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Embracing the Unexpected: A Quasi-experiment to Explore the Effects of Power and Gender on the Decision to Reciprocate a Hug-Or Not-in the Workplace

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Embracing the Unexpected: A Quasi-experiment to Explore the Effects of Power and Gender on the Decision to Reciprocate a Hug-Or Not-in the Workplace

by

Paula Gable

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ACCEPTANCE

This dissertation was prepared under the direction of the *PAULA GABLE* Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

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LIST OF ABBREVIATIONS

(In Alphabetical Order)

DV	Dependent Variable
GSU	Georgia State University
GCI	Global Competency Inventory
ES	Emotional Sensitivity
IV	Independent Variable
LR	Logistic Regression
MR	Multiple Regression
QCE	Quality of Communication Experience (Measure)
RCB	Robinson College of Business
SET	Social Exchange Theory
SF	Social Flexibility
SPSS	Statistical Program for the Social Sciences

ABSTRACT

Embracing the Unexpected: A Quasi-experiment to Explore the Effects of Power and Gender on the Decision to Reciprocate a Hug- Or Not- In the Workplace

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In business, the ability to develop rapport with a potential exchange partner can significantly impact the outcome of a negotiation. Although non-verbal communication is a key factor in relationship-building, there is little research on use of touch in business, and even less about hugging, even though hugging is becoming more common in the US. To explore hugging as a nonverbal form of communication in the workplace, the researcher adopted a quasi-experimental design informed by Social Exchange Theory (SET). During the experiment, power and dyadic gender composition were manipulated to study their effects on a "hugee's" decision to reciprocate a hug, or not, in a business setting. Following a scenario-based encounter between subject and confederate, the subjects answered a series of questions about themselves and their experience.

This research shows that female research participants are more likely than male participants to reciprocate a hug offered by a same-gender exchange partner; that the power (status) of a "hugger" does not significantly influence whether or not a research participant will reciprocate a hug offered by an exchange partner; that the gender of the research participant does not moderate the effect of power of the exchange partner such that power will have a greater effect on female

participants than male participants and that individual traits of Emotional Sensitivity and Social Flexibility do not predict hugging in the workplace.

I INTRODUCTION

I.1 Motivation for the Study

In *Kiss, Bow, or Shake Hands* (Morrison & Conaway, 2006), a popular book on international business etiquette, the authors assert that most business meetings begin with the formal greeting of a kiss, bow, or handshake, depending on local customs. The authors stress the importance of correctly offering and reciprocating a greeting, because it is crucial in developing rapport with potential exchange partners: "an unintentional misstep can destroy your costly international marketing efforts (Morrison & Conaway, p. vii)."

The need to understand cultural nuances and observe correct social protocol is critical to all aspects of business, whether domestic or foreign, according to David Reiter, M.D., M.B.A, and Medical Director of Thomas Jefferson University Hospital. Reiter asserts that "the cost of not knowing local custom and practice varies from unexpectedly poor accommodations to lost business deals, (Morrison & Conway, p. iv.)" To be successful, business people must understand the interpersonal dynamics of social protocol, including hugging, which can either strengthen or weaken a business relationship.

Understanding the dynamics of offering and reciprocating a hug in the workplace may be more difficult than one might initially expect. When we look at the media today, we frequently see pictures of world leaders greeting colleagues with a hug, rather than the more traditional handshake. Some embraces appear to be natural, cordial and appropriate in a professional setting, while others seem stiff and reluctant, at best. A single Google search yielded over 15,000,000 hits for "awkward hugs," many of which contained pictures or videos of public figures who seem quite perplexed about this emerging form of nonverbal communication, which is becoming more prevalent in the American workplace.

This uptick of hugging even caught the attention of the staid *Wall Street Journal,* which published the article, "The Delicate Protocol of Hugging" (Drexler, 2013). Drexler asserts that while hugging in the U.S. is on the rise, surveys reveal that many Americans prefer to avoid intimacy with co-workers. This seeming paradox may indicate the ambivalence U.S. workers have about the use of touch. Although there may be many valid reasons for coworkers to hug, a senior executive once counseled Drexler: "Don't yell, don't cry, don't hug." She prefers to follow that advice.

In the past, when Drexler was first coached to avoid hugging in the workplace, the guidance to refrain from hugging was likely wise counsel. However, this instruction may no longer be relevant today. With hugging in the workplace becoming more common in America, there is a current need to understand the underlying factors of giving and reciprocating a hug. In fact, failure to do so could be detrimental to business.

Psychologists and sociologists have been studying the use of human touch in interpersonal relations for many years (Argyle, 1988; Johnson & Edwards, 1991; Mehrabian, (1970, 1972, 1981), with researchers coming to varying conclusions. Prior work on culture and communication (e.g., Adair, Buchan, & Chen, 2009) suggests that people with different cultural backgrounds prefer varying degrees of personal space and emotional expressiveness. Other factors such as gender, professional culture (e.g., business executives or child care providers), professional status (e.g., hiring manager or student intern), context (e.g., formal or informal) and individual traits may also influence the choice to initiate or respond to hugging.

Done well, hugging can facilitate rapport-building. Yet, if the initiator and the responder have different comfort levels related to hugging, this can cause tension or even rupture an

interpersonal relationship. An unwelcome hug can tarnish a public imagine, affect morale, and even sabotage a deal -- all of which can figure prominently in the bottom line.

One particularly embarrassing, business-related hug was caught on video when a reporter (Markovich, 2013) attended a Charlotte, North Carolina Chamber of Commerce press conference where MetLife announced they would bring more than 1,300 jobs to the city. Later, Markovich looped shots of the male mayor and male governor in an awkward and embarrassing embrace and posted to the internet "an endless snapshot of an infinitesimal moment." (http://www.charlottemagazine.com/Blogs/Way-Out/March-2013/The-Weeks-Inanity-Animated-GIF-edition/)

Although this ill-conceived hug did not torpedo the business deal, it was widely discussed in the business community and drew significant attention on the *Charlotte Magazine* website. From there, the link could easily be Tweeted, posted to Facebook or Stumble-Upon, pinned to Pinterest, or accessed via Google+, to name a few social media outlets. In an era of instantaneous information sharing, it is more important than ever to avoid clumsy embraces that can negatively impact public perceptions. Gaining new insights on this topic will shed light on the current state of hugging in the American workplace, and may help practitioners avoid an awkward or embarrassing social faux pas that could negatively impact both the actors and the organizations they represent.

I.2 Theoretical Framework

This section presents several distinct streams of literature as the theoretical framework to analyze hugging in the workplace. First, *Social Exchange Theory* (SET) (Blau, 1964; Cook, 1978; Emerson, 1962; Homans, 1958; Thibaut & Kelly, 1959) is reviewed to shed light on the effect of power in the decision to reciprocate a hug. Second is a review of the literature on *touch*

as a form of nonverbal communication (Fuller & Simmering, 2011; Hall, 1996; Hornik, 1992; Marler et al., 2011; Simmering, et al., 2013) with a special focus on *hugging* (Derlega, Catanzaro & Lewis, 2001; Dolin & Booth-Butterfield, 1993; Holroyd & Brodsky, 1980; Rabinowitz, 1991). Third is a review of *gender* in the decision to reciprocate a hug (Dolin & Booth-Butterfield, 1993; Holroyd & Brodsky, 1980; Rabinowitz, 1991).

I.3 Overview of This Study

Despite prior research on human touch, there exists little or no research on hugging in a business setting. However, earlier research on Social Exchange Theory (SET) and the use of touch as a form of nonverbal communication indicate that the gender, power, and individual traits of research subjects are important constructs to consider in research on human touch.

This research makes several unique contributions regarding application of Social Exchange Theory to the study of nonverbal communication in the workplace. In particular, it:

(1) is among the first to explore hugging in a workplace context;

(2) explores the role of power in the decision to reciprocate a hug in the workplace;

(3) explores how the gender of exchange partners (M-M and F-F) influences the decision to reciprocate a hug in the workplace;

(4) explores the interaction of power and gender in the decision to reciprocate a workplace hug;

(5) explores whether a research participant's relational competency predicts the decision to reciprocate a hug offered at the outset of a business meeting.

The remainder of this document is structured as follows:

- §2 reviews the literature related to the constructs and theories, as well as the research model and hypotheses that will guide study design;
- §3 describes the research methodology (quasi-experimental design and measures);

- §4 discusses the approach to data analysis and presents results;
- §5 discusses the study's results and presents conclusions.
- §6 discusses contributions and limitations;
- §7 cites references used in this study;
- §8 presents supporting documents not included in the body of this paper.

II LITERATURE REVIEW

II.1 A Review of Social Exchange Theory (SET)

To analyze hugging in the workplace, Social Exchange Theory (SET) (Blau, 1964; Cook & Emerson, 1978; Emerson, 1972; Homans, 1958; Thibaut & Kelly, 1959) is used as an orienting theoretical perspective for understanding a hug between two people in a business relationship, known as *exchange partners*. Although various theorists have voiced different opinions about SET, most would agree that it "involves a series of interactions that generate obligations," and that "social exchange theory (SET) is among the most influential conceptual paradigms for understanding workplace behavior (Cropanzo & Mitchell, 2005, p. 874)."

II.1.1 *The Origins of SET*

Cropanzano & Mitchell (2005) trace the origins of SET back to cultural anthropologist and ethnographer Branislaw Malinowski (1922), who studied circular patterns of exchange among tribal societies on islands in the Pacific Ocean. Malinowski proposed that these social exchange patterns served to reduce conflict and enhance solidarity among groups. In this way, "Rather than a theory that explains precisely the nature of some social phenomenon, social exchange theory is an orienting strategy or perspective that shapes the way social exchange researchers develop theories and conduct research (Lovaglia, 2007)." Thus, adopting this theoretical approach, social exchange is conceptualized as trade of valued resources, which may include both tangible goods such as money and other items of value, and intangible goods such as affection, attention and information, in any combination.

Other scholars believe SET began with Marcel Mauss, sometimes referred to as the "father of modern French anthropology." In 1925, he published Essai sur le don, (released in English in 1954 as *The Gift: Forms and Functions of Exchange in Archaic Societies.*) Homans (1958, p.

598) wrote, “So far as I know, [Mauss’s is] the only theoretical work that makes explicit use of [exchange theory].” As such, some researchers consider it the first systematic analysis of the gift exchange custom, which began before the rise of the Roman Empire and is still observed in some parts of the world today.

According to Mauss, the gift exchange can be understood as a transaction, or series of transactions, that shape personal relationships between individuals and groups. Yet, these gift exchanges are much more than the swapping of goods. They seem to take on a life of their own, forming and upholding moral, mythological, and religious phenomena, as well as the aesthetic, economic, judicial, rhetorical and social structure of aboriginal cultures. Later anthropologists (Firth, 1967; Sahlins, 1972) continued in this tradition, which had earlier been revised and applied to social psychology (e.g., Gouldner, 1960; Homans, 1958; Thibault & Kelley, 1959), and sociology, Blau, 1964).

Although Homans himself states that he drew on the work of Mauss, other theorists trace the genesis of SET to sociologist George Homans with publication of his article, “Social Behavior as Exchange” (1958). Here, the author asserted that “interaction between persons is an exchange of goods, material and non-material (p. 597),” with nonmaterial goods being symbols of approval and prestige. Homans drew inspiration from his friend, behavioral psychologist B.F. Skinner (1953), who likened human behavior to that of an experimental animal such as a pigeon. In the laboratory, the pigeon pecks at a target in its cage, and the psychologist rewards the behavior by feeding the bird corn.

Of course there are some fundamental differences between the operant conditioning actions of pigeons and those of humans. Yet, Homans suggests that just as a bird can be conditioned in the laboratory, two individuals can reinforce each other’s behavior – even though this interpersonal

process is more complex and less understood. Per Homans, the question with humans is not how their behavior was reinforced in the past, but rather how much value their behavior is "getting them now." In its simplest form, SET, shaped by rational choice theory, can be summarized as Profit = Rewards – Cost. By applying this formula, logical human actors are expected to maximize profit, both tangible and intangible (Blau, 1964; Homans, 1961; Thibaut & Kelly, 1959.)

II.1.2 *The Role of Power in SET*

When studying exchange relationships, Blau, 1964; Homans, 1961; Thibaut & Kelly, 1959, identified *power* as a key construct, with power defined as the relative interdependence of both parties. For example, if person A relies on person B for positive results, and person B does not rely on person A, then B is understood to have considerable power over A (Cook & Emerson, 1978).

According to Thibaut and Kelly (1959), supervisors may control not only an employee's financial outcomes, termed *fate control*, but can also exert a great deal of influence over a subordinate's behavior, which is referred to as *behavior control*. This control comes from a supervisor's ability to punish or reward particular types of behaviors. When an employee has the ability to create other options for him or herself, beyond rewards from an employer, this is referred to as *mutual fate control.*

In cases where *mutual fate control* exists, the employer and employee are dependent upon each other to achieve desired financial outcomes (Thibaut and Kelly, 1959). The mutuality of their business relationship gives the employee significant bargaining power s/he might not have in a business relationship where the employer holds all the power. Mutual fate control thus limits the behavioral control that the employer may exert over the employee.

It is important to note that Blau (1964) was among the first theorists to distinguish between social exchange and economic exchange. He theorized that social exchange is based on a relationship that involves unspecified, future obligations. In comparison, economic exchange creates an expectation of an exchange in which the exact nature of future return for contributions is clearly specified.

Gouldner (1960) ties Social Exchange Theory to reciprocity, the assumption that people help those who help them. Within this framework, people consciously or unconsciously keep a mental tally of the social credits accruing to them by helping out others. They also tend to like people who help them and show them affection with the unspoken that others will return affection in the future. In addition, people rarely (if ever) support or assist those who cannot reciprocate in some way either now or in the future.

II.1.3 *The Role of Gender in SET*

"Society rewards and reinforces different types of behavior for men and women." (Eagly, 1987). Additionally, "Prescriptive sex stereotypes stem from men's higher status as compared to women within society (Conway, Pizzamiglio, & Mount, 1996; Eagly & Steffen, 1984; Hoffman & Hurst, 1990; Jackman, 1994; Meeker & Weitzel-O'Neill, 1977; Ridgeway & Bourg, 2004)."

In the U.S., as the percentage of women in the workplace has grown and the gender-based segregation in occupations has decreased, women now personally identify with what were once considered strictly masculine personality traits (Spence & Buckner, 2000; Twenge, 1997) and contemporary society has come to view women as more "masculine" than women of the past (Cejka & Eagly, 1999; Diekman & Eagly, 2000). Nevertheless, societal expectations still prescribe that women exhibit behaviors associated with feminine niceness (e.g., kindness, warmth, and sensitivity to others' needs). Yet, these "feminine" behaviors also connote a

subordinate status to men, (Jackman, 1994; Prentice & Carranza, 2002; Ridgeway, 2001; Rudman & Glick, 2008).

These gender-based stereotypes pose a unique threat to women in business negotiations. A female who projects competence in stereotypically masculine ways (e.g. self-promoting Rudman, 1998); authoritative or directive (Eagly, Makhijani & Klonsky, 1992) runs a far greater risk of social resistance that a male with otherwise comparable individual traits (Carli, 1990; Carli et al., 1995; Eagly et al., 1992; Rudman, 1998; Rudman & Glick, 1999, 2001).

As recently as 2001, researchers Rudman & Glick suggested than in order for a professional woman to convey competence and be as influential as her male counterparts, she must soften behaviors typically associated with male competence by accentuating behaviors traditionally associated with "feminine niceness." Based on this understanding of clear differences in behavioral expectations for men and women, it will be interesting to note how gender and power interact in the decision to reciprocate a hug in a business setting in 2016.

II.2 Nonverbal Communication in Human Interactions

In the second edition of his book *Silent Messages: Implicit Communication of Emotions and Attitudes (1981),* Albert Mehrabian builds on his earlier research on non-verbal communications (1970, 1972) to demonstrate "that only 7% of what we communicate consists of the literal content of the message. The use of one's voice, such as tone, intonation and volume, take up 38% and as much as 55% of communication consists of body language (as cited by Van Vliet, 2012, p. v)." Thus, "body language" is an extremely important element of communication, and well worthy of study.

II.2.1 *Touch as a Form of Nonverbal Communication*

One form of body language is, of course, touch. Rose (1990, p. 315) asserts that "although touch clearly has important functions it is not clear that it plays any sort of one unique role in interpersonal communication." Argyle (1988) and Johnson & Edwards, (1991) also conducted research demonstrating the ambiguity of touch in interpersonal behavior. A review of the literature yields interesting insights into the use of human touch and its effect on those who are touched by another.

II.2.2 *The Use of Touch in the Workplace*

As early as 1976, Fisher et al., (p. 417) wrote that "touch is an essentially positive stimulus for the recipient to the extent that it does not: (a) impose a greater level of intimacy than the recipient desires . . ., or (b) communicate a negative message." Because touch may be used to persuade (Jones & Yarbrough, 1985), obtain compliance with requests (Willis & Hamm, 1980), or generate prosocial behavior (Goldman & Fordyce, 1983), one way to conceptualize touch is as an influence tactic. If touch is conceptualized as an influence tactic, then supervisors who use touch effectively should demonstrate greater interpersonal influence and greater apparent sincerity. Interpersonal influence captures work-related relationship building skill and communication effectiveness, while apparent sincerity assesses the extent to which individuals are honest, open, and forthright (Ferris et al., 2005).

Heaphy (2007) and others (e.g. Blanchard & Johnson, 2003) suggest that managers who use touch effectively are more effective at conveying sincere care for their subordinates and their success, than those who cannot. As a result, managers with higher "touch efficacy" are more likely to gain a variety of benefits including positive, supportive relationships, than peers with

less touch efficacy. Edwards (1984) proposed that "through touch, people will communicate support and caring to each other and thus feel safer and closer to each other (p. 770)."

In a novel experiment conducted in 1984, Crusco & Wetzel examined the effects of two different types of touch, either on the hand or on the shoulder, given by a waitress to a customer in a restaurant. The percentage tip left by the customer was used as a proxy to measure customer satisfaction. Results showed that the tipping rate was significantly higher when the waitress touched the customer, and that the tipping rate did not vary between the two different types of touch, (hand or shoulder) or the gender of the customer. The researchers concluded that the effect of touch can occur without the recipient's awareness, and that males respond similarly to females regarding human touch, as long as the contact is unobtrusive or free of dependency or status implications.

Nevertheless, as recently as 2007, Heaphy reported that "Though touch is fundamental to our nature, the use of touch as a means of building positive organizational relationships is a phenomenon that remains unexplored." In fact, much research in the area of human touch has focused on negative aspects of this behavior, particularly sexual harassment. Indeed, many managers are afraid to use physical touch with their subordinates because they fear this behavior could be perceived as sexual harassment (Richmond & McCroskey, 2004). Yet, Fuller & Simmering (2011) contend that appropriate touch can play a significant role in facilitating positive organizational behavior, particularly between a supervisor and a subordinate. Shotland and Craig (1988) believe that these concerns about appropriate touch being construed as sexual harassment are largely unfounded, because adults generally have the ability to distinguish between behavior associated with sexual interest and behavior that is simply meant to be friendly. Furthermore, certain types of touch -- pats on the back, handshakes, and other forms of

touch commonly used in the workplace can be used legally and appropriately. Fuller & Simmering (2011) agree that appropriate use of touch in the workplace can enhance interpersonal relationships and is related to several indicators of supervisor social effectiveness, including positive, supportive relationships, which may be associated with enhanced results in the workplace.

II.2.3 *The Role of Gender in Human Touch*

Although results from research on human touch have not always been consistent, some findings have been replicated. There is some consensus among earlier publications regarding who received touch in the workplace; female subjects were touched in the workplace more frequently than their male contemporaries (Crusco & Wetzel, 1984; Henley, 1977; Major, 1981; Major et al., 1990).

However, it was not clear whether same-gender or opposite-gender touch was more common in the workplace, because different researchers have reached different conclusions, "owing to methodological problems (Stier & Hall, 1984, p. 440)." Major, et al., (1990) and Willis, et al., (1978) assert that physical contact between opposite-gender individuals was more prevalent, while Stier & Hall (1984) concluded that same-gender touch was more common.

Other studies (Martin & Anderson, 1993; Stier & Hall, 1984; Willis & Rawdon, 1994) on the relationship between gender and touch indicated that male subjects at that time were less comfortable with same-sex touch than were females. Rabinowitz (1991, p. 574) concluded that "Because traditional male gender-role socialization prohibits male-to-male touching except in specific situations, many men in North American culture rarely … use physical contact to convey caring or closeness in male relationships."

These findings are in keeping with earlier research by Heslin & Alper (1983) and Jourard & Rubin (1968) which indicate that women are generally *less* touch-avoidant than men in same-gender encounters, while Anderson & Leibowitz (1978) report women are *more* touch-avoidant than men in opposite-gender encounters (Remland & Jones, 1988). Additionally, Heslin & Alper (1983) showed that in general, women feel more positive about being touched than do men.

II.2.4 *The Role of Power in Human Touch*

It appears there is a connection between proximity of people in a shared space, and their level of comfort during an encounter with another person. In 1964, Hall's research indicated that in the US, "distances of from 6 to 18 inches are typical for intimate interpersonal situations, distances of from 30 to 48 inches are typical of casual personal interaction, distances of from 7 to 12 feet are characteristic of social-consultative situations, and distances of 30 feet and more are characteristic of public interaction situations (Mehrabian, 1969, p. 362.)"

Hall (1996) implies that if a person making an address does not observe these norms, either by being too close or too far away, then the addressee can adopt a negative attitude toward the encounter. Thus, an unexpected hug from another person could violate the norm of socially acceptable distances between people, and therefore be considered undesirable.

Hall further indicates there is an interaction between gender and power in some nonverbal communications: "Higher-status individuals initiated touch that was judged more often to be affectionate and that was more often directed to the arm or shoulder, whereas lower-status individuals initiated more formal touches and hand-shakes. Gender asymmetry in touch was very weak overall, but favored male-to-female over female-to-male touch when the two individuals had equal professional status, (p. 23)."

Henley (1973) proposed that higher status individuals have a touching privilege that they exercise in order to express and maintain their status advantage; and, because men have higher status than women, status is expressed through a man's touch of a woman more than vice versa. In general, lower status individuals permit individuals of higher status to approach quite closely but do not generally encroach upon the personal space of a higher status individual (Hartnett, Baily & Gibson, 1970). Major (1981) draws an analogy between the use of touch and the use of first names in social exchange. Like the use of another individual's first name, physical contact can imply closeness and camaraderie when used reciprocally, or higher status and power when used unilaterally, at times when the recipient does not feel free to reciprocate the gesture.

II.2.5 *Touch in the Workplace*

Cultural awareness is of particular importance to business people who seek to do business with exchange partners of varying ethnic and religious backgrounds. In Platonic, adult relationships, "individuals expressing affection can incur a number of inter-personal risks, especially in nonromantic relationships where opportunities for misattribution on the part of the recipient may be high (Floyd & Voloudakis, 1999.)" Within some societies, certain types of physical contact, such as kissing on the cheeks, are perceived as appropriate or even expected, while in others, the same act is viewed as invasive and unwelcome and may even be forbidden by religious or social tradition.

Cultural awareness is of particular importance to business people who seek to do business with people of varying ethnic and religious backgrounds. The risk of claims of sexual harassment is another factor to consider when determining whether or not a hug is appropriate in a business setting. "Officially, the Equal Employment Opportunity Commission (EEOC) says that sexual

harassment includes 'unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature'" (Rosner et al., 2001, p. 369).

In general, the courts have determined if a particular behavior constitutes harassment by asking if a "reasonable person" would consider it to be so. Additionally, when the alleged victim is female, some courts have held that the standard must be whether a "reasonable woman" would consider the questionable behavior unwelcome and sexual in nature.

Simmering, et al., (2013) further notes that "for physical touch to be seen as contributing to a hostile work environment, it must be intentional and involve 'intimate body areas' (U.S. EEOC, 1990: p. 8), or be performed in 'an offensive manner' (U.S. EEOC, 1990: p. 11). Therefore, many common types of physical touch (e.g., high fives, handshakes, pats on the back) would not normally be characterized as constituting sexual harassment. This creates the potential for touch to be used in the workplace in a positive fashion (p. 134).

Prior research (Hornik, 1992) suggests intentional touch frequently has a positive effect on consumers; female shoppers who were touched by a confederate, posing as an employee as they entered a store, spent more time in-store. Yet, for accidental interpersonal touching, when women - and to a lesser extent men - are brushed by another consumer in a store, they are likely to cease considering the product and may leave.

According to a US survey (*PR Newswire*, 2011) sponsored by the Menlo Park, California-based advertising, PR, and marketing recruiting firm, The Creative Group, "three in 10 advertising and marketing executives said hugging colleagues is at least somewhat common in the United States, and nearly one-quarter (24 percent) said it's not out of the ordinary to greet clients that way." Nevertheless, many leaders in the field do not personally engage in the practice. Seven in ten executives interviewed reported that "embracing coworkers in

a business setting is inappropriate; 76 percent said they rarely, if ever, hug clients or business contacts."

For this study, *The Creative Group* hired an independent research firm that did over 500 telephone interviews (*PR Newswire,* 2011). Participants were comprised of approximately 375 randomly selected marketing executives from firms with 100 or more employees, and about 125 randomly selected advertising executives from agencies with 20 or more employees. For this survey, research volunteers were asked, "In general, how common is it for you to greet the following individuals with a hug instead of a handshake in the United States?" Their responses reveal:

Table 1 Hugging v. Handshake

Responses to the question: "In general, how common is it for you to greet the following individuals with a hug instead of a handshake in the United States?"	Coworker	Client/ Business Contact
Very common if you know the individual well or it has been a while since you have seen him/her	7%	3%
Somewhat common if you know the individual well or it has been a while since you have seen him/her	23%	21%
Not common at all; hugging is rarely appropriate in a business setting	57%	61%
Never; hugging is not appropriate in a business setting	13%	15%
Total	100%	100%

These results suggest that hugging colleagues is probably more common in advertising agencies than in corporate marketing environments: 48 percent of the advertising executives interviewed said it is somewhat or very common to hug coworkers, compared to 29 percent of their counterparts in corporate marketing. In addition, 41 percent of advertising executives reported embracing clients or business contacts, while only 24 percent of marketing executives reported engaging in this behavior.

According to Donna Farrugia, Executive Director of the organization sponsoring the survey on hugging, “When it comes to business greetings, it’s important to read your audience and the environment well. It’s always best to err on the formal side to avoid making anyone feel uncomfortable.” Business people even run the risk of having others perceive an embrace as a form of sexual harassment. Given the potential negative consequences of an inappropriate hug, answers to the research question can provide valuable information about the decision to hug or not, in a business setting.

When considering factors that influence the decision to hug in the workplace, it is important to note that younger employees may well be more comfortable with physical touch than previous generations. This sociological phenomenon is particularly interesting because the US has not traditionally been a very “tactile culture,” (Simmering, et al., 2013). Nevertheless, Kershaw (2009) notes that among many American youth from a wide range of ethnic backgrounds, hugging is replacing more traditional forms of greetings for male-male, male-female and female-female encounters, which now tend to be entirely nonverbal.

Since most undergraduate students are between 18-25 years of age, and data was gathered at a university campus setting, it is possible that the subjects in this age range have adopted the emerging “hugging as the standard greeting” trend observed in interactions between youth and young adults.

III RESEARCH METHODOLOGY

This section presents the methodology employed to test predictions about the effect of gender and power in the decision to reciprocate a hug, or not, in a business setting.

III.1 Experimental Design

"Experimental designs are often touted as the most 'rigorous' of all research designs or, … the 'gold standard' against which all other designs are judged." (Trochim, W. n.d. *Research Methods Knowledge Base.* Retrieved from http://www.socialresearchmethods.net/kb/desexper.php on 2-15-2016).If the study is well designed and implemented then the experiment is "probably the strongest design with respect to internal validity" which is required to establish a cause-effect or causal relationship between an experimental treatment and outcomes.

The limitation of experimental design is that it often limits external validity, or the ability to generalize results to the "real world." This is due to use of artificial experimental contexts, thereby sacrificing external validity (reproducibility in other settings) to achieve greater internal validity by establishing a high degree of correlation between the treatment and the observed behavior of the subject. In experimental design, it may be necessary to balance a high level of internal validity, required to minimize the possibility of alternative explanations, and a high level of external validity, needed to support reproducibility in other contexts.

Trochim (2008) presents the following diagram as a logic tree to identify the experimental design:

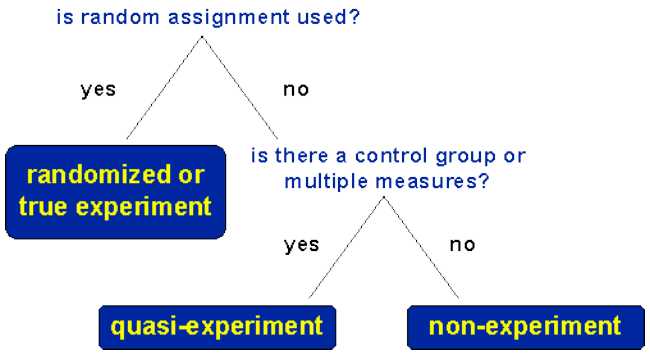


Figure 1 Logic Tree for Experimental Design

In addition to a true experimental design, a researcher may also choose to adopt either a quasi-experimental design, or a non-experimental approach to an investigation. A true experiment requires random assignment of subjects, while research that does not meet the criteria for either a true or quasi-experimental design are categorized as non-experimental. This study qualifies as a 2x2 factorial quasi-experiment with a non-equivalent group design (NEGD) employing post-test only measurements. A graphic representation of the 2x2 factorial design is presented in Figure 2 below.

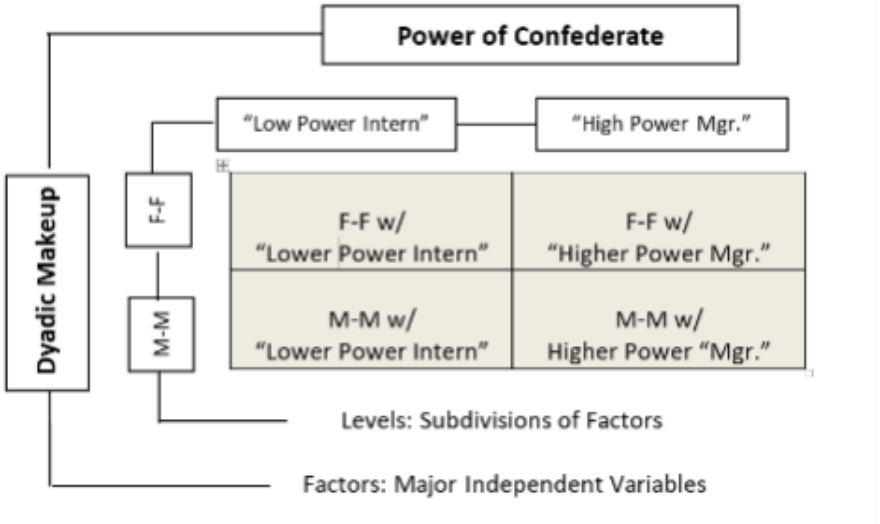


Figure 2 Schematic of 2x2

Given the unique features of a quasi-experimental methodology, this approach was adopted to study factors that influence the decision to reciprocate a hug in the workplace. Drawing on Social Exchange (Blau, 1964; Cook & Emerson, 1978; Homans, 1958, 1961; Thibaut & Kelly, 1959) for a theory-based analysis of an encounter between two exchange partners, the independent variable, ***power***, was manipulated to determine whether relative social power is a significant factor in the decision to reciprocate a hug offered by an exchange partner at the outset of a business meeting. To explore the role of ***gender*** in this encounter, the researcher matched female research participants with a female confederate, and male research participants with a male confederate who offered an unexpected hug at the outset of a mock business negotiation.

III.2 Constructs Used

The constructs shown in Table 1 were used to study the effects of power and gender on the decision to reciprocate an unexpected hug offered by a confederate playing the role of an exchange partner in an important business negotiation. For a full list of the SPSS-based questions used to gather related data, please see Appendix 7.3.5. A brief description of variables follows.

Table 2 Constructs Used

Variable	Description of Variable
Manipulated Variable: Gender Composition of Dyad	Subjects self-identified as male or female and were assigned to either the male or female confederate so that all dyads were either M-M or F-F.
Manipulated Variable: Power *(Confederate has either = or > Power than the research participant*)	The mutual interdependence of both parties in an exchange relationship, e.g.: If person A relies on person B for positive results, and person B does not rely on person A, then B is understand to have considerable power over A. Power (status) was manipulated by having the confederate present as either a manager of higher power, or a student intern (peer) of equal power.
Power *(Status as its proxy)*	The position a person occupies in a particular setting. In this study, status served as a proxy for power.
IV: Global Competency Inventory (GCI)	GCI is a multifaceted, individual level construct that is broken down into several distinct constructs. Analysis in this study is limited to Emotional Sensitivity and Social Flexibility scales.

IV: Emotional Sensitivity (ES) ***(a GCI Construct)***	Capacity to read emotions and understand feelings and challenges of others. This is the first of two GCI constructs used in this study.
IV: Social Flexibility (SF) ***(a GCI Construct)***	Capacity to regulate and adapt one's behaviors to fit in and build positive relationships with others. This is the second of two GCI constructs used.
DV: Degree of Hug Reciprocation	Measured using a five point scale (Appendix 7.3.3.b) with (1) denoting no hug and (5) a full embrace. This scale was based on Barnlund's (1975) research that delineates "Areas of Contact" in human encounters.
DV: Quality of Communication Experience *(QCE)*	QCE is a multifaceted, individual level construct that involves cognitive, behavioral, and affective elements. It is broken down into three distinct constructs: Clarity, Comfort and Responsiveness.
DV: Comfort *(a QCE Construct)*	A condition of positive affect of ease and pleasantness when interacting with each other (Liu et al., 2010, p.470).
DV: Responsiveness ***(a QCE Construct)***	The behavioral aspect of the communication experience which indicates the norm of coordination (Liu et al., 2010, p.470).
Control Variables	Calculations were made using Age and Years in US as controls.

III.3 Basic Research Model

Figure 3 presents a schematic of the basic research model.

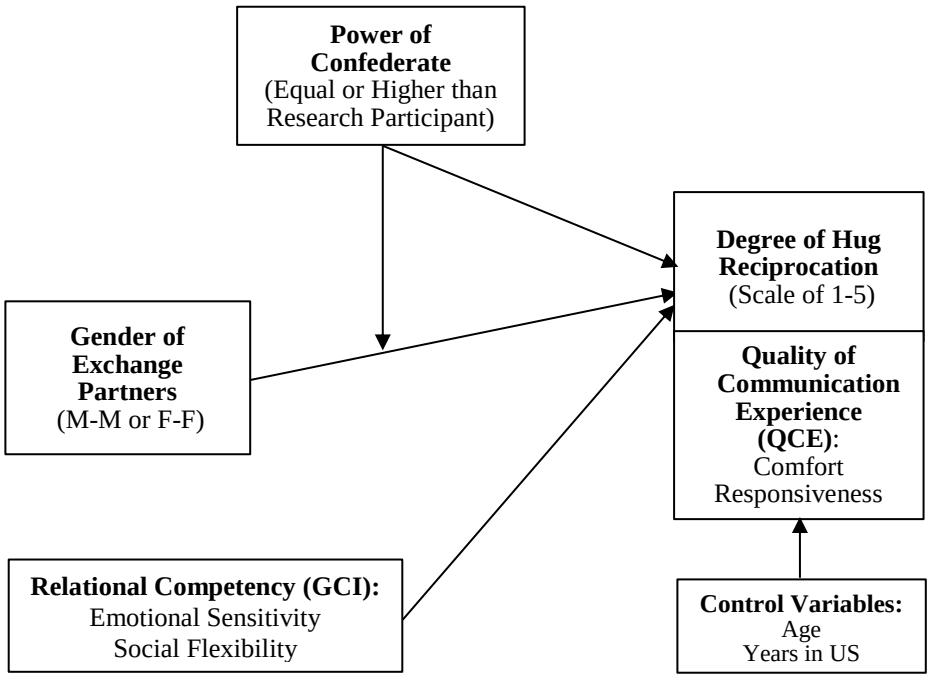


Figure 3 Basic Research Model

III.4 Developing Hypotheses

Based on the findings in the literature review, hypotheses were developed about reciprocation of a hug, in relationship to the effect of: (1) the manipulated variable, Power, (with status used as

a proxy for power); (2) the Gender composition of the research participant-confederate dyad; (3) the interaction of Power and Gender; (4) the relationship between reciprocation of a hug and the participant's assessment of the quality of communication during the encounter.

III.4.1 *Hypothesis 1*

Within SET is the belief that a person of lower power will seek to garner favor with the exchange partner of higher power (status) in order to gain future, unspecified rewards from the more powerful individual, who has access to resources that could help the exchange partner in the present or future. In short, Blau (1964) posited that one will perform a rational, economic calculus and then seek out and foster relationships predicated upon expectation of reciprocity.

The first hypothesis was developed based on SET, which suggests that an exchange partner of lower power (status) will ingratiate him or herself to a person of higher status (power):

H_1: Research participants are more likely to reciprocate a hug offered in a business setting by an exchange partner of higher power (status) than by an exchange partner of equal power (peer.)

III.4.2 *Hypothesis 2*

In 1968, Jourard & Rubin demonstrated that women are generally *less* touch-avoidant than men in same-gender encounters, while Anderson & Leibowitz (1978) report women are *more* touch-avoidant than men in opposite-gender encounters. This is consistent with the findings of other researchers (Heslin & Nguyen, 1983; Jourard & Rubin (1968); Martin & Anderson, 1993; Rabinowitz, 1991; Stier and Hall, 1984; Willis & Rawdon, 1994) who concluded that women in the 60's through the 90's were far more comfortable with same-gender touch than were men.

Therefore, it would be reasonable to hypothesize that, despite a recent increase in hugging among youth of both genders (Kershaw, 2009), females today are still more likely than males to reciprocate a hug offered by a same-gender exchange partner, as posited in H_2 below:

H_2: Female research participants are more likely than male participants to reciprocate a hug offered in a business setting by a same-gender exchange partner.

III.4.3 *Hypothesis 3*

For many years, social scientists have studied social influence behavior used by individuals in organizations where they aspire to achieve desired outcomes such as positive performance reviews, higher pay and promotions (e.g. Gotsis & Kortezi 2010; Kipnis et al. 1980; Sussman et al. 2002). Such influence tactics have been categorized by Kipnis et al. 1980 as either *soft* or *hard.* Soft tactics involve less aggressive, more subtle and indirect forms of influence that do not threaten the influence target's sense of power and control (Farmer et al. 1997, Kipnis et al. 1980). Ingratiating one's self to the boss is a typical example of a soft influence tactic. Hard tactics involve a more explicit challenge to an influence target's sense of power and control, with examples being directness and assertiveness, dominance (Kipnis et al. 1980) and even insults (Carothers & Allen, 1999).

In relationships where the power differential between supervisor and employee is perceived as high, the employee tends to use soft tactics as a primary influence strategy (Farmer et al., 1997). In contrast, when the perceived power differential is low, rather than high, the employee is more likely to use hard tactics as a primary influence strategy (Kipnis et al. 1980).

Research suggests that, in addition to the perceived power differential, gender norms also dictate a person's decision to employ soft or hard influence tactics. Studies have demonstrated that women are more likely than men to use soft influence tactics, and men are more likely than women to use hard influence tactics (Carothers & Allen 1999; Oakley 2000; Rudman 1998; Singh et al. 2002.)

Consistent with earlier findings, recent research by Capezio et al. (2017) demonstrated that in leader-follower relationships, gender is a significant factor in how followers respond to

Machiavellian leaders. As in other organizational settings, women tend to ingratiate themselves to their superior, while men do not; and men tend to be assertive while women do not. Thus, it is reasonable to posit that women are more sensitive to a power differential than men, and that they would be more likely to ingratiate themselves to "the boss" by reciprocating a hug, even if it was an unwelcome gesture of greeting. This reasoning gave rise to the following hypothesis about the decision to reciprocate a hug in a work-related scenario:

H_3: The gender of the research participant moderates the effect of power of the exchange partner such that power has a greater effect on reciprocation of the hug for female participants in a business setting than for male participants.

III.4.4 *Hypothesis 4*

Mendenhall, Stevens, Bird & Oddou (2010) of The Kozai Group demonstrated that, in order to be successful in an overseas assignment, business professionals must have a high level of competency in three dimensions: Perception Management, Relationship Management, and Self-Management. To assess an individual's skill in these three dimensions, The Kozai Group developed a proprietary instrument, the Global Competency Index (GCI, Appendix 7.2.2), to measure three broad dimensions of one's capacity to interact and function effectively in culturally complex contexts. Within the GCI, Relationship Management is conceptualized as having five distinct dimensions: (1) relationship interest, (2) interpersonal engagement, (3) emotional sensitivity, (4) self-awareness, and (5) social flexibility. In this study, use of the GCI is limited to two constructs, ES and SF, because upon review of the GCI instrument, they appeared most relevant to a research participant's decision to reciprocate a hug.

Emotional Sensitivity (ES) refers to the capacity to read the emotions and understand the feelings and concerns of others, as well as respond with empathy to the circumstances

individuals face. Emotional sensitivity is critical to effectiveness in complex business relationships because it contributes to an individual's ability to:

show appropriate respect to others (Arthur & Bennett, 1995, 1997; Hudson & Inkson, 2006; Kealey, 1994; Moro Bueno & Tubbs, 2004);
display interpersonal and cultural empathy (Arthur & Bennett, 1995, 1997; Cui & Van Den Berg, 1991; Hudson & Inkson, 2006; Kealey, 1994; Mendenhall & Osland, 2002; Moro Bueno & Tubbs, 2004);
show tolerance for differences in others (Arthur & Bennett, 1995, 1997; Hudson & Inkson, 2006; Kealey, 1994; Selmer, 1999, 2001).

Social Flexibility (SF) is defined as a person's capacity to regulate and adapt one's behavior to fit in and build positive relationship with others. "High social flexibility helps people adjust their behaviors to fit the situation and to favorably impress and connect with people they do not know well. Social flexibility also helps people better influence others to adapt their behaviors to fit the social situation." (Mendelhall et al., 2010, p. 13.)

It would seem logical that in order to show respect for the exchange partner; exhibit interpersonal and cultural empathy; and show acceptance of different behaviors in others; persons with highly developed ES would be more likely than persons with a less-developed ES to reciprocate an unexpected hug offered at the outset of a business meeting.

It would seem equally logical that persons with highly developed SF would be less "thrown" by an unexpected hug than persons with a less-developed SF. Therefore, one could predict that persons who score high in the SF domain would quickly reciprocate a hug in order to fit it and be accepted by the exchange partner, as well as to favorably impress and connect with the person offering the hug.

H_4: Relational Competency of the research participant predicts reciprocation of a hug.

H_{4A}: More emotionally sensitive people are more likely to fully reciprocate a hug offered in a business setting than less emotionally sensitive people.

H_{4B}: More socially flexible people are more likely to fully reciprocate a hug offered in a business setting than less socially flexible people.

In order to test these hypotheses, the following data collection strategy was employed.

III.5 Data Collection Strategy

Using Soper's on-line A-priori Sample Size Calculator for Multiple Regression (Roper, D., n.d. Retrieved from http://www.danielsoper.com/statcalc/calculator.aspx?id=1) with anticipated effect size (f2) = .15, which is small; desired statistical power level = 0.8; number of predictors = 3; and a probability level = 0.05 yielded minimum sample size n = 76. To ensure a sufficiently large sample size after cleaning the data, the experiment was run so that n =152 for data collected.

III.6 Discussion of Measures Used

III.7 Quality of Communications Experience Measure (QCE)

To gain insight into the relationship between reciprocating a hug in the workplace and the quality of communication experienced by the research participant, the Quality of Communication Experience (QCE) instrument (Liu, Stahl, & Chua, 2010) was administered to measure the constructs of Comfort, Clarity and Responsiveness in an interpersonal exchange. (See Appendix 7.3.1 to view validated measure.)

III.7.1 *Global Competency Inventory (GCI)*

The Global Competency Inventory (GCI) developed by the Kozai Group (Mendenhall, et al., 2010) was used to measure the research participant's Emotional Sensitivity (ES) and Social Flexibility (SF) as predictors in the decision to reciprocate a hug or not. (See Appendix 7.3.2 to view elements of validated measure.)

III.8 Procedures

III.8.1 *An Overview of the Experiment*

To test these hypotheses, the researcher ran a quasi-experiment at Georgia State University, Robinson College of Business, located in downtown Atlanta. Before the experiment began, she met individually with each potential research participant in the "intake room" to discuss the experiment before inviting the potential subject to sign an Informed Consent Form (Appendix 7.1.3). The document clearly stated that there was an element of deception in the scenario, and that the encounter would be recorded by an audio/visual camera.

After the research participant signed the Informed Consent Form, the researcher instructed the participant to read the written research scenario (Appendix 7.1.4.a or b) which set the stage for a "second meeting" between a "representative" of a local business (played by a confederate) and a "leader of a student organization" (played by the research participant) trying to "close a deal" on a proposal s/he presented earlier to the "company representative."

The researcher led the participant to a nearby office, where the confederate was waiting at a desk behind a closed door for the "second meeting." The researcher instructed the student to knock on the door and wait for the "business representative" to answer. When the confederate heard the knock, s/he turned on an audio-video camera before inviting the student to come into the office. When the participant entered the office, the confederate offered the research participant a hug, rather than the traditional handshake extended at the outset of most business meetings in the US.

After the confederate offered the participant a hug, s/he pretended to take an important phone call. The confederate asked the participant to step into the hall for just a moment to allow for privacy. At this point, the researcher met the participant at the office door and announced "This concludes the experiment."

The researcher then invited the participant to return to the initial "intake room" to answer a series of questions administered on a secure computer. Afterwards, the participant was given a written statement explaining the purpose of the experiment (Appendix 7.1.5) and the nature of the deception. The researcher addressed any questions or concerns that arose, to ensure that the experiment had not upset the participant in any way. When the research participant was satisfied with the explanation, the researcher paid the student the $10 honorarium, thanked the participant, and walked him or her to the exit.

III.8.2 *Recruiting Confederates and Research Participants*

Both a male and a female confederate of similar age and ethnic background were recruited using the flyer in Appendix 7.1.1. Research participants were recruited via flyers (Appendix 7.1.2) posted throughout public spaces at the university; distributing flyers in GSU classes taught by Business School professors; and by posting flyers in restaurants, coffee shops, houses of worship and other public bulletin boards near the university.

Those interested in participating in this research project were instructed to contact the researcher via phone or e-mail for an initial intake to ensure they met inclusion criteria. They then scheduled a time to meet in person with the researcher on campus at the Robinson College of Business. Occasionally, potential participants received word-of-mouth information about the study and simply “showed up” on site with the hope that there would be availability in the researcher’s schedule for them to participate.

To determine if research participants had heard about the true nature of the experiment, the researcher casually inquired about this during the intake session with all participants. All of them said, “No” before the experiment, although 5 participants (3%) admitted a friend told them it was fun and there was a surprise and they should participate.

To address the likelihood of a social desirability bias during a face-to-face meeting, the final item on the questionnaire asked "Did you hear anything about the true nature of this research study BEFORE you participated in the study today?" A total of 90% of research participants responded "No" in the questionnaire while 10% responded "Maybe" or Yes" or did not respond to the question. Running a non-parametric Related Samples Wilcoxon Signed Rank Test revealed that there was no statistical difference in the results of the "Yes" samples and the "No" samples, indicating it was not necessary to eliminate the "Yes" responders from the experiment.

III.8.3 *Manipulation Check*

When research participants met with the researcher to be briefed on the research scenario, they were told they would be meeting for the second time with a company representative to review a proposal they had presented earlier – with the intention of closing on the deal. In actuality, this was the first and only interaction between research participant and a confederate playing the role of a company representative. Since the manipulated variable for this experiment was power of the "hugger" (with social status as its proxy), the confederate played either the role of a peer (student intern in a local Public Relations firm) or a person of greater power (Manager of PR at a local firm).

When the confederate played the role of a peer (student intern), the written scenario stated that the "student intern" did ***not*** have the power to approve or reject the participant's proposal. Instead, s/he was simply gathering information to be "passed along to the decision maker" - a "person of higher rank" within the company. When the confederate played the role of a person of higher status (Manager of PR), the written scenario stated that the Manager ***did have*** the power to approve or reject the research participant's proposal.

To conduct a manipulation check (Sigall & Mills, 1998), the researcher asked participants in the pilot if they could recall the title of their role, as well as that of the confederate. All of them stated they could, and that they understood their status relative to the confederate. They were also able to recall that the "peer" confederate did not have decision-making authority, while the "manager" did.

To further test the effect of the manipulation of the power (status) variable, the questionnaire contained an item asking if participants could remember the role of the confederate. Responding to a free form question, 86 participants (57%) could recall the title of the confederate, while 64 (43%) could not. Since it was quite conceivable that the manipulation could have been effective even with participants who could not recall the exact title, the researcher ran all calculations for both n=148 (all research participants who completed the intake survey) and n=86 (those who "passed" the manipulation check by entering the title of the confederate in a freeform response.)

III.8.4 *Data Collection Procedures*

Following the encounter, research participants answered questions about their experience online via an anonymous online Qualtrics survey run on a secure computer. The researcher was present to answer any questions the student might have regarding the survey. A summary of the measurement instrument is presented in Table 3 below. (The full questionnaire can be found in Appendix 7.3.6.)

Table 3 Summary of the Measurement Instrument

Question(s)	Objective	Style	Comments/Sources
1	Welcome and instructions	Comment	Not a question. Formatting forced by Qualtrics.
2-7	Demographics	Selection from predefined list or freeform narrative	N/A
8	Degree of Reciprocation of Hug	5-point scale.	Barlund (1975):

9-31	Quality of Communication Experience	7-point Likert scales w multiple measures.	QCE: Liu et al. (7.2.1)
32-53	Global Competency Inventory (GCI)	7-point Likert scales w multiple measures.	AKA Kozai Group Measure (7.2.2)
54	Manipulation check	Question with freeform response:	Q: Do you remember the role of the person you encountered?
55	Determine if participants heard about the true nature of the experiment beforehand	Yes/No	In person follow-up question(s) by researcher when response was not NO.

III.9 The Debrief

Following completion of the survey, the researcher debriefed participants by asking them to read the debriefing script (Appendix 7.2.4). After the debriefing, the researcher requested that participants not discuss the true nature of the research with others so as not to bias the results with future participants who already knew the "surprise" in the experiment. In cases where the respondent did not enter "no" in questions 55, the researcher asked follow-up questions to determine if the research participant's responses should be included in the analysis.

When the research participants were questioned by the researcher about what they had heard about the research, they all said they heard there was a surprise – but no one admitted to knowing the precise nature of the surprise. A few said they heard the experiment was very short and two said they heard it was about "body language." Some admitted knowing that the actors were paid by the researcher, but that fact would not likely change the results of the experiment, because all participants understood that this was a fictitious scenario and not an actual business negotiation. Therefore, none of the subjects were dropped for knowing too much about the research ahead of time.

IV ANALYSIS AND RESULTS

The data (n=150 and n=86) were analyzed to reveal descriptive statistics. (Please see Appendix 7.4 and 7.5 for full results.) Results of hypothesis testing and post hoc analyses are presented in Figures 4a and 4b below.

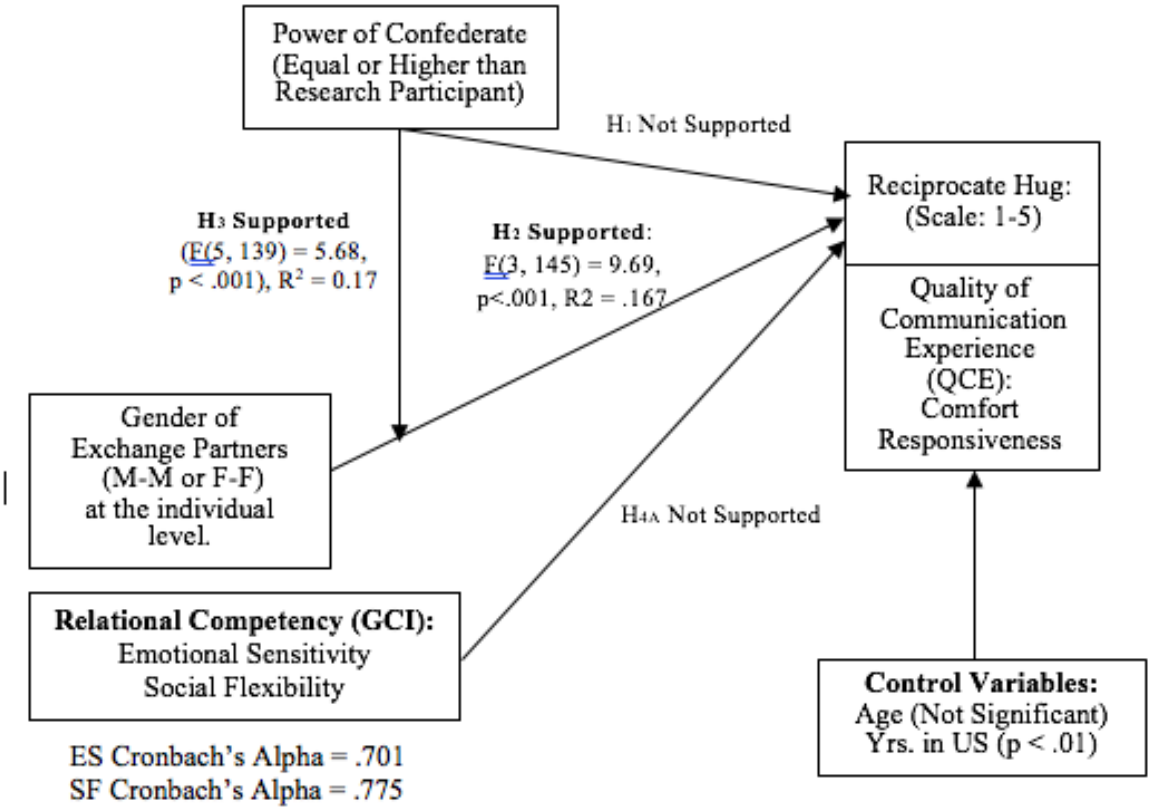


Figure 4 Research Model with Results (n=150)

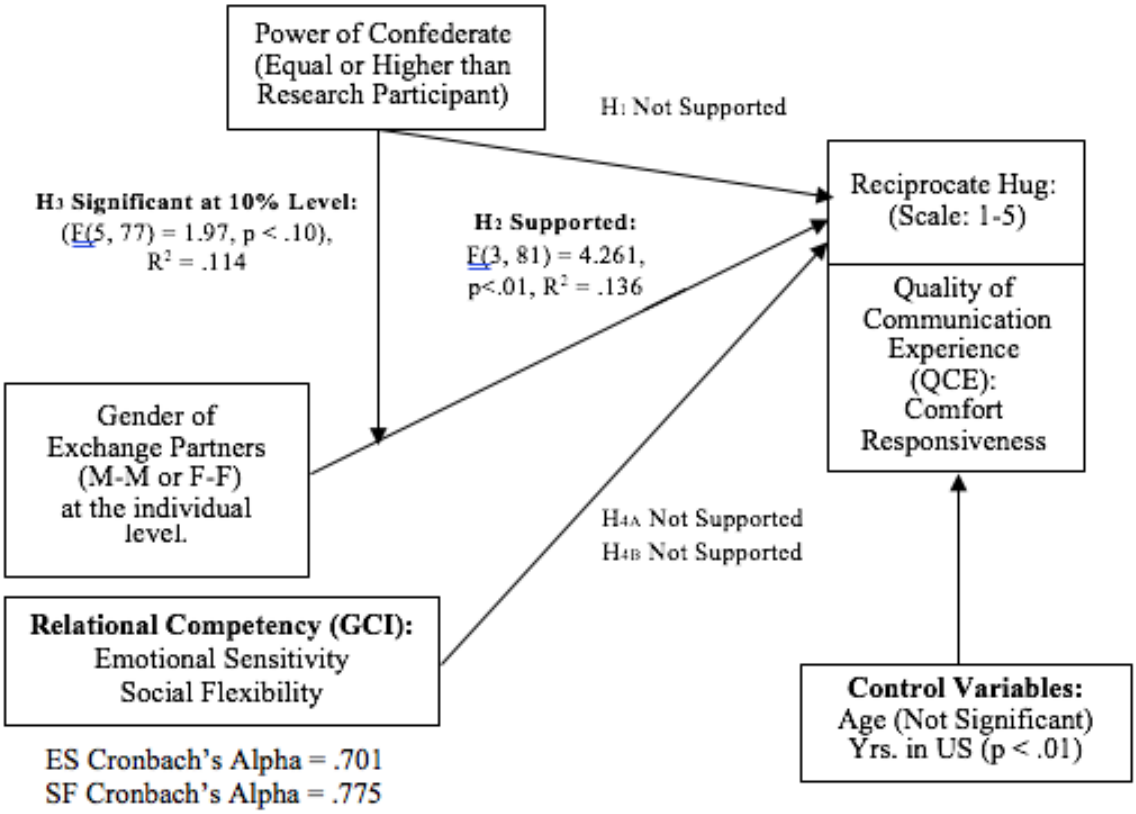


Figure 5 Research Model with Results (n=86)

IV.1 Descriptive Statistics

Key descriptive statistics for both n=150 and n=86 follow.

IV.1.1 *Gender & Power*

The ***total*** number of research participants were divided into four groups, where n=150. Forty-nine percent (49%) of the research participants self-identified as male, and 51% as female.

Table 4 Total Number of Participants per Treatment Condition (n=150)

Gender	Intern with Same Power as Subject	Manager with Greater Power	Total Count	Total (%)
Male	37	36	71	49
Female	40	37	75	51
TOTAL	77	73	150	100

In an attempt to determine if the manipulation of the variable for Power (status) was effective, the analysis was conducted using the data for all participants (n=150 above) as well as with only those participants (n=86 below) who passed the manipulation check, i.e., could correctly recall the status (role or title) of the confederate in a freeform format.

Table 5 Number of Participants per Treatment Condition Who Passed Manipulate Check (n=86)

Gender	Intern with Same Power as Subject	Manager with Greater Power	Total Count	Total (%)
Male	27	25	52	60
Female	16	18	34	40
TOTAL	43	43	86	100

IV.1.2 *Age Distribution and Years in the United States*

As presented in Table 5a below, the age of participants in the full sample (n=150) ranged from 18 to 71 years of age, with a mean of 23 years, S.D. = 31.2. The number of years spent living in the U.S. ranged from less than one year to 71 years, with a mean of 23 years in the U.S, S.D. = 15.1.

Table 6 Descriptive Statistics for Control Variables (n=150)

	n	Min.	Max.	Mean	S.D.
Age of Participant	150	18	71	23	31.2
Years Living in the US	150	1	71	23.9	15.1

As presented in Table 5b below, the age of participants in the smaller sample (n=86) again ranged from 18 to 71 years of age, with a slightly lower mean age of 22.7 years and slightly smaller S.D. = 29.1. The number of years spent living in the U.S. ranged from less than one year to 71 years, with a mean of 22.8 years in the U.S, S.D. = 14.3. Please see Appendices 7.4.1 and 7.4.2 for supporting information.

Table 7 Descriptive Statistics for Control Variables (n=86)

	n	Min.	Max.	Mean	S.D.
Age of Participant	86	18	71	22.7	29.1
Years Living in the US	86	1	71	22.8	14.3

IV.1.3 *Ethnicity, Country of Birth and Highest Level of Formal Education*

For n=150, 77 (51.3%) of research participants identified as African American; 30 (20%) as Asian; 11 (7.3%) as mixed ethnicity; 5 (3.3%) as White of Hispanic origin; 23 (15.3%) as White, not of Hispanic origin; and 4 (2.7%) as "Other" ethnicity. Participants in the full sample reported being born in 32 different countries, with 67.3% born in the USA; 5.3% born in India; 2% born in China, Nigeria or South Korea; and 1.3% born in Iran, Jamaica, Japan, Pakistan or Vietnam.

For n = 86, 46 (53.5%) of research participants identified as African American; 18 (20.9%) as Asian; 6 (7%) as mixed ethnicity; 4 (4.7%) as White of Hispanic origin; 11 (12.8%) as White, not of Hispanic origin; and 1 (1.2%) as "Other" ethnicity. Participants in this smaller sample reported being born in 20 different countries, with 60% born in the US; 7% born in India; 2.3% in Pakistan or South Korea; and 1.2% born in Bulgaria, Canada, Columbia, Germany, Haiti, Honduras, Iran, Japan, Kenya, Nigeria, Taiwan, Turkey, Venezuela and Vietnam. For supporting information please see Appendix 7.4.3.

Regarding Highest Level of Formal Education for the full sample (n=150), 70 (46.7%) completed high school or received a GED Certificate; 46 (30.7%) reported completing or being enrolled in a Bachelor's Degree program; 23 (15.3%) reported completing or being enrolled in a Master's Degree program; and 11 (7.3%) reported completing or being enrolled in a Doctoral program.

For the smaller sample of participants passing the manipulation check (n=86), 40 (46.5%) completed high school or received a GED Certificate; 28 (32.6%) reported completing or being enrolled in a Bachelor's Degree program; 11 (12.8%) reported completing or being enrolled in a Master's Degree program; and 7 (8.1%) reported completing or being enrolled in a Doctoral program. Please see Appendix 7.4.3 for supporting information.

IV.2 Hypothesis Testing

Since hugging can be conceived of as Areas of Contact and Interception (Barnlund, 1975, Appendix 7.3.3.a), rather than a binary (Y/N) response, participants were asked to respond to the question "Did you hug the other party? Please rate the "Degree of Hug": 1 = No; 2 = A little; 3 = Somewhat; 4 = Not quite a full hug; 5 = Full hug. To corroborate the self-reported rating of Degree of Hug Reciprocation with the coding scale, the researcher reviewed the videotape of random encounters and almost universally concurred with the rating the research participant chose. Please see Appendix 7.3.3.b for photographs used to code Degree of Hug Reciprocation.

Multiple regression analyses were conducted for hypothesis and post hoc testing, with results for H_1 in Section 4.1; H_2 in Section 4.2; H_3 in Section 4.3; and $H_{4A\&B}$ in Section 4.4.

IV.2.1 *Testing H_1 and Post Hoc Analyses (n=150 and n=86)*

Section 4.2.1.a presents results of testing H_1 for n=150 and n=86; Section 4.2.1.b presents results of a post-hoc analysis (n=150 and n=86) of the Confederate's Power (status) as a predictor of the *Comfort* construct in the QCE measure; and 4.2.1.c present results of a post-hoc analysis (n=150 and n=86) of the Confederate's Power (status) as a predictor of *Responsiveness* respectively.

IV.2.1.1 Testing H_1: Power of Confederate Predicts Degree of Hug Reciprocation

A multiple linear regression analysis was conducted to test if an exchange partner is more likely to reciprocate a hug offered in a business setting by a person of higher power (status) than by an exchange partner of equal power (peer), as suggested by the literature on Social Exchange Theory and postulated in H_1 below:

H_1: Research participants are more likely to reciprocate a hug offered in a business setting by an exchange partner of higher power (status) than by an exchange partner of equal power (peer.)

The analysis revealed that for n=150, a nonsignificant regression equation was found: ($F(3, 141) = 1.47$, $p < .23$), $R^2 = .03$. Similarly, for n=86, a nonsignificant regression equation was found: ($F(3, 79) = 1.5$, $p < .23$), $R^2 = .05$. (Please see Appendices 7.5.1.$a_{1\&2}$ for detailed results of testing H_1 with n=150 and n=86.) Therefore, **H_1 is not supported for either n=150 or n=86.**

IV.2.1.2 Post Hoc Analysis: Power of Confederate Predicts Comfort (QCE)

A multiple linear regression analysis was conducted to test if the Power (status) of the confederate predicts *Comfort* (a measure of Quality of Communication Experience, QCE). For n=150, a nonsignificant regression equation was found: ($F(3, 142) = .44$, $p < .80$), $R^2 = .006$. Similarly, for n=86, a nonsignificant regression equation was found: ($F(3, 79) = 1.5$, $p < .73$), $R^2 = .016$. (Please see Appendices 7.5.1.$b_{1\&2}$ for detailed results of the analysis.) Results reveal that ***Power of the confederate does not predict Comfort for n=150 or n=86.***

IV.2.1.3 Post Hoc Analysis: Power of Confederate Predicts Responsiveness (QCE)

A post hoc multiple regression analysis was conducted to test if Power (status) of the Confederate predicts *Responsiveness* (QCE). For n=150, a result significant at the .08 level was found: ($F(3, 142) = 2.281$, $p < .082$), $R^2 = .046$. Participants' predicted Responsiveness is equal

to 5.72 - .057 (Years in US) + .651 (Power of Confederate) where Power of Confederate is coded as 1= Intern and 2 = Manager.

Similarly for n=86, a result significant at the .08 level was found: ($F(3, 80) = 2.332$, $p < .08$), $R^2 = .08$. Participants' predicted Responsiveness is equal to 5.63 - .097 (Years in US) + 1.193 (Power of Confederate) where Power of Confederate is coded as 1= Intern, 2 = Manager. Please see Appendices 7.5.1.$c_{1\&2}$ for detailed results of the analysis. The results reveal that ***Power of the confederate predicts Responsiveness at the 10% level for both n=150 and n=86.***

IV.2.2 *Testing H_2 and Related Post Hoc Analyses*

Section 4.2.2 is divided into three sections. Section 4.2.2.a presents the results of testing H_2: Gender is a predictor of hug reciprocation; Section 4.2.2.b presents the results of a post hoc analysis of Gender as a predictor of the *Comfort* construct in the QCE measure; and Section 4.2.2.c presents the results of a post-hoc analysis of Gender as a predictor of the *Responsiveness* construct in the QCE measure.

IV.2.2.1 Testing H_2: Gender Predicts Degree of Hug Reciprocation

A multiple linear regression analysis was conducted to test H_2: Gender composition of the research participant-confederate dyad predicts the degree of hug reciprocation. Descriptive statistics for n=150 reveal Mean Degree of Hug Reciprocation = 3.93, S.D. = 1.26; Mean Age = 23, S.D. = 31.2; Mean Years in the US = 24, S.D. = 15.2, as presented in Table 6a below.

Table 8 Descriptive Statistics for Testing H2 (n=150)

	n	Mean	Std. Deviation
Degree of Hug Reciprocation	149	3.93	1.26
Age	150	23	31.2
Years Living in the US	150	24	15.2

For n=86, Mean Degree of Hug Reciprocation = 3.8, S.D. = 1.27; Mean Age = 22.5, S.D. = 29.2; Mean Years in the US = 22.7, S.D. = 14.2, as shown in Table 6b below.

Table 9 Descriptive Statistics for Testing H2 (n=86)

	n	Mean	Std. Deviation
Degree of Hug Reciprocation	85	3.8	1.27
Age	85	22.5	29.2
Years Living in the US	85	22.7	14.3

For n=150, a multiple linear regression was calculated to predict degree of hug reciprocation based on Gender composition of the confederate-participant dyad. A significant regression equation was found: $F(3, 145) = 9.693$, $p<.000$, $R^2 = .167$. (Please see Appendix 7.5.2.a_1 for detailed analysis.) The analysis revealed **Participants' predicted Degree of Hug Reciprocation = 2.81 - .016 (Years in US) + 1.007(Gender) where Gender is coded as 1= Male, 2 = Female.**

Similarly, for n=86, a significant regression equation was found: $F(3, 81) = 4.261$, $p<.008$, $R^2 = .136$. (Please see Appendix 7.5.2.a_2 for detailed results.) The analysis revealed that participants' **predicted Degree of Hug Reciprocation is equal to 3.447 - .025 (Years in US) + .711(Gender) where Gender is coded as 1= Male, 2 = Female.**

IV.2.2.2 Post Hoc Test: Gender as a Predictor of Comfort (QCE)

A multi-regression analysis was conducted in a post hoc analysis to test if Gender composition of the subject-confederate dyad predicts *Comfort* (a measure in the QCE). For n=150, a nonsignificant regression equation was found: ($F(3, 146) = .224$, $p < .88$), $R^2 = .005$. Similarly, for n=86, a nonsignificant regression equation was found: ($F(3, 82) = .414$, $p < .75$), $R^2 = .02$. Please see Appendices 7.5.2.$b_{1\&2}$ for detailed results of the analysis. The results reveal that **Gender does not predict *Comfort* for either n=150 or n =86.**

IV.2.2.3 Post Hoc Testing: Gender Predicts Responsiveness (QCE)

A multiple linear regression analysis was conducted in a post hoc analysis to test if Gender composition of the subject-confederate dyad predicts Responsiveness, a measure of QCE. For n=150, a result significant at the .10 level was found: ($F(3, 146) = 2.112$, $p < .10$), $R^2 = .042$. Participants' predicted Responsiveness = 6.76 - .058(Years in US) - .023(Gender) where Gender is coded as 1= Male and 2 = Female.

Similarly, for n=86, a result significant at the .10 level was found: ($F(2, 82) = 2.146$, $p < .10$), $R^2 = .073$. Participants' predicted Responsiveness = 8.179 - .097(Years in US) -.569(Gender) Gender is coded as 1= Male and 2 = Female. (Please see Appendices 7.5.2.$c_{1\&2}$ for detailed results.) The analysis revealed that **Gender predicts Responsiveness at the 10% level for both n=150 or n=86.**

IV.2.3 *Testing H_3 and Related Post Hoc Analyses (n=150 and n=86)*

Section 4.2.3 is divided into three sections. Section 4.2.3.a presents the results of testing H_3 to determine if the interaction of Power and Gender predicts Degree of Hug Reciprocation; Section 4.2.3.b presents the results of a post-hoc analysis of the interaction of Power and Gender as a predictor of the *Comfort* construct in the QCE measure; and Section 4.2.2.c presents the results of a post-hoc analysis of the interaction of Power and Gender as a predictor of the *Responsiveness* construct in the QCE measure.

IV.2.3.1 . Testing H_3: Interaction of Power & Gender Predicts Hug

A multiple linear regression analysis was conducted to test H_3:

> ***H_3: The gender of the research participant will moderate the effect of power of the exchange partner such that power will have a greater effect on reciprocation of the hug for female participants than for male participants.***

For n=150, a multiple linear regression was calculated to predict Degree of Hug Reciprocation based on the interaction of the confederate's power (status) and gender, genderXconfstatus, and the control variable, Years in US. A significant equation was found: ($F(5, 139) = 5.68$, $p < .000$), $R^2 = 0.17$. Participants' predicted Degree of Hug Reciprocation = 3.67 - .015(Years in US) + .747(Gender) -.541(Power) + .136(GenderXconfstatus) where Gender is coded as 1 = Male, 2 = Female; and Power is coded as 1 = Intern and 2 = Manager.

For n=86, a regression equation significant at the 10% level was found: ($F(5, 77) = 1.97$, $p < .09$), $R^2 = .114$. Predicted Degree of Hug Reciprocation = 3.97 - .023(Years in US) + .427(Gender) - .307(Power) where Gender is coded as 1 = Male; 2 = Female and Power is coded as 1= Intern, 2 = Manager. Please see Appendices 7.5.3.$a_{1\&2}$ for detailed results of the analysis.

IV.2.3.2 Post Hoc Test: The Interaction of Power and Gender Predicts Comfort (QCE)

A multi-regression analysis was conducted in a post hoc analysis to test if the interaction of Power and Gender predicts *Comfort*, a measure of QCE). For n=150, a nonsignificant regression equation was found: ($F(5, 140) = .23$, $p < .95$), $R^2 = .008$. Similarly, for n=86, a nonsignificant regression equation was found: ($F(5, 78) = .33$, $p < .89$), $R^2 = .021$. Please see Appendices 7.5.3.$b_{1\&2}$ for detailed results of the analysis. The results reveal that ***the interaction of Power and Gender does not predict Comfort for either n=150 or n=86.***

IV.2.3.3 Post Hoc Test: The Interaction of Power and Gender Predicts Responsiveness

A multi-regression analysis was conducted in a post hoc analysis to test if the interaction of Power and Gender predicts *Responsiveness*, a measure of QCE). For n=150, a nonsignificant regression equation was found: ($F(5, 140) = 1.41$, $p < .225$), $R^2 = .048$. Similarly, for n=86, a nonsignificant regression equation was found: ($F(5, 78) = .1.72$, $p < .141$), $R^2 = .099$. Please see

Appendices 7.5.3.$c_{1\&2}$ for detailed results of the analysis. The results reveal that ***the interaction of Power and Gender does not predict Responsiveness for n=150 or n=86.***

IV.2.4 *Testing H_4*

A multi-regression analysis was conducted to test H_4:

H_4: Relational Competency of the research participant predicts reciprocation of a hug such that:

H_{4A}: More emotionally sensitive people are more likely to fully reciprocate a hug offered in a business setting than less emotionally sensitive people.

H_{4B}: More socially flexible people are more likely to fully reciprocate a hug offered in a business setting than less socially flexible people.

Results for testing H_{4A} are presented in Section 4.2.4_A and results for testing H_{4B} are presented in section 4.2.4_B.

IV.2.4.1 Testing H_{4A}: Emotional Sensitivity Predicts Hug

For n=150, a nonsignificant regression equation was found: ($F(3, 145) = .83$, $p < .48$), $R^2 = .13$. Similarly, for n=86, a nonsignificant regression equation was found: ($F(3, 81) = 1.95$, $p < .13$, $R^2 = .067$. Please see Appendices 7.5.4.$a_{1\&2}$ for detailed results of the analysis.

Results: *H_{4A} is not supported for either n=150 or n=86.*

IV.2.4.2 Testing H_{4B}: Social Flexibility Predicts Hug

For n=150, a nonsignificant regression equation was found: ($F(3, 145) = .897$, $p =< .45$), $R^{2 =} .018$. Similarly, for n=86, a nonsignificant regression equation was found: ($F(3, 81) = 2.15$, $p < .11$, $R^2 = .074$. Please see Appendices 7.5.4.$b_{1\&2}$ for detailed results of the analysis.

Results: *H_{4B} is not supported for either n=150 or n=86*

IV.3 Summary of Results

IV.3.1 *Results of Hypothesis and Post Hoc Testing*

A Table of Results for Hypothesis and Post Hoc Testing is presented below:

Table 10 Results of Hypothesis and Post Hoc Testing

	Proposition	Result
H_1 n=150	Power of Confederate Predicts Degree of Hug Reciprocation	Not Supported ($F(3, 141) = 1.47$, $p < .23$, $R^2 = .03$.
H_1 n=86	"	Not Supported ($F(3, 79) = 1.5$, $p < .23$), $R^2 = .05$
Post Hoc n=150	Power of Confederate Predicts Comfort	Not Significant $F(3, 142) = .44$, $p < .80$), $R^2 = .006$.
Post Hoc n=86	"	Not Significant ($F(3, 79) = 1.5$, $p < .73$), $R^2 = .016$
Post Hoc n=150	Power of Confederate Predicts Responsiveness	Regression Significant at 10% Level ($F(3, 142) = 2.281$, $p < .082$), $R^2 = .046$. Predicted Responsiveness = 5.72 - .057 (Years in US)** + .651 (Power of Confederate) where Power of Confederate is coded as 1= Intern and 2 = Manager.
Post Hoc n=86	"	Regression Significant at 10% Level ($F(3, 80) = 2.332$, $p < .10$), $R^2 = .08$. Predicted Responsiveness = 5.63 - .097 (Years in US)** + 1.193 (Power of Confederate) where Power of Confederate is coded as 1= Intern, 2 = Mgr.
H2 n=150	Gender Predicts Degree of Hug Reciprocation	Supported $F(3, 145) = 9.693$, $p<.001$, $R^2 = .167$. Predicted Degree of Hug = 2.81 - .016 (Years in US)** + 1.007(Gender) where Gender is coded as 1= Male, 2 = Female.
H_2 n=86	"	Supported $F(3, 81) = 4.261$, $p<.008$, R2 = .136. Predicted Degree of Hug Reciprocation = 3.447 - .025 (Years in US)** + .711(Gender)*** where Gender is coded as 1= Male, 2 = Female.
Post Hoc n=150	Gender of Dyad Composition Predicts Comfort	Not Significant ($F(3, 146) = .224$, $p < .88$), $R^2 = .005$.
Post Hoc n=86	"	Not Significant ($F(3, 82) = .414$, $p < .75$), $R^2 = .02$.
Post Hoc n=150	Gender of Dyad Composition Predicts Responsiveness	Regression Significant at 10% Level ($F(3, 146) = 2.11$, $p < .10$), $R^2 = .042$. Participants' predicted Responsiveness = 6.76 - .058(Years in US)** - .023(Gender) where Gender is coded as 1= Male, 2 = Female.
Post Hoc n=86	"	Regression Significant at 10% Level ($F(2, 82) = 2.146$, $p < .10$), $R^2 = .073$. Predicted Responsiveness = 8.179 - .097(Years in US)** -.569(Gender) where Gender is coded as 1= Male and 2 = Female.

H3 n=150	Interaction of Power & Gender Predicts Degree of Hug Reciprocation	Supported ($F(5, 139) = 5.68$, $p < .001$), $R^2 = 0.17$. Predicted Degree of Hug Reciprocation is equal to 3.67 - .015(Years in US)** + .747(Gender) - .541(Power) + .136 (GenderXConfstatus) where Gender is coded 1 = Male, 2 = Female; Power is coded 1= Intern; 2 = Manager; and GenderXConfstatus is the interaction of Gender and Power (status).
H_3 n=86	"	Supported at 10% Level ($F(5, 77) = 1.97$, $p < .09$), $R^2 = .114$. Predicted Degree of Hug Reciprocation = 3.97 - .023(Years in US)** +.427(Gender) - .307(Power) + .139(GenderXConfstatus) where Gender is coded as 1= Male, 2 = Female; Power is coded as 1=Intern, 2 = Manager; and GenderXConfstatus is the interaction of Gender and the confederate's Power (status).
Post Hoc n=150	Interaction of Power & Gender Predicts Comfort	Not Significant ($F(3, 146) = .224$, $p < .88$), $R^2 = .005$.
Post Hoc n=86	"	Not Significant ($F(3, 82) = .414$, $p < .75$), $R^2 = .02$.
Post Hoc n=150	Interaction of Power & Gender Predicts Responsiveness	Significant at 10% Level ($F(3, 146) = 2.112$, $p < .10$), $R^2 = .042$. Predicted Responsiveness = 6.76 - .058(Years in US)** - .023(Gender) where Gender is coded as 1= Male and 2 = Female.
Post Hoc n=86	"	Significant at 10% Level ($F(2, 82) = 2.146$, $p < .10$), $R^2 = .073$. Predicted Responsiveness is equal to 8.179 - .097(Years in US)* - .569(Gender) where Gender is coded as 1= Male and 2 = Female.
H_{4A} n=150	Emotional Sensitivity Predicts Degree of Hug Reciprocation	Not Supported ($F(3, 145) = .83$, $p < .48$), $R^2 = .13$.
H_{4A} n=86	"	Not Supported ($F(3, 81) = 1.95$, $p < .13$, $R^2 = .067$.
H_{4B} n=150	Social Flexibility Predicts Degree of Hug Reciprocation	Not Supported ($F(3, 145) = .897$, $p =< .45$), $R^2 = .018$.
H_{4B} n=86	"	Not Supported ($F(3, 81) = 2.15$, $p < .11$, $R^2 = .074$.

*Significant at .10 level ** Significant at .05 level *** Significant at .001 level		

IV.3.1.1 Bivariate Correlations (n=150)

Table 11 Bivariate Correlations between Key Variables (n=150)

		1	2	3	4	5	6	7	8	9
1.	Gender	—								
2.	Age	.182*	—							
3.	† Years in US	.195*	.362**	—						
4.	Degree of Hug Reciprocation	.358**	-.027	-.123	—					
5.	Confederate's Status	-.014	-.051	-.037	-.133	—				
6.	Emotional Sensitivity	.023	.128	.104	.028	-.103	—			
7.	Social Flexibility	.001	.413**	.070	.048	.022	.027	—		
8.	Comfort	.014	-.043	-.056	.150	.042	-.032	-.050	—	
9.	Responsiveness	-.043	-.081	-.204*	.149	.081	-.014	.003	.564**	—

* $p < .05$ ** $p < .01$

†. The correlation between Yrs. In US and degree of hug is negative which seems strange. However, looking at the underlying data
using Chi Square we find that there is a quadratic relationship which makes the linear correlation tool an ineffective method to calculate this.

Variables	1	2	3	4	5	6	7	8	9
M	N/A	23	23.9	3.9	N/A	5.0	4.6	4.5	5.3
SD	N/A	31.2	15.1	1.3	N/A	2.5	2.1	3.7	4.4
Range	M or F	1 - 71	1 - 71	1 - 5	Intern or Mgr.	(-)9 - 7	(-)13 - 7	(-)21 – 7	(-)47 – 7

IV.3.1.2 Bivariate Correlations (n=86)

Table 12 Bivariate Correlations between Key Variables (n=86)

		1	2	3	4	5	6	7	8	9
1.	Gender	—								
2.	Age	.157	—							
3.	† Years in US	.223*	.338**	—						
4.	Degree of Hug Reciprocation	.205	-.125	-.250*	—					
5.	Confederate's Status	.049	-.019	-.075	-.012	—				
6.	Emotional Sensitivity	-.034	-.050	.048	-.064	-.043	—			
7.	Social Flexibility	-.021	.593**	.063	.036	.036	.018	—		
8.	Comfort	-.082	-.084	-.090	.123	.073	-.067	-.065	—	
9.	Responsiveness	-.108	-.118	-.264*	.124	.123	-.021	-.009	.563**	—

* p < .05 ** p < .01

†. The correlation between Yrs. In US and degree of hug is negative which seems strange. However, looking at the underlying data using Chi Square we find that there is a quadratic relationship which makes the linear correlation tool an ineffective method to calculate this.

Variables	1	2	3	4	5	6	7	8	9
M	N/A	22.7	22.8	3.8	N/A	5.0	4.5	4.1	5.1
SD	N/A	28.9	14.3	1.3	N/A	2.5	2.7	4.7	5.7
Range	M or F	1 - 71	1 - 71	0 - 5	Intern or Mgr.	(-)9 - 7	(-)13 - 7	(-)21 - 7	(-)47 - 7

V DISCUSSION OF RESULTS AND IMPLICATIONS

V.1 Contributions to the Body of Knowledge

This study makes several valuable contributions to our understanding of non-verbal communication in business: (1) it demonstrates how SET may be used as an overarching framework to study hugging in the workplace; (2) it adds to the small body of knowledge about hugging in a professional context; (3) it highlights the role of gender in a person's decision to reciprocate a hug – or not; (4) it explores participants' subjective evaluation of their experience and the influence of offering of a hug in a business setting; (5) sets the foundation for future cross-cultural experiments on hugging in the workplace.

V.2 Significant Results

Perhaps the most significant result of this research is that it is the first to demonstrate *empirically* that women are more likely than men to reciprocate a hug by a person of the same gender in a business setting. This is especially interesting because norms around hugging as a social greeting have been shifting appreciably in recent years, such that "For [both male and female] teenagers, hello means 'How about a hug?'" (Kershaw, 2009).

Male-male hugging as a business greeting was certainly not the case in the US in the 1970's, 80's or 90's (Barnlund, 1975; Derlega, et al., 1989; Drexler, 2013; Fischer et al., 1976; Henley, 1973; Major, 1981; Rabinowitz, 1991; Remland, 1988; Stier & Hall, 1984; Willis & Radow, 1994). Yet, the hugging teens that Kershaw referenced in 2009 are now in universities and the workplace, so it was conceivable that analysis of data collected in 2016 at a university setting (mean age of 23, S.D. = 32) might detect male-male hugging as being on par with female-female hugging. However, this was not the case. Instead, this analysis of recent data demonstrates that earlier cultural norms around same-gender hugging still exist, at least to some degree.

This result is significant because several decades of research have consistently shown that appropriate social responses are key to effectiveness in business (Barnlund, 1975; Crusco & Wetzel, 1984; Hall, 1996; Morrison & Conaway, 2006) and use of touch can aid in rapport building. Thus, it was valuable to develop a research approach employing a controlled scenario as well as statistical controls; a scale for analyzing degree of a videotaped hug; and application of existing measures with validated reliability to rigorously study this use of touch in a business setting.

V.2.1 *Discussion of Testing H_1*

Perhaps the most surprising result was that hypothesis H_1 was not supported. Instead, this research suggests that *Research participants are NOT more likely to reciprocate a hug offered by an exchange partner of higher power (status) than by an exchange partner of equal power (peer).* As previously noted, early Social Exchange theorists, (Blau, 1964; Gouldner, 1960; Homans, 1958; Thibaut & Kelly, 1959) drew inspiration from Operant Conditioning Theory (Skinner, 1951, 1953) to study the construct of "social exchange" in interpersonal relationships, especially in organizational settings. According to these theorists, SET can be summarized as ***Profit = Rewards – Cost***, with rewards and costs being both material and non-material. Thus, social exchange was reduced to a simple formula, reflecting the belief that rational actors in a business setting would maximize tangible and intangible profit in any given encounter.

Blau, 1964; Homans, 1961; and Thibaut & Kelly, 1959, focused on *power* as a key construct in an exchange relationship between rational actors, especially as power relates to symbols of approval and prestige. Within this theoretical framework, power is identified as the key non-material variable in social exchange. Following this logic, a person of lower power will seek to ingratiate her or himself to an exchange partner of higher status in order to gain unspecified

future rewards from the more powerful person who has greater access to resources. Thus, the first hypothesis tested the application of the rational actor's response as posited by SET.

The results of this study may suggest that, counter to earlier theorizing in SET, human beings are not always motivated or constrained by a rational, economic calculus to seek out and foster relationships predicated upon expectation of reciprocity. Instead, results may suggest that in an organizational setting, people tend to embrace the social protocol of "politeness" that fosters interpersonal relationships that are central to successful business relationships. In short, if someone offers you a "gift," in this case a hug, the polite thing is to accept it graciously – whether or not you want it, regardless of the "power" of the person offering the hug.

Another distinct possibility is that the effect size of the manipulation was so small that it was not a significant factor in the research participant's decision to reciprocate a hug -- or not.

An *alternative theoretical explanation* is that, rather than responding to manipulation of the confederate's power (status), the research participants were striving to properly enact a role, as social conventions would dictate. Thus, rather than the power (status) of the confederate, the "power" would be the research participants' role conformity and accommodation in the experimental setting (Biddle, 1986).

Eagly and Chrvala (1986) demonstrated empirically that women were more likely than men to conform in group pressure settings and that a research subject's sex and age predicted the extent to which they conformed. Additionally, females over 18 years of age were more likely to conform under surveillance than without surveillance, whereas surveillance had no effect on males or women 18 or younger. Eagly and Chrvala presented these findings through the lens of theories that both gender and age act as status characteristics and that gender roles predict conformity.

It would be illuminating to conduct a field survey about research participants' behavior in naturalistic settings in an attempt to eliminate or reduce the power of role conformity, which is heightened for women under surveillance.

An additional advantage to this approach would be that the research participant would respond to an actual supervisor with real "power over" the employee. This would reduce concerns about whether manipulation of the power variable or role conformity had (more of) an effect on the participant's behavior. It would also eliminate concern about the effect size being too small to have a significant effect on the research participants' behavior.

V.2.2 *Discussion of Testing H_2*

One of the individual traits most frequently analyzed in social research is gender. The desire to understand the impact of gender on the decision to reciprocate a hug in a business setting gave rise to the second hypothesis.

H_2: Female research participants are more likely than male participants to reciprocate a hug offered by a same-gender exchange partner.

This hypothesis was strongly supported for n=150: $F(3, 145) = 9.693$, $p<.001$, $R^2 = .167$.

Predicted Degree of Hug Reciprocation = $2.81 - .016$ (Years in US)$^{**} + 1.007$(Gender)***

where Gender is coded as 1= Male, 2 = Female.

As noted in Section 3.4.2, women are generally *less* touch-avoidant and/or more comfortable with touch than men in same-gender encounters (Heslin & Nguyen, 1983; Jourard & Rubin, 1968; Martin & Anderson, 1993; Rabinowitz, 1991; Stier and Hall, 1984; Willis & Rawdon, 1994). Thus, it would initially have been surprising if the second hypothesis were not supported. However, since hugging is becoming quite popular among Millennials, it is likely that at some

point future, male-male, male-female and female-female hugging will be equally prevalent and socially acceptable as a greeting in a business setting. Thus, it would be useful for future researchers to receive the approvals required to study both same-gender and opposite-gender encounters involving human touch to determine if or when this "crossover" point is reached.

It is possible that, by making a strong case based on the work of Derlega, Cantanzaro and Lewis, 2001; Floyd & Voloudakis, 1999; Fuller, 2011, Holroyd & Brodsky, 1908; Johnson & Edwards, 1991; Rosner, Halcrow & Levins, 2001; Shotland & Craig, 1988; and Simmering et al., 2013, a future researcher may be able to convince members of an IRB that opposite gender hugging does not pose a significant risk to either research participants or the university. Allowing for true random assignment of participants, rather than same-sex assignment, would add a great deal of richness to the research while "upgrading" the approach from a quasi-experiment to a full experiment.

V.2.3 *Discussion of Testing H_3*

It is not possible with existing numerical data and analysis to determine if the research participants responded to the manipulation of Power; if they were influenced by the social pressure of role conformity; or if other factors were at play in their decision to reciprocate a hug. However, it is likely that H_3 was supported at the 5% level with n=150 because women are both more sensitive to power under surveillance than men (Eagly and Chrvala, 1986) and more likely to hug a same-gender individual than men, as demonstrated by this experiment. So, the effect of gender or the interaction of power and gender had an effect that was significant at the .05 level for n=150, but is only significant at the .1 level for n=86.

V.2.4 *Discussion of Testing H_4*

As noted earlier, none of the H_4 hypotheses were supported. In retrospect, it may be that the instrument used to measure ES and SF was not fully appropriate for assessing these constructs in a very brief encounter that did not involve an actual business negotiation. Instead, the instrument was originally developed to determine the Quality of Communication Experience in a business negotiation – which is significantly different than a brief hug at the outset of a mock business negotiation.

Additionally, the researcher reworded the original questions slightly so they would make sense to the research participants within the context of a brief encounter involving touch but not dialogue. It is conceivable that these modifications, in addition to accidental omission of three QCE items in the on-line questionnaire further diminished the predictive abilities of the multiple linear regression calculations. In the future, it may be useful to run additional tests to identify the relationships between key variables by developing and testing a full model including all the data that was collected for this experiment.

V.3 Limitations of this Study

As with most social science experiments conducted in a university lab, the first design limitation of this research is that a sample taken in this setting is typically skewed to over-represent young research participants (under the age of 25). GSU also has a much higher percentage of women and minorities than in the United States as a whole, which could also result in a research sample that is not typical of the larger population.

To address these concerns, the researcher posted flyers in numerous public settings such as non-university related libraries, bookstores, condominiums, restaurants and houses of worship to recruit not only students but also university staff as well as adults without any direct affiliation

with the university. Thus, the sample may be more representative of the adult population than is often the case for experiments conducted at a university. To further address this concern, a future researcher could develop a data collection plan that would draw a sample from a more demographically diverse setting.

Another limitation of this study is that confederates only offered a hug to research participants of the same gender. Although Molm (2000) and colleagues found that same-gender interactions did not introduce a gender bias in a computer-based experiment, it is unlikely that this will be the case for a lab-based experiment in which subjects meet each other face to face. In the future, it may be desirable to develop a research protocol that allows for true random assignment of subjects, thereby qualifying the design as a true experiment, rather than a quasi-experiment. Existing resources to address these issues are cited in Section 5.2.1.

V.4 Areas for Future Research

Future research should involve analyzing data that were collected but not included in this study. Specifically, running the full model using all of the existing data would likely yield results that would have both theoretical and practical applications of value. One interesting approach would be to explore how data from the GCI and "Big Five" (Goldberg, 1990) personality traits interact, because this could yield valuable insights into strengthening international business relationships.

Another factor to consider is that the Kozai Group ran their analysis of the GCI using only data from the full sample (n=150). If future researchers wish to compare results of the GCI for two different samples (n=150 and n=86), it may be useful to obtain the results for n=86 from Kozai – if only to determine if they differ significantly from n=150.

Researchers may also wish to view and more fully code the audio-visual recordings to discern if there are patterns which emerge that might not have been captured by the on-line questionnaire. This line of inquiry resulted from the researcher's attempt to explain her ability to consistently predict which research participants would or would not reciprocate a hug, simply based their "body language." This phenomenon is very much in keeping with the research of Ambady & Rosenthal, 1992, which demonstrates that many people have the ability to almost instantaneously assess interpersonal dynamics.

Future research of behavioral clues could include analyzing the research participant's posture (free and open vs. closed and constricted); facial expressions (warm and friendly vs. aloof and analytical); in conjunction with Big Five traits and other personality factors already measured.

It may be illuminating to analyze existing data through the lens of additional decision making theories to enhance the study the phenomenon of hugging in the workplace.

APPENDICES

Appendix A Data Collection Strategy

Appendix 7.1 contains the documents to recruit personnel and participants and gather data for this study.

Appendix A.1 Flyers to Recruit Confederates

The IRB-approved flyer below was designed to recruit confederates. Fortunately, an RCB doctoral student, Greg Hardt, and his wife Kathleen volunteered through word of mouth recruiting, making the flyer redundant.

Earn $10/Hr.

Play the Role of an Executive in a Research Experiment about business interactions.

Help researchers study how people interact in business negotiations. Researchers from GSU's Robinson College of Business need **ONE (1) *FEMALE* and ONE (1) MALE (+/- 18-35 years of age)** to play a role in an experiment. The successful candidate will:

- **Be very punctual and responsible.**
- **Be able to work in flexible time blocks during the summer term at GSU.**
- **Feel comfortable interacting with people of diverse backgrounds.**

Additional information about the position:

- TEMPORARY position for about 75 hours during the Summer Term. Hours are somewhat flexible, based on the availability of research study participants.
- The actor must complete the entire commitment to be paid.
- Work location is at Robinson College of Business, GSU.

To ask questions or apply for this summer job, **please e-mail Paula Gable, at pgable2@student.gsu.edu**

Thank You.

Appendix A.2 Flyer to Recruit Research Participants

The flyer below was posted on and near the college campus in places where students were likely to see them. Business School instructors also granted permission to share the flyer with members of their class. Students who wished to participate in the research project contacted the student researcher for pre-screening via phone or e-mail. If the potential subject met initial selection criteria, s/he scheduled an in-person intake interview with the student researcher at the research site. If the research participant met all inclusion criteria, s/he was invited to read and sign the Informed Consent Form (Appendix 7.1.3) and review the research scenario in Appendix 7.1.4.a.

Participate in a Study.

Help researchers study how people act in business negotiations. All participants will receive $10.00.

Spend half an hour or less at a Robinson College of Business conference room in a mock business negotiation. Afterwards, answer questions about yourself and your experience. Overall, we hope to learn about factors that affect decisions and interactions in business. Although unlikely, it is possible you could experience some social discomfort during "business talks."

To volunteer or ask questions, e-mail Paula Gable,
pgable2@student.gsu.edu

To set up a time to be in this study, please e-mail Paula Gable **three half-hour time blocks** when you are available. Ms. Gable will try to match your schedule and confirm study time and room number.

If you wish, researchers will give you a copy of the report when the study is completed. We are also happy to give you detailed feedback about your responses to our questions.

Confidentiality is guaranteed.
Thank You.

Appendix A.3 Informed Consent Form

After answering any questions the research participant may have, the researcher invited the research participant to sign a copy of the written informed consent form below. If the subject agrees\d, s/he was invited into a different room to conduct the mock negotiation outlined in Appendix 7.1.4.a below. Since initial IRB Approval was scheduled to expire 5/15/2015, the IRB approved an extension to allow for data collection in the summer of 2016.

Informed Consent

Georgia State University, Robinson College of Business

Title: A Study of Nonverbal Communication in Business Negotiations
Principal Investigators: Mark Keil & Leigh Anne Liu
Student Investigator: Paula Gable

Purpose:

The purpose of this research is to study factors that influence decision making and social interactions in business negotiations. Researchers will recruit a total of 150 participants for this study. Being part of this study will require about 30 minutes of your time.

Procedures:

You will:

First, receive instructions about this study.

Second, be asked if you are willing to have your participation in this study recorded (both audio and video recording.)

Third, read the scenario and wait for the other party.

Fourth, interact with the other party.

Fifth, answer some questions about the interaction.

Sixth, receive $10.00 in cash for participating in this study.

During the study you may be led to believe some things that are not true. When the study is over, we will tell you everything and will be happy to answer any questions you might have. At that time you can choose whether or not you want to let us use your information. If you wish, we will also share a copy of our final report with you when the study is completed.

III. Risks:

Although unlikely, it is possible you could experience some social discomfort during mock "business negotiations."

IV. Benefits:

Participation in this study may not benefit you personally. Your participation may have a broader impact to society by contributing to our understanding of the factors that impact the decision to reciprocate a hug offered in the workplace

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. There will not be any penalty if you do not participate. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

VI. Confidentiality:

We will keep your records private to the extent allowed by law. Researchers Leigh Anne Liu, Mark Keil, and Paula Gable will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP).

We will use a study number rather than your name on study records. The information you provide will be stored on password and firewall-protected computers. The information linking your name and the study number will be stored separately from the data to protect your privacy during the data analysis phase.

For the same reason, the audiovisual file used for the recording device will also be stored separately from the code sheet and other data, and uploaded files will be stored on password and firewall- protected computers.

This information will be destroyed after the study is finished. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

VII. Contact Persons:

Contact Leigh Anne Liu at 404-413-7288 or laliu@gsu.eduif you have questions, concerns, or complaints about this study. Call Susan Vogtner in the Georgia State University Office of Research Integrity at 404-413-3513 or svogtner1@gsu.eduif you want to talk to someone who is not part of the study team. You may contact us with questions, concerns, or suggestions about the study. You can also call Susan Vogtner if you have questions or concerns about your rights in this study.

VIII. Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep. If you are willing to volunteer for this research and be recorded with a video camera, please sign below.

_____ _____

Participant Date

_____ _____

Principal Investigator or Researcher Obtaining Consent Date

Appendix B Research Scenarios and Debrief

During the intake process with the research participant, the researcher shared one of four research scenarios to explain the nature of the encounter with the confederate. The one below was used when the MALE confederate was playing the role of a student intern. The version on the following page was used when the FEMALE confederate was playing the role of a Manager

Appendix B.1 Research Scenario for Male Participant

Instructions: We are interested in studying interactions that occur in the workplace. You will be asked to read the short scenario below, and then remain "in character" as you respond to a workplace interaction. Following the interaction described in the scenario, you will be asked to complete a short survey. There are no right or wrong answers.

Scenario: Please imagine that you are a summer intern working for the human resources department of a large company. You are also a representative of a student organization on campus. Your student organization is about to begin negotiations with the company about funding a high profile event that could receive national media attention. You are about to meet Greg Hardt from the company's public relations department for the second time. His picture follows:

Greg Hardt
Intern - Public Relations

At the first meeting, you and Greg talked about the possibility of securing corporate funding for the event. Following that meeting, you presented Greg with a detailed proposal and you are now meeting for the second time to discuss this proposal. This second meeting will be very important to the success of the negotiations, which could open the door for national media exposure, and resulting career opportunities that might

not otherwise be available to you. It is therefore important that the meeting goes smoothly and that there are no awkward moments.

Appendix B.2 Research Scenario for Female Participant

The research scenario below was used when the FEMALE confederate was playing the role of a Manager.

Instructions: We are interested in studying interactions that occur in the workplace. You will be asked to read the short scenario below, and then remain "in character" as you respond to a workplace interaction. Following the interaction described in the scenario, you will be asked to complete a short survey. There are no right or wrong answers.

Scenario: Please imagine that you are a summer intern working for the human resources department of a large company. You are also a representative of a student organization on campus. Your student organization is about to begin negotiations with the company about funding a high profile event that could receive national media attention. You are about to meet Kathleen Hardt from the company's public relations department for the second time. Her picture follows:

Kathleen Hardt
Director of Public Relations

At the first meeting, you and Kathleen talked about the possibility of securing corporate funding for your school organization's event. Following that meeting, you presented Kathleen with a detailed proposal and you are now meeting for the second time to discuss this proposal. This second meeting will be very important to the success of the negotiations, which could open the door for national media exposure, and resulting career opportunities that might not otherwise be available to you. It is therefore important that the meeting goes smoothly and that there are no awkward moments.

Appendix B.3 Full Research Scenario – Not Shared with Research Participant

[The researcher will thank the student volunteer for participating in the research study, and review the signed Informed Consent Form before beginning the experiment. After the student has given oral consent to begin taping, the researcher will hand the participant a sheet with the Instructions and Scenario presented below. The researcher will tell the student participant that they will review the handout together, and the participant can ask questions at any time. Note: In order to address any possible concerns regarding subject and Confederate hugging, our research protocol details the precautions that will be taken to safeguard participants.]

Instructions:

We are interested in studying interactions that occur in the workplace. You will be asked to read the short scenario below, and then remain "in character" as you respond to a workplace interaction. Following the interaction described in the scenario, you will be asked to complete a short survey. There are no right or wrong answers.

Scenario:

Please imagine that you are a summer intern working for the human resources department of a large company. You are also a representative of a student organization on campus. Your student organization is about to begin negotiations with your company about funding a high profile event that could receive national media attention. You are about to meet [another summer intern/senior manager] from the company's public relations department for the second time.

[Insert image of confederate's headshot here].

At the first meeting, you and the company's Public Relations Representative (PR Rep) talked about the possibility of securing corporate funding for the event. Following that meeting, you presented the PR Rep with a detailed proposal and you are now meeting for the second time to discuss this proposal. This second meeting will be very important to the success of the negotiations, which could open the door for national media exposure, and resulting career opportunities that might not otherwise be available. It is therefore important that the meeting goes smoothly and that there are no awkward moments.

[Videotape encounter.]

[The researcher turns on the camera and instructs the student participant to wait in the room until the PR Rep (the Confederate posing as either another summer intern or a senior manager) arrives. The researcher leaves and the Confederate enters the room and begins a scripted monologue:

Confederate: "Hello (insert student name.) It's good to see you again."

The Confederate initiates a hug and watches closely to the student participant's body language to determine if s/he should complete the hug, or allow the student to pull away.

Confederate: "I've read your proposal on the event and am excited to know more about it."

Beeper or cell phone goes off and confederate says:

Confederate: "I am really sorry, but I need to step outside to take this call. Do you mind if we continue this later?"

The researcher enters the room and asks the subject to complete the survey which is hosted on a website and will be accessed using the researcher's laptop computer. After completion of the survey, the researcher tells the student participant that this concludes the experiment and that s/he will do a debriefing to explain the purpose of the research and the reason for the deception. After addressing all of the student participant's questions, the researcher states that s/he will be happy to share the results of the experiment when the study is complete.

Manipulated variables:

Power of the confederate relative to the subject (summer intern vs. senior manager)
Gender of the subject-confederate dyad (M-M or F-F female). Note: To avoid the possibility of putting a student participant in an awkward situation of receiving a hug from a member of the opposite gender, all participants will be matched with a Confederate of the same gender.)

Appendix B.4 Debrief

Following the research participant's encounter with the confederate, the researcher escorted the participant back to the room where they originally met, in order to answer questions in an on-line, Qualtrics-based survey. Afterward, the researcher debriefed the research participant using the text below:

From this study, we want to learn how gender and power status influence a person's decision to return a hug in a professional setting. Earlier research shows that hugging can help or hinder relationship building (Drexler, 2013). A person must make a split second decision to return a hug or not. We want to understand which factors impact a person's decision.

Earlier research suggests that gender and status might be two important factors that influence the decision to hug or not. We hope to learn how they combine with a person's personality, communication skills, and life experience, as they respond to a hug.

This research is important, because different people interpret body language differently. To succeed, business people must know how to respond to "nonverbal cues," which can "make or break" a deal.

The person who offered you a hug works for the researchers. Coming here for a mock negotiation was a cover story for what we really wanted to study. That is, how gender and professional status influence the decision to return a hug in the workplace. We are happy to answer your questions about our experiment.

APPENDIX C MEASUREMENT INSTRUMENTS

Below are the measures used in this quasi-experiment. They were included in an on-line Qualtrics-based survey (Appendix 7.2.4) accessed from a secure computer.

Appendix C.1 Quality of Communication Experience (QCE) Measures

Below are the questions used to develop the QCE measure, which is multifaceted, individual level construct that involves cognitive, behavioral, and affective elements. It is broken down into three distinct constructs: Clarity, Comfort and Responsiveness. In this research, I the questions were designed as 7 point Likert-Type Scales to gather data about the research participants' subjective views of the encounter with the confederate, where 1 indicates "Strongly Disagree" and 7 indicates "Strongly Agree."

Subscale - Clarity

1. I understood what the other side was saying.

2. I understood what was important to the other side.

3. We clarified the meaning if there was a confusion of the messages exchanged.

4. I think the other side understood me clearly.

5. The messages exchanged were easy to understand.

Subscale - Responsiveness

6. The other side responded to my questions and requests quickly during the interaction.

7. The conversation ran smoothly without any uncomfortable silent moments or I did not notice any uncomfortable silent moments.

8. I was willing to listen to the other side's perspectives.

9. When the other side raised questions or concerns, I tried to address them immediately.

10. One or both of us kept silent from time to time.

Subscale - Comfort

11. I was nervous talking to the other side.

12. I felt the other side trusted me.

13. I felt the other side was trustworthy.

14. I felt comfortable interacting with the other side.

15. The other side seemed comfortable talking with me.

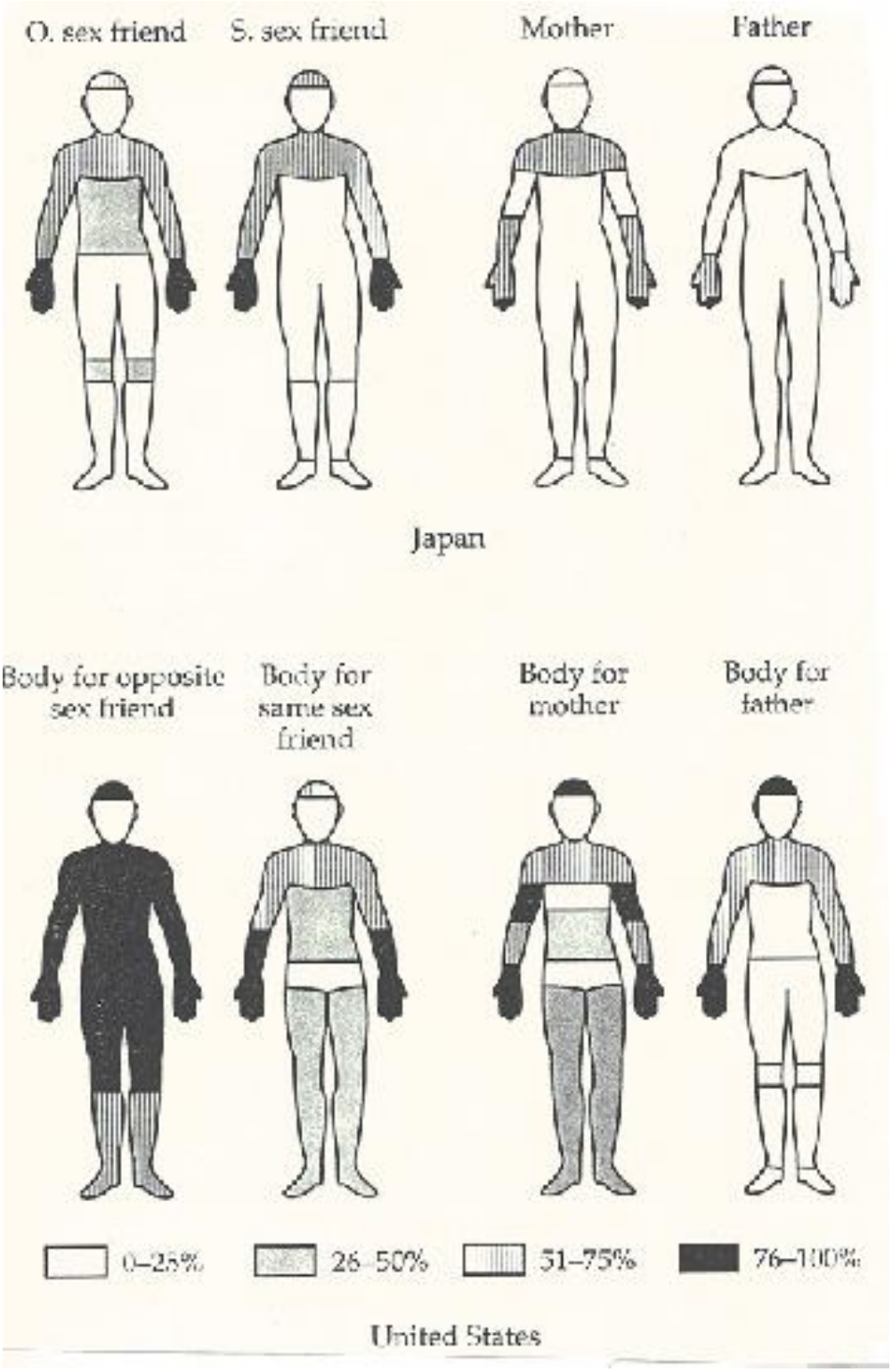
Appendix C.2 Global Competency Inventory (AKA Kozai Group Survey Questions)

Questions in The Global Competency Inventory, a validated instrument developed by the Kozai Group in Japan. This study focused on measuring the constructs of Emotional Sensitivity and Social Flexibility with a 7-Point Likert-type Scale to determine their influence on the decision to reciprocate an unexpected hug in a workplace setting.

	For the following questions, please provide your answer according to this format. 1 2 3 4 5 6 7 Strongly disagree ... Strongly Agree	
Study code	**Survey item text**	**Your Answer**
kozai01	Before acting, I like to think through how it will impact others.	
kozai02	Even if opposed, I can still find a way to get what I want.	
kozai03	I am always quick to help others.	
kozai04	I am good at making impromptu speeches.	
kozai05	I am normally sensitive to even the slightest change in the facial expression of the person I am talking with.	
kozai06	I am often able to correctly read others' emotions even if their outward behavior is different.	
kozai07	I can easily adapt to others without compromising my beliefs.	
kozai08	I can easily see when people's behavior doesn't match how they really feel.	
kozai09	I enjoy listening to what others have to say at least as much as I like explaining my own views on things.	
kozai10	I have a well-developed sense of humor.	
kozai11	I have no difficulty arguing for both sides of an issue.	
kozai12	I have the ability to alter my behavior if I feel that I need to act differently in order to fit in.	
kozai13	I have trouble changing my behavior to fit in.	

kozai14	I like to impress or entertain people.	
kozai15	I look for humor in tense situations to relieve the strain.	
kozai16	I think I would be a better actor than a mathematician.	
kozai17	I would probably not make a good actor.	
kozai18	I would say I’m more self-confident than others.	
kozai19	If others were afraid, I’d probably be the one to help them cope.	
kozai20	It is easy for me to figure out how deeply someone is feeling about an issue.	
kozai21	My friends would probably describe me as someone who's sensitive to the feelings of others.	
kozai22	People often come to me because they feel I am understanding of their challenges and problems.	
kozai23	When I am around others I don't know well, it doesn't take me very long before I start picking up little expressions or behaviors from them	

Appendix C.3 Areas of Contact and Interception (Barnlund, 1975).



Appendix C.4 Pictures Used to Rate Degree of Hug Reciprocation

Based on the Question: "Did you hug the other party?

Scale: 1= NO Hug; 2= A Little; 3= Somewhat; 4= Not Quite a Full Hug; 5 = Full Hug

1 = No Hug (Handshake)

1 = No Hug (Handshake)

1 = No Hug (Handshake)

2 = A Little

2 = A Little

2 = A Little

3 = Somewhat

3 = Somewhat

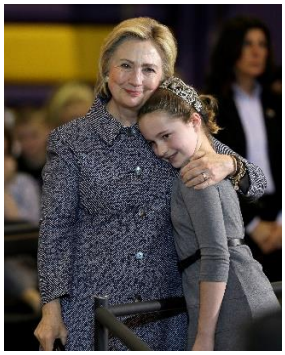
3 = Somewhat

3 = Somewhat

3 = Somewhat

3 = Somewhat

(Continued) Pictures Used to Rate Degree of Hug Reciprocation



4 = Not Quite a Full Hug

4 = Not Quite a Full Hug

4 = Not Quite a Full Hug

4 = Not Quite a Full Hug

4 = Not Quite a Full Hug

4 = Not Quite a Full Hug

5 = Full Hug

5 = Full

5 =

5 = Full Hug

5 = Full

5 = Full Hug

Appendix C.5 Table of Variables Used

Question # in SPSS	Type of Variable	Description
Q2. (SPSS Variable View Row 4)	**Manipulated Variable: Gender Composition of Dyad *(M-M or F-F)***	Subjects self-identify as male or female. Based on gender identity, subjects were assigned to either the male or female confederate so that all dyads are either M-M or F-F. Measure is at the individual level.
Q78. Intern = (1) Mgr. = (2) (SPSS Variable View Row 81)	**Manipulated Variable: Power (Role of Mgr.)** ***Confederate has either = (Intern) or > (Manager) Power than the research participant.***	The mutual interdependence of both parties in an exchange relationship. For example, if person A relies on person B for positive results, and person B does not rely on person A, then B is understand to have considerable power over A. I manipulated the status of the confederate, who played the role of either a manager of higher power, or a student intern (peer) of equal power.
Demographics		
Q3. SPSS Row 5	**Control Variable: Age**	Integer Variable.
Q4. Rows 6 & 7	**Control Variable: Ethnicity (Menu) + Freeform Response**	Nominal Variable. African American, Asian, White of Hispanic origin, White not of Hispanic origin, Mixed Ethnicity.
Q5. SPSS Row 8	**Control Variable: Highest level of education**	Scale variable. 1=High school or GED; 2=College Graduate; 3=Master's Degree; 4=Doctorate.
Q6. Row 9	**Country of birth**	Free-form response.
Q7. Row 10	**Control: Years in USA**	Integer variable. Number of years the research participant has been in the USA.
Q8. Row 11	**DV: Degree of Reciprocation of Hug**	Measured using a five point scale, with (1) denoting rejection of hug and (5) a full embrace. This scale will be based upon Barnlund's (1975) research that delineates "Zones of Body Contact" in human encounters (Appendix 7.2.3)
Questions 17- 31.	**DV: Quality of Communication Experience**	QCE as a multifaceted, individual level construct that involves cognitive, behavioral, and affective elements. It is comprised of three distinct constructs: Clarity, Responsiveness, Comfort, described below.
Questions 17 & 18. (Rows 20 & 21)	**DV: Clarity *(QCE Construct)***	The cognitive aspect of the communication experience, defined as the degree of comprehension of the meaning being communicated. Meaning encompasses not only factual information but also ideas, emotions, and values that are conveyed via symbolization and demonstration.
	DV: Responsiveness *(QCE Construct)*	The behavioral aspect of the communication experience which indicates the norm of coordination (Liu et al., 2010, p.470).

Question # in SPSS	Type of Variable	Description
	DV: Comfort ***(QCE Construct)***	A condition of positive affect of ease and pleasantness when interacting with each other (Liu et al., 2010, p.470).
	About yourself (the subject) in the encounter	
Q9. Row 12	**Data collected for future use.**	Q. How did you feel about the encounter? 7-point Likert-type scale: 1= Happy, 4 = OK, 7= Embarrassed. (Reversed)
Q10. Row 13	**Data collected for future use.**	Q. Did you "lose face" (i.e., damage your sense of pride) in the encounter? 7-point Likert-type scale: 1=Not at all; 4=Moderately; 7=A great deal.
Q11. Row 14.	**Data collected for future use.**	Q. Did this encounter make you feel more or less competent as an individual? 7-point Likert-type scale: 1=It made me feel less competent; 4=It did not make me feel more or less competent; 7= It made me feel more competent.
Q12. Row 15.	**Data collected for future use.**	Q. Did you behave according to your own principles and values? 7-point Likert-type scale: 1=Not at all; 4=moderately; 7= Perfectly
Q13. Row 16.	**Data collected for future use.**	Q. Did this encounter positively or negatively impact your self-image or your impression of yourself? 7-point Likert-type scale: 1= It ***negatively*** impacted my self-image; 4= It did not positively or negatively impact my self-image; 7= It ***positively*** impacted my self-image.
	About relationship with other party	
Q14. Row 17.	**Data collected for future use.**	Q. What kind of "overall" impression did your counterpart make on you? 7-point Likert-type scale: 1= Extremely ***negatively***; 4= Neither positive nor negative; 7= Extremely ***positive***.
Q15. Row 18	**Data collected for future use.**	Q. Did the encounter you just had make you trust the other person? 7-point Likert-type scale: 1= Not at all; 4= Moderately; 7= Perfectly
Q16. Row 19	**Data collected for future use.**	Q. Did the encounter build a good foundation for a future relationship with the other person? 7-point Likert-type scale: 1= Not at all; 4= Moderately; 7= Perfectly

Question # in SPSS	Type of Variable	Description
DV: QCE	**About Communication in General during Encounter**	
DV for QCE Q17. SPSS (Row 20)	**Measure for Clarity** (Variable = Clarity1)	Q. At the time of the encounter, I understood what the other side was doing. 7-point Likert-type scale: 1=Strongly disagree; 4=Neither agree nor disagree; 7=Strongly agree.
DV-QCE Q18. (Row 21)	**Measure for Clarity** (Variable = Clarity2)	Q. At the time of the encounter, I understood what was important to the other side. 7-point Likert scale.
DV-QCE Q19. (Row 22)	**Measure for Responsiveness** (Variable = Responsive1)	Q. I responded to the other side's hug quickly during the encounter. 7-point Likert scale.
DV- QCE Q20. (Row 23)	**Measure for Responsiveness** (Variable = Responsive2)	Q. The encounter ran smoothly without any uncomfortable moments or I did not notice any uncomfortable moments. 7-point Likert-type scale.
DV-QCE Q21. (Row 24)	**Measure for Responsiveness** (Variable = Responsive3)	Q. I was willing to reciprocate the other side's hug. 7-point Likert scale.
DV-QCE Q22. (Row 25)	**Measure for Responsiveness** (Variable = Responsive4)	Q. When the other side initiated the hug, I tried to reciprocate immediately. 7-point Likert scale.
DV-QCE Q23. (Row 26)	**Measure for Responsiveness** (Variable = Responsive5)	Q. I was caught by surprise by the other person's hug. 7-point Likert scale.
DV-QCE Q24. (Row 27)	**Measure for Responsiveness** (Variable = Responsive6)	Q. I did not respond appropriately to the hug. 7-point Likert scale. (Reverse)
DV-QCE Q25. (Row 28)	**Measure for Comfort** (Variable = Comfort1)	Q. The hug made me nervous during this encounter. 7-point Likert scale.
DV-QCE Q26. (Row 29)	**Measure for Comfort** (Variable = Comfort2)	Q. I felt the other side was trustworthy. 7-point Likert scale.
DV-QCE Q27. (Row 30)	**Measure for Comfort** (Variable = Comfort3)	Q. I felt comfortable interacting with the other side. 7-point Likert scale.
DV-QCE Q28. (Row 31)	**Measure for Comfort** (Variable = Comfort4)	Q. The other side seemed comfortable interacting with me. 7-point Likert scale.
About Yourself		
Q29.	**Measures for "Big 5" Personality Traits.**	9-point Likert-type scale: 1=Extremely inaccurate; 5=Neither accurate nor inaccurate; 9=Extremely accurate
a.	Collected for future use.	Talkative
b.	Collected for future use.	Extroverted
c.	Collected for future use.	Bold
d.	Collected for future use.	Energetic
e.	Collected for future use.	Shy
f.	Collected for future use.	Quiet
g.	Collected for future use.	Bashful
h.	Collected for future use.	Withdrawn
Q30.	**Measures for "Big 5" Personality Traits.**	Collected for future use.
a.	Collected for future use.	Sympathetic
b.	Collected for future use.	Warm

Question # in SPSS	Type of Variable	Description
c.	Collected for future use.	Kind
d.	Collected for future use.	Cooperative
e.	Collected for future use.	Cold
f.	Collected for future use.	Unsympathetic
g.	Collected for future use.	Rude
h.	Collected for future use.	Harsh
Q31.	**Measures for "Big 5" Personality Traits.**	
a.	Collected for future use.	Not nervous
b.	Collected for future use.	Relaxed
c.	Collected for future use.	Moody
d.	Collected for future use.	Jealous
e.	Collected for future use.	Temperamental
f.	Collected for future use.	Envious
g.	Collected for future use.	Touchy
h.	Collected for future use.	Fretful
Global Competency Index (GCI) (Kozai Group Questionnaire)		*These were run by the Kozai Group. All are 7-point Likert scale: 1=Strongly disagree; 4=Neither agree nor disagree; 7=Strongly agree.*
	IV: Global Competency Inventory (GCI)	GCI is a multifaceted, individual level construct that is broken down into several distinct constructs. Analysis in this study is limited to Emotional Sensitivity and Social Flexibility scales.
	IV: Emotional Sensitivity (ES) ***(GCI Construct)***	Capacity to read emotions and understand feelings and challenges of others. This is the first of two constructs of the (GCI) used in this study.
	IV: Social Flexibility (SF) ***(GCI Construct)***	Capacity to regulate and adapt one's behaviors to fit in and build positive relationships with others. This is the second of two constructs of the GCI used in this study.
Q32.	**Measure of GCI** A Proprietary Measure Scored by the Kozai Group	Before acting, I like to think through how it will impact others.
Q33.	"	Even if opposed, I can still find a way to get what I want.
Q34.	"	I am always quick to help others.
Q35.	"	I am good at making impromptu speeches.
Q36.	"	I am normally sensitive to even the slightest change in the facial expression of the person I am talking with.
Q37.	"	I am often able to correctly read others' emotions even if their outward behavior is different.
Q38.	"	I can easily adapt to others without compromising my beliefs.
Q39.	"	I can easily see when people's behavior doesn't match how they really feel.
Q40.	"	I enjoy listening to what others have to say at least as much as I like explaining my own views on things.
Q41.	"	I have a well-developed sense of humor.
Q42.	"	I have no difficulty arguing for both sides of an issue.

Question # in SPSS	**Type of Variable**	**Description**
Q43.	"	I have the ability to alter my behavior if I feel that I need to act differently in order to fit in.
Q44.	"	I have trouble changing my behavior to fit in.
Q45.	"	I like to impress or entertain people.
Q46.	"	I look for humor in tense situations to relieve the strain.
Q47.	"	I think I would be a better actor than a mathematician.
Q48.	"	I would probably not make a good actor.
Q49.	"	I would say I'm more self-confident than others.
Q50.	"	If others were afraid, I'd probably be the one to help them cope.
Q51.	"	It is easy for me to figure out how deeply someone is feeling about an issue.
Q52.	"	My friends would probably describe me as someone who's sensitive to the feelings of others.
Q53.	"	People often come to me because they feel I am understanding of their challenges and problems.
Q54. (Row 78)	**Manipulation Check. Free form response.**	Q. Do you remember the role (Title) of the person with whom you did your "negotiation"?
Q55. (Row 79)	**Checking on whether or not people heard about the "surprise" to the experiment.**	Q. Did you hear about the true nature of the experiment before you participated in the study today?
Followed by Oral Debrief	**Followed by Oral Debrief**	**Followed by Oral Debrief**

Appendix C.6 Full On-Line Qualtrics-Based Questionnaire

Welcome:

Q1. Thank you for participating in our study! Below are some questions regarding the encounter. There are no right or wrong answers. All responses are confidential. Please answer openly and honestly.

Demographics

Q2. Gender

Male
Female

Q3. What is your age?

Move slider to enter response.

Q4. What is your ethnicity?

African American
Asian
White, of Hispanic Origin
White, not of Hispanic Origin
Mixed Ethnicity
Other

Q5. What is your highest level of formal education?

High School or GED
College Graduate
Master's Degree
Doctorate

Q6. In which country were you born?

Q7. Years in US

About the encounter

Q8. Did you hug the other party?

1= NO; 2= A little; 3= Somewhat; 4= Not quite a full hug; 5 = YES. Full hug.

Q9. How did you feel about this encounter?

Not Embarrassed 2 3 OK 5 6 Embarrassed

About Yourself:

.

Q10. Did you "lose face" (i.e., damage your sense of pride) in the encounter?

Not at all 2 3 Moderately 5 6 A great deal

Q11. Did this encounter make you feel more or less competent as an individual?

It made me feel *less* competent; 2 3; It did not make me feel more or less competent; 5 6 It made me feel *more* competent

Q12. Did you behave according to your own principles and values?

Not at all 2 3 Moderately 5 6 Perfectly

Q13. Did this encounter positively or negatively impact your self-image (impression) of yourself?

It negatively impacted my self-image; 2 3; It did not positively or negatively affect my self-image. 5 6; It *positively* impacted my self-image

About Your Relationship with the Other Party:

Q14. What kind of overall impression did the other person make on you?

Extremely *negative* 2 3; Neither negative nor positive; 5 6; Extremely *positive*

.

Q15. Did the encounter you just had make you trust the other person?

Not at all 2 3 Moderately 5 6 Perfectly

Q16. Did the encounter you just had build a good foundation for a future relationship with the other person?

Not at all 2 3 Moderately 5 6 Perfectly

About the communication in general:

Q17. At the time of the encounter, I understood that the other person was trying to hug me.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q18. I think the other person understood my intentions about returning or not returning the hug.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q19. I responded to the other person's hug quickly during the encounter.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q20. The encounter ran smoothly without any uncomfortable moments.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q21. I was willing to reciprocate the other person's hug.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q22. When the other person initiated the hug, I tried to reciprocate immediately.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q23. I was caught by surprise when the other person initiated the hug.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q24. I responded appropriately to the hug.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree
.

Q25. The hug made me nervous during this encounter.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q26. I felt the other person was trustworthy.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree;
Strongly Agree

Q27. I felt comfortable interacting with the other person.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q28. The other person seemed comfortable interacting with me.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

More about yourself:

Q29. Please use this list of common human traits to describe yourself as accurately as possible. Describe yourself as you see yourself at the present time, not as you wish to be in the future. Describe yourself as you are generally or typically, as compared with other persons you know of the same gender and roughly your same age.

Extremely Inaccurate; Very Inaccurate; Quite Inaccurate; Slightly Inaccurate; Neither Accurate nor Inaccurate;
Slightly Accurate; Quite Accurate; Very Accurate; Extremely Accurate.

Talkative
Extroverted
Bold
Energetic
Shy
Quiet
Bashful
Withdrawn

Q30. Please use this list of common human traits to describe yourself as accurately as possible.

Extremely Inaccurate; Very Inaccurate; Quite Inaccurate; Slightly Inaccurate; Neither Accurate nor Inaccurate;
Slightly Accurate; Quite Accurate; Very Accurate; Extremely Accurate.

Sympathetic
Warm
Kind
Cooperative
Cold
Unsympathetic

Rude
Harsh

Q31. Please use this list of common human traits to describe yourself as accurately as possible.

Extremely Inaccurate; Very Inaccurate; Quite Inaccurate; Slightly Inaccurate; Neither Accurate nor Inaccurate; Slightly Accurate; Quite Accurate; Very Accurate; Extremely Accurate.

Not envious
Relaxed
Moody
Jealous
Temperamental
Envious
Touchy
Fretful

Kozai Group Scale

Q32. Before acting, I like to think through how it will impact others.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

.

Q33. Even if opposed, I can still find a way to get what I want.

Extremely Inaccurate; Very Inaccurate; Quite Inaccurate; Slightly Inaccurate; Neither Accurate nor Inaccurate; Slightly Accurate; Quite Accurate; Very Accurate; Extremely Accurate.

.

Q34. I am always quick to help others.

Extremely Inaccurate; Very Inaccurate; Quite Inaccurate; Slightly Inaccurate; Neither Accurate nor Inaccurate; Slightly Accurate; Quite Accurate; Very Accurate; Extremely Accurate.

Q35. I am good at making impromptu speeches.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q36. I am normally sensitive to even the slightest change in the facial expression of the person I am talking with.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q37. I am often able to correctly read others' emotions even if their outward behavior is different.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q38. I can easily adapt to others without compromising my beliefs.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q39. I can easily see when people's behavior doesn't match how they really feel.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q40. I enjoy listening to what others have to say at least as much as I like explaining my own views on things.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q41. I have a well-developed sense of humor.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q42. I have no difficulty arguing for both sides of an issue.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q43. I have the ability to alter my behavior if I feel that I need to act differently to fit in.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q44. I have trouble changing my behaviors to fit in.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q45. I like to impress or entertain people.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q46. I look for humor in tense situations to relieve the strain.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q47. I think I would be a better actor than a mathematician.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q48. I would probably not make a good actor.
Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q49. I would say I'm more self-confident than others.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q50. If others were afraid, I'd probably be the one to help them cope.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q51. It is easy for me to figure out how deeply someone is feeling about an issue.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q52.
My friends would probably describe me as someone who's sensitive to the feelings of others.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q53. When I am around others I don't know well, it doesn't take me very long before I start picking up little expressions or behaviors from them.

Strongly Disagree; Disagree; Somewhat Disagree; Neither Agree nor Disagree; Somewhat Agree; Agree; Strongly Agree

Q54. Do you remember the role (title) of the person with whom you did your "negotiation"? If so, please enter it. If not, please write the word "NO." You can "guess" if you do not remember the exact title.

Q55. Did you hear anything about the true nature of this research study BEFORE you participated in the study today?

No; Maybe; Yes

Q56. Thank you for your participation!

Q57. Do you have comments or suggestions to improve our survey or other aspects of this experiment?

Appendix D. Descriptive Statistics

The following section presents calculations and results developed using an SPSS software analysis program.

Appendix D.1 Age Distribution of Research Participants (n=150 and n=86)

The tables below presents the observed frequency of the age of each research participant for both n=150 and n=86.

Age Distribution (n=150)

		Frequency	Percent	Valid Percent	Cumulative %
Valid	-99	8	5.3	5.3	5.3
	18	4	2.7	2.7	8.0
	19	9	6.0	6.0	14.0
	20	18	12.0	12.0	26.0
	21	16	10.7	10.7	36.7
	22	8	5.3	5.3	42.0
	23	6	4.0	4.0	46.0
	24	5	3.3	3.3	49.3
	25	3	2.0	2.0	51.3
	26	4	2.7	2.7	54.0
	27	8	5.3	5.3	59.3
	28	2	1.3	1.3	60.7
	29	3	2.0	2.0	62.7
	30	3	2.0	2.0	64.7
	31	5	3.3	3.3	68.0
	32	3	2.0	2.0	70.0
	33	3	2.0	2.0	72.0
	34	1	.7	.7	72.7
	35	3	2.0	2.0	74.7
	36	3	2.0	2.0	76.7
	37	5	3.3	3.3	80.0
	39	3	2.0	2.0	82.0
	40	4	2.7	2.7	84.7
	41	2	1.3	1.3	86.0
	42	3	2.0	2.0	88.0
	45	2	1.3	1.3	89.3
	46	2	1.3	1.3	90.7
	49	2	1.3	1.3	92.0
	51	2	1.3	1.3	93.3
	52	2	1.3	1.3	94.7
	53	1	.7	.7	95.3
	55	1	.7	.7	96.0
	57	1	.7	.7	96.7
	61	1	.7	.7	97.3
	62	1	.7	.7	98.0
	63	1	.7	.7	98.7
	65	1	.7	.7	99.3
	71	1	.7	.7	100.0
	Total	150	100.0	100.0	

(Continued). Age Distribution of Research Participants (n=150 and n=86)

Age Distribution (n=86)					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	-99	4	4.7	4.7	4.7
	18	1	1.2	1.2	5.8
	19	5	5.8	5.8	11.6
	20	15	17.4	17.4	29.1
	21	7	8.1	8.1	37.2
	22	6	7.0	7.0	44.2
	23	3	3.5	3.5	47.7
	24	3	3.5	3.5	51.2
	25	2	2.3	2.3	53.5
	26	2	2.3	2.3	55.8
	27	6	7.0	7.0	62.8
	28	2	2.3	2.3	65.1
	29	3	3.5	3.5	68.6
	30	2	2.3	2.3	70.9
	31	3	3.5	3.5	74.4
	32	1	1.2	1.2	75.6
	33	2	2.3	2.3	77.9
	35	2	2.3	2.3	80.2
	36	2	2.3	2.3	82.6
	37	2	2.3	2.3	84.9
	39	1	1.2	1.2	86.0
	40	1	1.2	1.2	87.2
	41	1	1.2	1.2	88.4
	42	1	1.2	1.2	89.5
	45	1	1.2	1.2	90.7
	46	1	1.2	1.2	91.9
	49	2	2.3	2.3	94.2
	51	1	1.2	1.2	95.3
	53	1	1.2	1.2	96.5
	55	1	1.2	1.2	97.7
	62	1	1.2	1.2	98.8
	71	1	1.2	1.2	100.0
	Total	86	100.0	100.0	

Appendix D.2. Years Living in the United States

The table below presents a summary of the number of years research participants have lived in the United States for both n=150 and n=86.

Years Living in the United States (n=150)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	.7	.7	.7
	1	1	.7	.7	1.3
	1	3	2.0	2.0	3.3
	2	1	.7	.7	4.0
	2	5	3.3	3.3	7.3
	3	1	.7	.7	8.0
	3	1	.7	.7	8.7
	4	2	1.3	1.3	10.0
	5	3	2.0	2.0	12.0
	6	2	1.3	1.3	13.3
	7	4	2.7	2.7	16.0
	8	1	.7	.7	16.7
	9	3	2.0	2.0	18.7
	10	1	.7	.7	19.3
	11	1	.7	.7	20.0
	12	1	.7	.7	20.7
	13	1	.7	.7	21.3
	14	2	1.3	1.3	22.7
	15	2	1.3	1.3	24.0
	16	2	1.3	1.3	25.3
	18	5	3.3	3.3	28.7
	19	7	4.7	4.7	33.3
	20	15	10.0	10.0	43.3
	21	16	10.7	10.7	54.0
	22	9	6.0	6.0	60.0
	23	8	5.3	5.3	65.3
	24	3	2.0	2.0	67.3
	26	2	1.3	1.3	68.7
	27	3	2.0	2.0	70.7
	28	2	1.3	1.3	72.0
	29	1	.7	.7	72.7
	30	3	2.0	2.0	74.7
	31	2	1.3	1.3	76.0
	32	1	.7	.7	76.7
	33	2	1.3	1.3	78.0
	34	1	.7	.7	78.7
	36	1	.7	.7	79.3
	37	2	1.3	1.3	80.7

	Years Living in the United States (n=150) – Continued			
	Frequency	Percent	Valid Percent	Cumulative Percent
39	3	2.0	2.0	82.7
40	4	2.7	2.7	85.3
41	2	1.3	1.3	86.7
42	2	1.3	1.3	88.0
44	1	.7	.7	88.7
45	2	1.3	1.3	90.0
46	1	.7	.7	90.7
49	2	1.3	1.3	92.0
51	2	1.3	1.3	93.3
52	2	1.3	1.3	94.7
53	1	.7	.7	95.3
55	2	1.3	1.3	96.7
61	1	.7	.7	97.3
62	2	1.3	1.3	98.7
65	1	.7	.7	99.3
71	1	.7	.7	100.0
Total	150	100.0	100.0	

Number of Years Living in the US (n=86)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	1.2	1.2	1.2
	1	1	1.2	1.2	2.3
	1	1	1.2	1.2	3.5
	2	3	3.5	3.5	7.0
	3	1	1.2	1.2	8.1
	3	1	1.2	1.2	9.3
	4	1	1.2	1.2	10.5
	5	2	2.3	2.3	12.8
	6	1	1.2	1.2	14.0
	7	2	2.3	2.3	16.3
	8	1	1.2	1.2	17.4
	9	1	1.2	1.2	18.6
	11	1	1.2	1.2	19.8
	12	1	1.2	1.2	20.9
	14	1	1.2	1.2	22.1
	15	1	1.2	1.2	23.3
	16	2	2.3	2.3	25.6
	18	1	1.2	1.2	26.7

	Number of Years Living in the US (n=86) – Continued				
		Frequency	Percent	Valid Percent	Cumulative Percent
	19	4	4.7	4.7	31.4
	20	14	16.3	16.3	47.7
	21	7	8.1	8.1	55.8
	22	7	8.1	8.1	64.0
	23	4	4.7	4.7	68.6
	24	1	1.2	1.2	69.8
	26	1	1.2	1.2	70.9
	27	3	3.5	3.5	74.4
	28	2	2.3	2.3	76.7
	29	1	1.2	1.2	77.9
	30	3	3.5	3.5	81.4
	31	1	1.2	1.2	82.6
	33	1	1.2	1.2	83.7
	36	1	1.2	1.2	84.9
	39	1	1.2	1.2	86.0
	40	1	1.2	1.2	87.2
	41	1	1.2	1.2	88.4
	42	1	1.2	1.2	89.5
	45	1	1.2	1.2	90.7
	46	1	1.2	1.2	91.9
	49	2	2.3	2.3	94.2
	51	1	1.2	1.2	95.3
	53	1	1.2	1.2	96.5
	55	1	1.2	1.2	97.7
	62	1	1.2	1.2	98.8
	71	1	1.2	1.2	100.0
	Total	86	100.0	100.0	

Appendix D.3 Ethnicity, Country of Birth and Highest Level of Formal Education

The tables below present a summary of the ethnic background of research participants for both n=150 and n=86.

Ethnicity (n=150)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	African American	77	51.3	51.3	51.3
	Asian	30	20.0	20.0	71.3
	Mixed Ethnicity	11	7.3	7.3	78.7
	White, of Hispanic Origin	5	3.3	3.3	82.0
	White, not of Hispanic Origin	23	15.3	15.3	97.3
	Other	4	2.7	2.7	100.0
	Total	150	100.0	100.0	

Ethnicity (n=86)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	African American	46	53.5	53.5	53.5
	Asian	18	20.9	20.9	74.4
	Mixed Ethnicity	6	7.0	7.0	81.4
	White, of Hispanic Origin	4	4.7	4.7	86.0
	White, not of Hispanic Origin	11	12.8	12.8	98.8
	Other	1	1.2	1.2	100.0
	Total	86	100.0	100.0	

Country of Birth (n=150)					
		Frequency	Percent	Valid %	Cumulative %
Valid	Bangladesh	1	.7	.7	.7
	Bulgaria	1	.7	.7	1.3
	Burkina Faso	1	.7	.7	2.0
	Canada	1	.7	.7	2.7
	Chad	1	.7	.7	3.3
	China	3	2.0	2.0	5.3
	Colombia	1	.7	.7	6.0
	Denmark	1	.7	.7	6.7
	Dominican Republic	1	.7	.7	7.3
	Germany	1	.7	.7	8.0
	Greece	1	.7	.7	8.7
	Guyana	1	.7	.7	9.3
	Haiti	1	.7	.7	10.0
	Honduras	1	.7	.7	10.7
	India	8	5.3	5.3	16.0
	Indian	1	.7	.7	16.7
	Iran	2	1.3	1.3	18.0
	Jamaica	2	1.3	1.3	19.3
	Japan	2	1.3	1.3	20.7
	Kenya	1	.7	.7	21.3
	Nigeria	3	2.0	2.0	23.3
	Pakistan	2	1.3	1.3	24.7
	Philippines	1	.7	.7	25.3
	South America	1	.7	.7	26.0
	South Korea	3	2.0	2.0	28.0
	Taiwan	1	.7	.7	28.7
	Trinidad & Tobago	1	.7	.7	29.3
	Turkey	1	.7	.7	30.0
	USA	101	67.3	67.3	97.3
	USVI	1	.7	.7	98.0
	Venezuela	1	.7	.7	98.7
	Vietnam	2	1.3	1.3	100.0
	Total	150	100.0	100.0	

Country of Birth (n=86)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bulgaria	1	1.2	1.2	1.2
	Canada	1	1.2	1.2	2.3
	Colombia	1	1.2	1.2	3.5
	Germany	1	1.2	1.2	4.7
	Haiti	1	1.2	1.2	5.8
	Honduras	1	1.2	1.2	7.0
	India	6	7.0	7.0	14.0
	Indian	1	1.2	1.2	15.1
	Iran	1	1.2	1.2	16.3
	Japan	1	1.2	1.2	17.4
	Kenya	1	1.2	1.2	18.6
	Nigeria	1	1.2	1.2	19.8
	Pakistan	2	2.3	2.3	22.1
	South America	1	1.2	1.2	23.3
	South Korea	2	2.3	2.3	25.6
	Taiwan	1	1.2	1.2	26.7
	Turkey	1	1.2	1.2	27.9
	USA	60	69.8	69.8	97.7
	Venezuela	1	1.2	1.2	98.8
	Vietnam	1	1.2	1.2	100.0
	Total	86	100.0	100.0	

The tables below present a summary of the educational background of research participants for both n=150 and n=86.

Highest Level of Formal Education (n=150)				
		Frequency	Valid Percent	Cumulative Percent
Valid	High School or GED	70	46.7	77.3
	College Graduate	46	30.7	30.7
	Master's Degree	23	15.3	92.7
	Doctorate	11	7.3	100.0
	Total	150	100.0	

Highest Level of Formal Education (n=86)				
		Frequency	Valid Percent	Cumulative Percent
Valid	High School or GED	40	46.5	79.1
	College Graduate	28	32.6	32.6
	Master's Degree	11	12.8	91.9
	Doctorate	7	8.1	100.0
	Total	86	100.0	

Appendix D..4 Degree of Hug Reciprocation & Manipulation Check

Degree of Hug Reciprocation (n=86)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO.	5	5.8	5.9	5.9
	A little	13	15.1	15.3	21.2
	Somewhat	9	10.5	10.6	31.8
	Not quite a full hug.	25	29.1	29.4	61.2
	YES. Full hug.	33	38.4	38.8	100.0
	Total	85	98.8	100.0	
Missing	-99	1	1.2		
Total		86	100.0		

Confederate's Status: Intern =1; Manager = 2 (n=86)					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Intern w Same Power	42	48.8	50.0	50.0
	Mgr. w Higher Power	42	48.8	50.0	100.0
	Total	84	97.7	100.0	
Missing	System	2	2.3		
Total		86	100.0		

(Continued) Degree of Hug Reciprocation & Manipulation Check

Those Who Passed the Manipulation Check: Do you remember the role (title) of the person you just met in the "negotiation"?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Intern	36	41.9	41.9	41.9
	Manager	50	58.1	58.1	100.0
	Total	86	100.0	100.0	

Did you hear anything about the true nature of this research BEFORE you participated in this study?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	74	86.0	86.0	86.0
	Maybe	4	4.7	4.7	90.7
	Yes	8	9.3	9.3	100.0
	Total	86	100.0	100.0	

Appendix D.5 Comments & Suggestions from Research Participants

The table below presents a summary of the verbatim free-form comments and suggestions provided by research participants (n=148).

Do you have comments or suggestions to improve our survey or other aspects of this experiment?					
		Frequency	%	Valid %	Cumulative Percent
Valid		39	45.3	45.3	45.3
	Ask participants to read scenario carefully and give them at least 5 minutes to read. Leaving particpant alone while reading the scenario will be helpful.	1	1.2	1.2	46.5
	background history	1	1.2	1.2	47.7
	Cool experiment that provided a insight to business negotiations	1	1.2	1.2	48.8
	Great experiment!	1	1.2	1.2	50.0
	hugs are good for you	1	1.2	1.2	51.2
	I truly enjoyed this. Thank you.	1	1.2	1.2	52.3
	It was a very warm survey. I enjoyed it	1	1.2	1.2	53.5
	It was fun!	1	1.2	1.2	54.7
	it was great	1	1.2	1.2	55.8
	It was lots of fun!	1	1.2	1.2	57.0
	It was so interested. It is a different way to study social sciences.	1	1.2	1.2	58.1
	Keep up the good work.	1	1.2	1.2	59.3
	Less questions could increase chances of unbiased responses	1	1.2	1.2	60.5
	n/a	2	2.3	2.3	62.8
	N/A	1	1.2	1.2	64.0
	No	5	5.8	5.8	69.8
	No	8	9.3	9.3	79.1
	NO	1	1.2	1.2	80.2
	no it was interesting	1	1.2	1.2	81.4
	No, Great job and fun.	1	1.2	1.2	82.6
	No, I thought it is an interesting study.	1	1.2	1.2	83.7
	No, it is a great experiment	1	1.2	1.2	84.9
	No. Great experiment.	1	1.2	1.2	86.0

(Continued) - Comments & Suggestions from Research Participants

	(Continued): Do you have comments or suggestions to improve our survey or other aspects of this experiment?				
		Frequency	%	Valid Percent	Cumulative Percent
	No. Interesting Experiment.	1	1.2	1.2	87.2
	None	2	2.3	2.3	89.5
	Nope great job	1	1.2	1.2	90.7
	not at this time	1	1.2	1.2	91.9
	Paula Gable and I briefly discussed one slight indicator that may have keyed in on the purpose of the study.	1	1.2	1.2	93.0
	Please share the final report	1	1.2	1.2	94.2
	Some of the questions seem to be asking the same thing. For instance, "envious/jealous or moody/temperamental" this may cause some confusion for future participants.	1	1.2	1.2	95.3
	Somewhat understand the concept, just don't know how some people would feel towards it, especially people of the opposite gender as the intern/person they are meeting.	1	1.2	1.2	96.5
	The scenario did a good job of putting me in a mindset where I believed that I would be arguing a point. I was not at all focused on the method of greeting.	1	1.2	1.2	97.7
	This was a real good survey, very nice and a real good feeling.	1	1.2	1.2	98.8
	Very interesting!	1	1.2	1.2	100.0
	Total	86	100.0	100.0	

Appendix E Supporting Documents for Testing H1 and Related Post Hoc Analyses

Below are SPSS tabulations for the multiple regression calculations to test $H_{1.}$ Section 7.5.1.a_1 presents results for n=150 and section 7.5.1.a_2 presents results for n=86.

Appendix E.1. Regression to Test H_1: Confederate's Power (Status) Predicts Hug (n=150)

H_1 NOT SUPPORTED FOR n=150

Model Summary (n=150)							
					Change Statistics		
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1
1	.108[a]	.012	-.002	1.252	.012	.832	2
2	.174[b]	.030	.010	1.245	.019	2.731	1

Model Summary (n=150)		
	Change Statistics	
Model	df2	Sig. F Change
1	142	.437
2	141	.101
a. Predictors: (Constant), Years lived in the United States, Age of Research Participant		

ANOVA[a] (n=150)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.608	2	1.304	.832	.437[b]
	Residual	222.702	142	1.568		
	Total	225.310	144			
2	Regression	6.840	3	2.280	1.472	.225[c]
	Residual	218.470	141	1.549		
	Total	225.310	144			

a. Dependent Variable: Degree of Hug Reciprocation
b. Predictors: (Constant), Years in the United States, Age
c. Predictors: (Constant), Years in US, Age, Confederate's Status: Interim =1; Manager = 2

Appendix E.2. Regression to Test H1: Confederation's Power Predicts Hug (n=86)

H_1 NOT SUPPORTED FOR n=86

Model Summary (n=86)				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.229[a]	.052	.029	1.223
2	.231[b]	.053	.017	1.230
a. Predictors: (Constant), Years in US, Age				
b. Predictors: (Constant), Years in US, Age, Confederate's Status: Intern =1; Manager = 2				

ANOVA[a] (n=86)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.611	2	3.306	2.210	.116[b]
	Residual	119.678	80	1.496		
	Total	126.289	82			
2	Regression	6.739	3	2.246	1.484	.225[c]
	Residual	119.550	79	1.513		
	Total	126.289	82			
a. Dependent Variable: Degree of Hug Reciprocation						
b. Predictors: (Constant), Years in the United States; Age						
c. Predictors: (Constant), Years in US; Age; Confederate's Status: Intern =1; Mgr. = 2						

Appendix E.3 Post Hoc Test: Confederate's Power (Status) Predicts Comfort

Below are SPSS tabulations showing results of multiple regression calculations for a post hoc analysis to test if the confederate's power predicts the Comfort measure in the QCE scale. Section 7.5.1.b_1 presents results for n=150 and section 7.5.1.b_2 presents results for n=86.

Appendix 7.5.1.b_1. Post Hoc Test: Power Predicts Comfort (n=150)

REGRESSION NOT SIGNIFICANT.

Model Summary (n=150)							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.064[a]	.004	-.010	3.70741	.004	.297	2
2	.075[b]	.006	-.015	3.71758	.002	.219	1

Model Summary (n=150)		
Model	Change Statistics	
	df2	Sig. F Change
1	143	.743
2	142	.641

a. Predictors: (Constant), Years in the US, Age of research participant.
b. Predictors: (Constant), Years in US, Age, Confederate's Status: Interim =1; Mgr. = 2

ANOVA[a] (n=150)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.165	2	4.083	.297	.743[b]
	Residual	1965.522	143	13.745		
	Total	1973.687	145			
2	Regression	11.185	3	3.728	.270	.847[c]
	Residual	1962.502	142	13.820		
	Total	1973.687	145			

a. Dependent Variable: Comfort (QCE)
b. Predictors: (Constant), Years in US, Age of Research Participant
c. Predictors: (Constant), Years in US, Age, Confederate's Status: Interim =1; Manager = 2

Appendix E.4 Post Hoc Test: Power Predicts Comfort (n=86)

REGRESSION NOT SIGNIFICANT.

Model Summary (n=86)				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.109[a]	.012	-.013	4.80743
2	.127[b]	.016	-.021	4.82660

a. Predictors: (Constant), Years in US, Age
b. Predictors: (Constant), Years in US, Age, Confederate's Status: Intern =1; Mgr. = 2

ANOVA[a] (n=86)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.454	2	11.227	.486	.617[b]
	Residual	1872.025	81	23.111		
	Total	1894.479	83			
2	Regression	30.795	3	10.265	.441	.725[c]
	Residual	1863.685	80	23.296		
	Total	1894.479	83			

a. Dependent Variable: Comfort
b. Predictors: (Constant), Years in US, Age
c. Predictors: (Constant), Years in US, Age, Confederate's Status: Intern =1; Manager = 2

Appendix E.5 Post Hoc Test: Confederate's Power Predicts Responsiveness

Below are results of a post hoc multiple regression analysis to test if the confederate's power predicts the construct Responsiveness from the QCE scale. Section 7.5.1.c_1 presents results for n=150 and section 7.5.1.c_2 presents results for n=86.

Appendix 7.5.1.c_1. Post Hoc Test: Confederate's Power Predicts Responsiveness (n=150)

POST HOC TEST IS SIGNIFICANT AT THE .082 LEVEL.

Model Summary (n=150)							
					Change Statistics		
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1
1	.201a	.041	.027	4.34574	.041	3.018	2
2	.214b	.046	.026	4.34855	.005	.815	1

Model Summary (n=150)		
	Change Statistics	
Model	df2	Sig. F Change
1	143	.052
2	142	.368

a. Predictors: (Constant), Years in the US, Age
b. Predictors: (Constant), Years in the United States, Age, Confederate's Status: Interim =1; Manager = 2

ANOVA[a] (n=150)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	114.010	2	57.005	3.018	.052b
	Residual	2700.619	143	18.885		
	Total	2814.630	145			
2	Regression	129.425	3	43.142	2.281	.082c
	Residual	2685.204	142	18.910		
	Total	2814.630	145			

a. Dependent Variable: Responsiveness
b. Predictors: (Constant), Years in the United States, Age
c. Predictors: (Constant), Years in US, Age, Confederate's Status: Intern = 1, Mgr. = 2

Continued: Confederate's Power Predicts Responsiveness (n=150)

Coefficients[a] (n=150)						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.719	.676		9.944	.000
	Age	.000	.013	-.002	-.025	.980
	Years in US	-.058	.026	-.200	-2.269	.025
2	(Constant)	5.721	1.296		4.415	.000
	Age	.000	.013	.001	.011	.991
	Years in US	-.057	.026	-.199	-2.250	.026
	Confederate's Status: Interim =1; Mgr. = 2	.651	.721	.074	.903	.368

a. Dependent Variable: Responsiveness

Appendix E.6. Post Hoc Test: Confederate's Power (Status) Predicts Responsiveness (n=86)

POST HOC TEST SIGNIFICANT AT THE .08 LEVEL

Model Summary (n=86)				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.264[a]	.070	.047	5.61236
2	.284[b]	.080	.046	5.61432

a. Predictors: (Constant), Years in US, Age
b. Predictors: (Constant), Years in US, Age, Confederate's Status: Intern =1; Mgr. = 2

Excluded Variables[a] (n=86)						
Model		Beta In	T	Sig.	Partial Correlation	Collinearity Statistics: Tolerance
1	Confederate's Status: Intern =1; Manager = 2	.104[b]	.971	.334	.108	.994

a. Dependent Variable: Responsiveness
b. Predictors in the Model: (Constant), Years in US, Age

ANOVA[a] (n=86)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	190.789	2	95.395	3.029	.054[b]
	Residual	2551.389	81	31.499		
	Total	2742.178	83			
2	Regression	220.530	3	73.510	2.332	.080[c]
	Residual	2521.648	80	31.521		
	Total	2742.178	83			

a. Dependent Variable: Responsiveness
b. Predictors: (Constant), Years in US, Age
c. Predictors: (Constant), Years in US, Age, Confederate's Status: Intern =1; Manager = 2

Coefficients[a] (n=86)						
Model		Unstandardized Coefficients: B	Unstandardized Coefficients: Std. Error	Standardized Coefficients: Beta	t	Sig.
1	(Constant)	7.495	1.161		6.455	.000
	Age	-.006	.022	-.033	-.286	.775
	Years in US	-.101	.046	-.251	-2.209	.030
2	(Constant)	5.634	2.240		2.516	.014
	Age	-.007	.022	-.033	-.292	.771
	Years in US	-.097	.046	-.243	-2.132	.036
	Confederate's Status: Intern =1; Manager = 2	1.193	1.229	.104	.971	.334

a. Dependent Variable: Responsiveness

Appendix E.7 Supporting Documents for Testing H2 and Related Post Hoc Analyses

Below are SPSS tabulations for the multiple regression calculations to test H_2 and related post hoc analyses. . Section 7.5.2.a_1 presents results of hypothesis testing for n=150 and section 7.5.1.a_2 presents results for n=86.

Appendix 7.5.2.a_1. Testing H_2: Gender Predicts Degree of Hug Reciprocation (n=150)

H_2 SUPPORTED FOR N=150.
GENDER <u>DOES</u> PREDICT DEGREE OF HUG RECIPROCATION.

Model Summary (n=150)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.124[a]	.015	.002	1.262	.015	1.138	2
2	.409[b]	.167	.150	1.165	.152	26.407	1

Model Summary (n=150)

Model	Change Statistics	
	df2	Sig. F Change
1	146	.323
2	145	.000

a. Predictors: (Constant), Years in the United States, Age
b. Predictors: (Constant), Years in the United States, Age, Gender

ANOVA[a] (n=150)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.625	2	1.813	1.138	.323[b]
	Residual	232.562	146	1.593		
	Total	236.188	148			
2	Regression	39.454	3	13.151	9.693	.000
	Residual	196.734	145	1.357		
	Total	236.188	148			

a. Dependent Variable: Degree of Hug Reciprocation
b. Predictors: (Constant), Years in the United States, Age
c. Predictors: (Constant), Years in the United States, Age, Gender

(Continued). Testing H_2: Gender Predicts Hug Reciprocation (n=150)

Coefficients[a] (n=150)						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.166	.194		21.425	.000
	Age	.001	.004	.019	.220	.826
	Years in the US	-.011	.007	-.130	-1.472	.143
2	(Constant)	2.808	.319		8.792	.000
	Age	-.001	.003	-.032	-.386	.700
	Years in the US	-.016	.007	-.187	-2.282	.024
	Gender	1.007	.196	.400	5.139	.000
a. Dependent Variable: Degree of Hug Reciprocation						

Appendix E.8 Testing H_2: Gender Predicts Degree of Hug Reciprocation (n=86)

H_2 SUPPORTED FOR n=86.
GENDER DOES PREDICT DEGREE OF HUG RECIPROCATION.

Model Summary (n=86)							
					Change Statistics		
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1
1	.253[a]	.064	.041	1.244	.064	2.813	2
2	.369[b]	.136	.104	1.202	.072	6.761	1

Model Summary (n=86)		
	Change Statistics	
Model	df2	Sig. F Change
1	82	.066
2	81	.011
a. Predictors: (Constant), Years in US, Age		
b. Predictors: (Constant), Years in US, Age, Gender		

ANOVA[a] (n=86)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.705	2	4.352	2.813	.066[b]
	Residual	126.895	82	1.548		
	Total	135.600	84			
2	Regression	18.481	3	6.160	4.261	.008[c]
	Residual	117.119	81	1.446		
	Total	135.600	84			
a. Dependent Variable: Degree of Hug Reciprocation						
b. Predictors: (Constant), Years in US, Age						
c. Predictors: (Constant), Years in US, Age, Gender						

(Continued). Testing H_2: Gender Predicts Hug Reciprocation (n=86)

Coefficients[a] (n=86)						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.317	.257		16.830	.000
	Age	-.002	.005	-.046	-.409	.683
	Years in US	-.021	.010	-.234	-2.065	.042
2	(Constant)	3.447	.417		8.273	.000
	Age	-.003	.005	-.071	-.649	.518
	Years in US	-.025	.010	-.284	-2.551	.013
	Gender	.711	.273	.276	2.600	.011

Coefficients[a] (n=86)			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Age	.888	1.126
	Years in US	.888	1.126
2	(Constant)		
	Age	.882	1.134
	Years in US	.862	1.160
	Gender	.949	1.054
a. Dependent Variable: Degree of Hug Reciprocation			

Excluded Variables[a] (n=86)						
Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Gender	.276[b]	2.600	.011	.278	.949

Excluded Variables[a] (n=86)			
Model		Collinearity Statistics	
		VIF	Minimum Tolerance
1	Gender	1.054	.862
a. Dependent Variable: Degree of Hug Reciprocation			
b. Predictors in the Model: (Constant), Years in US, Age			

(Continued). Testing H_2: Gender Predicts Hug Reciprocation (n=86)

Collinearity Diagnostics[a] (n=86)						
				Variance Proportions		
Model	Dimension	Eigenvalue	Condition Index	(Constant)	Age	Years in US
1	1	2.419	1.000	.04	.07	.04
	2	.431	2.368	.13	.91	.05
	3	.150	4.020	.83	.03	.91
2	1	3.276	1.000	.01	.03	.02
	2	.486	2.597	.02	.89	.00
	3	.182	4.238	.05	.07	.97
	4	.056	7.670	.92	.00	.01

Collinearity Diagnostics[a] (n=86)		
		Variance Proportions
Model	Dimension	Gender
1	1	
	2	
	3	
2	1	.01
	2	.02
	3	.09
	4	.88
a. Dependent Variable: Degree of Hug Reciprocation		

Appendix E.9 Post Hoc Test: Gender Predicts Comfort (n=150)

REGRESSION NOT SIGNIFICANT.

Model Summary (n=150)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.061[a]	.004	-.010	3.65758	.004	.278	2
2	.068[b]	.005	-.016	3.66859	.001	.119	1

Model Summary (n=150)

Model	Change Statistics	
	df2	Sig. F Change
1	147	.757
2	146	.730

a. Predictors: (Constant), Years in the United States, Age
b. Predictors: (Constant), Years in the United States, Age, Gender

ANOVA[a] (n=150)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.449	2	3.724	.278	.757[b]
	Residual	1966.550	147	13.378		
	Total	1973.998	149			
2	Regression	9.054	3	3.018	.224	.879[c]
	Residual	1964.944	146	13.459		
	Total	1973.998	149			

a. Dependent Variable: Comfort
b. Predictors: (Constant), Years in the United States, Age
c. Predictors: (Constant), Years in the United States, Age, Gender

Coefficients[a] (n=150)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.837	.563		8.585	.000
	Age	-.003	.010	-.027	-.302	.763
	Years in the US	-.011	.021	-.047	-.527	.599
2	(Constant)	4.550	1.004		4.533	.000
	Age	-.004	.010	-.030	-.341	.734
	Years in the US	-.012	.022	-.051	-.569	.570
	Gender	.213	.616	.029	.345	.730

a. Dependent Variable: Comfort

Appendix E.10 Post Hoc Analysis: Gender Predicts Comfort (n=86)

REGRESSION NOT SIGNIFICANT.

Model Summary (n=86)							
					Change Statistics		
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1
1	.107[a]	.011	-.012	4.75067	.011	.480	2
2	.122[b]	.015	-.021	4.77114	.003	.289	1

Model Summary (n=86)		
	Change Statistics	
Model	df2	Sig. F Change
1	83	.620
2	82	.592
a. Predictors: (Constant), Years in US, Age		
b. Predictors: (Constant), Years in US, Age, Gender		

ANOVA[a] (n=86)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.672	2	10.836	.480	.620[b]
	Residual	1873.217	83	22.569		
	Total	1894.890	85			
2	Regression	28.260	3	9.420	.414	.744[c]
	Residual	1866.629	82	22.764		
	Total	1894.890	85			
a. Dependent Variable: Comfort						
b. Predictors: (Constant), Years in US, Age						
c. Predictors: (Constant), Years in US, Age, Gender						

(Continued). Gender Predicts Comfort (n=86)

Coefficients[a] (n=86)						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.803	.978		4.909	.000
	Age	-.010	.019	-.061	-.525	.601
	Years in US	-.023	.038	-.070	-.601	.550
2	(Constant)	5.511	1.642		3.355	.001
	Age	-.009	.019	-.055	-.473	.638
	Years in US	-.019	.039	-.058	-.490	.625
	Gender	-.580	1.079	-.061	-.538	.592
a. Dependent Variable: Comfort						

Excluded Variables[a] (n=86)						
Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Gender	-.061[b]	-.538	.592	-.059	.943
a. Dependent Variable: Comfort b. Predictors in the Model: (Constant),Years lived in the United States, Age						

Appendix E.11 Post Hoc Test: Gender Predicts Responsiveness (n=150)

REGRESSION NOT SIGNIFICANT.

Model Summary (n=150)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.204[a]	.042	.029	4.28795	.042	3.189	2
2	.204[b]	.042	.022	4.30260	.000	.001	1

Model Summary (n=150)

Model	Change Statistics	
	df2	Sig. F Change
1	147	.044
2	146	.975

a. Predictors: (Constant), Years in the United States, Age
b. Predictors: (Constant), Years in the United States, Age, Gender

ANOVA[a] (n=150)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	117.285	2	58.643	3.189	.044[b]
	Residual	2702.822	147	18.387		
	Total	2820.108	149			
2	Regression	117.304	3	39.101	2.112	.101[c]
	Residual	2702.804	146	18.512		
	Total	2820.108	149			

a. Dependent Variable: Responsiveness
b. Predictors: (Constant), Years in the US, Age
c. Predictors: (Constant), Years in US, Age, Gender

(Continued): Post Hoc Test - Gender Predicts Responsiveness (n=150)

Coefficients[a] (n=150)						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.730	.660		10.189	.000
	Age	-.001	.012	-.008	-.093	.926
	Years in US	-.058	.025	-.201	-2.319	.022
2	(Constant)	6.760	1.177		5.743	.000
	Age	-.001	.012	-.008	-.088	.930
	Years in US	-.058	.025	-.200	-2.283	.024
	Gender	-.023	.722	-.003	-.032	.975
a. Dependent Variable: Responsiveness						

Appendix E.12. Post Hoc Test: Gender Predicts Responsiveness (n=86)

SIGNIFICANT AT 10% LEVEL.

Model Summary (n=86)							
					Change Statistics		
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1
1	.266[a]	.070	.048	5.54464	.070	3.148	2
2	.270[b]	.073	.039	5.57142	.002	.204	1

Model Summary (n=86)		
	Change Statistics	
Model	df2	Sig. F Change
1	83	.048
2	82	.653

a. Predictors: (Constant), Years in US, Age
b. Predictors: (Constant), Years in US, Age, Gender

ANOVA[a] (n=86)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	193.531	2	96.765	3.148	.048[b]
	Residual	2551.672	83	30.743		
	Total	2745.203	85			
2	Regression	199.862	3	66.621	2.146	.101[c]
	Residual	2545.341	82	31.041		
	Total	2745.203	85			

a. Dependent Variable: Responsiveness
b. Predictors: (Constant), Years in US, Age
c. Predictors: (Constant), Years in US, Age, Gender

(Continued). Gender Predicts Responsiveness (n=86)

Coefficients[a] (n=86)						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.485	1.142		6.555	.000
	Age	-.006	.022	-.032	-.289	.773
	Years in US	-.100	.045	-.253	-2.247	.027
2	(Constant)	8.179	1.918		4.265	.000
	Age	-.005	.022	-.028	-.246	.806
	Years in US	-.097	.046	-.243	-2.117	.037
	Gender	-.569	1.259	-.049	-.452	.653
a. Dependent Variable: Responsiveness						

Excluded Variables[a] (n=86)						
Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Gender	-.049[b]	-.452	.653	-.050	.943
a. Dependent Variable: Responsiveness						
b. Predictors in the Model: (Constant), Years in US, Age						

Appendix E.13. Testing H_3: Interaction of Power & Gender Predicts Hug (n= 150)

H3 SUPPORTED FOR n=150.

Model Summary (n=150)							
					Change Statistics		
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1
1	.108[a]	.012	-.002	1.252	.012	.832	2
2	.388[b]	.151	.133	1.165	.139	23.112	1
3	.411[c]	.169	.145	1.157	.018	3.034	1
4	.412[d]	.170	.140	1.160	.001	.123	1

Model Summary (n=150)		
	Change Statistics	
Model	df2	Sig. F Change
1	142	.437
2	141	.000
3	140	.084
4	139	.726

a. Predictors: (Constant), Years in the United States, Age
b. Predictors: (Constant), Years in the United States, Age, Gender
c. Predictors: (Constant), Years in the United States, Age, Gender, Confederate's Status: Interim=1; Mgr.= 2
d. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Mgr.= 2; genderXconfstatus is the interaction of Gender and the confederate's Power (status).

(Cont.) Testing H_3: Power*Gender Predicts Hug (n= 150)

ANOVA[a] (n=150)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.608	2	1.304	.832	.437[b]
	Residual	222.702	142	1.568		
	Total	225.310	144			
2	Regression	33.971	3	11.324	8.345	.000[c]
	Residual	191.339	141	1.357		
	Total	225.310	144			
3	Regression	38.030	4	9.507	7.107	.000[d]
	Residual	187.281	140	1.338		
	Total	225.310	144			
4	Regression	38.196	5	7.639	5.675	.000[e]
	Residual	187.115	139	1.346		
	Total	225.310	144			

a. Dependent Variable: Degree of Hug Reciprocation
b. Predictors: (Constant), Years in US, Age
c. Predictors: (Constant), Years in US, Age, Gender
d. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Mgr. = 2
e. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Mgr.= 2, genderXconfstatus (where genderXconfstatus is the interaction of Gender and Confederate's Status)

(Cont.). Testing H_3: Power*Gender Predicts Hug (n= 150)

Coefficients[a] (n=150)						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	T	Sig.
Years in US	Years in US	4.130	.195		21.203	.000
	Years in US	.001	.004	.025	.282	.779
	Years in US	-.009	.007	-.114	-1.273	.205
2	(Constant)	2.850	.322		8.853	.000
	Age	-.001	.004	-.016	-.192	.848
	Years in US	-.015	.007	-.177	-2.094	.038
	Gender	.955	.199	.383	4.807	.000
3	(Constant)	3.369	.437		7.713	.000
	Age	-.001	.003	-.022	-.264	.792
	Years in US	-.015	.007	-.181	-2.149	.033
	Gender	.953	.197	.382	4.829	.000
	Confederate's Status: Intern =1; Mgr. = 2	-.335	.192	-.134	-1.742	.084
4	(Constant)	3.673	.972		3.778	.000
	Age	-.001	.003	-.023	-.276	.783
	Years in US	-.015	.007	-.177	-2.083	.039
	Gender	.747	.618	.300	1.208	.229
	Confederate's Status: Intern =1; Mgr. = 2	-.541	.617	-.217	-.877	.382
	† genderXconfstatus	.136	.389	.118	.351	.726

a. Dependent Variable: Degree of Hug Reciprocation

† GenderXconfstatus is the interaction of Gender and the confederate's Power (status)

Appendix E.14. Testing H_3: Interaction of Power & Gender Predicts Hug (n= 86)

H_3 SIGNIFICANT AT 10% LEVEL FOR n=86.

Model Summary (n=86)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.229[a]	.052	.029	1.223	.052	2.210	2
2	.333[b]	.111	.077	1.192	.058	5.187	1
3	.336[c]	.113	.067	1.199	.002	.182	1
4	.337[d]	.114	.056	1.206	.001	.064	1

Model Summary (n=86)

Model	Change Statistics	
	df2	Sig. F Change
1	80	.116
2	79	.025
3	78	.671
4	77	.801

a. Predictors: (Constant), Years in US, Age
b. Predictors: (Constant), Years in US, Age, Gender
c. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2
d. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2, genderXconfstatus, where genderXconfstatus is the interaction of Gender and confederate's Power (status)

ANOVA[a] (n=86)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.611	2	3.306	2.210	.116[b]
	Residual	119.678	80	1.496		
	Total	126.289	82			
2	Regression	13.985	3	4.662	3.279	.025[c]
	Residual	112.304	79	1.422		
	Total	126.289	82			
3	Regression	14.247	4	3.562	2.480	.051[d]
	Residual	112.042	78	1.436		
	Total	126.289	82			
4	Regression	14.340	5	2.868	1.973	.092[e]
	Residual	111.949	77	1.454		
	Total	126.289	82			

a. Dependent Variable: Degree of Hug Reciprocation
b. Predictors: (Constant), Years in US, Age
c. Predictors: (Constant), Years in US, Age, Gender
d. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2
e. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2, genderXconfstatus (where genderXconfstatus is the interaction of Gender and confederate's Power (status)

(Continued). Testing H_3: Gender*Power Predicts Hug (n= 86)

Coefficients[a] (n=86)						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.271	.253		16.858	.000
	Age	-.002	.005	-.042	-.369	.713
	Years in US	-.018	.010	-.211	-1.833	.070
2	(Constant)	3.511	.415		8.460	.000
	Age	-.003	.005	-.066	-.586	.560
	Years in US	-.023	.010	-.261	-2.279	.025
	Gender	.628	.276	.249	2.278	.025
3	(Constant)	3.680	.575		6.405	.000
	Age	-.003	.005	-.066	-.584	.561
	Years in US	-.023	.010	-.265	-2.297	.024
	Gender	.635	.278	.252	2.286	.025
	Confederate's Status: Intern =1; Manager = 2	-.113	.265	-.046	-.427	.671
4	(Constant)	3.968	1.276		3.109	.003
	Age	-.003	.005	-.071	-.612	.542
	Years in US	-.023	.010	-.262	-2.246	.028
	Gender	.427	.870	.169	.491	.625
	Confederate's Status: Intern =1; Manager = 2	-.307	.811	-.124	-.378	.706
	genderXconfstatus	.139	.549	.119	.253	.801
a. Dependent Variable: Degree of Hug Reciprocation						

Excluded Variables[a] (n=86)						
Model		Beta In	T	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Gender	.249[b]	2.278	.025	.248	.939
	Confederate's Status: Intern =1; Manager = 2	-.032[b]	-.290	.772	-.033	.992
	genderXconfstatus	.150[b]	1.376	.173	.153	.982
2	Confederate's Status: Intern =1; Manager = 2	-.046[c]	-.427	.671	-.048	.989
	genderXconfstatus	-.049[c]	-.320	.750	-.036	.480
3	genderXconfstatus	.119[d]	.253	.801	.029	.052
a. Dependent Variable: Degree of Hug Reciprocation b. Predictors in the Model: (Constant), Years in US, Age c. Predictors in the Model: (Constant), Years in US, Age, Gender d. Predictors in the Model: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2						

Appendix E.15. Post Hoc Test: Interaction of Power & Gender Predicts Comfort (n=150)

REGRESSION NOT SIGNIFICANT.

Model Summary (n=150)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.064[a]	.004	-.010	3.70741	.004	.297	2
2	.070[b]	.005	-.016	3.71895	.001	.114	1
3	.080[c]	.006	-.022	3.72923	.002	.218	1
4	.090[d]	.008	-.027	3.73939	.002	.235	1

Model Summary (n=150)

Model	Change Statistics	
	df2	Sig. F Change
1	143	.743
2	142	.736
3	141	.641
4	140	.628

a. Predictors: (Constant), Years in US, Age
b. Predictors: (Constant), Years in US, Age, Gender
c. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2
d. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2, genderXconfstatus (interaction between power and gender)

ANOVA[a] (n=150)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.165	2	4.083	.297	.743[b]
	Residual	1965.522	143	13.745		
	Total	1973.687	145			
2	Regression	9.746	3	3.249	.235	.872[c]
	Residual	1963.941	142	13.831		
	Total	1973.687	145			
3	Regression	12.775	4	3.194	.230	.921[d]
	Residual	1960.912	141	13.907		
	Total	1973.687	145			
4	Regression	16.064	5	3.213	.230	.949[e]
	Residual	1957.623	140	13.983		
	Total	1973.687	145			

a. Dependent Variable: Comfort
b. Predictors: (Constant), Years in US, Age
c. Predictors: (Constant), Years in US, Age, Gender
d. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2
e. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2, genderXconfstatus (interaction between power and gender)

(Continued). Interaction of Power & Gender Predicts Comfort (n=150)

Coefficients[a] (n=150)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.850	.576		8.415	.000
	What is your age?	-.004	.011	-.033	-.370	.712
	Years in the United States?	-.011	.022	-.044	-.489	.626
2	(Constant)	4.564	1.025		4.451	.000
	What is your age?	-.004	.011	-.036	-.401	.689
	Years in the United States?	-.012	.022	-.049	-.535	.594
	What is your gender?	.214	.633	.029	.338	.736
3	(Constant)	4.121	1.400		2.944	.004
	What is your age?	-.004	.011	-.035	-.381	.704
	Years in the United States?	-.012	.022	-.048	-.525	.601
	What is your gender?	.215	.635	.029	.338	.736
	Confederate's Status: Interim =1; Manager = 2	.288	.618	.039	.467	.641
4	(Constant)	2.763	3.132		.882	.379
	What is your age?	-.004	.011	-.033	-.361	.719
	Years in the United States?	-.013	.022	-.053	-.577	.565
	What is your gender?	1.128	1.988	.153	.567	.571
	Confederate's Status: Interim =1; Manager = 2	1.203	1.986	.164	.606	.545
	genderXconfstatus	-.605	1.247	-.179	-.485	.628

a. Dependent Variable: Comfort

Appendix E.16 Post Hoc Test: Interaction of Power & Gender Predicts Comfort (n=86)

REGRESSION NOT SIGNIFICANT

Model Summary (n=86)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.109[a]	.012	-.013	4.80743	.012	.486	2
2	.123[b]	.015	-.022	4.82909	.003	.275	1
3	.142[c]	.020	-.029	4.84727	.005	.401	1
4	.144[d]	.021	-.042	4.87692	.001	.043	1

Model Summary (n=86)

Model	Change Statistics	
	df2	Sig. F Change
1	81	.617
2	80	.601
3	79	.528
4	78	.837

a. Predictors: (Constant), Years in US, Age
b. Predictors: (Constant), Years in US, Age, Gender
c. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2
d. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2, genderXconfstatus (Interaction of Gender and Confederate's Status)

ANOVA[a] (n=86)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.454	2	11.227	.486	.617[b]
	Residual	1872.025	81	23.111		
	Total	1894.479	83			
2	Regression	28.872	3	9.624	.413	.744[c]
	Residual	1865.607	80	23.320		
	Total	1894.479	83			
3	Regression	38.291	4	9.573	.407	.803[d]
	Residual	1856.188	79	23.496		
	Total	1894.479	83			
4	Regression	39.302	5	7.860	.330	.893[e]
	Residual	1855.177	78	23.784		
	Total	1894.479	83			

a. Dependent Variable: Comfort
b. Predictors: (Constant), Years in US, Age
c. Predictors: (Constant), Years in US, Age, Gender
d. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2
e. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2, genderXconfstatus

(Continued). Interaction of Power & Gender Predicts Comfort (n=86)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.809	.994		4.836	.000
	Age	-.010	.019	-.061	-.523	.602
	Years in US	-.024	.039	-.072	-.613	.542
2	(Constant)	5.511	1.670		3.300	.001
	Age	-.009	.019	-.055	-.469	.640
	Years in US	-.020	.040	-.059	-.492	.624
	Gender	-.583	1.111	-.060	-.525	.601
3	(Constant)	4.520	2.293		1.971	.052
	Age	-.009	.019	-.056	-.468	.641
	Years in US	-.018	.040	-.053	-.435	.665
	Gender	-.632	1.118	-.065	-.565	.574
	Confederate's Status: Intern =1; Manager = 2	.673	1.063	.071	.633	.528
4	(Constant)	3.569	5.157		.692	.491
	Age	-.008	.020	-.052	-.427	.670
	Years in US	-.018	.041	-.055	-.449	.655
	Gender	.052	3.501	.005	.015	.988
	Confederate's Status: Intern =1; Manager = 2	1.309	3.265	.138	.401	.690
	genderXconfstatus	-.454	2.200	-.103	-.206	.837

a. Dependent Variable: Comfort

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Gender	-.060[b]	-.525	.601	-.059	.933
	Confederate's Status: Intern =1; Manager = 2	.067[b]	.598	.551	.067	.994
	genderXconfstatus	-.001[b]	-.007	.995	-.001	.978
2	Confederate's Status: Intern =1; Manager = 2	.071[c]	.633	.528	.071	.990
	genderXconfstatus	.086[c]	.530	.598	.060	.473
3	genderXconfstatus	-.103[d]	-.206	.837	-.023	.051

a. Dependent Variable: Comfort
b. Predictors in the Model: (Constant), Years in US, Age
c. Predictors in the Model: (Constant), Years in US, Age, Gender
d. Predictors in the Model: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2

*Appendix E.17 Post Hoc Analysis: Power*Gender Predicts Responsiveness (n=150)*

REGRESSION NOT SIGNIFICANT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.201[a]	.041	.027	4.34574	.041	3.018	2
2	.201[b]	.041	.020	4.36099	.000	.002	1
3	.214[c]	.046	.019	4.36392	.005	.809	1
4	.219[d]	.048	.014	4.37518	.002	.276	1

Model Summary

Model	Change Statistics	
	df2	Sig. F Change
1	143	.052
2	142	.969
3	141	.370
4	140	.600

a. Predictors: (Constant), Years in US, Age
b. Predictors: (Constant), Years in US, Age, Gender
c. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2
d. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2, genderXconfstatus

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	114.010	2	57.005	3.018	.052[b]
	Residual	2700.619	143	18.885		
	Total	2814.630	145			
2	Regression	114.039	3	38.013	1.999	.117[c]
	Residual	2700.591	142	19.018		
	Total	2814.630	145			
3	Regression	129.452	4	32.363	1.699	.153[d]
	Residual	2685.178	141	19.044		
	Total	2814.630	145			
4	Regression	134.728	5	26.946	1.408	.225[e]
	Residual	2679.902	140	19.142		
	Total	2814.630	145			

a. Dependent Variable: Responsiveness
b. Predictors: (Constant), Years in US, Age
c. Predictors: (Constant), Years in US, Age, Gender
d. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2
e. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2, genderXconfstatus

(Continued): Power*Gender Predicts Responsiveness (n=150)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.719	.676		9.944	.000
	Age	.000	.013	-.002	-.025	.980
	Years in US	-.058	.026	-.200	-2.269	.025
2	(Constant)	6.757	1.202		5.619	.000
	Age	.000	.013	-.002	-.021	.983
	Years in US	-.058	.026	-.200	-2.226	.028
	Gender	-.029	.742	-.003	-.039	.969
3	(Constant)	5.757	1.638		3.515	.001
	Age	.000	.013	.001	.015	.988
	Years in US	-.057	.026	-.198	-2.207	.029
	Gender	-.028	.743	-.003	-.037	.970
	Confederate's Status: Interim =1; Manager = 2	.651	.723	.074	.900	.370
4	(Constant)	7.478	3.665		2.040	.043
	Age	-7.110E-5	.013	.000	-.005	.996
	Years in US	-.056	.026	-.193	-2.124	.035
	Gender	-1.185	2.326	-.135	-.509	.611
	Confederate's Status: Interim =1; Manager = 2	-.508	2.323	-.058	-.219	.827
	genderXconfstatus	.766	1.459	.190	.525	.600

a. Dependent Variable: Responsiveness

*Appendix E.18 Post Hoc Analysis: Power*Gender Predicts Responsiveness (n=86)*

REGRESSION NOT SIGNIFICANT.

Model Summary (n=86)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.264[a]	.070	.047	5.61236	.070	3.029	2
2	.268[b]	.072	.037	5.64056	.002	.192	1
3	.289[c]	.083	.037	5.64061	.012	.999	1
4	.315[d]	.099	.041	5.62767	.016	1.364	1

Model Summary (n=86)

Model	Change Statistics	
	df2	Sig. F Change
1	81	.054
2	80	.662
3	79	.321
4	78	.246

a. Predictors: (Constant), Years in US, Age
b. Predictors: (Constant), Years in US, Age, Gender
c. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2
d. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2, genderXconfstatus

ANOVA[a] (n=86)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	190.789	2	95.395	3.029	.054[b]
	Residual	2551.389	81	31.499		
	Total	2742.178	83			
2	Regression	196.903	3	65.634	2.063	.112[c]
	Residual	2545.275	80	31.816		
	Total	2742.178	83			
3	Regression	228.673	4	57.168	1.797	.138[d]
	Residual	2513.505	79	31.817		
	Total	2742.178	83			
4	Regression	271.864	5	54.373	1.717	.141[e]
	Residual	2470.314	78	31.671		
	Total	2742.178	83			

a. Dependent Variable: Responsiveness
b. Predictors: (Constant), Years in US, Age
c. Predictors: (Constant), Years in US, Age, Gender
d. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2
e. Predictors: (Constant), Years in US, Age, Gender, Confederate's Status: Intern =1; Manager = 2, genderXconfstatus

(Cont.). Interaction of Power & Gender Predicts Responsiveness (n=86)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.495	1.161		6.455	.000
	Age	-.006	.022	-.033	-.286	.775
	Years in US	-.101	.046	-.251	-2.209	.030
2	(Constant)	8.180	1.951		4.194	.000
	Age	-.005	.022	-.028	-.242	.809
	Years in US	-.097	.047	-.241	-2.065	.042
	Gender	-.569	1.298	-.049	-.438	.662
3	(Constant)	6.360	2.669		2.383	.020
	Age	-.005	.022	-.028	-.243	.809
	Years in US	-.093	.047	-.231	-1.972	.052
	Gender	-.658	1.301	-.057	-.506	.614
	Confederate's Status: Intern =1; Manager = 2	1.236	1.237	.108	.999	.321
4	(Constant)	12.575	5.951		2.113	.038
	Age	-.010	.023	-.049	-.422	.674
	Years in US	-.088	.047	-.219	-1.867	.066
	Gender	-5.126	4.040	-.440	-1.269	.208
	Confederate's Status: Intern =1; Manager = 2	-2.921	3.768	-.256	-.775	.441
	genderXconfstatus	2.965	2.539	.557	1.168	.246
a. Dependent Variable: Responsiveness						

Appendix E.19. Testing H_{4A}: Emotional Sensitivity (ES) Predicts Hug (n=150)

H_{4A} NOT SUPPORTED FOR n=150

Model Summary (n=150)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.124[a]	.015	.002	1.262
2	.130[b]	.017	-.003	1.265

a. Predictors: (Constant), Years in US, Age
b. Predictors: (Constant), Years in US, Age, Emotional Sensitivity

ANOVA[a] (n=150)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.625	2	1.813	1.138	.323[b]
	Residual	232.562	146	1.593		
	Total	236.188	148			
2	Regression	3.989	3	1.330	.830	.479[c]
	Residual	232.199	145	1.601		
	Total	236.188	148			

a. Dependent Variable: Degree of Hug Reciprocation
b. Predictors: (Constant), Years in US, Age
c. Predictors: (Constant), Years in US, Age

Coefficients[a] (n=150)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.166	.194		21.425	.000
	Age	.001	.004	.019	.220	.826
	Years in US	-.011	.007	-.130	-1.472	.143
2	(Constant)	4.075	.273		14.903	.000
	Age	.001	.004	.015	.173	.863
	Years in US	-.011	.007	-.132	-1.495	.137
	Emotional Sensitivity	.020	.042	.040	.476	.635

a. Dependent Variable: Degree of Hug Reciprocation

Appendix E.20 Testing H_{4A}: Emotional Sensitivity (ES) Predicts Hug (n=86)

H_{4A} NOT SUPPORTED FOR n=86

Model Summary (n=86)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.253[a]	.064	.041	1.244	.064	2.813	2
2	.259[b]	.067	.033	1.250	.003	.268	1

Model Summary (n=86)

Model	Change Statistics	
	df2	Sig. F Change
1	82	.066
2	81	.606

a. Predictors: (Constant), Years in US, Age
b. Predictors: (Constant), Years in US, Age, Emotional Sensitivity

ANOVA[a] (n=86)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.705	2	4.352	2.813	.066[b]
	Residual	126.895	82	1.548		
	Total	135.600	84			
2	Regression	9.123	3	3.041	1.947	.128[c]
	Residual	126.477	81	1.561		
	Total	135.600	84			

a. Dependent Variable: Degree of Hug Reciprocation
b. Predictors: (Constant), Years in US, Age
c. Predictors: (Constant), Years in US, Age, Emotional Sensitivity

Coefficients[a] (n=86)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.317	.257		16.830	.000
	Age	-.002	.005	-.046	-.409	.683
	Years in US	-.021	.010	-.234	-2.065	.042
2	(Constant)	4.452	.366		12.160	.000
	Age	-.002	.005	-.051	-.443	.659
	Years in US	-.020	.010	-.230	-2.015	.047
	Emotional Sensitivity	-.028	.054	-.056	-.517	.606

a. Dependent Variable: Degree of Hug Reciprocation

(Continued). H_{4A}: Emotional Sensitivity (ES) Predicts Hug (n=86)

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics: Tolerance
1	Emotional Sensitivity	-.056[b]	-.517	.606	-.057	.993

a. Dependent Variable: Degree of Hug Reciprocation
b. Predictors in the Model: (Constant), Years in US, Age

Appendix E.21 Testing H_{4B}: Social Flexibility (SF) Predicts Hug (n=150)

H_3 NOT SUPPORTED FOR n=150

Model Summary (n=150)				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.124[a]	.015	.002	1.262
2	.135[b]	.018	-.002	1.265

a. Predictors: (Constant), Years in the United States, Age
b. Predictors: (Constant), Years in the United States, Age, Social Flexibility

ANOVA[a] (n=150)						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.625	2	1.813	1.138	.323[b]
	Residual	232.562	146	1.593		
	Total	236.188	148			
2	Regression	4.302	3	1.434	.897	.445[c]
	Residual	231.886	145	1.599		
	Total	236.188	148			

a. Dependent Variable: Degree of Hug Reciprocation
b. Predictors: (Constant), Years in the US, Age
c. Predictors: (Constant), Years in the US, Age, Social Flexibility

Coefficients[a] (n=150)						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.166	.194		21.425	.000
	Age	.001	.004	.019	.220	.826
	Years in US	-.011	.007	-.130	-1.472	.143
2	(Constant)	4.017	.301		13.357	.000
	Age	.000	.004	-.007	-.071	.944
	Years in US	-.010	.007	-.124	-1.400	.164
	Social Flexibility	.035	.054	.059	.650	.516

a. Dependent Variable: Degree of Hug Reciprocation

Continued. Testing H_{4B}: Social Flexibility (SF) Predicts Hug (n=86)

H_{4B} NOT SUPPORTED FOR n=86

Model Summary (n=86)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.253[a]	.064	.041	1.244	.064	2.813	2
2	.271[b]	.074	.039	1.245	.009	.825	1

Model Summary (n=86)

Model	Change Statistics	
	df2	Sig. F Change
1	82	.066
2	81	.367

a. Predictors: (Constant), Years in US, Age
b. Predictors: (Constant), Years in US, Age, Social Flexibility

ANOVA[a] (n=86)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8.705	2	4.352	2.813	.066[b]
	Residual	126.895	82	1.548		
	Total	135.600	84			
2	Regression	9.984	3	3.328	2.146	.101[c]
	Residual	125.616	81	1.551		
	Total	135.600	84			

a. Dependent Variable: Degree of Hug Reciprocation
b. Predictors: (Constant), Years in US, Age
c. Predictors: (Constant), Years in US, Age, Social Flexibility

Coefficients[a] (n=86)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.317	.257		16.830	.000
	Age	-.002	.005	-.046	-.409	.683
	Years in US	-.021	.010	-.234	-2.065	.042
2	(Constant)	4.103	.349		11.773	.000
	Age	-.005	.006	-.125	-.877	.383
	Years in US	-.019	.010	-.215	-1.862	.066
	Social Flexibility	.056	.062	.123	.908	.367

a. Dependent Variable: Degree of Hug Reciprocation

Continued. Testing H_{4B}: Social Flexibility (SF) Predicts Hug (n=86)

Excluded Variables[a] (n=86)						
Model		Beta In	T	Sig.	Partial Correlation	Collinearity Statistics: Tolerance
1	Social Flexibility	.123[b]	.908	.367	.100	.627
a. Dependent Variable: Degree of Hug Reciprocation						
b. Predictors in the Model: (Constant), Years in US, Age						

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