

Gaze Aversion on Video: Incongruent Mimicry's Influence  
on Perceived Communication Competence and Likability

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### Abstract

Smooth interactions between new interaction partners require communication competence and congruency in nonverbal mimicry. This study seeks to understand the influence of incongruent nonconscious mimicry in people's assessments of another's communication competence. There is very little research tying behavioral mimicry and communication competence, and this study seeks to unpack mimicry's influences on interactions with others. Participants ( $N=20$ ) in the study watched an online video and completed an online survey evaluating one of the on-screen speaker's communication competence and likability. Results indicate that gaze aversion impacts an observer's perception of the speaker's communication competence and likability online.

*Keywords:* gaze aversion, nonverbal, communication competence, likability

### Crossing Wires Online: Incongruent Mimicry's Influence on Perceived Communication Competence

Interpersonal relationships and social groups play large roles in people's daily lives. Large social networks connect individuals with shared resources and support. The information age and technology have shifted many people toward embracing the idea of a diverse network of individual relationships versus the idea of group memberships dominating one's social environment (Wellman & Rainie, 2012), meaning people are more focused on individual relationships than ever before. The diversity and accumulation of individual relationships demand improved interpersonal communication competence if one is to thrive in a changing relational landscape.

A factor influencing face-to-face individual relationships is the ability to display behaviors that allow for smooth interactions (Wiemann, 1977). Research suggests that smooth interactions are negotiated based on similarities in order to reduce conflict (Chartrand & Bargh, 1999), which when combined demonstrate the two key components of communication: competence and nonverbal mimicry. Spitzberg & Hecht (1984) argues that perceived communication competence results from a sense of satisfaction with the exchange. People experienced in communication competence create interactions seen as smooth (Wiemann, 1977), inferring that the exchange was satisfying to at least one person. This proposed study investigates the conversational setting to determine whether small observable incongruences in an interactant's nonverbal behavior impedes an observers' assessment of: a) the speaker's communication competence, and b) the likability of the speaker. Using what is known today about nonconscious mimicry and

communication competence, this paper unpacks the disruptive nonverbal behaviors that potentially influence a person's assessment of third person.

### **Social Synchrony, Mirroring and Mimicry**

Communication is an essential process in everyday living. It allows us to make sense of the world and achieve specific goals, from intentional messages like ordering a cup of coffee at Starbucks to unintentional messages, like walking past a friend without acknowledging them. Interaction Adaptation Theory (IAT) posits that people act in an interactional synchrony and display a tendency to engage in reciprocal patterns of behavior (Burgoon, Stern, & Dillman, 1995), meaning that politeness and courtesy will be met in kind, whereas guarded or defensive interactions will be reciprocated, yielding different results. People engaged in these interactions begin with an interaction position and work together to either converge the communication behavior with someone they like, or diverge and emphasize their own style with someone they dislike (Littlejohn & Foss, 2011). Burgoon et al (1995) claim that our communication interactions exist to fulfill the (a) *requirements* (needs), (b) *expectations* (behavioral level needed to fill needs), and (c) *desires* (wants or preferences) of each individual. She further differentiates between synchrony and mirroring, suggesting that synchrony reflects behavior that is coordinated, and mirroring reflects visual behavior that is identical in form. Together these two combined form the concept of reciprocity. To allow for deeper interpretations of nonverbal behavior, Burgoon specifically calls out the concept of 'motor mimicry' to represent the reflexive behaviors that are indicative of empathic responses in communication interactions. For example when someone winces in response to another person stubbing his or her toe, the wince communicates empathy through feeling.

Mirroring and mimicry rely on the idea of nonconscious nonverbal behavior, whose only differentiation is mirroring can also be a conscious behavior in which a person intends to positively or negatively manipulate another person.

The nonverbal modality in communication plays a key role in interpersonal face-to-face dyadic relationships as it often conveys more meaning than its verbal counterpart (Chovil, 1991; Knapp & Daly, 2011). Burgoon et al (2001) describe nonverbal communication as forms of iconic expression, which include gestures, facial expressions, body movement, intonations, gaze, dress, use of voice, touch, distancing, time and physical objects. These individual cues work within dyadic and group interactions to provide specific social meaning through a process of creating (encoding) and interpreting (decoding) communication (Knapp & Daly, 2011). It is the encoding and decoding process between individuals that is the source of understanding and allows interpretation of a person's meaning or intent. The ubiquitous nature of nonverbal cues in communication makes it an exciting area to explore, however, despite its prevalence, it is often is viewed as a secondary part of the more dominant verbal counterpart (Chovil, 1991). To date, little research has been performed to understand the correlation between communication competence and mimicry. This paper posits that smooth interactions between new interaction partners require both a high level of communication competence and congruency in nonverbal mimicry.

### **Communication Competence**

Nonverbal communication is contextual and supportive of communication goals. People work to serve their own needs in communication and individual goals for each communicative instance may vary (Wiemann, 1977). A person's communication goal can

be to develop a long-term social relationship (e.g., join a group), a short-term goal of acquiring limited amounts of information (e.g., get directions) or involve some level of deception (e.g., salesman wanting to make a sale). However, in order to achieve communication goals with any amount of success requires the communication to be smooth and consistent. For instance, if a person's wants to show romantic interest in another person, they might lean forward when the other person is speaking to indicate interest or smile to indicate enjoyment. Likewise, misinterpretation of nonverbal cues carries consequences. If a professor winks at a student to indicate he is joking and the student interprets the behavior as flirting, the professor did not succeed in his communication goal. Thus, behavioral indicators support the communication goals when performed competently and is interpreted as congruent with the original intent.

Spitzberg & Hecht (1984) believe that perceived communication competence is a result of a sense of satisfaction with the exchange. *Satisfaction* is defined as a “favorable response to the fulfillment of positive communication expectations,” and accomplishes an individual's objective in a manner that navigates both the relationship with the interactant and its context (Spitzberg & Hecht, 1984). Spitzberg and Hecht (2015) operationalize this definition by extracting two key components in a satisfying encounter: appropriateness and effectiveness. They define *appropriateness* as behaviors that follow social rules, norms, and expectancies and *effectiveness* as an accomplishment of perceived values or goals (Spitzberg, 2015). Most facets of communication competence include some element of nonverbal communication. Rubin's overall classification scheme of communication competence divides competence into ten sections: self-disclosure, empathy, social relaxation, assertiveness, interaction management, altercentrism,

expressiveness, supportiveness, immediacy and environment control (Rubin & Martin, 1994). Wiemann, another prominent scholar in communication competence, believed many nonverbal behaviors (e.g., smiling, head nods) was an assessment of a person's innate empathic abilities. This suggests there is some alignment between these measures, however the nomenclature has since changed to categorize nonverbal behaviors primarily in the immediacy and expressiveness concepts. Thus, the focus of this study falls within the following factor: immediacy.

Immediacy has a tendency to signal interest, intimacy, and attentiveness based on the individuals' proximity to each other, orientation of the body, gestures, eye contact and other nonverbal positive reinforcers, like smiling (Spitzberg & Hecht, 1984). The goal of enacting smooth nonverbal signals within immediacy is to send the message of interpersonal warmth and build rapport between individual communicators. It is this concept of rapport – and the factors that influence why two people communicate well. One of the reasons for why two people get along is simply due to likability; in that one person enjoys the company of another.

### **Likability and Nonverbal Mimicry**

People often select likable people over technically competent people when it comes to deciding with whom they want to work (Casciaro & Lobo, 2005), making one person's attitude towards a specific source incredibly powerful (Roskos-Ewoldsen & Fazio, 1992). Likability is often used in rhetorical or persuasive research, wherein an individual is influenced to act or react based on a speaker's attributes, like: physical attractiveness, similarity, verbal compliments, and simple association (Reysen, 2005). There are three distinct components when it comes to establishing rapport or liking between people: (1)

mutual attentiveness, which indicates both parties are focused on each other, (2) positivity, which indicates the interactions are on the whole positive and (3) co-ordination, which describes the synchronicity or smoothness of interactions (Tickle-Degnen & Rosenthal, 1990). Tickle-Degnen and Rosenthal (1990) found that likability can be consciously manipulated based on nonverbal cues or nonconsciously transmitted as messages between individual cues. These cues are directed gaze, smiling, head nodding, forward lean, direct body orientation, posture mirroring, and arm or leg configuration (e.g., crossed/uncrossed).

Nonverbal behaviors specifically identify mimicry as a form of similarity, which is suggested to derive from the basic human need to bond with others. Evolutionary communication studies posit that people create bonds or develop rapport with one another in order to survive (Lakin, Jefferis, Cheng, & Chartrand, 2003). The way in which we communicate using nonverbal cues forms a behavioral pattern, referred to as behavioral mimicry. Mimicry is often associated with increased liking and general rapport between individuals (Chartrand & Bargh, 1999; Bavelas J., Black, Lemery, MacInnis, & Mullet, 1986; Schefflen, 1964; La France & Broadbent, 1976). The mechanism for mimicry is referred to as the chameleon effect, which is defined as the “tendency to adopt the postures, gestures, and mannerisms of interaction partners,” (Lakin, Jefferis, Cheng, & Chartrand, 2003) and is characterized by a lack of conscious choice on behalf of the communicators (Chartrand & Bargh, 1999).

A fascinating aspect of the chameleon effect stems from its relationship to traits and other human characteristics. For example, people who scored high on the Interpersonal Reactivity Scale (Davis, 1983) subscale, perspective taking, were more likely to mimic



the behavior of others (Chartrand & Bargh, 1999). If the individual did not mimic the behavior of another the communicator was not as well liked (Chartrand & Van Baaren, 2009). Thus, it is suggested that the empathy skillset of one individual mediates the rapport between communication partners. However, perception of the act of mimicry can be manipulated based on individual interpretation of intent. Manusov (1992) discovered that mirroring the behavior of another communicates our internal feelings towards another person. For individuals who were not ‘primed’ to think about the other person’s nonverbal behavior, evaluated their communication partner to be more competent and socially attractive than those who were primed to think their communication partner was either acting in an intentional or unintentional way. Thus, the nonconscious aspect of mimicry is helpful in facilitating new relationships, but may prove problematic, as once a particular construct is developed, future interactions with that person will be interpreted within that constraint. For example, if a person is dissatisfied with a particular relationship, the nonverbal behavior signals from that particular person will be perceived as both negative and intentional.

### **Violations of Nonverbal Behaviors**

Nonverbal behaviors can encourage or disrupt the flow of conversation. In studies focused on rapport, positive variables like: smiling, head nodding, forward lean and direct body orientation aided in the creation of a positive interaction. Mirroring and directed gaze also contributed to positivity, but to a lesser degree (Tickle-Degnen & Rosenthal, 1990). However, there are cases in which nonverbal behaviors violate the expectations of the participant or observer. This is referred to the “expectancy violations model.” In this model a violation can be viewed as positive or negative. A positive

violation can be an initial conversation with a cold experience to a subsequent conversation filled with interpersonal warmth. The transition from cold to warm is a positive violation. The same can occur in reverse, in which case the interpretation becomes a negative violation. Burgoon (1998) works within the “immediacy” category of communication competence and elaborates on the expectations around distance, gaze and sensory involvement. Typical violations in nonverbal communication are eye gaze aversion, and distancing (Burgoon & Hale, 1988; Mehrabian, 1969).

### **Rationale**

Smooth interactions between interaction partners require communication competence, particularly coordination in immediacy cues and congruence in nonverbal mimicry. Using the lens of Interaction Adaptation Theory, this paper seeks to understand the power of nonconscious nonverbal mimicry violations in the assessment process of a person’s communication competence and likability. The following hypotheses are posed:

*H1: One participant’s nonverbal behavior violation (e.g., gaze aversion) in a dyadic interaction will lower an observer’s assessment of that speaker’s communication competence.*

*H2: One participant’s nonverbal behavior violation (e.g., gaze aversion) in a dyadic interaction will lower an observer’s assessment of a speaker’s likability in dyadic interactions.*

### **Method**

#### **Participants**

Due to the relative universality of the phenomena, as determined by existing

research, the population of interest for this study is broad: English-speaking adults ( $n=20$ ) with Internet access during this study's data collection period. The recruiting process used a nonprobability convenience sample as the survey participants were within the researcher's personal social network. Recruitment messages were sent through Facebook, LinkedIn, Twitter and email and as a result a small degree of snowball sampling occurred as in-network participants forwarded the survey communication to their friends and family members. 20 total participants responded to the survey, but 2 responses were incomplete and thus removed from the analysis. There was a fairly even representation between men ( $n=9$ ) and women ( $n=1$ ), age range was skewed towards a younger crowd in that the majority of respondents were in the 18-29 age range ( $n=16$ ) with the 30-49 age range in a distant second ( $n=4$ ). The majority of people were single ( $n=17$ ), with minimal representation from married ( $n=1$ ) and in a domestic partnership ( $n=2$ ), in addition to being primarily Caucasian ( $n=14$ ), followed by Asian ( $n=3$ ), African American ( $n=2$ ), and Hispanic ( $n=1$ ).

### **Procedure**

To assess if a single nonverbal signal impacts the assessment of communication competence, a quantitative survey was distributed electronically to a broad audience. The survey linked each participant randomly to one of two video conditions, and presented with scales with which the participant assessed the competence and likability of one speaker. Each video condition is less than one minute long; each showcases a positive verbal encounter in English between a dyad (see Appendix 1). The first video condition shows the two people interacting with positive nonverbal signals: relaxed open arms, smiling, and slightly leaning forward towards the person. The second video is virtually

identical in showing the same two people interacting with the same positive nonverbal signals, but in this condition, one person also averting her gaze. To maintain some measure of consistency and control across the two video conditions, the dialog audio was recorded only once and skillfully dubbed over the second video. Both videos were shot at enough distance to mask any evidence of overdubbing.

### **Measures**

Two measures are used to assess the speaker in the video: Wiemann's (1977) communicative competence scale and the Reysen (2005) likability scale.

**Communicative Competence Scale.** Wiemann's (1977) communicative competence scale (CCS) was designed to let an observer assess another person's communicative competence. Wiemann's scale is compatible with the communicative competence concepts reviewed in this paper's rationale and can be adapted to focus on an external view. Cronbach's alpha reliabilities range near .96 (Wiemann, 1977).

**Reysen Likability Scale.** Reysen's (2005) likability scale measures the degree of likability of a particular source. Reysen calculates its chronbach's alpha reliability to be .90 to .91 (Reysen, 2005; Reysen S. , 2006).

### **Analysis**

The data was analyzed using the Statistical Program for Social Sciences version 22.0 (SPSS 22.0) to determine the relationship between congruent mimicry, likability and perceived communication competence as well as incongruent mimicry, likability and perceived communication competence. An independent samples t-test was used to compare the means of the two conditions.

## Results

### Communication Competence

*H1: One participant's nonverbal behavior violation (e.g., gaze aversion) in a dyadic interaction will lower an observer's assessment of that speaker's communication competence.*

The communication competence scale reported a cronbach alpha score of .931, ensuring the scale's reliability. An independent-samples t-test was conducted to compare communication competence in both the congruent mimicry (control) and an incongruent mimicry (experimental) conditions. There was a significant difference in the scores for the congruent mimicry ( $M=4.1$ ,  $SD = .36$ ) and incongruent mimicry ( $M = 1.8$ ,  $SD = .31$ ) conditions ( $t(14) = p < .01$ ). These results indicate that the people watching a video of people engaging in mirroring or mimicry behaviors, perceive the primary speaker to be a competent communicator.

Table 1A					
<i>Group Statistics for Competence</i>					
	Video Condition	N	Mean	Std. Deviation	Std. Error Mean
Competence	1	9	4.0957	.36167	.12056
	2	9	1.7901	.31215	.10405

Table 1			
<i>Independent Samples Test of Competence</i>			
		Equal variances assumed	Equal variances not assumed
Levene's Test for Competence	F	1.065	
	Sig	.317	
t-test for Competence	t	14.478	14.478
	df	16	15.665
	Sig (2-tailed)	.000	.000

Mean Difference		2.30556	2.30556
Std. error difference		.15925	.15925
95% confidence interval of the difference	Lower	1.96796	1.96737
	Upper	2.64315	2.64374

### Likability

*H2: One participant's nonverbal behavior violation (e.g., gaze aversion) in a dyadic interaction will lower an observer's assessment of a speaker's likability in dyadic interactions.*

The likability scale reported a cronbach alpha of .961 in reliability, ensuring the scale's reliability. An independent-samples t-test was conducted to compare likability in a congruent mimicry (control) and an incongruent mimicry (experimental) condition. There was a significant difference in the scores for the congruent mimicry ( $M = 3.75$ ,  $SD = .39$ ) and incongruent mimicry ( $M = 1.2$ ,  $SD = .37$ ) conditions ( $t(10.34) = , p < .01$ ). These results indicate that the people watching a video of people engaging in mirroring or mimicry behaviors, perceive the primary speaker to be likable.

Table 2A					
<i>Group Statistics for Likability</i>					
	Video Condition	N	Mean	Std. Deviation	Std. Error Mean
Likability	1	9	3.7475	.38510	.12837
	2	10	1.9636	.36665	.11595

Table 2			
<i>Independent Samples Test of Likability</i>			
		Equal variances assumed	Equal variances not assumed
Levene's Test for Likability	F	.015	
	Sig	.904	

t-test for Likability	t	10.341	10.313
	df	17	16.573
	Sig (2-tailed)	.000	.000
	Mean Difference	1.78384	1.78384
	Std. error difference	.17251	.17298
	95% confidence interval of the difference	Lower Upper	1.41988 2.14799
			1.41817 2.14951

### Discussion

This paper posits that smooth interactions between interaction partners require both a high level of communication competence and congruency in nonverbal mimicry. To collect data, a quantitative survey was distributed electronically to a broad audience ( $N=18$ ). The survey linked each participant randomly to one of two video conditions, and was then presented with scales with which the participant assessed the communication competence and likability of a single speaker. Using Interaction Adaptation Theory as the organizing theory and its concept of reciprocity as revealed by mirroring and mimicry, this study discovered that gaze aversion has a powerful effect on an observer's assessment for both a speaker's communication competence and likability.

A person's communication competence is assessed based on both verbal and nonverbal behaviors. Gaze aversion has a significant impact to the factors outlined in Wiemann's communication competence scale, indicating there is a strong relationship between gaze aversion and an observer's assessment of the online speaker's communication competence. In studies detailing gaze patterns in autistic children, researchers discovered that attention to both eyes and mouth is important for not only language development, but also in regards to communicative competence (Norbury,

Brock, Cragg, Einav, Griffiths, & Nation, 2009). While competence may be defined at varying levels and degrees, the study speaks to the importance of eye gaze and its relationship to assessing a person's communication competence.

The other aspect of the study was the relationship between gaze and likability. The expectancy violation of gaze aversion has a significant impact to the factors outlined in Reysen's likability scale, indicating there is a strong relationship between gaze aversion and an observer's assessment of the online speaker's likability. Larsen and Shackelford (1996) found "gaze avoidant women were rated as less attractive, less agreeable, and less happy than the non-avoidant women," which could explain the difference in means in the likability condition, as likability is often associated with factors like attractiveness and agreeableness (Reysen, 2005). Tickle-Degnen and Rosenthal (1990) indicated cues like directed gaze, smiling, head nodding, forward lean, and direct body orientation are correlated to likability and Grahe and Berneri (1999) observed that nonverbal behaviors were the primary indicators of rapport in dyadic interactions. This demonstrates the results from this study are consistent with other research performed in the field. Thus, an observer's online assessment of a third person's likability can be influenced based on a speaker's nonverbal behaviors; specifically gaze aversion.

In addition to the findings resulting from the competence and likability scales, an additional discovery was made during the analysis. When the two conditions were merged together, there was a strong correlation between both competence and likability ( $r = .959^{**}$ ,  $p < .01$ ). However, when assessed individually only in the congruent mimicry (control) condition, where the assessed speaker was acting in a relaxed manner,



was there a positive correlative relationship between the communication competence and likability scale ( $r = .736^*$ ,  $p < .05$ ). In the incongruent mimicry (experimental) condition, where the assessed speaker engaged in gaze aversion, there was no statistically significant correlation between communication competence and likability ( $r = .567$ ,  $p > 0.05$ ). The fact that communication competence and likability are neither positively nor negatively correlated could potentially be due to the lack of change in verbal content, pitch, or tone. In educational settings, verbal immediacy was an important predictor of learning and motivation and supported the interdependency between immediacy and communication skills (Frymier & Houser, 2000), much in the same way that teacher competence is correlated with positive vocal cues (Beatty & Behnke, 1980). Speech patterns are also an indicator of likability in that speech itself is a way in which we identify our similarities in order to create rapport (Schuller, et al., 2014). However little research exists that elaborates on the potential mediators between verbal and nonverbal behaviors and the importance people place on each in everyday interactions. Dillard and Spitzberg (1984) looked at, what they refer to as ‘molecular’ behaviors, which are comprised of both verbal and nonverbal behaviors, but there was no stack ranking of order of importance and it was primarily related to an individual’s social skill set, and not necessarily communication competence or likability. Additional research in this area would likely bring to light the important factors that mediate competence and likability.

### **Limitations**

The first limitation of this study surveyed only people with Internet access on a small scale ( $N=20$ ) and available during two weeks in April 2015. This limits the reach of

the study and in conjunction with the low number of participants, means this study is not generalizable to any population.

The second limitation rests in the video itself. The video showcased a short-term communication goal of one person attempting to acquire limited amounts of information from another person, and in both cases with the audio from one video being dubbed over top of the other video, meant that we can specifically exclude any verbal patterning from our list of potential variables mediating the results. However, despite the strength of the results, there remains some question as to whether the content of the videos actually depicts mimicry. The actors in the study were previously friends, and thus already primed for positive communication, meaning that each actor had a predefined relationship. In addition to priming, the actors found it significantly challenging to perform positive communication patterns while making a subtle shift in their behavior; instead the eye gaze aversion behavior was exaggerated. Additional factors like memorization of a script and the behavior they performed was not wholly an act of mirroring and mimicry. Instead the actor's actions could have initiated a socio-emotional assessment in the study participant, and could have interpreted the speaker to be displaying self-conscious or shy behaviors, which is not part of the model of mimicry. Gaze avoidance can either be associated with shyness or social anxiety (Larsen & Shackelford, 1996) or attributed to a person who is removing the additional cognitive load of visual information (Doherty-Scheddon & Phelps, 2005) to allow for more in-depth comprehension of content. Prolonged gaze aversion, however, is likely associated with the aforementioned shyness. Alternatively, the research actually may be reporting the immediacy behaviors exhibited by the actors in the video (proxemics, open arms and smiling) are correlated with an

observer's assessment of a speaker's communication competence and likability.

The final limitation of the study is its failure to collect data on a third phenomenon, satisfaction. Collecting satisfaction with the interaction would have helped further illuminate the communication competence results within the study findings.

### **Future Research**

To determine the effects of mimicry, we might simply turn to technology to help us identify and unpack how communication competence and likability are assessed online. Future research in this area could use media equation theory and anthropomorphism of avatars as a foundation for how we treat online characters as real people, and manipulate animated characters to better represent mimicry and its violations. Another possible study for future research in this area to assess a single speaker's communication competence and likability online based on speaker to audience mimicry, which would require a lab setting while watching the behaviors of the 'present audience,' recording their nonverbal behaviors and completing three surveys, communication competence, likability and satisfaction. Linking our actual behavior and responses to online content can help us understand how to better communicate in a digital world. The last area of additional research is evaluation of verbal communication and its relative comparison to nonverbal communication content based on context of speech. Understanding how people rank the importance of specific kinds of communication, can help us better explore areas, especially in remote work situations where minimal nonverbal communication is present.

### References

- Ariely, D. (2008). *Predictably Irrational: The Hidden Forces That Shape Our Decisions*. New York, NY: HarperCollins Publishers.
- Bavelas, J. B., Black, A., Lemery, C. R., & Mullett, J. (1986). "I Show How You Feel": Motor Mimicry as a Communicative Act. *Journal of Personality and Social Psychology* , 322-329.
- Bavelas, J. B., Coates, L., & Johnson, T. (2002). Listener Responses as a Collaborative Process: The Role of Gaze . *International Communication Association* , 566-580.
- Bavelas, J., Black, A., Lemery, C., MacInnis, S., & Mullet, J. (1986). Experimental Methods for Studying "Elementary Motor Mimicry.". *Journal of Nonverbal Behavior* , 102-119.
- Beatty, M., & Behnke, R. (1980). Teacher Credibility As a Function of Verbal Content and Paralinguistic Cues. *Communication Quarterly* , 55-59.
- Burgoon, J. k., Guerrero, L. K., & Manusov, V. (2011). Nonverbal Signals. In M. L. Knapp, & J. A. Dal, *The SAGE Handbook of Interpersonal Communication* (pp. 239-290). Thousand Oaks, CA, USA: Sage Publications.
- Burgoon, J., & Hale, J. (1988). Nonverbal Expectancy Violations: Model Elaboration and Application of Immediacy Behaviors. *Communication Monographs* , 58-79.
- Burgoon, J., Stern, L., & Dillman, L. (1995). *Interpersonal Adaptation: Dyadic Interaction Patterns* . New York, NY: Cambridge University Press. .
- Casciaro, T., & Lobo, M. S. (2005, June). Competent Jerks, Lovable Fools and the Formation of Social Networks. *Harvard Business Review* , pp. 92-99.
- Chartrand, T. L., & Bargh, J. A. (1999). The Chameleon Effect: The Perception-Behavior Link and Social Interaction . *Journal of Personality and Social Psychology* , 893-910.
- Chartrand, T. L., & Van Baaren, R. (2009). Human Mimicry. *Advances in Experimental Social Psychology* , 219-274.
- Chovil, N. (1991). Social Determinants of Facial Displays. *Journal of Nonverbal Behavior* , 141-153.
- Dillard, J., & Spitzberg, B. (1984). Global impressions of social skills: Behavioral predictors. In R. N. Bostrom, *Communication Yearbook 8* (pp. 446-463). Beverly Hills, CA, USA: Sage Publications .
- Doherty-Scheddon, G., & Phelps, F. (2005). Gaze aversion: A response to cognitive or social difficulty? *Memory & Cognition* , 33 (4), 727-733.
- Frymier, A., & Houser, M. (2000). Teacher-Student Relationship as an Interpersonal Relationship. *Communication Education* , 49 (3), 207-219.
- Grahe, J., & Bernieri, F. (1999). The Importance of Nonverbal Cues In Judging Rapport. *Journal of Nonverbal Behavior* , 253-269.

- Knapp, M. L., & Daly, J. A. (2011). *The SAGE Handbook of Interpersonal Communication*. Thousand Oaks, CA: Sage Publications.
- La France, M., & Broadbent, M. (1976). Group rapport: Posture sharing as a nonverbal indicator. *Group and Organization Studies* , 328-333.
- 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* , 145-162.
- Larsen, R., & Shackelford, T. (1996). Gaze Avoidance: Personality and Social Judgments of People Who Avoid Face-To-Face Contact. *Personality and Individual Differences* , 907-919.
- Littlejohn, & Foss. (2011). *Theories of Human Communication*. Long Grove, IL: Waveland Press.
- Mehrabian, A. (1969). Some referents and measures of nonverbal behavior. *Behavior Research Methods & Instrumentation* , 203-207.
- Norbury, C. F., Brock, J., Cragg, L., Einav, S., Griffiths, H., & Nation, K. (2009). Eye-movement patterns are associated with communicative competence in autistic spectrum disorders . *Journal of Child Psychology and Psychiatry* , 50 (7), 834-842.
- Reysen. (2005). Construction of a new scale: The Reysen Likability Scale. *Social Behavior and Personality* , 33 (2), 201-208.
- Reysen, S. (2006). A New Predictor of Likeability: Laughter. *North American Journal of Psychology* , 373-382.
- Roskos-Ewoldsen, D., & Fazio, R. (1992). The Accessibility Source Likability as a Determinant of Persuasion. *Society for Personality and Psychology* , 19-25.
- Rubin, R. B., & Martin, M. M. (1994). Development of a Measure of Interpersonal Communication Competence . *Communication Research Reports* , 33-44.
- Schefflen, A. E. (1964). The significance of posture in communication systems . *Psychiatry* , 316-331.
- Schuller, B., Steidl, S., Batliner, A., Noth, E., Vinciarelli, V., Burkhardt, F., et al. (2014). A survey on perceived speaker traits: personality, likability, pathology, and the first challenge. *Computer Speech and Language* , 29 (1), 100-131.
- Spitzberg. (2015). A Model of Intercultural Communication Competence. In L. Samovar, R. Porter, E. McDaniel, & C. Roy, *Intercultural Communication: A Reader* (pp. 379-391). Boston, MA: Cengage Learning.
- Spitzberg, B. H., & Hecht, M. L. (1984). A Component Model of Relational Competence. *Human Communication Research* , 575-599.
- Tickle-Degnen, L., & Rosenthal, R. (1990). The Nature of Rapport and Its Nonverbal Correlates. *Psychological Inquiry* , 1 (4), 285-293.
- Wellman, B., & Rainie, L. (2012). *Networked Individualism: The New Social Operating System*. Cambridge, MA: MIT Press.

Wiemann, J. (1977). Explication and Test of a Model of Communicative Competence. 195-213.

### APPENDIX 1: Video Documentation

Type	Positive Nonverbal	Negative Nonverbal
Video 1	Facing other person Open, relaxed posture Smiling	
Video 2	Facing other person Open, relaxed posture Smiling	Gaze aversion

### Communication Script for the Video

Person 1: Hey, Mark! Have you seen Luke around lately?

Person 2: Hm, you know, I haven't seen him on campus.

Person 1: Crap. He hasn't been in class for a week, is he sick?

Person 2: Nah, he's stressed out I think. Been posting way too many cat videos on Facebook. [laughs]

Person 1: [laughs]

Person 2: Do you need his phone number?

Person 1: Yeah, that would be great! I'm working with him on a project and we never got around to exchanging information.

Person 2: That sucks. When is it due?

Person 1: Tomorrow!

Person 2: Wow, that's rough.

Person 1: You took that class last semester, right? Did you do a project for that class when you took it?

Person 2: Yeah, I think so.

Person 1: Do you mind if I take a peek; it would really help me out to see what I'm supposed to do.

Person 2: Sure, what's your email address?

**APPENDIX 2: Measures and Scales****Communication Competence Scale** (Wiemann, 1977)

Always keep Speaker [A] in mind as you answer.

1. [A] appears to easily get along with others.
2. [A] adapts to changing situations.
3. [A] treats the other person as an individual.
4. [A] interrupts too much. [R]
5. [A] appears "rewarding" to talk to.
6. [A] deals with [B] effectively.
7. [A] is a good listener.
8. [A] appears cold and distant. [R]
9. [A] appears easy to talk to.
10. [A] wouldn't argue with someone just to prove he/she is right.
11. [A]'s conversation behavior is not "smooth." [R]
12. [A] ignores other's people's feelings. [R]
13. [A] generally knew how the listener felt.
14. [A] let other people know he/she understands them.
15. [A] appears to understand other people.
16. [A] appears relaxed and comfortable when speaking.
17. [A] listens to what other people say to him/her.
18. [A] appears to like being close and personal with other people
19. [A] generally knows what type of behavior is appropriate in any given situation.
20. [A] does not make unusual demands on other people.
21. [A] is an effective conversationalist.

22. [A] is supportive of other people.
23. [A] does not mind meeting strangers.
24. [A] can easily put himself/herself in another person's shoes.
25. [A] pays attention to the conversation.
26. [A] is generally relaxed when conversing with a new acquaintance.
27. [A] is interested in what others have to say.
28. [A] doesn't follow the conversation very well. [R]
29. [A] enjoys social gatherings where he/she can meet new people.
30. [A] is a likeable person.
31. [A] is flexible.
32. [A] is not afraid to speak with people in authority.
33. People can go to [A] with their problems.
34. [A] generally says the right thing at the right time.
35. [A] likes to use his/her voice and body expressively.
36. [A] is sensitive to others' needs of the moment.

*Note. Items 4, 8, 11, 12, and 28 are reverse-coded before summing the 36 items.*

**The Reysen Likability Scale (Reysen, 2005)**

1. This person is friendly.
2. This person is likeable.
3. This person is warm.
4. This person is approachable
5. I would ask this person for advice.
6. I would like this person as a coworker.
7. I would like this person as a roommate.
8. I would like to be friends with this person.



9. This person is physically attractive.

10. This person is similar to me.

11. This person is knowledgeable.

### APPENDIX 3: Results Tables

Table 1A					
<i>Group Statistics for Competence</i>					
	Video Condition	N	Mean	Std. Deviation	Std. Error Mean
Competence	1	9	4.0957	.36167	.12056
	2	9	1.7901	.31215	.10405

Table 1B					
<i>Independent Samples Test of Competence</i>					
			Equal variances assumed	Equal variances not assumed	
Levene's Test for Competence	F		1.065		
	Sig		.317		
t-test for Competence	t		14.478	14.478	
	df		16	15.665	
	Sig (2-tailed)		.000	.000	
	Mean Difference		2.30556	2.30556	
	Std. error difference		.15925	.15925	
	95% confidence interval of the difference	Lower	1.96796	1.96737	
		Upper	2.64315	2.64374	

Table 2A					
<i>Group Statistics for Likability</i>					
	Video Condition	N	Mean	Std. Deviation	Std. Error Mean
Likability	1	9	3.7475	.38510	.12837
	2	10	1.9636	.36665	.11595

Table 2B					
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<i>Independent Samples Test of Likability</i>			
		Equal variances assumed	Equal variances not assumed
Levene's Test for Likability	F	.015	
	Sig	.904	
t-test for Likability	t	10.341	10.313
	df	17	16.573
	Sig (2-tailed)	.000	.000
	Mean Difference	1.78384	1.78384
	Std. error difference	.17251	.17298
	95% confidence interval of the difference	Lower	1.41817
		Upper	2.14951

Table 3			
<i>Pearson Correlation of Measured Scales in Congruent Mimicry Condition</i>			
		Competence	Likability
Competence	Pearson Correlation	1	.736*
	Sig (2-tailed)		.024
	N	9	9
*Indicates significant correlation			

Table 4			
<i>Pearson Correlation of Measured Scales in Incongruent Mimicry Condition</i>			
		Competence	Likability
Competence	Pearson Correlation	1	.567
	Sig (2-tailed)		.112
	N	9	9
*Indicates significant correlation			

Table 5			
<i>Pearson Correlation of Measured Scales in Incongruent Mimicry Condition</i>			
		Competence	Likability
Competence	Pearson Correlation	1	.959**
	Sig (2-tailed)		.112
	N	18	18
**Indicates significant correlation			

Table 6					
Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 - 29	16	80.0	80.0	80.0
	30 - 49	4	20.0	20.0	100.0
	Total	20	100.0	100.0	

Table 7					
Sex					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	9	45.0	45.0	45.0
	Female	11	55.0	55.0	100.0
	Total	20	100.0	100.0	

Table 8					
Relationship Status					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	17	85.0	85.0	85.0
	Married	1	5.0	5.0	90.0
	Domestic Partnership	2	10.0	10.0	100.0
	Total	20	100.0	100.0	

Table 9					
Race					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	White/Caucasian	14	70.0	70.0	70.0
	African American	2	10.0	10.0	80.0
	Hispanic	1	5.0	5.0	85.0
	Asian	3	15.0	15.0	100.0
	Total	20	100.0	100.0	