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Unpacking Rapport: The Role of Behavioral Coordination and Culture in Workplace Interviews

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Abstract

This paper examines the influence of non-verbal coordination and culture on perceptions of

interpersonal rapport and candidate performance in job interview settings. Mock interviews were

conducted on-site at a Fortune 500 company using a 2 x 3 experimental design. Anglo and Latino mid-

level managers were interviewed by a confederate who enacted one of two possible levels of non-

verbal coordination. Our results show that low levels of behavioral coordination on the part of an

interviewer reduce candidates' self-esteem and perceptions of interpersonal rapport; increase their

anxiety and the time candidates take to respond to interview questions; and lower performance

evaluations for both self- and expert third party-ratings. Our results also show that these effects are

moderated by culture but not gender, with stronger effects found for Latino men than for Anglo men or

women. Theoretical implications and practical ramifications for workplace diversity and the

development of interpersonal rapport and improved collaboration are discussed.

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The labor landscape within the United States is rapidly changing. Average job tenure is decreasing (an average of 17 percent over the last 20 years), while the U.S. labor force is becoming increasingly diverse (2003 Current Population Survey). Amid this dynamic environment, unprecedented opportunities exist for minority group members to break into jobs and professions that have traditionally been dominated by Anglo applicants. To navigate this new landscape, employers need reliable mechanisms for assessing the appropriateness of job applicants to specific jobs and work environments. The job interview is often the mechanism of choice; as such, it serves as a gateway for minority job access and career mobility. Not surprisingly, it also introduces many barriers to effective placement for both qualified minority applicants and the employers who seek to hire them.

There is no doubt that overt racism continues to be a factor affecting the hiring results of many inter-ethnic job interviews (i.e., when an Anglo interviewer meets with a minority interviewee; Brief, 2000; Murrell, Dietz-Uhler, Dovidio, & Drout, 1994). Yet, even in the absence of bias, researchers have long found that job interview results are notoriously weak predictors of job performance – especially when compared to the predictive accuracy of general mental ability tests (for reviews see Schmidt, & Hunter 1998; 2004). These findings run counter to managerial intuition, which typically places tremendous weight on impressions formed in job interviews. It also runs counter to a robust social psychological phenomenon, known as the "thin slice" effect, which shows that strangers can form remarkably accurate perceptions of others given 30 seconds or less of random exposure to a person's behavior (for reviews see Ambady, & Rosenthal, 1992; Ambady, Bernieri & Richeson, 2000). For example, "thin slices" of behavior have been found surprisingly accurate in predicting general intelligence (Borkenau, et al 2004), personality traits of anxiety or depression (Waxer, 1974, 1976,

1977), teachers' feelings toward their students (Babad, Bernieri & Rosenthal, 1989; Ambady, & Rosenthal, 1993), and judges' expectations regarding a trial's conclusion (Blanck, & Rosenthal, 1992).

One reason for this discrepancy may be that thin slice effects are typically situated within a relevant work or other social context (such as the teacher's classroom or judge's courtroom). In contrast, employment interviews create a stylized, often atypical work situation in which employees are asked to talk about themselves rather than to perform a job-relevant task. Given this disconnect from actual job tasks, it is perhaps not surprising that a key finding of interviewing research over the last 20 years has been that the more the interview can be structured to encourage participants to respond to specific, job-relevant questions (referred to as situational interviews), the higher the reliability of interviewing results (see Harris, 1989; Huffcutt, Roth, & McDaniel, 1996; Jelf, 1999 for reviews). Under these conditions, interviews can, at least, match the predictive reliability of cognitive ability tests, sometimes adding predictive validity on top of them (Schmidt, & Hunter, 1998).

Here, we propose another reason for the discrepancy between interview ratings and job performance; namely, that interview results are vulnerable to subtle interpersonal dynamics that occur when a specific interviewer meets a specific candidate. When any two people meet for the first time, they may not immediately like each other and experience a "connection." For an interviewer, a lack of rapport is typically not problematic; its just part of his or her job that day. But for an interviewee seeking a job, particularly if he or she finds that job very attractive, experiencing a lack of rapport can be a source of significant stress. As research on the sociometer hypothesis maintains, people have innate, nonconscious mechanisms for monitoring their social environments. These mechanisms are very sensitive to changes in perceived acceptance and rejection by other people (Leary, Tambor, Terdal & Downs, 1995). This is particularly true in situations of relational ambiguity, where a clearly positive or negative relationship has not yet been established (Leary, Haupt, Strausser & Chokel,

1998). It is also particularly true in situations in which a person has a significant stake in the outcome of the interaction. Here, experiencing a lack of rapport is more likely to increase people's anxiety, decrease their self-esteem and most importantly, adversely affect outward behaviors on which their performance will be based (Goffman, 1955; Leary et al. 1995; Leary et al. 1998).

Obviously, decreases in interview performance that might occur because of short-term interpersonal dynamics will not always be indicative of actual job performance. The same would be true of increases in interview performance that might occur because an interviewer and candidate connect particularly well. It is in this spirit that we seek to study the dynamics of interpersonal rapport in job interview settings – because increased understanding of these dynamics could be central to interpreting the results of job interviews and their effects on corporate hiring, particularly in a diverse labor environment. Such findings could also lend insight into work interactions more broadly, as little past organizational research has explicitly examined how interpersonal rapport evolves in work contexts.

The Experience of Interpersonal Rapport

Recent social psychological studies find that while the perception of rapport stems from interpersonal dynamics that unfold outside of people's conscious awareness, rapport is typically communicated and inferred through very literal mechanisms. As a growing body of laboratory research documents, the experience of rapport is communicated through the simultaneous mirroring of verbal and other behavioral gestures between people as they interact (see for example, Chartrand, & Bargh, 1999; Lakin, & Chartrand, 2003). Thus, people who experience liking for each other tend to subtly, yet nonsconsciously, mirror each other's speaking styles and body movements. It is through that experience of behavioral mirroring that the presence of rapport is communicated to one's partner. Hence, in interaction, an absence or low level of behavioral mirroring from an interaction partner

typically signals the subjective experience of low rapport. Conversely, a high level of behavioral mirroring typically signals the subjective experience of high rapport. This tendency is problematic for interviews insofar as an interviewer's low level of behavioral mirroring may signal rejection to a candidate. The psychological effects of which may, in turn, inhibit a candidate's opportunity to demonstrate their true skills and an interviewer's ability to accurately assess those skills – without either person being consciously aware that these effects are occurring.

Current research suggests that the unintended problems presented by this type of mirroring effect may be compounded when interviewing a culturally diverse pool of applicants. This is because cultural groups have been shown to differ substantially in their attentiveness to relational cues and consequently their sensitivity to mirroring effects (van Baaran, et al, 2003; Sanchez-Burks, 2004). For example, Anglo-Americans are less attentive to relational cues and as a result engage less in behavioral mirroring in work settings than they do in non-work social settings (Sanchez-Burks, 2002). In contrast, Latinos remain highly attentive to relational cues across both contexts (Triandis, et al, 1984; Lindsley & Braithwaite, 1996; Sanchez-Burks, Nisbett, & Ybarra, 2000). The nature of these cultural differences suggests that the performance of ethnic minorities in interviews might be particularly susceptible to the dynamics of interpersonal rapport. In the presence of a non-mirroring interviewer, minorities such as Latinos may be more likely than Anglos to infer a lack of rapport and hence become anxious, have lower self-esteem, and experience inhibited performance. By this reasoning, cultural differences in relational focus could trigger actual differences in observed interview performance--a behavioral difference that may not be diagnostic regarding job performance, but could affect hiring decisions even in the absence of explicit or implicit bias.

In this paper, our goal was to examine these implicit interpersonal dynamics and their effect on interview performance in a field study conducted in the headquarters of a Fortune 500 firm. The

theoretical rationale for the study combined two literatures: research on the antecedents and consequences of interpersonal rapport and research on the relational schemas commonly used by Anglos and Latinos in work settings. If similarities in relational schemas affect perceptions of rapport and relational schemas vary with ethnicity, it may be possible to disentangle their effects on interview performance. That is, by changing the non-verbal relational style used by an interviewer, perceptions of rapport and performance might be changed. These findings would have implications not only for how interviews are conducted, but could yield important insight into the factors affecting rapport and performance in interethnic workplaces more broadly.

BEHAVIORAL MIRRORING AND INTERPERSONAL INTERACTION

There is now a wide body of research that shows that people tend to non-consciously mirror their interaction partners' speech patterns and physical gestures. For example, people are known to mimic others' speaking styles, including accents, tone of voice, pauses, rates of speech and syntax (see van Baaren, et al, 2004 for a brief review). When people receive verbal mimicking, they have a more positive subjective experience of the social interaction and subsequently engage in more positive behaviors. For example, van Baaren and his colleagues (van Baaren et al, 2003; van Baaren, Holland & Kawakami, 2004) recently demonstrated that when waitresses used the exact same words as their customers, they received larger tips compared to when they simply paraphrased their customers' orders.

Similarly, the non-conscious mirroring of physical gestures has also been shown to affect perception and appraisal in face-to-face interactions. Building upon a phenomenon originally proposed by William James (1890), researchers have shown a) that the mere perception of a behavioral cue in another person's posture, mannerisms, or movements will increase the likelihood of enacting those same behaviors oneself (LaFrance, 1982; Bernieri, 1988) and b) that when a person's physical gestures

are mirrored by another person, higher levels of interpersonal liking are experienced for that person (Chartrand and Bargh, 1999). For example, Chartrand and Bargh (1999) had participants work on a task with a confederate who, mid-way through the interaction, began a subtle sequence of movements (e.g., shaking his or her foot). They found that participants reliably began to mirror these gestures and, upon subsequent questioning, were not aware that they had done so (even denying that their movement may have been influenced by the other person). In another study, the authors trained a confederate to mirror (or not) participants' postures and physical mannerisms. They found that participants who were paired with a confederate who mirrored their physical gestures subsequently rated that interaction partner as more likable and rated their interactions as proceeding more smoothly than did participants who were paired with a non-mirroring confederate. Consistent with natural field studies conducted by others (LaFrance, 1982; Bernieri, 1988), and corroborated by recent neuroscientific evidence (van Baaren, et al, 2004), research consistently finds that people are unaware of the incidence and prevalence of behavioral mirroring and its effect on the subjective experience of interpersonal rapport.

Building from these studies, a body of research is now emerging that focuses on understanding the moderators of behavioral mirroring for interpersonal perception and behavior (e.g., Sanchez-Burks, 2002; Lakin, et al, 2003; van Baaren, et al, 2004). These studies examine individual-level differences and situational differences in attention to interpersonal cues. For example, people who tend toward interdependent (versus independent) self-construal, or have been experimentally primed to adopt an interdependent (versus independent) situational perspective, have been shown to be more sensitive to mirroring effects (van Baaren, et al, 2003). A similar contrast has been found across people with a high-context dependent (versus low-context dependent) cognitive style. People who are more context-dependent in their perceptions tend to rely more on external readily available referents for assimilating new stimuli and information; whereas people who are less context-dependent have been shown to more

easily differentiate between a focal object and its surrounding field/context when encoding new information (Witkin, Goodenough, and Oltman, 1979). Similarly, people who are high (versus low) context-dependent have been found to be more susceptible to the effects of behavioral mirroring (van Baaren, et al, 2004).

Together, this body of work suggests that the benefits and costs associated with mirroring (or the lack thereof) will vary with the type of relational schema that a person uses to encode and process interpersonal cues within a specific interaction. Relational schemas may differ due to either individual differences or situationally induced differences, as well as due to cultural differences (Sanchez-Burks, 2004).

Psychological Outcomes

Overall, past research suggests that differences in behavioral mirroring and rapport can produce problems in interactions where one person has a higher relational focus than the other person. If the lower relational focus person engages in little behavioral mirroring, the more relationally-focused person is likely to infer that the interaction is not unfolding well. When this happens in more formal, 'high-stakes' interactions (e.g., settings such as job interviews and sales calls), we can imagine that the effect could be particularly potent. First, we know that the structure of the job interview setting induces perceived power differences across the participants. These power differences will naturally prime people in the candidate position to be, on average, more relationally vigilant than people in the interviewer position (Lee & Tiedens, 2001; Keltner, Gruenfeld & Anderson, 2003). Further, as we have noted earlier, people have innate, non-conscious mechanisms for monitoring their social environments, and these mechanisms are very sensitive to changes in perceived acceptance and rejection by other people, particularly in high stress social settings (Leary, et al, 1995). In interview settings, we thus predict that people in the candidate position would be particularly likely to perceive

the presence or absence of behavioral mirroring on the part of the interviewer. When their behavior is mirrored, candidates will feel reassured that they are performing well. Self-esteem will be enhanced and anxiety reduced (Ozer, & Bandura, 1990; Mor, & Winquist, 2002). Conversely, in the absence of behavioral mirroring, we anticipate that candidates will perceive their interactions as less fluid, and thereby be likely to experience increased anxiety and reduced self-esteem. In which case, they would also perceive their own performance as less effective. Thus, we offer the following hypotheses regarding the psychological outcomes associated with behavioral mirroring in job interview settings:

> H1: People whose behaviors are not mirrored by an interviewer will report lower levels of perceived rapport (H1a), higher levels of state anxiety (H1b), lower levels of state self-esteem (H1c), and lower self-rated interview performance (H1d) than will people whose behaviors are mirrored.

Behavioral Outcomes

As past laboratory-research has found, low or high levels of behavioral mirroring can also induce behavioral manifestations. For example, a person who interacts with a mirroring partner and gains the positive experience of interpersonal rapport is more likely to engage in pro-social behaviors. As van Baaen, et al (2004) recently found, participants who were mirrored by a confederate in the laboratory were more likely to engage in helpful behavior toward that confederate, such as picking up pens dropped by the confederate and donating money to a charity advocated by the confederate.

Just as high levels of behavioral mirroring have been found to induce positive behaviors in the laboratory, we can imagine that in many real-world settings low levels of behavioral mirroring are also likely to have behavioral effects. Here, we suggest that a perceived lack of rapport, signaled by low levels of behavioral mirroring, can lead to self-doubt and internal questioning. A reaction that could, in

turn, lead to less fluid behaviors toward the other party, particularly in the evaluative setting of a job interview. The candidate may begin wonder why the interaction is not unfolding well, becoming distracted and wasting valuable cognitive resources on processing the interview – resources that might otherwise be devoted to interaction-specific activities, such as formulating responses to interviewer questions (c.f. Baumeister, et al, 1998). As a result, a candidate may take longer to respond to interview questions. Within western cultures, people tend to infer intelligence and persuasiveness from a target's ability to respond to questions quickly and with few pauses (Miller, et al, 1976; Erickson, et al, 1978; Hosman, 1989; Smith, & Shaffer, 1995). This tendency suggests that measuring question-answer response latencies (that is, the time delay in candidate's response to questions) may provide a substantive indicator of how behavioral mirroring affects performance in interview interactions. This reasoning about rapport and delayed response times is consistent with social cognition research showing that mental energy spent worrying about how others view the self and one's performance can slow down mental processing and lower performance (c.f. Carver, & Scheier, 1981; Baumeister, et al, 1998; Fredrickson, et al, 1998). This tendency also suggests that soliciting expert third-party evaluations of candidate performance may provide another substantive indicator of how behavioral mirroring affects interview performance. If candidates whose behaviors are not being mirrored are, in fact, behaving less fluidly and coming across less effectively than candidates whose behaviors are being mirrored, third-party evaluations of interview performance would reflect these differences. Based on this reasoning, we offer the following hypotheses regarding the behavioral outcomes associated with behavioral mirroring:

> H2: People whose behaviors are not mirrored by an interviewer will take more time to respond to interviewer questions (i.e., demonstrate longer question-answer response latencies) compared to people whose behaviors are mirrored.

H3: People whose behaviors are not mirrored by an interviewer will receive lower performance

ratings by independent expert judges compared to people whose behaviors are mirrored.

Cultural Differences

A broad body of research demonstrates that cultures differ in the relational work styles that

employees adopt and that these differences manifest themselves in cross-cultural variation in attention

to relational cues. Scholars have used various dimensions to differentiate cultures, from high context

versus low context (Hall, 1976; Ting-Toomey, 1998); to independent versus interdependent self-

construals (Markus, & Kitayama, 1991); to individualism versus collectivism (for reviews see

Triandis, 1995; Earley, & Gibson, 1998; Wagner, 2002). Across each dimension, there is a common

theme about how cultures differ in the relative emphasis that members place on monitoring the

interpersonal dimension of their social interactions. This theme, pointed out in a series of recent

studies, closely corresponds with work showing that variance in relational sensitivity moderates

behavioral mirroring behavior (Sanchez-Burks, 2002; van Baaren, et al, 2003) -- such that cultural

groups who differ in their attention to relational cues also tend to differ in how much they engage in

and are sensitive to behavioral mirroring.

European American and Mexican cultures provide a prototypical example of this contrast in

relational attentiveness. Latino culture, in addition to being more high-context and interdependent

compared to Anglo Americans (for a review see Triandis, 1995), is also distinguished by its tradition

of *simpatía* (Triandis, et al, 1984; Sanchez-Burks, et al, 2000). This cultural tradition places an

emphasis on social harmony, similar to many East Asian cultures, and functions as a relational schema

that leads Latinos to attend to the interpersonal dimension in virtually all their interactions, both work

and non-work alike (Diaz-Guerrero, 1967; Lidnsey, & Braithwaite, 1996; Gabrielidis, et al, 1997). For

example, compared to Anglo Americans, Latinos show better memory for interpersonal and social emotional workgroup dynamics (Sanchez-Burks, Nisbett, & Ybarra, 2000). Latino managers attend more to subordinates personal goals and aspirations (DeVoe, & Iyengar, 2004), and to saving face for workers when resolving conflicts or delivering bad news (Lidnsey, & Braithwaite, 1996). Together, this literature identifies a heightened attention to relational cues among Latinos and suggests that Latinos may be particularly susceptible to behavioral mirroring effects.

In contrast, Anglo Americans represent the prototypical low context, independent culture (Hampden-Turner, & Trompenaars, 1993; Earley, 1997) and have been observed to approach workplace relations in a manner consistent with what has been called Protestant Relational Ideology ("PRI") (Sanchez-Burks, 2004). This relational ideology refers to a deep-seated belief that affective and relational concerns are inappropriate in work settings and, therefore, are to be given less attention than they might be given in non-work settings. This ideology has been traced to the beliefs and practices of the founding communities of American society and continues to influence mainstream American work styles (Sanchez-Burks, 2002). PRI operates as a relational schema in which attention to relational cues is restricted in work settings. For example, compared to Anglos in non-work settings and compared to East Asians and Latinos both in work and non-work settings – Anglo Americans in work settings show a decrease in memory for interpersonal dynamics, a tendency to ignore vocal emotion, are less accurate about subordinates' motivations and concentrate on direct rather than indirect meaning in communications (DeVoe, & Iyengar, 2004; for a review see Sanchez-Burks, 2004). Consistent with this more restricted relational focus, Anglos have also been shown to engage less in behavioral mirroring both overall (van Baaren, et al, 2003) and in work settings in particular (Sanchez-Burks, 2002). This tendency suggests that as interviewers Anglos are likely to engage in comparatively low levels of behavioral mirroring, irrespective of a candidate's demographic

background. Further, when Anglo themselves are job candidates they may be less susceptible to behavioral mirroring effects as compared to Latinos.

Thus, we hypothesize that culture moderates the psychological and behavioral effects that we have outlined in Hypotheses 1-3. Specifically, we predict that the negative effect of having an interviewer not mirror a candidate's behaviors will vary with cultural group membership – showing greater negative effects for Latino candidates than for Anglo candidates. Accordingly, we offer the following hypotheses:

H4: Latinos whose behaviors are not mirrored will show lower levels of perceived rapport (H4a), higher levels of state anxiety (H4b), lower levels of state self-esteem (H4c), and lower self-rated performance (H4d) when compared Anglo candidates whose behaviors are not mirrored.

H5: Latino candidates whose behaviors are not mirrored will take more time to respond to interviewer questions (i.e., longer question-answer response latencies) than will Anglo candidates whose behaviors are not mirrored.

H6: Latinos candidates whose behaviors are not mirrored will show a greater decrease in objective interview performance as rated by independent experts (H6a) and the self (H6b) than will Anglo candidates whose behaviors are not mirrored.

In sum, our goal was to examine the role of rapport in workplace interactions, focusing on the job interview context. We chose a field setting at the headquarters of a Fortune 500 company and utilized a mock interview format. To manipulate perceptions of rapport, we trained two confederates to conduct the interviews while either engaging in behavioral mirroring or not. The study was designed to

incorporate multiple dependent variables and provide a multifaceted approach to examining the breadth and depth of behavioral mirroring effects.

METHOD

Ninety mid-level managers and specialists employed at the southwestern U.S. headquarters of a Fortune 500 firm participated in this study. The final study sample included 33 Anglo-American men, 30 Latino men, and 27Anglo-American women. [1] The mean age of the participants was 35.95 (SD = 8.92), with a mean number of years work experience 13.75 (SD = 8.5). Participants were recruited through advertisements sent out via e-mail from the organization's human resources department approximately two weeks before the study was scheduled to be run. The e-mails expressed the company's interest in and support of the study, describing its purpose as the study of "interview dynamics." The e-mail indicated that approximately 125 people would be interviewed, and as a thank you for participation, participants would have the opportunity to win one of two $500 cash prizes. The winners for these prizes would be randomly selected from among all participants. Participants were scheduled for appointments as they responded to the e-mail advertisement, until all of the available interview slots for their gender/ethnic type were filled. The slots were filled within five days.

The interviews took place approximately one week later over the span of five days. They were conducted during normal business hours in office space located within the firm's headquarters. Each participant received an e-mail two days before their scheduled interview, reminding them of their scheduled time and the interview location (Note: nine interviews with Latino females were excluded from analysis because there were not sufficient in number to conduct a meaningful analysis). One month later, two prizewinners were selected, notified, and paid.

Design

The field experiment used a three-by-two between-subjects design. This design crossed three demographic group categories (Anglo male, Anglo female, Latino male) with two levels of behavioral mirroring (behavioral mirroring or not). Gender was included in the design to provide empirical insight into how gender differences might compare to ethnic-group differences (Latinos vs. Anglo-Americans). However, equivocal findings and conflicting theoretical accounts in the literature concerning gender differences in relational attentiveness and behavioral mirroring (Kashima, et al, 1995; Chartand & Bargh, 1999) precluded making specific *a priori* hypotheses concerning gender differences.

Procedure. The interview followed a standard screening protocol. When participants arrived at the designated office, a coordinating research assistant greeted them. She gave participants a packet containing informed consent forms, which included giving the researchers consent to videotape the interview for later evaluation, and an employment biographical questionnaire. This questionnaire was used as a basis of discussion in the interview and asked for information about college and previous and current employment experiences. Prior to filling out these forms, participants were assured that no personal identifiers were being kept with the data and that no one from the company would have access to any individual information obtained during the study.

After the documents were completed, the research coordinator escorted participants to a nearby office where they were introduced to an interviewer. The research coordinator gave the background information sheet to the interviewer with a notation as to which mirroring condition to implement. (The mirroring conditions were randomly assigned across participants within demographic group.) The interviewer then followed a 15-minute scripted interview protocol, which included referring to

information contained on the background information sheet. The interview was structured based on conversation with industry interviewers experts so as to model an actual interview format.

After completing the interview, the participants were escorted to a separate office by the interviewer where they met another research assistant who would walk them through the final stage of the study. Here, they were requested to complete a follow-up questionnaire packet that contained the self-report dependent measures and demographic questions. Upon completion of the questionnaire, the research assistant conducted a debriefing session. The research assistant queried the participant about any general questions they had, followed by increasingly specific questions intended to determine if the participant had noticed that the interviewer was mirroring their behaviors or not. Finally, the goals of the study were discussed, and any remaining questions answered. Only one participant raised suspicion during the debriefing session concerning the behavioral gestures of the interviewer though they did not specifically notice the presence or absence of mirroring. Data from this one participant was excluded from the analyses.

Confederate interviewers. The interviewers were two male Anglo American executives with an average of twelve years working experience. Prior to the study, the interviewers were trained to conduct the interviews while mirroring or not mirroring participant's postures and non-verbal movements (e.g., foot-shaking, hand on the table, etc.). The paradigm used for this manipulation followed that used in previous mirroring studies (Chartrand, & Bargh, 1999; Sanchez-Burks, 2002; van Baaran, et al, 2003). For example, when the participant leaned forward, the interviewer was instructed to do likewise. When the participant crossed their legs, the interviewer was to do likewise. In the non-mirroring condition, the interviewers were trained to maintain a relaxed behavioral posture with feet on the floor and the pre-interview packet in their hands to reduce the possibility of non-conscious mirroring. The interviewers were instructed to behave in the non-mirroring condition as relaxed,

mobile, and animated as the mirroring condition so as not to confound the mirroring manipulation with differences in interview awkwardness or stiffness (cf. Chartrand, & Bargh, 1999; Sanchez-Burks, 2002).

Video-Coder Performance Measures

During the interviews, video recordings were made of each interview that showed full body shots of the interviewer and the interviewee. Following the study, three edited versions of these video recordings were made: one version in which only the interviewer is visible, a second version in which only the interviewee is visible, and a third which only contained the audio track of the interview. The interviewer-only videos were subsequently coded by one group of viewers to assess the success of the manipulation. The audio-only version of the interviews was used to code for question-answer latencies. The interviewee-only videotapes were used by the independent experts to evaluate performance while remaining blind to whether the interview engaged in mirroring or not.

Manipulation check measures. Viewers of the interviewer-only videos were used to establish whether the confederates' behaviors varied across the mirroring conditions in ways that might provide alterative explanations for our results. Differences in the number of times the interviewer smiled, for example, or came across as more or less friendly and likable, might influence an applicant beyond the mirroring manipulation. Thus, two coders who were blind to the experimental hypotheses viewed the interviewer-only videos to evaluate behavior regarding (a) friendliness toward the applicant, (b) how much the interviewed appeared to like the applicant, (c) and how much the interviewer smiled in the interview. Coders evaluated a sample (n = 60) of edited versions and rated the items on a 10-point scale (1 = low, 10 = high). The average reliability between the judges for these three items was, $\underline{R}$ = .84. Ratings from the two coders were averaged to form a single index for each measure. Results showed no significant differences between the mirroring and no mirroring conditions, or between the

ethnic/gender groups (all p's > .05), showing that the two versions of the interview were successfully

standardized. It does not appear that the confederates behaved differently toward the applicants in any

meaningful way other than in the non-verbal mirroring manipulation itself.

Expert-coded performance measures. Four professional recruiters and interview coaches

employed at either a large accountancy firm or university business school agreed to view and code the

interviewee-only videos to provide objective evaluations of candidates' performances. These coders

had a mean level of working experience of 8 years in the human resource field. They were instructed to

code the interviews along seven dimensions of performance (body language, impact, verbal

communication skills, motivation, assertiveness, interpersonal skills and overall impression). For each

measure, a 7-point Likert scale (1 = extremely low, 7 = extremely high) was used. These performance

criteria were chosen prior to the study in consultation with professional recruiters and interview

coaches from industry to reflect the criteria commonly used for actual recruitment evaluations.

Subsequent analysis of the ratings revealed that the seven measures were highly correlated

(Chronbach's α = .91), so they were subjected to a principal-components analysis. The principal-

components analysis (without rotation) indicated the presence of a single factor accounting for 67% of

the variance. On the basis of this finding, a composite performance score was created for each

interview. The effective inter-judge reliability (Rosenthal, & Rosnow, 1991) for the composite

measure was quite high, R = .90.

Question-answer latency measures. Research assistants, blind to the conditions and hypotheses,

coded question-answer latency using the audio portion associated with each video interview. The

research assistants used stopwatches to measure the amount of time that passed between the end of an

interviewer question and the start of an interviewee's vocal response. A composite score was

subsequently calculated for each interviewee (inter-coder reliability based on a random subset of 20

interviews was R = .88), consisting of the mean question-answer latency response times across the interview.

Self-report measures. The post-interview questionnaire contained dependent measures obtained from the interviewee perspective. In that questionnaire, perceptions of rapport were measured using a single-item measure which evaluated "how smooth was the interview interaction." Responses were recorded using a 5-point Likert scale (1 = not smooth at all, 3 = somewhat smooth, 5 = very smooth). State anxiety was measured using Spielberger, et al.'s (1980) 10-item instrument (Chronbach's α = .80). State self-esteem was measured using Heatherton & Polivy's (1991) 15-item instrument (Chronbach's α = .84). Finally, subjective self-performance was measured using a single-item, which asked respondents to circle the response "that best reflects your evaluations of your overall performance during the interview," (1 = unsatisfactory performance, 3 = ok performance, 5 = excellent performance).

RESULTS

Table 1 reports the correlations between each dependent measure and Table 2 reports the means and standard deviations of each dependent measure by condition.

Interaction Smoothness

Hypothesis 1a predicted that interviewees whose behaviors were not mirrored would report lower levels of perceived interaction rapport than would interviewees whose behaviors were mirrored. To test this hypothesis, a Mirroring (interviewer mirrored or not) X Group (Anglo male/ Anglo female/ Latino male) analysis of variance (ANOVA) was performed on self-report ratings of how smoothly the interview interaction unfolded. When the interviewer did not mirror participants, they reported lower levels of perceived rapport in the interview ($\underline{M}$ = 4.17) compared to when they were mirrored ($\underline{M}$ = 4.43), $\underline{F}$(1,84) = 2.52, $\underline{p}$ = .11. As shown in Figure 1, this effect was found for men overall ($\underline{M}$ = 4.00

vs. 4.46), $F(1,84) = 4.51$, $p = .03$; and for Anglo men, in particular ($Ms = 4.00$ vs. 4.47) , $t(84) = 1.96$,

$p = .05$, but not for Anglo-women ($t > 1$). The effect was in the expected direction, but not reliable for

Latino men ($Ms = 4.01$ vs. 4.30), $t(84) = 1.07$, $p = .29$. Across conditions, Anglo women reported

higher rapport ratings ($M = 4.60$) compared to Anglo men ($M = 4.21$) and Latino men ($M = 4.13$),

$F(1,84) = 3.63$, $p = .03$. Overall, the pattern of results provides partial support for Hypothesis 1a

concerning the main effect of interview mirroring on perceived interaction smoothness. The

hypothesized interaction between mirroring and demographic group (H4a) on perceived smoothness

was not supported, $F(1,84) = 1.04$, $p = .36$, indicating that Anglos and Latinos self-reported experience

of rapport were equally affected by the absence of behavioral mirroring (see Table 2 for a summary of

means and standard deviations for all dependent measures).

State Anxiety

Across conditions, levels of state anxiety were hypothesized to increase in the absence (versus

presence) of behavioral mirroring (H1b). This effect was not supported in the Mirror by Group

ANOVA, ($F < 1$). However, a significant mirroring by group interaction provided support for the

Hypothesis 4b: the absence of mirroring increased anxiety more for Latinos ($Ms = 2.11$ vs. 1.71) than

for either Anglo men ($Ms = 1.78$ vs. 1.76) or Anglo women ($Ms = 1.81$ vs. 1.96), $F(1,84) = 2.98$, $p =$

.05. As shown in Figure 2, the level of anxiety invoked during the interview for Latinos varied

significantly ($t(84) = 2.12$, $p . = 037$) as a function of behavioral mirroring, with greater anxiety in the

absence of mirroring, whereas for Anglo men and women, anxiety levels remained relatively constant

across these conditions (p's $> .45$). Thus, the influence of interview mirroring varied as a function of

the interviewee's culture, with minorities the most vulnerable to this behavioral mirroring effect.

State Performance Self-Esteem

The absence of behavioral mirroring also had a negative main effect on participant's state performance self-esteem, $F(1,84) = 2.30$, p = .07, with lower performance self-esteem in the absence of mirroring (M = 4.08) compared to the presence of mirroring (M = 4.24) -- providing partial support for Hypothesis 1c. Moreover, as shown in Figure 3, this negative effect on performance self-esteem was stronger, as predicted (H4c), for Latinos (Ms = 4.09 vs. 4.48), t(84) = 2.35, p = .02, than for either Anglo men (*M*s = 4.18 vs. 4.10), p > .30, or Anglo women (Ms = 3.93 vs. 4.15), p > .20 (overall interaction, $F(1,84) = 2.30$, *p* = .10). These results show that Latinos experienced lower performance self-esteem when the interview did not engage in behavioral mirroring whereas Anglos performance self-esteem was relatively unaffected by this dynamic. Consistent with the anxiety results, these data showed that cultural group membership moderated the influence of mirroring on subjective well-being.

Self-Reported Performance

The negative effect that lack of mirroring had on participants' psychological well being (e.g., self-esteem, anxiety) was reflected also in participants' own performance ratings. As Table 1 shows, higher self-ratings of performance were significantly and positively correlated with perceptions of interaction smoothness (r = 0.51, p < .01) and state self-esteem (r = .50, p < .01) and negatively correlated with state anxiety (r = -0.52, p < .01).

In addition, a Mirroring X Group ANOVA revealed a main effect for mirroring, F(1,84) = 5.46, p = .022 showing that as predicted (H1d) the process of being interviewed by a person that did not engage in behavioral mirroring decreased a person's subjective evaluation of personal performance compared to when an interviewer did engage in non-verbal mirroring (Ms = 3.63 vs. 4.00). Moreover, as shown in Figure 4, this negative effect was stronger for Latinos (Ms = 3.53 vs. 4.13), t(84) = 2.24, p = .027, than for Anglo women (Ms = 3.77 vs. 4.07), *p* > .25 or Anglo men (Ms = 3.61 vs. 3.80), *p* >

.25. This pattern provides support for Hypothesis 4d showing that perceived performance is significantly more contingent on behavioral mirroring for Latinos than for either Anglo men or women.

<u>Question-Answer Latencies</u>

To provide perspective on the effects of mirroring for Latino and Anglo candidates beyond self-report indicators, we coded how long interviewees took on average to answer the interviewer's questions. This measure provided an 'in-the-moment' indicator of the non-conscious effects of behavioral mirroring. A Mirroring X Group ANOVA conducted on mean question-answer latencies provided support for Hypothesis 2 showing that overall participants took longer to respond to interview questions in the absence ($\underline{M}$ = 1.2 seconds) versus presence ($\underline{M}$ = .92 seconds, $\underline{F}$(1,84) = 4.22, $\underline{p}$ = .04) of behavioral mirroring.

Moreover, as predicted in Hypothesis 5, a Mirroring by Group ANOVA interaction revealed that this effect was stronger for Latinos as compared to Anglos $\underline{F}$(1,84) = 4.22, $\underline{p}$ = .097. As shown in Figure 5, question-answer latencies in the no-mirroring versus mirroring condition were significantly longer for Latinos ($\underline{M}$s = 1.26 vs. .82), $\underline{t}$(84) = 1.95, $\underline{p}$ = .055. The difference was weaker but in the same direction for Anglo women ($\underline{M}$s =1.24 vs. .87), $\underline{t}$(84) = 1.50, $\underline{p}$ = .13. Anglo men's question-answer latencies were relatively unaffected by the absence of mirroring ($\underline{M}$s =1.11 vs. 1.10), $\underline{t}$ < 1. This pattern of results shows that low levels of behavioral mirroring affected participants' real-time responses, with Latinos being more susceptible to this effect than Anglos. Thus, in addition to anxiety, self-esteem and subjective evaluations, these latency results provide converging evidence of the interaction between mirroring, culture and rapport.

Expert Evaluations of Interview Performance

A final indicator on the effects of behavioral mirroring included the perspectives of outside recruiter experts. This perspective is perhaps the most important to the extent that decisions to hire are most clearly based on the evaluations of others. Independent of the subjective-well being and latency indicators, the expert evaluations provides a measure of whether the effects of behavioral mirroring are detectable by outside observers. A Mirroring X Group ANOVA performed on expert-judged evaluations showed no overall main effect, (Mirroring $\underline{M}$ = 5.54, No Mirroring $\underline{M}$ = 4.34), $\underline{F}$ < 1, however, as predicted in Hypothesis 6, there was a mirroring by group interaction, $\underline{F}(1,84)$ = 3.40, $\underline{p}$ = .04. As shown in Figure 6, the expert-judged performance of Latino men, more than Anglo men or women, was significantly contingent upon behavioral mirroring. Latinos performed significantly worse in the absence (versus presence) of behavioral mirroring (4.20 vs. 5.15), $\underline{t}(84)$ = 2.66, $\underline{p}$ < .01. Yet, the level of behavioral mirroring did not effect the judged performance of Anglo men (4.36 vs. 4.13) or Anglo women (4.50 vs. 4.37), $\underline{p}$'s > .20. Thus, although there was no overall effect for objective performance depending upon whether a participant received high versus low levels of behavioral mirroring (as predicted by H3), this pattern of results provides support of Hypothesis 6 concerning the differential effect for Anglo versus Latino interviewees.

DISCUSSION

This study showed that behavioral mirroring is, in fact, a vehicle through which rapport is communicated in workplace interactions. As such, the presence or absence of behavioral mirroring displayed by an interaction partner can influence a person's psychological well-being, behaviors and performance. Regardless of an interviewee's cultural background, the level of non-verbal coordination exhibited by an interviewer can increase a candidate's anxiety and the time needed to respond to interviewer questions. It can also reduce self-esteem and self-evaluations of performance. This study

also showed that mirroring effects and their impact on performance are moderated by culture. Stronger effects were observed for Latino men than for Anglo men or women. These results provide support for our central thesis about the interplay between culture and non-verbal coordination. Namely, subtle interpersonal dynamics influence the diagnosticity of interviews, because they have a substantial, but unaccounted for, influence on interview results.

As a primary gatekeeper of access into the firm, job interview dynamics take on organizational and societal implications when they exert a differential influence on candidates depending upon a candidate's cultural backgrounds. Differences in influence on Anglo versus Latino candidates would not be cause for concern if it were not for prior studies suggesting that an Anglo-American interviewer is less likely to mirror their social interaction partners (Sanchez-Burks, 2002; van Baaren, et al, 2003). To the extent that the situation of an Anglo American man (or woman) faced with interviewing a diverse application pool is not atypical, our design and results model a pressing organizational issue. This theoretical significance is further complimented by its growing relevance to organizations given recent demographic trends in the U.S. Most recent census estimates show that Latinos are the largest minority group, comprising 14% of the population. Together with the 68% of the population identifying as white, intercultural contact between these two groups in the marketplace will become increasingly common.

Note that in contrast to earlier research, our results do not reveal a dynamic that stems from attitudes or biases regarding in-group versus out-group members. Rather, they show the consequences of two parties adopting different relational schemas at work; i.e., when one has a higher relational focus than the other. While such differences are especially likely across cultural interfaces (e.g., Triandis, et al, 1984; Sanchez-Burks, 2000; DeVoe, & Iyengar, 2004), it is important to keep in mind that not all Anglo-Latino interactions will be susceptible to these dynamics—because of individual

variation within cultures. Some Anglos will, in fact, be more attuned to non-verbal coordination than some Latinos. In which case, the dynamics observed here would not be replicated.

The importance of culture to our results stands in contrast to the relative unimportance of gender observed across our dependent measures. Although we had no *a priori* expectations about gender effects, the inclusion of gender in our design provided further insight into interactional *faultlines* (Murninghan & Lau, 1998). The behavioral mirroring literature typically shows mixed results for gender, with more studies reporting no gender differences (c.f., Chartrand, & Bargh, 1999; Sanchez-Burks, 2004). This ambiguity extends more generally to research on attentiveness to relational cues where popular and scholarly works showing contradictory findings (Brown & Levinson, 1987; Tannen, 1990; Holtgraves & Yang, 1992; Kashima, et al, 1995). In the present research, negligible effects were found for Anglo women interacting with Anglo men. These findings highlight that mirroring dynamics can not be understood solely as a function of demographic dissimilarity between an interviewer and interviewee.

Future Directions

The present research design focuses on the relative effects of behavioral mirroring on Anglos versus Latinos, but it does not address an important and related issue. Specifically, does level of mirroring give one group and advantage over another? Our results showed that minorities were more sensitive to these non-conscious dynamics, but they did not show that Latinos were actually worse off vis-à-vis Anglos – in fact, quite the opposite. While the absence of behavioral mirroring did appear to raise anxiety levels more for Latinos than for Anglos, it did not result in lower performance ratings. Moreover, the patterns showed a surprising boost in performance for Latinos when their behaviors were mirrored, such that they outperformed all other groups in our study! One possible explanation for this unanticipated result is the nature of our participant population: successful, employed Latino

professionals. These Latino participants had already broken through; they had demonstrated an ability to perform adequately within Anglo-Latino interactions. Only by already getting hired and promoted were they available to participate in our study. Although only an ad hoc explanation, it suggests that the Latinos who made it into our sample demonstrated a greater resilience in the face of low levels of behavioral mirroring than might the average Latino. Although beyond the scope of this present research, these issues provide interesting avenues to explore in future studies.

The approach to cultural and organizational behavior dynamics taken in the present research builds on an emerging movement in cross-cultural research to understand how people's culturally grounded mental maps give rise to cultural differences and similarities in organizations (c.f. Earley & Mosakowski, 2002; Morris & Young, 2002; Brockner, 2003). Our focus on non-conscious mirroring was inspired by prior research which showed marked differences in relational work schemas used by Anglos and Latinos. By applying this literature to job interview contexts, we have contributed to the integration of diversity and cultural research—highly related, yet largely isolated streams of research in organizational behavior. Both areas have contributed much to the understanding of how ethnic cultures make a difference at work. Joining these perspectives in single research designs, we believe, holds much promise for the field.

Finally, this study demonstrates how a very subtle difference in non-verbal coordination can produce an effect that is psychologically real to individuals and that has substantive consequences in the eyes of expert observers. The power of small effects is not new, nor is it irrelevant to organizational behavior. Yet, it reminds us that large voids still exist between everyday experience and organizational research. The intuitive experience of rapport and connection (or a lack thereof) in interaction is not a new concept to managers, or even organizational scholars. We have all experienced its presence and absence in interaction. Yet, it is a topic that has scarcely been studied in our research (see Barsade,

2002 for a notable exception), and one that is particularly relevant to job interview settings. Drawing from emerging research in social psychology, this study has begun to "unpack" the construct of rapport by exposing its non-verbal and cultural manifestations. More research is clearly needed that continues to elaborate the subtle, yet potent dynamics underlying everyday workplace interactions.

In closing, the implications of this research are important in the face of an increasingly diverse workplace and growing levels of globalization in operations. In order to overcome the challenges that these social, economic and geographic changes present for organizations, more research is needed into the implicit, yet powerful, interpersonal dynamics that mediate the relationship between culture and successful interaction in organizational contexts. Our results offer an important step toward this goal.

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Footnotes

[1] The demographic distribution across positions at the organization revealed relatively fewer Latino women within the mid-level managerial and specialist rank from which we obtained our sample. Consequently we did not obtain an adequate sample size of Latino women with a similar rank as the other groups so as to be included in the study. We were successful, however, in obtaining an adequate sample size of Anglo women who were similarly, though to a lesser extent, underrepresented in our sample population.

Table 1. Correlations between measures

	Interaction Smoothness	State Anxiety	State Self-esteem	Self-rated Performance	Expert-rated Performance
Interaction smoothness					
State anxiety	- 0.35**				
State self-esteem	0.17	- 0.58**			
Self-rated performance	0.51**	- 0.52**	0.50**		
Expert-rated performance	- 0.18+	- 0.05	0.15	0.06	
Question-answer latency	- 0.24*	0.26*	- 0.25*	- 0.37*	- 0.27*

$^+p < .10,$ $*p < .05,$ $** p < .01$

Table 2. Means and Standard Deviations a function of cultural group membership and mirroring condition.

	Anglo Men		Anglo Women		Latino Men	
	No Mirroring	Mirroring	No Mirroring	Mirroring	No Mirroring	Mirroring
Interaction smoothness	4.00(.77)	4.47(.64)**	4.60(.65)	4.57(.51)	4.01(.53)	4.30(.88)
State anxiety	1.78(.44)	1.76(.29)	1.81(.52)	1.96(.54)	2.11(.30)	1.71(.48)***
State self-esteem	4.18(.45)	4.10(.46)	3.93(.64)	4.15(.46)	4.09(.29)	4.48(.29)***
Self-rated performance	3.61(.78)	3.80(.68)	3.77(.92)	4.07(.73)	3.53(.64)	4.13(.64)***
Q-A latency	1.11(.70)	1.10(.50)	1.24(.98)	.87(.30)*	1.26(.54)	.82(.36)**
Expert-rated performance	4.36(.93)	4.13(.99)	4.50(.90)	4.37(.99)	4.20(.87)	5.12(.84)***

Significance levels for within Group differences
   *p < .15
  **p < .10
 ***p < .05

Figure Captions

Figure 1. Perceived Interaction Smoothness as a function of Behavioral mirroring participant's non-verbal gestures and participant's ethnicity and gender. Error bars represent one between-subjects standard error.
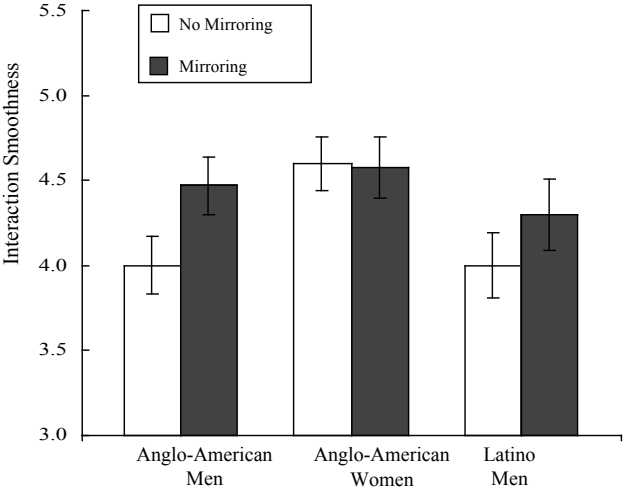
Figure 2. Psychological State Anxiety as a function of Behavioral mirroring participant's non-verbal gestures and participant's ethnicity and gender. Error bars represent one between-subjects standard error.
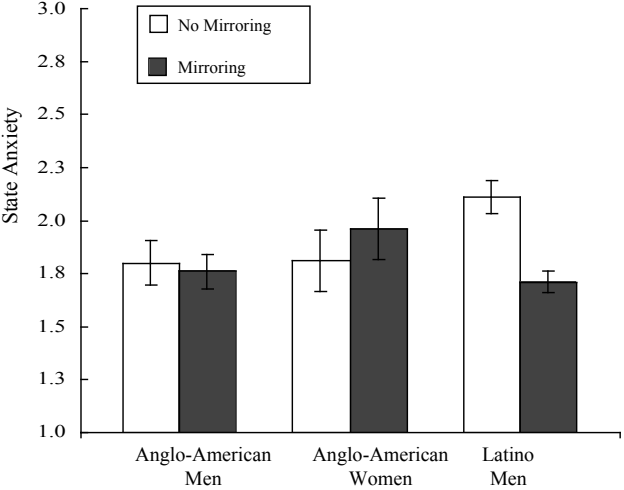
Figure 3. Psychological State Performance Self-Esteem as a function of Interviewer Mirroring participant's non-verbal gestures and participant's ethnicity and gender. Error bars represent one between-subjects standard error.
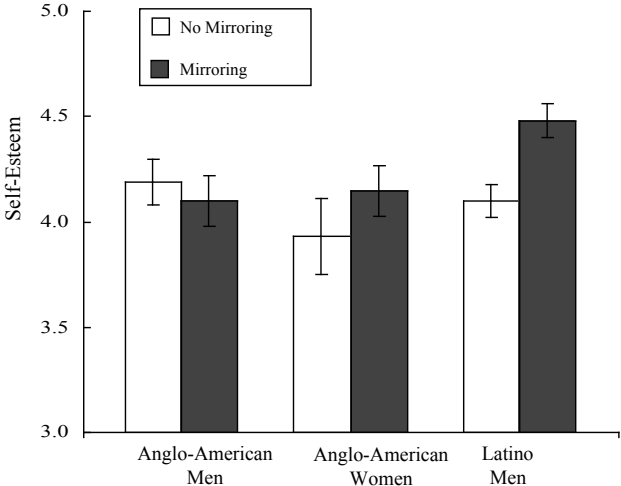
Figure 4. Self-rated interview performance as a function of Behavioral mirroring participant's non-verbal gestures and participant's ethnicity and gender. Error bars represent one between-subjects standard error.

Figure 5. Question-Answer Latency (in milliseconds) as a function of Behavioral mirroring participant's non-verbal gestures and participant's ethnicity and gender. Error bars represent one between-subjects standard error.

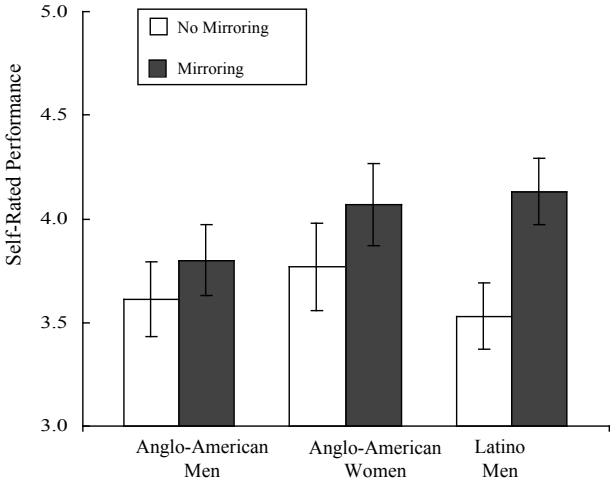Figure 6. Expert-rated interview performance as a function of Behavioral mirroring participant's non-verbal gestures and participant's ethnicity and gender. Error bars represent one between-subjects standard error.

Figure 1. Perceived Rapport as a function of Interviewer Mirroring participants non-verbal gestures and participant's ethnicity and gender. Error bars represent one between-subjects standard error.
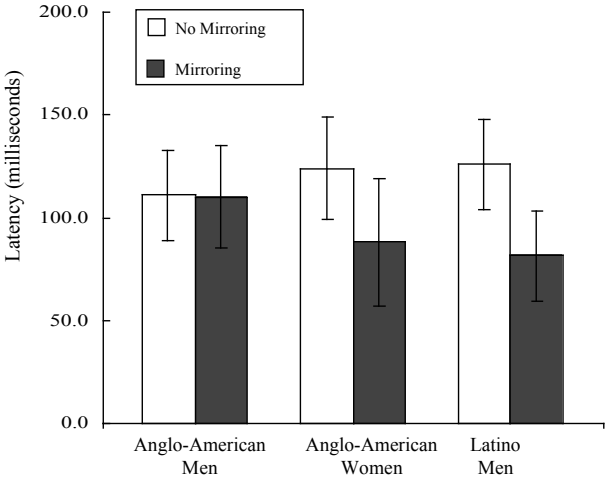

Figure 2. Psychological State Anxiety as a function of Interviewer Mirroring participants non-verbal gestures and participant's ethnicity and gender. Error bars represent one between-subjects standard error.
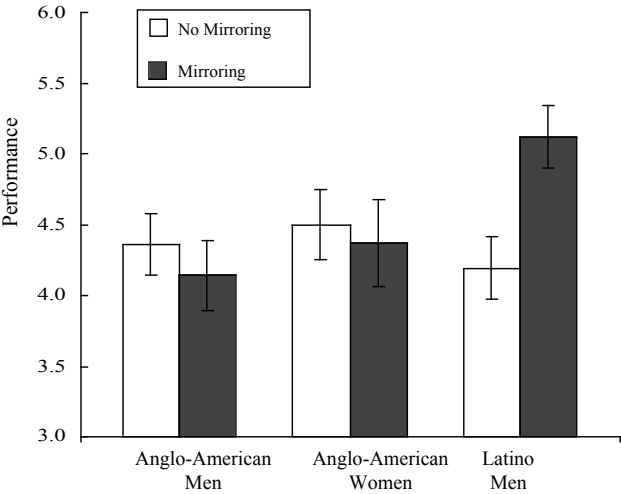
Figure 3. Psychological State Performance Self-Esteem as a function of Interviewer Mirroring participants non-verbal gestures and participant's ethnicity and gender. Error bars represent one between-subjects standard error.

Figure 4. Self-rated interview performance as a function of Interviewer Mirroring participants non-verbal gestures and participant's ethnicity and gender. Error bars represent one between-subjects standard error.

Figure 5. Question-Answer Latency (in milliseconds) as a function of Interviewer Mirroring participants non-verbal gestures and participant's ethnicity and gender. Error bars represent one between-subjects standard error.

Figure 6. Expert-rated interview performance as a function of Interviewer Mirroring participants non-verbal gestures and participant's ethnicity and gender. Error bars represent one between-subjects standard error.

Author Note