EFFECTS OF ATTITUDE SIMILARITY, ATTACHMENT STYLE, & SELF-ESTEEM

ON INTERPERSONAL ATTRACTION

by

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LIST OF ABBREVIATIONS

Abbreviation	Description
DA	Dissimilar Attitudes
IJS	Interpersonal Judgment Scale
SA	Similar Attitudes
SE	Self Esteem

ABSTRACT

Interpersonal Attraction is an important field of psychology concerning why humans are attracted to one another and the multiple factors as to how this attraction occurs. Major studies in the field have looked at dyadic relationships involving a complete range of interactions from first impressions of a stranger to those of long-term couples. These studies focus on reciprocal behavior contingencies and how these relationships grow and change over time. Research suggests there is a positive linear relationship between attitude similarity and attraction. This "reinforcement affect theory" view of attraction has been previously studied with interpersonal attraction, but has lately been challenged by theories that emphasize cognition rather than reinforcement. Focusing on constructs such as attachment style and self-esteem has allowed researchers to gain insight into the human psyche, which will assist in determining how interpersonal attraction occurs. Examining the conceptual processes concerning why people are attracted to individuals may help explain the complexities of attraction. The goals of the current study were to (1) replicate previous studies that show percent of attitude similarity influences interpersonal attraction, (2) to examine the relationship between attachment style and self-esteem, (3) their relationship to interpersonal attraction, and (4) to test for a cognitive interpretation of the attitude similarity – interpersonal attraction relationship. The results show that percent of attitude similarity influences interpersonal attraction and that self-esteem is related to attachment style. The results did not show that

attachment style or self-esteem are related to interpersonal attraction. A cognitive

interpretation of the attitude similarity – attraction relationship was not supported.

I. INTRODUCTION

Meeting someone for the first time is an exciting moment because each human is unknown to the other and there is much to be discovered under another individual's immediate exterior; a glimpse about who that person is seen upon the first encounter. Humans are social beings though; sharing personal views and opinions with one another is how communication and social bonding occur. Usually when people meet others with viewpoints similar to their own, they like them more, accept them more, and judge them to be more intelligent than those with dissimilar views (Byrne, 1961).

Interpersonal Attraction has become an important subfield within social psychology. The results of interpersonal attraction studies have been replicated over decades. Although it is unlikely that researchers can fully replicate the complex interactions that occur between two people who start to share their attitudes and personalities with one another, the field of social psychology has progressed to the point of examining additional variables that affect attraction. Attraction to certain people over others does not occur with pure impulse; there is a judgment to be made whether the judgment is subconscious or not. This judgment of another person is likely made up of a combination of a person's past and present experiences and current context of the situation.

Knowing how attraction forms may be useful and interesting in helping better understand relationship styles, interpersonal attraction in relationships, interpersonal behavior patterns, and the development of friendships. In addition, this research provides insight into the scientific understanding of the connection between various relationship styles and self-esteem when making judgments about others. From a wider perspective,

this study has the potential to extend an understanding of individual differences in attraction depending on similarity level, self-esteem level, and attachment style. Specifically, it will promote further understanding of how interpersonal relationships form and why they form the way they do.

Included in the research area of interpersonal attraction are variables that influence a person's interaction with the world such as attachment patterns (Bowlby, 1973; Byrne, 1997; Sroufe, 2005) and self-esteem (Helmreich, Aronson, & Lefan, 1970; Hendrick & Page, 1970). There have been several studies linking self-esteem to attraction, (Gonzales, Davis, Loney, LuKens, & Junghans, 1983; Hendrick & Page, 1970; Montoya & Horton, 2004), as well as many linking attachment style to self-esteem (Bylsma, 1997; Meyers, 1998; Mikulincer & Horesh, 1999; Tamir & Mitchell, 2013). However, no single study had looked at both self-esteem and attachment style as they affect attraction. Individuals' attitudes have been shown to affect attraction, but have not been measured directly with self-esteem and attachment style. Previous research conducted in this topic area has created the baseline as well as the building blocks necessary to further pursue this topic. Combining and investigating how these variables might connect and contribute to attraction will work to determine a potential baseline for how attraction is established. The independent variables of similarity and affect versus cognition will be randomly assigned, while the two quasi-independent variables (self-esteem, and attachment style) will be measured in order to investigate their relationship to the dependent variable, interpersonal attraction. Beginning with Byrne's reinforcement affect research, then moving on to a challenging theory of cognitive saliency by Montoya

and Horton will connect all of these constructs together into a vital research topic of interest to find the primary mediator of the attitude-attraction relationship.

Interpersonal Attraction and Attitude Similarity

As discussed by Byrne (1961), psychologists had previously studied similarity-attraction effect in an experimental setting; examples include Schacter (1951), Smith (1957, 1958) and Heider (1958), but their interpersonal theories focused on attribution in attraction. Byrne (1961) conducted one of the first experiments to test the theory that similarity drives attraction. This theory demonstrated that people are more attracted to someone if they receive positive feedback in the form of attitude similarities. He discovered that similarity of attitudes enhanced attraction. He found this to occur by conducting an experiment in which he measured the effect of similarity on interpersonal attraction by altering surveys of participants.

Byrne was a prominent social psychologist and pioneer in the field of interpersonal attraction as well as one of the primary researchers to suggest that similarity yields attraction (Byrne, 1960; Byrne & Nelson, 1965). This theory helped to develop a research design, which allowed a reliable experimental examination of the attitude-similarity relationship. His theory was based on positive reinforcement, focusing on the behavioral aspect of liking. Although cognition was acknowledged as an important aspect of forming a judgment of another, the data showed that the more attitudes individual's held in common with each other, the more attracted they were to the other individual (Byrne, 1971; Byrne, 1997). This might explain why people are drawn to like-minded individuals. Motivation to find others who are similar may have something to do with keeping a person's perspective consistent with what they already know; people strive for

assurance in dealing with the world around them. (Byrne, Clore, & Worchel, 1966). The social reinforcement when people agree with each other is associated with classical conditioning. Similar attitudes became a conditioned stimulus for implicit affective responses. This positive judgment therefore helps shape implicit evaluations of an individual, which is reflected in overt evaluative responses such as attraction (Byrne, 1997). An additional aspect to consider is that people usually observe like and unlike attitudes in the same person, eliciting both positive and negative affective responses. This combined effect is seen to result in a single evaluative response expressed as attraction. Byrne acknowledged the complex aspects of human interactions and observed that effects of two mediators could determine attraction: implicit affective responses and implicit evaluative responses (Byrne, 1997). Therefore, affect, evaluation, and reinforcement were conceptualized as three interactive constructs.

People think as well as feel; cognitive variables can modify and even override emotional considerations. He suggests that the probability of approach vs. avoidance was centered on the notion that evaluative behavior is based on six mediators: affect, evaluation, cognition, expectancy, fantasy, and arousal. This was labeled the "behavioral sequence" and introduces the idea that based on certain affective responses from the individual, an evaluation occurs, which in turn affects how attracted to another a person becomes (Byrne, 1997).

Byrne created his own operations and procedures rather than working within an existing framework and, with a limited budget, creativity, and access to paper generated a method for measuring variables. The independent variable was attitude similarity. His college students chose the topics for the survey. 26 attitudes with 7-point items ranging

from relatively important to relatively unimportant were given to the participants. A between subjects design was used with 4 experimental groups. 1= given a stranger who agreed with them on all 26 items (100% similarity). 2= stranger who disagreed on all 26 items (0% similarity). 3= stranger agreed on the 13 most important topics and disagreeing on the 13 least important, 4= stranger agreed on the 13 least topics and disagreed on the most important (50% similarity). He measured the dependent variable attraction by using The Interpersonal Judgment Scale (IJS). This measure consisted of two 7-point evaluative items from sociometric research; how much one likes the other person and the degree to which one would enjoy working with that person. The scale was preceded by four additional items designed to support the cover story, asking for perceptions of the stranger's intelligence, knowledge of current events, morality, and adjustment. First, the Survey of Attitudes was administered in class. Then the student was later presented with what was supposed to be a scale filled out by a fellow student in another class at the university (name and identifying data scissored out), the final step was the IJS.

This method removed other potential confounding variables such as physical attractiveness, age, height, ethnicity, educational background, nonverbal behavior, etc. The purpose was to determine just how much students could learn about one another from the limited information provided by comparing the different groups.

Highly significant results were found; attitudinal stimuli had a powerful effect on interpersonal evaluations. The participants believed that another student had filled out the bogus scale and the judgment scale was perceived as straightforward. Evaluations of strangers appeared to be affected by degree of similarity. Those with the highest levels of attraction were those who were given the highest level of attitude similarity. Not only did

similarity affect attraction, it also influenced the way participants made predictions about different aspects of similar strangers. Results showed that when the participant held similar attitudes to his/her own, that person was assumed to be more moral and intelligent, to hold more knowledge of current events, and to be well adjusted (Byrne, 1961). The effect of topic importance was weaker than had been assumed; suggesting the possibility that attitudinal content does not matter in this context. This allowed for the possibility for all data (800 participants) from previous experiments to be combined and plotted. The relationship between proportion of similar attitudes and attraction produced a linear function. The progression of attraction across the three conditions suggests that no similarity, intermediate similarity, and total similarity represent three points along a stimulus continuum (Byrne, 1961). However, the utility of a law is defined by its generality and application to further attraction studies; the goal was prediction.

Alternative explanations and flaws within the experiment can be acknowledged: for example, many of the attitudinal positions were developed by Texas undergraduates. However, he convincingly demonstrated that consistent procedures are a prerequisite for consistent outcomes. The succeeding scenarios tested also showed significance: racial prejudice, real and assumed similarity of spouses, computer dates, dispositional mediators of the similarity-attraction relationship, etc. (Byrne, 1997). Similarity was established as a precursor to liking, but other research is now being conducted that gives evidence of the interplay between factors when attraction occurs. Byrne expresses how the attraction paradigm endeavor was successful by commitment to two interrelated factors: operational and theoretical consistency (Byrne, 1971). Operational consistency involves the importance of an investigator keeping constant all operations except the

single new element being studied when progressing from one study to the next. He was not the first to suggest this useful and necessary step in the research process, Francis Bacon expressed this idea in the 17th century concerning the fact that graduate students are taught more about confounds within experiments rather than confounds between them (Byrne, 1997). Conceptual consistency is a related tool that refers to the need to incorporate any and all relevant findings into ones theoretical framework. Findings should be interrelated not only empirically, but also conceptually. Whatever the origins of a conceptual formulation and however much it is elaborated and altered over time, logical consistency is crucial. Without these two considerations when forming a research experiment, theoretical framework becomes of little value without a coherent empirical framework (Byrne, 1997). This can have an effect on future findings and progress in the area of research, which is the critical component of scientific activity. Conceptual formulations develop and expand over time, but unless the conceptual structure maintains some consistency, the result is confusion.

In 2004, Montoya and Horton produced a study that measured attraction in relation to cognitive evaluation. They hypothesized that cognitive inferences, not reinforcement-affect, were responsible for attraction. In their view, making inferences about similar and dissimilar others is what controls the level of liking, not necessarily the observable similarity of two individuals. They tested to see whether or not thinking about someone before assessing attraction, but after manipulating similarity, would affect the level of liking. It was hypothesized that thinking about an individual would increase the saliency of attitude similarity, allowing for an actual judgment to take place. The participant would therefore like the stranger more if this judgment took place before one

assessed the level of attraction because they would have thought of other aspects of the life of the individual, not simply of similarity. In one condition participants were shown a survey with one of two similarity levels, and then shown an attraction measure followed by a cognitive evaluation measure. In the other condition participants were told to cognitively evaluate the participant before responding to the attraction measure. The cognition measure consisted of a list of items that included questions asking how good of a person they thought the other person was and whether they thought the partner would make a good leader. Attraction was then assessed with the Interpersonal Attraction Scale, which included questions such as, "I think I would enjoy my future interaction partner's company" and "I would like to meet my future interaction partner" (Montoya and Horton, 2004).

Results replicated the previous findings of Byrne, but also contributed something new. It was suggested that cognitive evaluation moderated interpersonal attraction. In the condition that attraction was measured after cognitive evaluation there was a significant influence on attraction, but results were not significant when the attraction measure took place prior to the cognitive evaluation questions.

This study is important in establishing the cognitive aspect of liking, as well as showing that this cognitive aspect may allow an inference to occur between level of similarity and liking. In other words, people tend to infer that other similarities exist and that is where the attraction comes into play. It is not because of these specific similarities that someone is attracted; rather, because these similarities exist they are able to speculate that others exist as well. In terms of the cognitive influence on attraction, Byrne came to the same conclusion. He does not ignore a cognitive impact in past research, nor does he

deny that multiple factors are involved in forming attraction (Byrne, 1961). However, researchers disagree about why these findings occur. (evaluative responses vs. cognitive saliency). It is important to note that different methodologies were used in the Montoya and Horton study than in past research about attraction. Instead of the Interpersonal Judgment Scale, their study implemented a scale called the Interpersonal Attraction Questionnaire. They also developed a new scale that was used in the cognitive evaluation condition. This may have caused different results to emerge than would have occurred using methodological consistency.

Because conceptual and empirical consistency is important in applying findings to past and future research, this current study will use the reliable methods previously exhibited by Byrne for measuring attraction. Since the Montoya and Horton's study replicated findings and added to Byrne's attraction paradigm theory, replication should be possible in this study as well. Montoya and Horton's studies in 2004 affirmed Byrne's Law of Attraction because it supported the notion that people are attracted to similar individuals and this will allow a person to keep consistency regarding interpretation of their worldview (Montoya & Horton, 2004).

Interpersonal Attraction and Attachment Style

Developing one's own concept of self is arguably determined by the environment, beginning at infancy. Although no one is consciously thinking about his or her self-worth at this stage, the level of care received has a direct impact on how individuals feel about themselves and how they will act toward others in the future. An attachment review by Bartholomew (1990) explained the exploration of attachment role patterns first described by Bowlby (1969), then further established by Ainsworth et al., (1978) and Main (1981).

This early research focused on attachment as it pertains to infants. Attachment theory was then extended to adult romantic relationships by, among others, Hazan and Shaver (1994). Adult interpersonal behavior was studied further by Bartholomew and Horowitz (1991) who included underlying positive and negative dimensions (based on early experiences with caregivers).

I will outline the attachment roadmap, which is important in understanding the history of attachment theory. Attachment style has its roots in the 1960's when Bowlby first began to recognize the link between parenting style and personality development (Mikulincer & Horesh, 1999). However, it was not until 1973 that Bowlby's attachment theory began to take form as a potential explanation for development. His theory posits that how a caregiver treats an infant shapes how they will attain intimacy with others in the future. This was congruent with Ainsworth's findings (1978) in a series of experiments called *The Strange Situation*. These experiments show that the caregiver's level of attentiveness dramatically affects the infant. If the caregiver is caregiving and attentive, the person grows up with a balanced sense of self and others. However if the caregiver is inconsistently comforting when comfort is needed, the individual either learns to depend solely on him or herself, or constantly searches to gain the comfort that was missing in infancy. Three classic styles of attachment became the models for Attachment Theory: anxious-ambivalent, secure, and avoidant (Ainsworth & Bowlby, 1991). Anxious-ambivalent children feel easily rejected, fear abandonment, cling to those who first show interest in them, and doubt their worth. Secure children do not overly worry about relationships, nor do they avoid intimacy or commitment; they are emotionally balanced and mentally healthy. Those with an avoidant style are typically

distant in regard to self-disclosure and intimacy; they do not like to depend on others and rely on themselves for stability in times of emotional uncertainty (Hepper & Carnelley, 2012).

Bowlby and Ainsworth originally posited these childhood attachment styles, but one of Ainsworth's students (Mary Main) took particular interest in attachment and furthered her mentor's work. Main developed the Adult Interview (interviewing parents of the infants) where she developed a classification scheme consisting of 3 types of attachment. In which she used three types of attachment: Secure, Dismissing (never before seen), and Preoccupied. Main renamed the avoidant style as "dismissing" and the anxious-ambivalent style as "preoccupied." Dismissive and preoccupied styles were necessary in order to separate characteristics found in the anxious-ambivalent group. Both groups tended to need more attention overall, but the groups differed in how they sought the attention. Preoccupied children sought attention often and needed extra care whereas dismissive children seemed detached when experiencing stress. Main speculated that the detachment results from not wanting the attachment figure to leave. If the toddler exhibits a negative behavior, the adult is more likely to leave. Main sees detachment as a way of "cutting-off" attachment tendencies in order to achieve emotional preservation (Bartholomew, 1990). The constant neediness of the preoccupied child develops from resistance to exploring the environment independently. Dependence develops in response to inconsistent caregiving. In subsequent research Main found another form of attachment called "disorganized" with a very small percent of children exhibiting this style. Later research concludes that people that exhibit the disorganized style have emotional and mental instability throughout their lives (Sroufe, 2005).

Until now research on attachment styles had focused on infants and toddlers, but in 1987 Hazan and Shaver studied attachment in adult romantic relationships (Hazan & Shaver, 1987). They translated the concepts of Bowlby and Ainsworth into adult relationships using secure, ambivalent, and avoidant/fearful styles. Fear had not previously been discussed but Bowlby and Ainsworth suggest it as a way avoidance develops into adulthood (Bartholomew, 1990).

More recently though it has been argued that insecure styles branch off when the children grow into adults. If classified as avoidant in infancy, the child develops into a fearful or dismissive adult; a "preoccupied" adult stems from an anxious/ambivalent child. Individual differences and the environment cause individuals to differ in assessing their self-worth and the trustworthiness of others (Byrne, 1997). Adult attachment patterns influence responses to others in terms of affect, evaluations, beliefs, and expectancies, and are generated by interpersonal situations (Sroufe, 2005). Bartholomew and Horowitz believe that 4 attachment styles can be witnessed in adults. Secure individuals have autonomy and are comfortable with intimacy. Individuals who are preoccupied become involved in relationships but feel unworthy so are anxious and ambivalent about interacting with a partner. Those with a "dismissive" attachment style hesitate to become involved in relationships and when they do become involved, are suspicious about the motives and intentions of their partner. Those exhibiting "fearful" attachment style are socially avoidant. They do not trust themselves or others; as a result they are lonely and lacking in autonomy (Bartholomew, 1990).

Working models of self and other were first described by Bowlby. Bartholomew took "dismissive" from Main's research and "fearful" from Hazan and Shaver's work.

"Preoccupied" figured in Hazan and Main's works. Attachment theory has been conceptualized in different ways over the years. The methodology for measuring attachment styles has also evolved. Currently there is no universally accepted framework, rather there are several; these developments are discussed below. Bartholomew takes past research from Bowlby, Ainsworth, Main, Hazan, and Shaver in the 2x2 grid; they are all involved experimentally and conceptually connected (Bartholomew, 1990; Bylsma, Cozzarelli, & Sumer, 1997). This is arguably a better measure to use because it incorporates 4 types (both types of avoidant (fearful and dismissive) and a self-other outlook. Ainsworth did not use fearful and Hazan/Shaver did not include dismissive (Bartholomew & Shaver, 1998).

In 2005, Sroufe conducted a longitudinal study in order to find out whether or not attachment styles seen in infancy extend through the entire lifespan; the results coincided significantly with infant attachment score. Although there are many factors at play when an individual is growing and developing into adulthood, attachment styles are important because they create the basis for development. Adult attachment style has strong theoretical roots in attachment theory and research comparisons connect Bartholomew and Horowitz to Bowlby, Ainsworth, Main, Hazan, and Shaver (Bartholomew & Shaver, 1998). Still, attachment researchers are well aware of the lack of conceptual and empirical consistency. The goal is to be able to test a variety of hypotheses dealing with individual differences in attachment as predictors of interpersonal behavior, external events, internal mediating processes, and observable behavior (Sroufe, 2005).

Interpersonal Attraction and Self-Esteem

People hold views of the world on a dimension from positive to negative that stem from their view of themselves on a positive to negative dimension. Self-esteem is determined by how people think of themselves and largely results from how others treat them. How one thinks of his or her self can change, but is usually stable concept if not directly challenged (Bylsma, Cozzarelli, & Sumer, 1997). People often speculate about how they are viewed by others and also make inferences about other people. Thus, it is reasonable to expect that self-esteem would mediate the exchange between two people. However, there is current disagreement about which level of self-esteem predicts amount of liking towards another individual. A research study conducted in 1972 concluded that a combination of being recent and the quantity of positive feedback determine attraction to a confederate, as well as level of self-esteem. Scores coincided linearly showing that the more positively someone thought about the participant, the more positively the participant thought about the confederate. Likewise, the more positive feedback the participant received, the higher his/her self-esteem became (Tognoli & Keisner, 1972).

A finding by Leonard in 1975 showed that those with high self-esteem were more attracted to people whose attitudes were high in similarity with their own (Leonard, 1975). Such significance with is noteworthy in esteem research. However, attempts at replication have found consistent results. In 1983 a study conducted by Gonzales, Davis, Loney, LuKens, and Junghans looked at the effects of attitude similarity. Both attraction and self-esteem were measured as independent variables. By including a Byrne replication in the similarity-attraction aspect of the study, they sought to investigate this relationship further by comparing similarity with self-esteem level. The relation between

the two did not reach significance. There was significance in the 0% and 100% conditions regarding assumed judgments of others. Participants underestimated the level of attraction of individuals towards them in the 100% similarity condition, while those in the 0% similarity condition overestimated the level of liking one would have towards them. Results indicated that every participant was directly influenced by the amount of similar attitudes held in common.

The absence of significance concerning self-esteem is worth further exploration. There were only two levels of self-esteem studied in this experiment, which could heavily impact the results. Having three levels of self-esteem would allow for a moderate group to emerge, which has been previously hypothesized (Hendrick & Horace 1970). In fact, Hendrick and Horace found that the only significant differences in self-esteem were established by those who fell into the "moderate" group. This group was more generous in their attributions of attraction even when there was only 10% similarity in the attitude surveys. These findings have been replicated, suggesting that stable individuals are more objective and understanding of others' views, even if those views do not positively correlate with their own. A study by Hendrick & Horace (1970) assessed the relationship between self-esteem level and attraction. Participants were given attitude surveys that were filled with answers either similar to or dissimilar from their own. The results indicated that individuals with moderate self-esteem scores were the group most likely to be attracted to the other person in the "least similar" condition, compared with high and low esteem groups. The extreme (high/low) self-esteem groups tended to like others less if the strangers held opinions differing from their own. Forming a sense of self involves others just as much as personal internal work does (Hepper & Carnelley, 2012). One's

self-esteem level encompasses past mental representations as well as current ones. Therefore, attachment style and self-esteem may work together in shaping the way an individual interacts with others throughout his life, thus predicting how attraction will occur.

Attachment Style and Self-Esteem

Research involving attachment style and self-esteem shows conflicting evidence concerning which levels of self-esteem correlate with specific types of attachment. It was previously suggested by Bowlby that secure-attachment individuals hold positive views both of the self and of others (Bartholomew, 1990). Therefore, it would make sense that such individuals would be tolerant of others' dissimilar views and remain attracted to them. Other studies (Hepper & Carnelley, 2012) have found that those with secure attachment are found to also have high self-esteem. This is an inconsistency worth exploring in order to gain a clearer sense of the relationship between self-esteem and attachment style. There seems to be a consensus regarding those with preoccupied (anxious) attachment style, but conflicting reports for the dismissive type: Anxiety driven individuals consistently have low self-esteem, while dismissive (avoidant) individuals' self-esteem levels are inconsistent and fluctuate depending on perceived autonomy and distance from others, (Hepper & Carnelley, 2012; Hendrick & Horace, 1970). Preoccupied individuals depend heavily on others to gain their sense of self, but because they fear rejection and need constant approval in order to feel secure, they always come up short because no level of intimacy is satisfying (Hepper & Carnelley, 2012), and thus low self-esteem exists. On the other hand, those high in dismissive behaviors typically do not depend on anyone to maintain their sense of self. Therefore, maintaining self-esteem

depends on how well they maintain detachment and independence from others. Studies have shown that a dismissing style does not consistently correlate with self-esteem level (Hepper & Carnelley, 2012). Participants were less likely to be attracted to individuals who were more intelligent than they were. Researchers have concluded that occurs because of a threat to self-esteem. This suggests a link between cognitive evaluation and self-esteem in determining attraction, yet this link is not yet fully understood.

Attachment style and self-esteem have been linked together naturally because the way someone feels about him/herself heavily influences how someone will treat and bond with others. For example, "secure" attachment style reflects a higher self-esteem than 2 types of the "insecure" styles. While attachment research is focused mainly on romantic relationships in adulthood, there is reason to examine how attachment style and self-esteem affect interpersonal attraction, specifically looking at first time exposure to another person's attitudes. Self-esteem is a person's own unique outlook when comparing him/herself to the world around them. Therefore, it is not unreasonable to associate level of self-esteem with type of attachment style (Bylsma, Cozzarelli, & Sumer, 1997).

According to Hepper and Carnelley 2002, self-esteem level should be highest in healthy individuals, but there is no consensus. It is argued that level of self-esteem is highest in secure individuals because it is not circumstantial and does not depend on others. Meyers (2001) explains the correlates of esteem and attachment. He states that secure individuals have high self-esteem in general because they tend to criticize themselves less in times of turmoil and have lower levels of psychological distress. Although it makes sense that they would self-blame less and have less psychosis, self-esteem level is not so obvious.

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Other studies have found that those with moderate self-esteem level are most generous when it comes to those who differ in similarity. This implies open-mindedness and impartiality toward others' attitudes. Although these moderate –to- secure findings were not significant, they propose a wrinkle in the research. It has been speculated that those with both high and low self-esteem are indeed more similar than those with moderate levels (Hendrick & Horace, 1970). This suggestion is borne out by attachment style because self-esteem level can be seen to fit into each of the styles. For example, if a person has high anxiety, one would expect a low self-esteem level. Having to constantly seek affirmation from someone to by happy can be an exhausting process, and if the feedback is not given when "needed" or is not genuine, low self-esteem may result. It is speculated that the dismissive type of attachment correlates with high self-esteem because a strict individualistic attitude prevents these persons from sharing intimacy and thus any relationship is disappointing. When such individuals do something worthwhile, they pat themselves on the back instead of needing assurance from a loved one. This links attachment style and self-esteem to attraction because this internal judgment involves cognitive processes that vary depending on the individual (Byrne 1961; Wiest, 1965).

Both attachment style and self –esteem affect mental processes; they therefore help determine the level of attraction one feels toward others. Beginning in infancy, the level of care given to a child determines a person's specific attachment style (Ainsworth & Bowlby, 1991) and once it is established helps form the way information is processed. This information-processing regarding the self and others relies heavily on attachment style because it serves as a foundation for development and therefore helps mold one's frame of mind, impacting future interactions (Sroufe, 2005).

The Present Study

The current study seeks to streamline these four previously studied variables and link them together while replicating Montoya and Horton's findings. Establishing cognitive saliency before measuring attraction level will affect attraction significantly. In the current study it is hypothesized that attachment style, self-esteem level, cognitive saliency and similarity will all affect the level of attraction that one has for another individual.

In the current study I use a four-category model, which represents four attachment styles. Two participants have positive models of themselves (secure and dismissing) while the other two have low models of themselves (fearful and preoccupied). The optimal style would be "secure", with participants having high models both of themselves and of others (Bartholomew & Horowitz, 1991). Although these attachment styles have not been found to significantly and constantly predict level of self-esteem, this possibility is worth examining further. In agreement with previous studies, this study indirectly suggests that a link between level of attraction and level of self-esteem exists (Helmreich, Aronson, & Lefan, 1970).

Hypothesis I: Interpersonal attraction will be a function of attitude similarity. Byrne's findings will be replicated such that those who have 100% similarity in attitudes will have significantly more attraction to the "other stranger" than those in the 0% similarity condition. Similarity is hypothesized to have more of an effect overall than that of the quasi- independent variables.

Hypothesis II: Cognitive saliency is forecast to have a significant impact on attraction. A replication of the Montoya and Horton (1970) studies is expected to show

that those who cognitively evaluate others before assessing attraction will be more or less attracted (depending on level of similarity) to the strangers than those who assess attraction directly after viewing the attitude survey. While those with dismissive type of attachment are hypothesized to become more attracted to the other stranger in the cognitive salient/similar attitudes condition, preoccupied type of attachment with cognitive saliency and 100% similarity is expected to show the greatest overall attraction to the stranger.

Hypothesis III: Those with secure and preoccupied attachment types are expected to like dissimilar others (0%) more than those in other insecure styles (dismissive and fearful). This hypothesis is based on Bowlby's concept of trust of the self and other. Because both those with secure and preoccupied attachments have trust in others, they are expected to welcome dissimilar attitudes more openly than fearful or dismissive types. Those with the preoccupied type of attachment and 100% similarity condition are expected overall to have the most attraction to the "other" stranger. This expectation is based on Attachment Theory as well; their need for intimacy is hypothesized to dominate their need for a similar other.

Hypothesis IV: Self-esteem is hypothesized to affect attraction such that those with moderate and low self-esteem will be more attracted to dissimilar others than those with high self-esteem. Moderate levels of self-esteem are expected to be positively correlated with attraction. Those with high self-esteem are hypothesized to like dissimilar others less. This is based on studies by Hendrick and Horace (1970) in which those with moderate levels of self-esteem were associated with stable personalities; they are observed to be more open-minded toward other peoples' attitudes.

Hypothesis V: Because individuals with secure and dismissive types of attachment have trust in themselves, they are hypothesized to have higher self-esteem overall. The opposite is forecast for those with preoccupied and fearful types of attachment. Those with a secure attachment type are expected to have moderate to high self-esteem levels while those with the preoccupied type of attachment are expected to have the lowest self-esteem. The dismissing type is forecast to have the highest self-esteem overall. Because the Fearful attachment style is expected to have the fewest number of people identify with it, and hypothesis for this style of self-esteem remains unspecified.

Most research done on attachment style is based on relationships but this study hypothesizes that a pattern will emerge even in first time interactions and even if the participants do not actually interact. Judging another person's attitudes positively in the case of similarity or negatively in the case of dissimilarity, along with actively thinking about that individual and assessing attraction for that person is projected to reveal and mimic what happens in real-world connections. This study will expand existing literature regarding what factor specifically affect attraction and serve to help close the knowledge gap associated with this topic by using both qualitative and quantitative measures of assessment.

Multiple fields are directly impacted by interpersonal relationships and attraction such as teaching, several specialties of counseling, jobs that require close contact with others, as well as everyday interactions with family, friends, and co-workers. The findings of this study will allow for better understanding concerning why people are initially attracted to some individuals over others. While college students are the primary

participants, insight will be gained about how self-esteem and attachment style affect

cognitive processes that in turn affect attraction. To sum up, research concerned with

finding out more about what affects human attraction is useful to anyone who interacts

with other humans.

II. METHOD

Participants

Participants were students that were primarily recruited from sections of the Introductory Psychology classes using the SONA participant pool. The students participated in this study to fulfill a class requirement. Students were awarded two credits in exchange for participating in this study. A total of 269 students participated in the study, 198 females (73.6%) and 71 males (26.4%). There were no exclusions for participation in this study.

Instruments & Measures

The consent form is the first item seen by the participants. If the student does not wish to participate in the study, he or she is able to complete a make-up assignment given by the professor. The Survey of Attitudes (see Appendix A: 20-item Survey of Attitudes, Byrne, 1961) measures individuals' attitudes on a multitude of subjects. This survey gauged opinions by asking people about how much they agreed or disagreed with each statement on a scale from 1 to 7; For example, fresh air and exercise. 1= "I strongly believe that fresh air and daily exercise are not important." 7= "I strongly believe that fresh air and daily exercise are important." Topics such as environment, money, and religion were queried.

A subsequent questionnaire measuring global self-esteem (see Appendix B: Rosenberg Self-Esteem Scale, Rosenberg, 1965) consists of questions such as, "I feel that I am a person of worth, at least on an equal basis with others" and "I am able to do things as well as most other people." Participants are asked to rate each of these statements from strongly agreeing to strongly disagreeing (4 options).

The next survey is a questionnaire that was formed from the Hazan/ Shaver and Ainsworth questionnaires, which were constructed from the theoretical standpoint of Bowlby. This questionnaire has face validity with participants as well as reliability and validity compared with other attachment scales (Ravitz, Maunder, Hunter, Sthankiya, & Lancee, 2010). This is given to the participants in order to measure their attachment style, (see Appendix C: The Relationship Questionnaire, Bartholomew & Horowitz, 1991). One of four attachment styles will be assigned: Secure, Dismissing, Preoccupied and Fearful.

The judgment scale (see Appendix D: Interpersonal Judgment Scale, Byrne, 1971) is the last item given. The first four questions are traditional cognitive questions such as, "I believe that this person is very much above average in intelligence," while the last two questions are traditional measures of interpersonal attraction. One example states, "I believe that I would very much dislike working with this person in an experiment."

Design & Procedure

First the participants read a consent form that stated the benefits and minimal risks of the study. They signed and agreed to participate using Qualtrics (an online survey system). They then immediately filled out the 20-item Survey of Attitudes, online as well. Once completed, participants signed up for a time slot of their choosing in the lab. Session two involved asking participants to complete the Rosenberg Self-Esteem Scale (measure of self-esteem), and the Relationship Questionnaire (assessment of participant's attachment style) upon arrival. They then read a copy of the 20-item Survey of Attitudes completed by a stranger. All identifying information about the stranger was deleted from

the survey. Participants were randomly assigned to receive a survey that represents attitudes that were either 100% or 0% similar to their own.

After reading the stranger's survey, an evaluation of the strangers' attitudes will be measured using the Interpersonal Judgment Scale. This scale will be manipulated so that half of the participants will be randomly assigned to read either the cognitive evaluation questions (first 4 items) before assessing attraction to the stranger (last 2 items), or will be asked to assess attraction before assessing the stranger cognitively. This part of the study took approximately 20 minutes to complete. Participants were told that they can skip any of the questions that they do not feel comfortable answering and to complete the survey at their own pace.

After completing the questionnaires, participants will be told about the purpose of the study and how their data will be used to help understand the relationship between self-esteem, attachment style, attitude similarity, and interpersonal attraction. Each participant will be encouraged to ask questions about the study and will be emailed a debriefing sheet that explains the purpose of the experiment and includes the contact information of the PI prior to leaving the lab.

III. RESULTS

The goals of this study were to a) replicate previous findings regarding similarity and attraction, b) determine whether or not cognitive saliency would cause participants to be more or less attracted to the "other" stranger, c) establish whether or not attachment style could predict attraction, d) find which levels of self-esteem correlate with attraction and e) establish which levels of self-esteem are associated with specific types of attachment. It was hypothesized that the 100% similar condition would be more attracted than the 0% similarity condition. It was also hypothesized that assessing cognitive saliency before attraction would yield more attraction than if attraction was assessed first. Although both types of attachment hold trust for themselves, it was expected that those with a secure type of attachment would be more attracted to individuals who were not 100% similar, versus those with a dismissive type of attachment. Those with moderate to high self-esteem were predicted to report higher attraction to individuals regardless of similarity. Finally, self-esteem was predicted to be lower in fearful and preoccupied attachment types than in secure and dismissive types.

The final sample of 269 participants were originally measured but not all were incorporated in the analyses due to completion failure. To determine if attachment style and IJS type differentially modulates attraction depending on similarity level, an ANOVA was conducted using attachment style, IJS type, and similarity level as between subjects variables, and attraction score as the dependent variable.

A 4 (Attachment Style) X 2 (Interpersonal Judgment Scale type) X 2 (similarity type) between subjects factorial ANOVA was calculated for attraction. A total sample of 263 was incorporated in this analysis. The main effect of similarity on the attraction score

was significant, $F(1, 247) = 218.50$, $p < .01$. Greater similarity yielded higher attraction.

Two interactions were significant. The interaction between attachment style and type of

IJS on the attraction score was significant $F(3,247) = 28.44$, $p < .05$. The interaction

between attachment style and similarity type was significant $F(3,247) = 16.86$, $p < .05$.

Tables I and II below reflect this analysis.

Table I: Descriptive Data for Attachment Style, Interpersonal Judgment Scale Type, and Attraction

Attachment Style	Attraction Score for Traditional IJS: Mean (Standard Deviation)	Attraction Score for Altered IJS: Mean (Standard Deviation)
Secure	9.82 (3.25)	8.93 (3.48)
Dismissive	8.21 (3.88)	9.56 (3.74)
Preoccupied	9.00 (3.84)	9.09 (3.73)
Fearful	8.59 (3.70)	8.85 (3.78)

Table II: Descriptive Data for Attachment Style and Similarity Type for Attraction

Attachment Style	Attraction Score Similar: Mean (Standard Deviation)	Attraction Score Dissimilar: Mean (Standard Deviation)
Secure	11.64 (1.82)	6.63 (2.72)
Dismissive	11.38 (2.62)	5.36 (2.12)
Preoccupied	11.78 (1.68)	5.22 (2.13)
Fearful	12.35 (1.19)	6.24 (2.63)

A 3 (low, moderate and high self-esteem levels) X 2 (Interpersonal Judgment

Scale Type) between-subjects factorial ANOVA was calculated comparing self-esteem

level of participants to type of IJS; who had one of two types, cognitive saliency vs.

attraction first. A total sample of 259 participants were included in this analysis. The

entire range of self-esteem scores was between 10 and 40 with highest scores were

between 10-21, moderate between 22-30, and low between 31-40. The main effect for self-esteem level was not significant $F(23, 216) = 1.09$, $p > .05$). The main effect for order of IJS was also not significant $F(1, 216) = .61$, $p > .05$. The interaction was not significant $F(18, 216) = .48$, $p > .05$. Hence, neither self-esteem level nor the order of IJS has any significant effect on attraction.

A one-way ANOVA was conducted to test the possible relations between attachment styles and individual raw self-esteem scores, specifically testing if attachment style is related to self-esteem scores. A total of 256 people were included in this analysis. This investigation was specifically testing whether or not attachment style has a significant effect on self-esteem. A significant difference was found between the attachment styles $F(3, 252) = 6.01$, $p < .05$. Tukey's HSD was used to determine the nature of the significant differences between them. This analysis revealed that participants who had secure attachment style had the highest self-esteem ($M = 16.81$, $SD = 4.19$) whereas preoccupied attachment associated with lowest self-esteem ($M = 20.23$, $SD = 5.18$). The other two attachment styles showed no significance between self-esteem scores. Dismissive ($M = 18.08$, $SD = 4.11$), and fearful ($M = 17.92$, $SD = 5.25$). Table III reflects this analysis.

Table III: Comparing Attachment Style to Self-Esteem Scores

Dependent Variable: Self-Esteem	N	Mean of Self-Esteem Score	Std. Deviation
Secure	89	16.81	4.194
Dismissive	62	18.08	4.114
Preoccupied	52	20.23	5.181
Fearful	53	17.92	5.247
Total	256	18.04	4.755

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IV. DISCUSSION

The overarching goal of the study was to determine whether factors other than similarity also influence attraction. It was hypothesized that establishing cognitive saliency before measuring attraction level would affect attraction significantly. Those who cognitively evaluated others before assessing attraction were predicted to be more or less attracted (depending on level of similarity) to the strangers' attitudes than those who assessed attraction directly after viewing the attitude survey. Although no significant main effect was found for IJS type, consistency (including the use of scales and statistics) is necessary when replicating experiments to further the field of interpersonal attraction. Montoya and Horton (2004) found significance in their study, but used some of their own measures and elaborate statistical analyses to do so. Whether or not cognitive saliency influences attraction significantly is still up for debate and several consistent replications are needed before this claim can be validated.

Similarity of attitudes was expected to affect how much one is attracted to another individual. These findings were significant, replicating Donn Byrne's (1961) conclusions. Participants in the condition that received individuals with 100% similar attitudes to their own were significantly more attracted to the "other" stranger.

An interaction was found between attachment style and similarity type such that fearful had the highest attraction in the similar condition and dismissive styles had the lowest. In the dissimilar condition, preoccupied was also the lowest and secure was the highest.

An interaction was also found between attachment style and IJS type such that dismissive type dropped below the secure and preoccupied types from the altered to the

traditional IJS. Secure type went from the lowest in the altered to the highest of the four attachment types in the traditional condition.

Attachment style and self-esteem were the other two variables discussed. Both were expected to have a significant influence on why people are more attracted to some individuals than others. Those with a secure attachment type were hypothesized to have moderate self-esteem and like dissimilar others more than those in the three insecure styles. Participants with the preoccupied type of attachment were expected to have the lowest self-esteem overall, and to be more likely than the other three types to want to interact with the person they were most similar to. Participants with this type of attachment mixed with the cognitive saliency condition and 100% similarity were expected to have the most overall attraction to the "other" stranger. The dismissing type was forecast to have the highest self-esteem overall. Cognitive saliency was hypothesized to have less of an impact on this type of individual because of his/her reliance on autonomy. Unfortunately, none of these conditions were significant. Neither attachment style nor self-esteem was found to significantly influence attraction to another individual.

Self-esteem grouped into 3 levels did not correspond significantly with attachment type when involving attraction. The questions raised regarding secure individuals being more attracted to strangers is still unanswered. Maybe the "threat to self-esteem" via dissimilar attitudes was not enough to affect the individual. Also, self-esteem was measured before reading the Survey of Attitudes in order not to compromise the individuals' self-esteem. Therefore, the potential "threat" was not measured. However, self-esteem scores did correlate significantly with attachment style. Secure

attachment individuals reflected the highest levels of self-esteem and preoccupied individuals had the lowest self-esteem scores.

Lastly, judging another person's attitudes positively in the case of similarity or negatively in the case of dissimilarity, along with actively thinking about that individual and assessing attraction for that person was projected to reveal and mimic what happens in real-world connections. However, the basement of a psychology building is hardly a natural environment. There was no human connection established via eye contact, or by verbal or non-verbal communication. Even if these effects took place, they were not captured.

Although it was non-significant in all areas other than similarity type, this study expanded existing literature regarding what can affect attraction and served to help close the knowledge gap in the field.

Limitations

Regarding methods of measurement, The Relationship Questionnaire is a self-report survey. Errors related to this type of measurement include conformational bias. Researchers cannot control for this type of bias; there is always a risk with self-report surveys of participants picking the "best" answer. Also, this measure is categorical, forcing the participant to identify with only one attachment style. A continuous measurement might have more accurately described the participants' styles of attachment and would also have reflected individual differences more precisely. Nevertheless, "continuous" and "categorical" reflected very similar results whether a correlational analysis was used (involving four continuous ratings) or a between groups comparison of four groups was used (Bartholomew & Horowitz, 1991).

The Rosenberg Self-Esteem Scale also requires self-disclosure. Although five of the items are reverse-scored, participants who wanted to conceal how they felt about themselves could do so by choosing the most acceptable answer.

Another limitation involves the sample. Findings cannot be generalized to any population easily when the people involved in the study are undergraduates in a Texas university. This is a common challenge among researchers, but one that must be acknowledged as an existing barrier.

Concerning the variables measured, it is still unclear how attachment styles are maintained throughout the life-span. This variable has been operationally defined and restructured throughout time to cater to the type of relationship it was being applied to. While the theoretical roots have not changed, focusing on what the study is actually measuring rather only how it is being measured is also important. Epstein (1980) discusses how emotionally significant relationships and new social roles might change an individual's attachment style if the style is inconsistent with his/her new stage in life, for example marrying and having children. Also, people may be able to overcome early attachment models by forgiving their parents and becoming more autonomous in adulthood.

Determining cognitive saliency accurately is another potential limitation. Asking the right questions in order to get the participants to think about what the study requires can be challenging. Asking someone, "In general, how good a person do you think your partner is?" may not be the best way to achieve cognitive saliency. Continual research and findings are needed in order to determine this measure's validity.

It is important to remember that findings from any specific experiment with precise conditions, although they lend credence to a particular theoretical framework, are not sufficient until replication establishes reliability.

Future Research

Implicit measures of self-esteem might help eliminate error from a self-disclosure method in future experiments. Research conducted by Oakes, Brown, and Cai in 2008 describe and compare explicit and implicit measures of self-esteem. They argue that implicit self-esteem measures more reliably assess affective associations such as self-love and self-acceptance while explicit procedures are better at accurately assessing cognitive evaluations such as capability and self-competence. The Rosenberg Self-Esteem Scale assesses both affective and cognitive aspects of self-esteem; a future study could create a new scale which separates the two methods of evaluating self-esteem in order to create a more reliable self-esteem score. This should be done with caution though, as implicit measures of self-esteem are considered less stable and reliable compared to overt measures (Robinson, 2007).

Furthermore, changing the order of the attitude and self-esteem surveys could have an effect on how participants complete the self-esteem scale. Reading the attitudes before rating self-esteem might allow participants' current feelings of self-esteem to be measured more accurately. Reading the attitudes could enhance or diminish their self-esteem based on the notion that people like to keep their view of the world consistent. Those with a fragile sense of self could be negatively affected because of reading attitudes of students that are not in agreement with their own.

As discussed previously, a continuous measure for attachment style might help account for individual differences among participants in further experiments. Allowing participants to pick multiple styles will allow for a more accurate representation of the sample as well as allow the participant to adequately describe him/herself without feeling as if they must choose between parts of their personality.

In hopes of determining what affects interpersonal attraction, a cognitive measure that has strong internal validity would be useful in assessing whether or not evaluations from similar attitudes, or inferences based on what someone has gathered from similar attitudes, is the driving force. Although it has been verified that attraction is not solely based on a reinforcement effect, consistency in theory from operationally defined variables to empirical measurement through replication is key in allowing the subfield of interpersonal attraction to evolve.

APPENDIX A

Survey of Attitudes

Name: _____ Psychol: _____ Section: _____

Date: _____

Age: _____Sex:_____ Class: Fr._____ Soph._____ Jr. _____ Sr._____

Hometown: _____

1.)   Fraternities and Sororities (check one)

__I am very much against fraternities and sororities as they usually function.

__I am against fraternities and sororities as they usually function.

__To a slight degree, I am against fraternities and sororities as they usually function.

__To a slight degree, I am in favor of fraternities and sororities as they usually function.

__I am in favor of fraternities and sororities as they usually function.

__I am very much in favor of fraternities and sororities as they usually function.

2.)   Professors and Student Needs (Check one)

__I feel that university professors are completely indifferent to student needs.

__I feel that university professors are indifferent to student needs.

__I feel that university professors slightly indifferent to student needs.

__I feel that university professors are slightly concerned about student needs.

__I feel that university professors are concerned about student needs.

__I feel that university professors are very much concerned about student needs.

3.)   Smoking (check one)

__In general, I am very much in favor of smoking.

__In general, I am in favor of smoking.

__In general, I am mildly in favor of smoking.

__In general, I am mildly against smoking.

__In general, I am against smoking.

__In general, I am very much against smoking.

4.)   Comedian Who Use Satire (check one)

__I very much enjoy comedians who use satire.

__I enjoy comedians who use satire.

__I mildly enjoy comedians who use satire.

__I mildly dislike comedians who use satire.

__I dislike comedians who use satire.

__I very much dislike comedians who use satire.

5.)   Acting on Impulse vs. Careful Consideration of Alternatives (check one)

__I feel that it is better if people always act on impulse.

__I feel that it is better if people usually act on impulse.

__I feel that it is better if people often act on impulse.

__I feel that it is better if people often engage in a careful consideration of alternatives.

__I feel that it is better if people usually engage in a careful consideration of alternatives.

__I feel that it is better if people always engage in a careful consideration of alternatives.

6.)   Social Aspect of College Life (Check one)

__In general, I am very much against an emphasis on the social aspects of college life.

__In general, I am against an emphasis on the social aspects of college life.

__In general, I am mildly against an emphasis on the social aspects of college life.

__In general, I am mildly in favor of an emphasis on the social aspects of college life.

__In general, I am in favor of an emphasis on the social aspects of college life.

__In general, I am very much in favor of an emphasis on the social aspects of college life.

7.) Drinking (check one)

__In general, I am very much in favor of college students drinking alcoholic beverages.

__In general, I am in favor of college students drinking alcoholic beverages.

__In general, I am mildly in favor of college students drinking alcoholic beverages.

__In general, I am mildly opposed to college students drinking alcoholic beverages.

__In general, I am opposed to college students drinking alcoholic beverages.

__In general, I am very much opposed to college students drinking alcoholic beverages.

8.) American Way of Life (check one)

__I strongly believe that the American way of life is not the best.

__I believe that the American way of life is not the best.

__I feel that perhaps the American way of life is not the best.

__I feel that perhaps the American way of life is the best.

__I believe that the American way of life is the best.

__I strongly believe that the American way of life is the best.

9.) Sports (check one)

__I enjoy sports very much.

__I enjoy sports.

__I enjoy sports to a slight degree.

__I dislike sports to a slight degree.

__I dislike sports.

__I dislike sports very much.

10.) Money (check one)

__I strongly believe that money is not one of the most important goals in life.

__I believe that money is not one of the most important goals in life.

__I feel that perhaps money is not one of the most important goals in life.

__I feel that perhaps money is one of the most important goals in life.

__I believe that money is one of the most important goals in life.

__I strongly believe that money is one of the most important goals in life.

11.) Political Parities (check one)

__I am a strong supporter of the Democratic party.

__I prefer the Democratic party.

__I have a slight preference for the Democratic party.

__I have a slight preference for the Republican party.

__I prefer the Republican party.

__I am a strong supporter of the Republican party.

12.) One True Religion (check one)

__I strongly believe that my church represents the one true religion.

__I believe that my church represents the one true religion.

__I feel that probably my church represents the one true religion.

__I feel that probably no church represents the one true religion.

__I believe that no church represents the one true religion.

__I strongly believe that no church represents the one true religion

13.) War (check one)

__I strongly feel that war is sometimes necessary to solve world problems.

__I feel that war is sometimes necessary to solve world problems.

__I feel that perhaps war is sometimes necessary to solve world problems.

__I feel that perhaps war is never necessary to solve world problems.

__I feel that war is never necessary to solve world problems.

__I strongly feel that war is never necessary to solve world problems.

14.) Tipping (check one)

__I am very much opposed to the custom of tipping.

__I am opposed to the custom of tipping.

__I am mildly opposed to the custom of tipping.

__I am mildly in favor of the custom of tipping.

__In am in favor of the custom of tipping.

__I am very much in favor of the custom of tipping.

15.) Strict Discipline (check one)

__I am very much against strict disciplining of children.

__I am against strict disciplining of children.

__I am mildly against strict disciplining of children.

__I am mildly in favor of strict disciplining of children.

__I am in favor of strict disciplining of children.

__I am very much in favor of strict disciplining of children.

16.) Foreign language (check one)

__I am very much in favor of requiring students to learn a foreign language.

__I am in favor of requiring students to learn a foreign language.

__I am mildly in favor of requiring students to learn a foreign language.

__I am mildly opposed to requiring students to learn a foreign language.

__I am opposed to requiring students to learning a foreign language.

__I am very much opposed to requiring students to learn a foreign language.

17.) Fresh Air and Exercise (check one)

__I strongly believe that fresh air and daily exercise are not important.

__I believe that fresh air and daily exercise are not important.

__I feel that probably fresh air and daily exercise are not important.

__I feel that probably fresh air and daily exercise are important.

__I believe that fresh air and daily exercise are important.

__I strongly believe that fresh air and daily exercise are important.

18.) Nuclear Arms Race (check one)

__I am very much opposed to the federal government's buildup of nuclear arms.

__I am opposed to the federal government's buildup of nuclear arms.

__I am mildly opposed to the federal government's buildup of nuclear arms.

__I am mildly in favor of the federal government's buildup of nuclear arms.

__I am in favor of the federal government's buildup of nuclear arms.

__I am very much in favor of the federal government's buildup of nuclear arms.

19.) Dancing (check one)

__I enjoy dancing very much.

__I enjoy dancing.

__I enjoy dancing to a slight degree.

__I dislike dancing to a slight degree.

__I dislike dancing.

__I dislike dancing very much.

20.) Exhibitions of Modern Art (check one)

__I dislike looking at exhibitions of modern art very much.

__I dislike looking at exhibitions of modern art.

__I dislike looking at exhibitions of modern art to a slight degree.

__I enjoy looking at exhibitions of modern art to a slight degree.

__I enjoy looking at exhibitions of modern art.

__I enjoy looking at exhibitions of modern art very much.

APPENDIX B

Rosenberg Self Esteem Scale RSES

Items Rate the items using the following scale: 1 = *strongly agree* 2 = *agree* 3 = *disagree* 4 = *strongly disagree*

_____ 1. I feel that I am a person of worth, at least on an equal basis with others.

_____ 2. I feel that I have a number of good qualities.

_____ 3. All in all, I am inclined to feel that I am a failure. *

_____ 4. I am able to do things as well as most other people.

_____ 5. I feel I do not have much to be proud of. *

_____ 6. I take a positive attitude toward myself.

_____ 7. On the whole, I am satisfied with myself.

_____ 8. I wish I could have more respect for myself. *

_____ 9. I certainly feel useless at times. *

_____ 10. At times I think I am no good at all. *

*reverse-scored

APPENDIX C

The Relationship Questionnaire

Directions: Following are four general relationship styles that people often report. Place a checkmark next to the letter corresponding to the style that best describes you or is the closest to the way you are.

_____A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

_____B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

_____C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am uncomfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

_____D. I am comfortable without close relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me.

APPENDIX D

Interpersonal Judgment Scale

1.) Intelligence (check one)

__I believe that this person is very much above average in intelligence.

__I believe that this person is above average in intelligence.

__I believe that this person is slightly above average in intelligence.

__I believe that this person is average in intelligence.

__I believe that this person is slightly below average in intelligence.

__I believe that his person is below average in intelligence.

__I believe that this person is very much below average in intelligence.

2.) Knowledge of Current Events (check one)

__I believe that this person is very much below average in his (her) knowledge of current events.

__I believe that this person is below average in his (her) knowledge of current events.

__I believe that this person is slightly below average in his (her) knowledge of current events.

__I believe that this person is average in his (her) knowledge of current events.

__I believe that this person is slight above average in his (her) knowledge of current events.

__I believe that this person is above average in his (her) knowledge of current events.

__I believe that this person is very much above average I his (her) knowledge of current events.

3.) Morality (check one)

__This person impresses me as being extremely moral.

__This person impresses me as being moral.

__This person impresses me as being moral to a slight degree.

__This person impresses me as being neither particularly moral nor particularly immoral.

__This person impresses me as being immoral to a slight degree.

__This person impresses me as being immoral.

__This person impresses me as being extremely immoral.

4.) Adjustment (check one)

__I believe that this person is extremely maladjusted.

__I believe that this person is maladjusted.

__I believe that this person is maladjusted to a slight degree.

__I believe that this person is neither particularly maladjusted nor particularly well adjusted.

__I believe that this person is well adjusted to a slight degree.

__I believe that this person is well adjusted.

__I believe that this person is extremely well adjusted.

5.) Personal feelings (check one)

__I feel that I would probably like this person very much.

__I feel that I would probably like this person.

__I feel that I would probably like this person to a slight degree.

__I feel that I would probably neither particularly like nor particularly dislike this person.

__I feel that I would probably dislike this person to a slight degree.

__I feel that I would probably dislike this person.

__I feel that I would probably dislike to this person very much.

6.) Working together in an Experiment (check one)

__I believe that I would very much dislike working with this person in an experiment.

__I believe that I would dislike working with this person in an experiment.

__I believe that I would dislike working with this person in an experiment to a slight degree.

__I believe that I would neither particularly dislike nor particularly enjoy working with this person in an experiment.

__I believe that I would enjoy working with this person in an experiment to a slight degree.

__I believe that I would enjoy working with this person an experiment.

__I believe that I would very much enjoy working with this person in an experiment.

REFERENCES

Ainsworth, M. D., & Bowlby, J. (1991). An ethological approach to personality

    development. *American Psychologist,46*(4), 333-341.

Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of*

    Social and Personal Relationships, *7*(2), 147-178.

    doi:10.1177/0265407590072001

Bartholomew, K., & Horowitz, L. (1991). Attachment styles among adults: A

    test of a four-category model. *Journal of Personality and Social Psychology*,

    61(2), 226-244.

Bartholomew, K., & Shaver, P. R. (1998). Methods of assessing adult attachment: Do

    they converge? In J. A. Simpson, W. S., Rholes, J. A., Simpson, W. S., Rholes

    (Eds.) , *Attachment theory and close relationships* (pp. 25-45). New York, NY,

    US: Guilford Press.

Bylsma, W. H., Cozzarelli, C., & Sumer, N. (1997). Relation between adult attachment

    styles and global self-esteem. *Basic and Applied Social Psychology, 19*(1), 1-16.

Byrne, D. (1961). Interpersonal attraction and attitude similarity. *Journal of Abnormal*

    *and Social Psychology, 62(*3*),* 713-715.

Byrne, D. (1971). The attraction paradigm. New York: Academic Press, 1971.

Byrne, D. (1997). An overview (and underview) of research and theory within the

    attraction paradigm. *Journal of Social and Personal Relationships, 14(*3*),* 417-

    431. doi:10.1177/0265407597143008

Byrne, D., Clore, G. J., & Worchel, P. (1966). Effect of economic similarity-dissimilarity

    on interpersonal attraction. *Journal of Personality and Social Psychology*, *4*(2),

    220-224. doi:10.1037/h0023559

Byrne, D., & Nelson, D. (1965). Attraction as a lineal- function of proportion of positive

    reinforcements. *Journal of Personality and Social Psychology,1,* 659-663.

Epstein, S. (1980). The self-concept: A review and the proposal of an integrated theory of

    personality. *Personality: Basic issues and current research*, 82-132.

Gonzales, M. H., Davis, J. M., Loney, G. L., LuKens, C. K,. Junghans, C. M. (1983).

    Interactional approach to interpersonal attraction. *Journal of Personality and*

    Social Psychology, 44(6), 1192-1197.

Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process.

    Journal of Personality and Social Psychology, 52(3), 511-524. doi:10.1037/0022-

    3514.52.3.511

Hazan, C., & Shaver, P. R. (1994). Attachment as an organizational framework for

    research on close relationships. *Psychological Inquiry*, 5(1), 1-22.

    doi:10.1207/s15327965pli0501_1

Helmreich, R., Aronson, E., & LeFan, J. (1970). To err is humanizing sometimes: Effects

    of self-esteem, competence, and a pratfall on interpersonal attraction. *Journal of*

    Personality and Social Psychology, *16*(2), 259-264. doi:10.1037/h0029848

Hendrick, C., & Page, H. A. (1970). Self-esteem, attitude similarity, and attraction.

    Journal of Personality, *38*(4), 588-601. doi:10.1111/j.1467-6494.1970.tb00031.x

Hepper, E. G., & Carnelley K. B. (2012). Attachment and romantic relationships: The

    roles of working models of self and other. Santa Barbara, CA: Praeger. 133-154.

Huston, T. L., & Levinger, G. (1978). Interpersonal attraction and relationships. *Annual Review of Psychology*, *29,*115-156. doi:10.1146/annurev.ps.29.020178.000555

Leonard, R. L. (1975). Self-concept and attraction for similar and dissimilar others. *Journal of Personality and Social Psychology*, *31*(5), 926-929. doi:10.1037/h0076864

Meyers, S. A., (1998). Personality correlates of adult attachment style. *Journal of Social Psychology, 138*(3), 407-409.

Mikulincer, M., & Horesh, N. (1999). Adult attachment style and the perception of others: The role of projective mechanisms. *Journal of Personality and Social Psychology, 76*(6), 1022-1034.

Montoya, R. M., & Horton, R. S. (2004). On the importance of cognitive evaluation as a determinant of interpersonal attraction. *Journal of Personality and Social Psychology, 86*(5), 696-712. doi: 10.1037/0022-3514.86.5.696

Oakes, M. A., Brown, J. D., & Cai, H. (2008). Implicit and explicit self-esteem: Measure for measure. Social Cognition, 26(6), 778-790. doi:10.1521/soco.2008.26.6.778

Ravitz, P., Maunder, R., Hunter, J., Sthankiya, B., & Lancee, W. (2010). Adult attachment measures: A 25-year review. *Journal Of Psychosomatic Research*, *69*(4), 419-432. doi:10.1016/j.jpsychores.2009.08.006

Robinson, M. D. (2007). Lives lived in milliseconds: Using cognitive methods in personality research. In R. W. Robins, R. C. Fraley, R. F. Krueger, R. W. Robins, R. C. Fraley, R. F. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 345-359). New York, NY, US: Guilford Press.

Rosenberg, M. (1965). Rosenberg Self-Esteem Scale. *Psyctests*, doi:10.1037/t01038-000

Sroufe, L. A. (2005). Attachment and development: A prospective, longitudinal study

from birth to adulthood. *Attachment & Human Development*, *7*(4), 349-367.

doi:10.1080/14616730500365928

Tamir, D. I., & Mitchell, J. P. (2013). Anchoring and adjustment during social inferences.

Journal of Experimental Psychology: General, 142(1), 151-162. doi:

10.1037/a0028232

Tognoli, J., & Keisner, R. (1972). Gain and loss of esteem as determinants of

interpersonal attraction: A replication and extension. *Journal of Personality and*

Social Psychology, *23*(2), 201-204. doi:10.1037/h0033040

Wiest, W. M. (1965). A quantitative extension of Heider's theory of cognitive balance

applied to interpersonal perception and self-esteem. *Psychological Monographs:*

General and Applied, *79*(14), 1-20. doi:10.1037/h0093890