Warm, Competent, or Both?

Trait Perception in Friendship, Acquaintanceship, Siblings, and Romantic Relationship: Explicit, Implicit, and Transgression Studies

Phakkanun Chittham

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Department of Psychology

University of Essex

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Summary

The findings regarding trait preference or what we find desirable in a relationship partner such as a friend, a romantic partner, or a colleague are abundant. However, the evidence from the actual choice paradigm is not as substantial. Thus, the thesis focused on the established relationships by asking participants to report personality of their real partners. The studies included friendship, acquaintanceship, long-term romantic relationship, and sibling relation because these relationships are common. Given the predominance of close friendship, it was used as the comparison point. Closeness was tested if it could differentiate the relationships and influenced trait perception. The findings suggested that romantic partner showed a greater closeness compared to close friend, but the trait perception was similar. Between close friend and sibling, the former was deemed closer. However, no difference in trait perception was found. As predicted, the contrast was clearer when close friend was compared to acquaintance. Close friend was perceived as significantly closer, also more competent and warmer.

Personality traits were organized into two groups. The first is warmth or social-oriented qualities such as caring and sociable. The second is competence or task-oriented attributes such as capable and skilled. Hence, the two groups of traits were also compared. In terms of the importance of warmth and competence, the relationship partners were not consistently perceived as higher in warmth than competence. This implied that warmth was not necessarily more important than competence as the previous studies suggested.

Keywords: personality traits, warmth, competence, relationship, closeness

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Chapter 1: Literature Review

Personality Traits

Fundamental dimensions of personality perception. Imagine yourself in a new town that you just moved in with your long-term partner. It is a beautiful morning. You are at a bus stop. This is your first time that you will be taking a bus here. The bus arrives and you hop on. You say good morning to the bus driver who does not say anything back. You are slightly deterred but keep your composure. You inform him of your destination and ask politely for the price of the ticket, a question that meets with a short response. You pay and say thank you but you have got no response so you give up being cheerful and friendly and find yourself a seat. Although you do not say anything is it very likely that you will think to yourself "Man. This guy is surely rude/cold/a man of few words (or something stronger)"? At the end of the day, you come home and see your partner who is keen to know how your day was. Would it be the case that you will think that your partner is so lovely and affectionate and the world is better again?

The above scenario represented a very common situation in our daily life. As humans, we interact with others on a daily basis whether they are a complete stranger, an acquaintance, our friends, family, or a romantic partner. For every social target that we make contact with or every relationship partner that we form a relationship with, the same process and criteria are used to help us form an idea about what kind of person they are. For instance, the bus driver was not overly friendly and our partner was loving and supportive. This process referred to as "personality perception" is prevalent and helps us describing and predicting the pattern of others in terms of their cognition, motivation, emotion, and behavior (Ajzen, 2012; Nettle,

2007; Ozer & Benet-Martínez, 2006). This process transcends different targets from distant (in this stage the process is commonly called impression formation) to close others. It is an effortless process that humans are often capable of doing so with impressive accuracy (see Ambady, Bernieri, & Richeson, 2000 and Todorov, 2011 for reviews).

Traits or vocabularies that are used to describe personality are extensive. For example, Nick is easygoing. Jane is smart. Keith is reserved. Anne is anxious. Therefore, researchers have put forward models that systematically structure them into broad dimensions. In the area of social psychology, it has been established that traits can be broadly structured into two orthogonally related groups or dimensions known as fundamental dimensions of personality perception: competence dimension and warmth dimension (Fiske, Cuddy, Glick, & Xu, 2002; Judd, James-Hawkins, Yzertbyt, & Kashima, 2005). The warmth dimension contains traits that are related to the interpersonal tendency. Traits that indicate a high level of warmth such as friendly, helpful, sociable can be placed on one end whereas traits that suggest low warmth such as cold, selfish, unpopular can be placed on the other end. The competence dimension subsumes traits that are related to problem-solving, mastery, and task-functioning skills reflect the motivation to attain the goal. High competence traits such as determined, efficient, intelligent are placed on one end and opposite traits that suggest low competence such as foolish, lazy, clueless can be placed on the other end (Abele & Wojciszke, 2007 study 1; Rosenberg, Nelson & Vivekananthan, 1968; Wojciszke, Bazińska, & Jaworski, 1998 study 1).

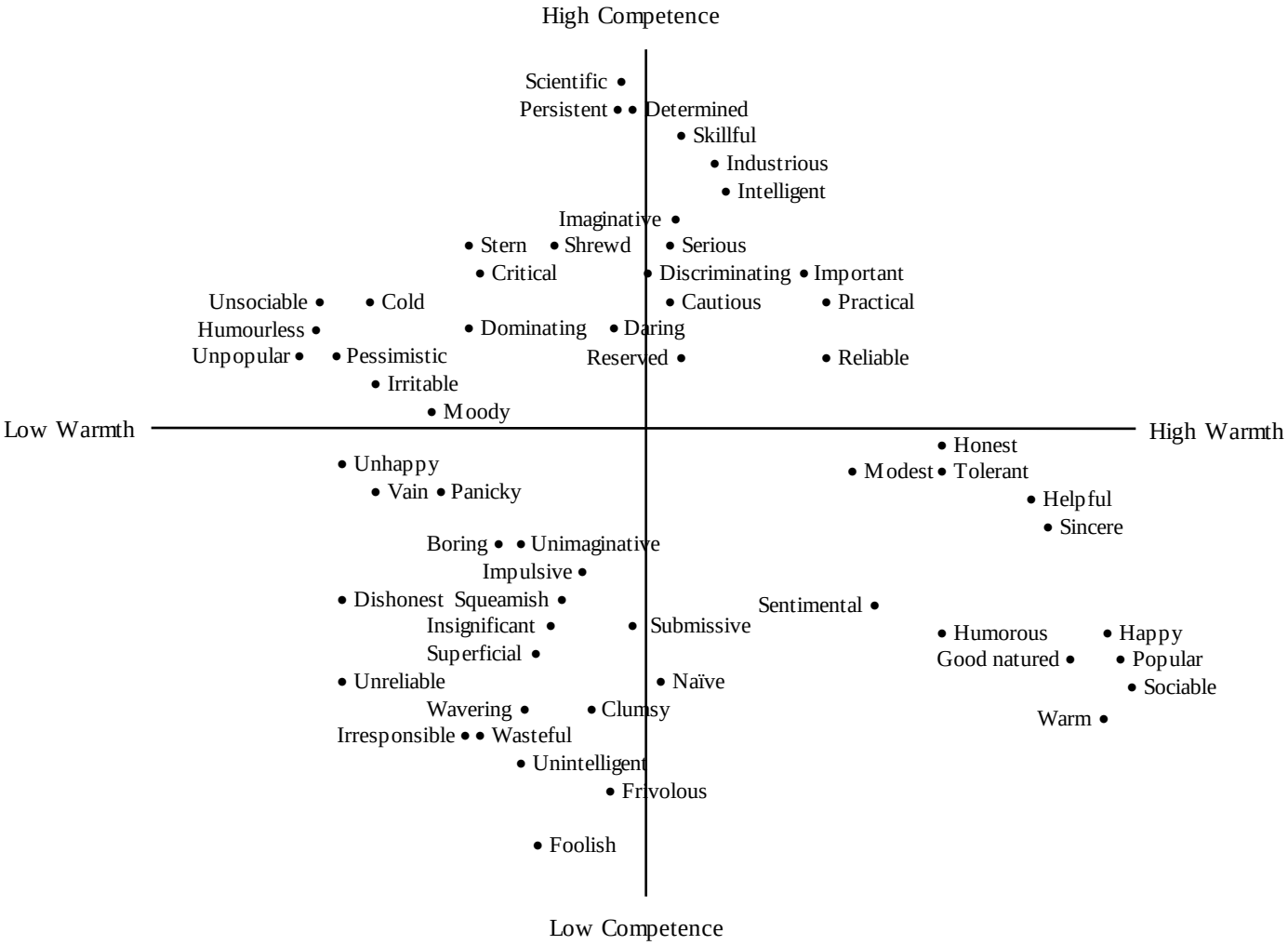

Figure 1.1. Fundamental dimensions of personality perception. Reproduced from "A multidimensional approach to the structure of personality impression" by S. Rosenberg, C. Nelson, and P. Vivekanan than, 1968, *Journal of Personality and Social Psychology, 9*, p. 290.

The terms warmth and competence are ubiquitous in social psychology (Fiske et al., 2002; Judd et al., 2005). More importantly, they describe the dimensions well and can be applied in different contexts. They can be used to describe self and other, both in the form of individual and group (see Abele & Wojciszke, 2014 and Wojciszke, 2005b for reviews). The are universal (Abele, Uchronski, Suitner, &Wojciszke, 2008; Cuddy et al., 2009; Ybarra et al., 2008). Behaviors can be

referred to these two underlying dimensions (Abele, Bruckmüller, & Wojciszke, 2014; Cislak & Wojciszke, 2008; Wojciszke, 1994). They are theoretically compatible with models in different fields such as personality (Blackburn, Renwick, Donnelly, & Logan, 2004; DeYoung, Weisberg, Quilty, & Peterson, 2013; Paulhus & Trapnell, 2008; Wiggins, 1991) and culture (Markus & Kitayama, 1991; Oyserman, Coon, & Kemmelmeier, 2002; Triandis, 1995; Wojciszke, 1997). These dimensions have been applied in topics outside social psychology such as consumer behavior (Aaker, Vohs, & Mogliner, 2010; Kervyn, Fiske, & Malone, 2012), leadership (Chen, Jing, & Lee, 2014; von Rueden, Gurven, Kaplan, & Stieglitz, 2014), appearance-based trait inferences or face perception (Cogsdill, Todorov, Spelke, & Banaji, 2014; Todorov, Olivola, Dotsch, & Mende-Siedlecki, 2015), gender (Abele, 2003; Cuddy, Fiske, & Glick, 2004), organizational psychology (Cuddy, Glick, & Beninger, 2011; Sackett & Walmsley, 2014) and even politics (Rule & Ambady, 2010; Todorov, Mandisodza, Goren, & Hall, 2005).

Implications. Competence and warmth were posited to have functional implications. Self-determination theory (Deci & Ryan, 2000) is a prominent theory in the motivational approach. It proposed that humans have three basic needs: need for belonging, need for competence, and need for autonomy. These needs have to be fulfilled in order for the individual to function and reach their potential. Warmth fulfills affiliation need because it promotes social connection and belongingness. Competence facilitates goal achievement that leads to sense of accomplishment, self-enhancement and self-esteem (Abele, Rupprecht, & Wojciszke, 2008; Abele & Wojciszke, 2007 study 3; Baumeister & Leary, 1995; Fiske, Cuddy, & Glick, 2007; Hogan, 1982; Locke & Nekich, 2000; Wojciszke, Baryła, Parzuchowski, Szymkow, & Abele, 2011; Ybarra et al., 2008). Having a partner who has attributes that promote

needs fulfillment is beneficial because these qualities increase relationship satisfaction (Orehek & Forest, 2016; Rodriguez, Hadden, & Knee, 2015) and well-being (Sheldon, Ryan, Deci, & Kasser, 2004). While the motivational approach is self-based implying that traits are beneficial largely to the possessor's needs fulfillment, the adaptive approach emphasizes the benefit of traits on the possessor the people around them. Specifically, competence is predominantly self-involved (Peeters, 1992; Wojciszke, 2005b). Competence or lack of competence predicts success or failure of the possessor (Sackett & Walmsley, 2014). On the other hand, warmth is inherently other-involved because it describes and predicts tendency the possessor will engage in social behaviors. Hence, warmth or lack of benefit (De Bruin & Van Lange, 1999; Peeters, 1992; Wojciszke, 2005b). Despite the different goals, namely need fulfillment in the motivational perspective and adaptation for the adaptive perspective, the two approaches proposed that traits have functional implications. Because the thesis focused on the benefits of traits on the perceiver, the adaptive approach was cooperated to a greater degree.

The evolutionary literature emphasizes reproduction and survival. To date, there has been research that explains how traits influence the two processes. Generally, traits are used as cues of relationship investment that is to predict the probability that the target would fulfill relationship goals (Cosmides & Tooby, 2005; Kendrick, Maner, & Li, 2005; Shackelford & Buss, 1996). More specifically, romantic partner or mate selection is directly related to reproduction and sexual selection. Sexual selection refers to the advantage an individual has over other same-sex individuals in terms of reproduction (Darwin, 1871). Based on that, two mating criteria were proposed. First, a good mate should have good genes that will be passed on to the offspring i.e. attractive and healthy. The second criterion is the good

investment theory. A good mate should possess certain characteristics that make them willing to be helpful and supportive in child-rearing. Moreover, they should have a high capacity to attain resources and status (Gangestad & Simpson, 2000). An individual who possesses traits that fulfilled these criteria would then be preferred over an individual who does not have these qualities. Indeed, accumulative amount of literature has concurred with this assumption. Warmth and competence are generally preferred or desirable (Fletcher & Simpson, 2000; Gangestad & Simpson, 2000; Hall, 2012; Montoya & Horton, 2014) whereas traits such as abusive, inattentive, untrustworthy, emotional instability, neuroticism, and dark triad (narcissism, Machiavellianism, psychopathy) are typically avoided in potential mate and friend (Apostolou, 2016; Jonason, Garcia, Webster, Li, & Fisher, 2015; Jonason & Schmitt, 2012).

The evolutionary perspective also explains how warmth and competence are differentially used to ensure survival. When a person encounters others, two-step processes are activated in a particular order. First, the perceiver has to make a decision whether the target is a friend or a foe. This is achieved by reading the target intention towards the perceiver. After understanding the intention, the next step is to decide whether the target will successfully carry out their intention. In this step, the perceiver must estimate the target's ability. The two steps are guided by the perception of warmth and competence respectively. Specifically, warmth signals harmfulness of a target that is, are they harmful or harmless? Consecutively, competence then signals the capacity to succeed in their intent regardless of the intent. For example, if a target is seen as willing to work towards mutually beneficial goals (high warmth), the perceiver usually proceeds to competence evaluation, that is does the target have the ability to succeed (high competence)? If the target has good

intention and ability, it is most likely that the relationship would be formed. If the target has good intention but low ability (low competence), the relationship may or may not be initiated. However, if a target is not cooperating (low warmth), the evaluation of competence may or may not take place. It may be relevant in a certain context but unimportant in others. In a situation where the target poses risk, for example, it is more likely that the competence evaluation is triggered because the process is important to survival. But in a situation where the target is unlikely to be harmful, the evaluation of competence is unnecessary (Cuddy et al., 2011; Vigil, 2007).

Following the two-step process of traits, a prominent hypothesis was posited: the primacy-of-warmth hypothesis. It stated that warmth was more important than competence because the question of intention or willingness preceded the question of capability (De Bruin & Van Lange, 1999; Fiske, Cuddy & Glick, 2007; Vigil, 2007). Warmth helps to make a decision whether to approach (relationship initiation) or avoid (relationship prohibition; Carver, 2005; Dunning, 2004; Oosterhof & Todorov, 2008; Todorov, 2008). Competence is inherently self-involved whereas warmth was majorly other-involved (Peeters, 1992; Wojciszke, 2005b). Therefore, warmth is believed to have more interpersonal consequence than competence (Helgeson, 1994). This primacy-of-warmth hypothesis has received some support. For instance, the valence of competence traits did not affect approach or avoidance response. Positive warmth traits triggered faster approach response (pushing the button) than avoidance (withdrawing the button) whereas negative warmth traits triggered faster avoidance than approach (Wentura, Rothermund, & Bak, 2000). Thus, only warmth was consequential in decision-making regarding approach and avoidance. When asked to rate importance of different traits qualities that were associated with warmth were

deemed more important than competence traits for friends (Abele & Wojciszke, 2007 study 4; Cottrell, Neuberg, & Li, 2007; Lusk, MacDonald, & Newman, 1998; Sprecher & Regan, 2002) and long-term romantic partner (Fletcher, Tither, O'Loughlin, Friesen, & Overall, 2004; Li, Bailey, Kenrick, & Linsenmeier, 2002; Sprecher & Regan, 2002). However, in these studies, warmth and competence were not categorized. That is participants were provided with a list of traits that were not specified in which dimension they belonged. Moreover, the number of competence and warmth traits was typically imbalance. Most traits were in warmth dimension whereas only a few were related to competence.

Lack of systematic manipulation of traits made it inconclusive whether warmth was more important than competence. This gap in literature induced researchers to use rigorous statistical techniques such as factor analysis and meta-analysis to develop models that systematically organize traits and allow further study in the field of relationship research. The pioneer model was the Ideal Standards Model (ISM: Fletcher, Simpson, Thomas, & Giles, 1999). Three ideals or desirable attributes were proposed for a long-term mate: trustworthiness/warmth, status/ resource, and attractiveness/vitality. For the most part, the three ideals are comparable with dimensions of warmth and competence. This was the most evident in trust-worthiness/warmth ideals that consisted of characteristics such as understanding, supportive, considerate, kind, and a good listener. Whilst the fundamental dimensions of personality perception strictly describe personality, the ISM extends beyond that. Namely, attractiveness/vitality ideals included physical appearance and lifestyle such as nice body, sexy, attractive, active lifestyle, sporty and athletic while status-resources ideals consisted of having a good job, financially secure, nice house or apartment, successful, and dresses well. Arguably, these attributes allow inference of

personality but the model is by no mean restricted to personality and rendered the comparison with warmth and competence dimensions. Hall (2011) extended the ISM to study same-sex friendship. The model proposed 6 requirements: systematical reciprocity, communion, enjoyment, instrumental aid, similarity, and agency. Communion and agency by definition fit perfectly with warmth and competence respectively. The others are less obvious which, in the same way as the ISM, did not allow direct comparison with warmth and competence.

Roles and Trait Ascription. The scenario of the bus driver and the romantic partner at the beginning of the chapter implied that we form relationships with different people. Not all relationship is equal in a sense that they have different characteristics and goals (Lee & Gillath, 2016; Sutcliffe, Dunbar, Binder, & Arrow, 2012). For instance, the bus driver may be considered as a type of work relationship that demands a high level of competence whereas a mate or a friend are considered to be personal relationships and require a high level of warmth. Social personality psychologists have studied the functional implication of traits in different relationships by limiting the scope of studies to warmth and competence. A wide range of interesting findings has emerged. When asked to report events that influenced the global evaluation of other, events that indicated warmth were reported more than events that had competence element. In contrast, events that influenced the global evaluation of self and close friend were centered on competence rather than warmth (Wojciszke et al., 1998 study 3; Wojciszke & Abele, 2008 study 1). When asked what kind of information needed to form an impression of hypothetical person and self, warmth information was more sought after than competence (Abele & Wojciszke, 2007; study 4; Brambilla, Rusconi, Sacchi, & Cherubini, 2011; De Bruin & Van Lange, 2000; Goodwin, Piazza, & Rozin, 2014; Wojciszke et al., 1998 study 4).

Training that was relevant to warmth was chosen as important for other whereas training regarding competence was preferred for self (Abele & Wojciszke, 2007 study 3). When asked to describe themselves in work context, participants mentioned competence attributes significantly more than warmth traits. The opposite was true for family context where warmth-related qualities were included more (Uchronski, 2008). In behavioral studies, cues such as words and faces that gave diagnostic information related to warmth also elicited faster response than competence (Abele & Bruckmüller, 2011; Todorov, Loehr, & Oosterhof, 2010; Ybarra, Chan, & Park, 2001). When asked about qualities they looked for in a leader, competence attributes were nominated (Lusk et al., 1998). When asked to role-play as manager, participants expressed more interest to learn about information related to competence of future employee and expressed higher task-oriented goal than participants who were randomly assigned to take on subordinate looking for manager role (Cislak, 2013). When asked about an ideal confidant, warmth attributes were nominated significantly more than competence attributes whereas when asked to choose a suitable negotiator, competence dominated (Wojciszke et al., 1998 study 2). Even with facial trait inference, there was a strong preference for non-dominant looking friends (Laustsen & Petersen, 2015).

In the context where one trait was spontaneously ascribed, the other trait became more relevant. For example, a benevolent politician was preferred over a self-serving politician because a high level of competence was expected in politicians in general (Cislak & Wojciszke, 2008). When asked to choose between friends and enemies with one being more intelligent than the other, smart friend was preferred whereas unintelligent enemy was preferred. The explanative account for this finding was that because friends were assumed to be warm (otherwise they would not be our

friends), competence became more relevant. Smart people were assumed to have more access to resources that could benefit their friend, and because there is implicit expectation that friends would share resources with each other, a smart friend who was perceived to have more resource was then chosen over the unintelligent friend who was perceived to have less access to resources. On the contrary, an unintelligent enemy was preferred because they were assumed to have very little intention to benefit us but rather harming. Therefore, an intelligent enemy posed a more serious threat to the perceiver compared to an enemy who was low on competence. This made an unintelligent enemy preferable to an intelligent one (Peeters, 1992). To conclude, existing research revealed that context determined how important warmth and competence are. In other words, context moderates salience of traits that in turn shifts the focus to the trait that would fulfill the goal presented by the situation. Warmth is deemed as important in social-oriented settings whereas competence is required in task-oriented situations. Lastly, when there is certainty about one trait, the other became diagnostic (Cuddy et al., 2011).

Interdependence is another factor that is context-dependent and influences trait salience. Interdependence refers to the state in the relationship when partner's behavior influences each other (Kelley & Thibaut, 1978 see Rusbult & Van Lange, 2003 for an in-depth review). In a situation where relationship partners rely on each other and their behaviors have a consequence on each other or in an interdependent context such as in a study group, both warmth and competence were relevant. Warmth was consistently found to be desirable in social context thus it was implied. Competence was inherently self-involved because its benefit was limited to the possessor. However, in this situation it would also influence the performance of the group and other members therefore alongside warmth, it was deemed as important

(Cottrell et al., 2007). This study, however, fell along one of those mentioned above that the numbers of competence and warmth traits were unequal.

The previous research listed above undoubtedly provided a theoretical background for the thesis despite the difference in paradigm (traits were not systematically categorized) and research question (not all focused on different relationships). Among them, there were two studies that were highly relevant to the present research. Wojciszke and Abele (2008) studied trait in relationships that varied in closeness, which they assumed to be different in interdependence level as well. In their first study, participants reported events that changed the way they perceived their close friend (supposedly higher dependence), peer (lower dependence), and themselves. Judges later assessed the extent the events suggested warmth and competence. As hypothesized, events indicative of warmth were reported more than events that had competence content for peer. In contrast, events that influenced the global evaluation of self and close friend were centered on competence rather than warmth. Additionally, events that influenced close friend and peer global impression did not differ in warmth. Competence, however, was significantly higher in close friend events than in peer events. The findings suggested that closeness or interdependence moderated trait salience. Specifically, warmth played an important role in distant other evaluation whereas competence was more relevant to self and close other. Study 2 proceeded to test the interdependence effect but in a different context. Participants, who were employees in different organizations: bureaucratic and efficiency-oriented organization, were asked to evaluate their supervisor. The authors first showed that the two organizations held different values by studying job satisfaction. It was found that in the efficiency-oriented organization, supervisor's competence was the predictor for job satisfaction whereas, in the bureaucratic

organization, supervisor's warmth was the predictor. This led them to argue that dependency only existed in efficiency-oriented organization, therefore, competence would be emphasized in this organization but not in the bureaucratic organization. In the main study, participants were asked to report global evaluation, warmth, and competence of their supervisor. It was found that warmth was better predictive of an overall impression than competence in the bureaucratic organization. On the other hand, global evaluation of supervisor in the efficiency-oriented organization was better predicted by competence. The authors concluded that their hypotheses were supported. When dependence was low, that is when judging distant other and in bureaucratic setting, warmth was more relevant to the overall evaluation. But when dependence increased, such as when judging self and close other or in the efficiency-oriented organization, competence was more influential to global impression of the target. The criticism of this study is that the concept of interdependence was largely assumed and not empirically measured. It is possible that different organizations irrespectively of value they place emphasis on vary in interdependence. For example, company A encourages employees to work together and cooperate while company B is more competitive hence employees do not cooperate to the same degree. Wouldn't interdependence be higher in company A by definition? In short, caution must be taken when measuring construct such as interdependence as it may have proved difficult to make a strong conclusion.

The study by Wojciszke and Abele (2008) was extended by Abele and Brack (2013). In study 1 they differentiated relationships into 3 types according to interdependence level. Mutual dependence relationship was defined as a relationship where behaviors of both relationship partners had an influence on each other. Partner implicitly expected investment from each other. Unilateral dependence relationship

was when only one partner, in this case, the perceiver, relied on the other/target. In this relationship, the only behavior of target affected the perceiver but not the other way around. Hence, investment was expected solely from the target. Lastly, independence relationship referred to a relationship that behavior of neither partner affected one another. Thus, no investment was assumed from either the perceiver or the target. Mutual relationships were tennis team and study group. Unilateral relationships were when the perceiver needed to borrow lecture notes from a classmate and when the perceiver asked a stranger for a lift. Independent relationships included attending a seminar with a classmate and having a new neighbor in the apartment. For each relationship type, participants were asked to rate their own and target's dependence and to select 8 traits from a list of 16 traits (half was warmth trait and the other half was competence trait). It was found that as the degree of interdependence increased, competence was chosen more frequently. The number of competence traits was significantly higher in mutual dependence relationship than both unilateral relationship and independence relationship. In contrast, the different pattern was found for warmth traits. The number of warmth traits actually decreased as the interdependence level increased. That is, the frequency of the traits was independence and unilateral dependence relationships. The numbers were significantly higher than in mutual dependence relationship.

The distinction of exchange and communal relationships (Clark & Mills, 1993) also implied the relative importance of traits. This theory categorized relationships into two groups according to motivation or rules that govern the relationship. Exchange relationships are characterized by a high emphasis on reciprocity. To maintain the relationship, partners strictly follow the rules of "give and take". Examples of exchange relationships are strangers and business associates.

In contrast, communal relationships are driven by concern about one's partner welfare. Close relationships including friendship and romantic relationship fall into this category. In their second study, instead of independence level, Abele and Brack (2013) categorized relationships based on Clark and Mills' (1993) distinction of exchange and communal relationship. The relationships used in this study were supervisor (exchange) and friend (communal). Participants were asked to select 8 traits from the same list of traits as in Study 1 they believed their supervisor and friend should have. In this study, they also rated their own traits. It was found that for friend, warmth was chosen more frequently than competence. The same pattern was found for supervisor but competence was much more desired in supervisor than in friend. In addition, participants' personality also predicted trait selection. The participants who saw themselves as higher in warmth selected more warmth traits than competence traits and more than the participants who scored lower in self-rating of warmth. In much the same way, the participants who rated themselves as highly competent selected more competence traits than warmth traits, and more than the participants who scored lower in self-rating of competence. Study 3 used the same targets (supervisor vs. friend) and the same results as in Study 2 were found. There was also an additional measurement, relationship goal. For each relationship, participants rated the importance of 2 well-being goals (to get along with the partner and for the partner take care of their well-being) and 2 mastery/learning goals (for the partner to teach them something and that they learn something from their partner). In other words, the participants reported the extent they expected their supervisor and friend to fulfill the goals. The results indicated that for exchange relationship (relationship with supervisor), the learning goals were significantly more important than the well-being goals. But for a communal relationship (friendship), well-being

goals were more important. This goal was predictive of trait selection. Participants who had valued learning goals selected more competence traits whereas participants who had valued well-being goals selected more warmth traits.

The findings from the above studies showed that relationship roles and interdependence had an influence on trait relevance (Abele & Brack 2013; Wojciszke & Abele, 2008). Warmth was not always more important than competence as the primacy-of-warmth hypothesis suggested (Abele & Wojciszke, 2007; De Bruin & Van Lange, 1999; Helgeson, 1994; Sprecher & Regan, 2002). Warmth was more influential on global evaluation of distant other or in the context where partners simply coexisted namely in an independent relationship. The target only had to be harmless for the relationship to continue which explained why warmth or lack of warmth was a concern. Warmth seemed to take priority in a unilateral relationship when the perceiver was completely reliant to target. Warmth was a better predictor of willingness to help than competence. The question about ability or whether the target will succeed in their intention might or might not be raised (Fiske et al., 2007). Relative importance was determined by what relationship entailed (Cottrell et al., 2007; Peeters, 1992). When interdependence was not controlled for, competence was salient in task-oriented setting whereas warmth was emphasized if the partner was expected to care for welfare of each other. Importantly, in mutual relationships where investment from both partners was expected, interdependence increased. In turn, both warmth that signaled the willingness to invest and ability that signaled a chance to succeed (Vigil, 2007) become diagnostic.

To conclude, a good amount of research has shown that traits are preferentially chosen to accommodate goal that was made salient by context. The literature had been growing but there was the need to further explore this topic with

different approaches. Therefore, the first purpose of the present thesis was to synthesize and extend the findings from the previous studies (Abele & Brack, 2013; Wojciszke & Abele, 2008) by using the new coherent paradigm, that is to study established relationships when competence and warmth were controlled, in order to provide comprehensive insight of personality perception in different relationships namely kinship, romantic relationship, close friendship, and acquaintanceship.

Trait Transgression

Even though expectations toward relationship partner are prevalent, they are not always fulfilled. For example, a friend who is not being supportive when we want them to be or when a housekeeper does not clean the place properly. This is a definition of relational transgression. More specifically, relational transgression occurs when a relationship partner engages in a behavior that is against relationship-relevant norms or rules that were implicitly or explicitly established and shared between the persons in the relationship (Casper & Card, 2010; Emmers-Sommer, 2003; Hoyt, Fincham, McCullough, Maio, & Davila, 2005; Metts, 1994; Roloff & Cloven, 1994; Roloff, Soule, & Carey, 2001). Due to the definition and research scope, behaviors that are related to relationship norms have been extensively studied in the field of relationship research. Some transgressions are ubiquitous across relationship types such as betrayal or expectation violation, a term that is used interchangeably with transgression (Finkel, Rusbult, Kumashiro, & Hannon, 2002; Fitness, 2001; Shackelford & Buss, 1996). In contrast, the other transgressions are relationship-specific e.g., infidelity, adultery (Jones & Burdette, 1994; Jones, Moore, Scratter, & Negel, 2001; Metts & Cupach, 2007; Tsapelas, Fisher, & Aron, 2011; Wilson, Mattingly, Clark, Weidler, & Bequette, 2011). However, transgression can be

extended to address expectations of a partner in terms of their personality rather than relationship-specific behaviors.

It is not uncommon to encounter seemingly trivial transgressions in everyday life such as forgetting to get grocery, pay bills, being indifferent toward one another or being unpleasant to another person. Behavior can inform us about competence and warmth of the person (Abele et al., 2014; Cislak & Wojciszke, 2008; Wojciszke, 1994), the same logic is pertinent for transgression. Specifically, trait transgression is defined as a behavior that suggested a lack of desirable traits, in this case, competence and warmth. Competence transgressions describe the lack of abilities and skills for instance when one fails an exam or when one is not completing their task efficiently. Warmth transgressions can be depicted as lack of cooperation and trustworthiness. For example, when one is being indifferent to their partner's needs or only consider their needs. Because relational transgression has not been studied in terms on trait it manifests, this was the second component of the thesis. Other types of transgressions were found to have several damaging consequences ranging from emotional (Baumeister, Stillwell, & Heatherton, 1995; McDonald & Asher, 2013), verbal (Haden & Hojjat, 2006; Jones & Burdette, 1994), cognitive (Cohen, 2010; Robbins & Merrill, 2014;), and behavioural (Morse & Metts, 2011; Tedeschi & Bond, 2001; Tsang, McCullough & Fincham, 2006). I hypothesize that trait transgression would have a negative consequence on trait perception. Specifically, competence transgression would decrease competence perception and warmth would decrease warmth perception, at the very least.

Research Paradigm

Closeness. The characteristic that has been found to differentiate relationships

and hypothesized in this research to result in different trait perception was closeness. There were few reasons, theoretically and practicality, why it was chosen over other constructs. Closeness is a central factor in interpersonal relationships (Fletcher Simpson & Thomas, 2000b; Mashek & Aron, 2004; Roberts & Dunbar, 2011a). It describes strength of relationships (Reis, Clark, & Holmes, 2004). It is a commonly used word that laypeople understand and can relate to easily (Uleman, Rhee, Bardoliwalla, Semin, & Toyama, 2000). Theoretically, closeness is highly related to interdependence which is another important aspect of a relationship (Berscheid & Reis, 1998). But interdependence is more specific. It refers to the influence that relational partners have on each other (Thibaut & Kelley, 1959). To my knowledge, there has been only one work that investigated the effect of interdependence on trait importance. That was the research by Abele and Brack (2013) which was outlined previously on page 13. Participants read different scenarios that supposedly embedded different levels of interdependence. They then reported their own and the partner's dependence level to check if the scenarios represented mutual relationship (relational partners relied on each other), unilateral relationship (only one partner relied on the other), or independence relationship (neither relied on each other). Closeness and interdependence differentiate relationships in the same way in terms of directionality. A close relationship often accompanies by higher and stable level of interdependence whereas a distant relationship is commonly characterized by lower interdependence (Kelley et al., 1983). However, they tap into different aspects of a relationship and provide different information. While interdependence reflects the influence that the relational partners have on each other, closeness transcends that. As a result, closeness and interdependence are mutually exclusive. Closeness is omnipresent and varies in every level of relationship that differs on interdependence

and vice versa (Sternberg, 1988). For instance, a parent-child relationship is considered a unilateral relationship where the child is more dependent on the parent (low interdependence) but they can perceive their relationship as close (high closeness). In my view, studying closeness would have had more implication than studying interdependence. If the results were different than what Abele and Brack (2013) found, we could then conclude that closeness and interdependence led to different findings and conduct additional research that compares the two constructs. If the finding from the present study was similar to that of Abele and Brack (2013), it would have provided evidence that closeness was similar to interdependence and extended their findings of the effect of interdependence and closeness on trait perception. Either way, researchers would then have an alternative measurement that they can use if preferred.

Closeness also has an advantage over another term, intimacy. Although the two terms have been used interchangeably, intimacy is more limited to romantic relationships whereas closeness can be used to describe any relationship including kinships, friendships, and romantic relationships (Dibble, Levine, & Park, 2012; Monsour, 1992; Parks & Floyd, 1996). The term closeness allows the comparison between relationships that are qualitatively different (e.g., romantic relationship vs. sibling relation) as well as the relationships that are quantitatively different (e.g., close friend vs. casual friend). Finally, closeness is an indicator of different behaviors and constructs such as tie strength (Marsden & Campbell, 1984), higher frequency of contact (Hill & Dunbar, 2003; Mok, Wellman & Basu, 2007; Roberts & Dunbar, 2011b), and advice giving and seeking (Feng & Magen, 2016). Specifically, people were more likely to give advice to those whom they felt closer to. They more often sought support and were more willing to receive advice from those they feel close to

such as their family members, friends, and romantic partners (Feng & Feng, 2013; Feng & MacGeorge, 2006; Kaniasty & Norris, 2000; Rafaeli & Gleason, 2009). Closeness motivated both kin and reciprocal altruism (Korchmaros & Kenny, 2001; Kruger, 2003). We are more likely to help people to whom we feel emotionally close. Closeness also had an effect on accuracy of emotional recognition (Sternglanz & DePaulo, 2004). Compared to strangers, accuracy rate was higher when friends were perceived. However, friends were more accurately perceived than close friends. Considering the significance of closeness and there is a limited amount of research on the difference in closeness of social connection (Lee & Gillath, 2016), it would be useful to study this concept. The majority of the studies (7 out of 8) used three items that measured closeness in different ways: a perceived closeness item, a social circle item, and an Inclusion of Other in Self item (Aron, Aron, & Smollan, 1992).

Perceived closeness. This is a 7-level Likert item that straightforwardly addressed closeness. For example, if your friend's name is John the item would read "How close are you to John?" This format of item has shown that different targets and relationships can be differentiated by closeness (Ackerman, Kenrick, & Schaller, 2007; Cohen, 2010; Lee & Gillath, 2016; Roberts et al., 2009; Roberts & Dunbar, 2011a; Totenhagen, Butler, Curran, & Serido, 2016).

Social circle. This item was based on social brain hypothesis (Dunbar, 1998). It proposed that one's social network could be visualized by successive concentric circles with an individual being the center. The individual organizes their social contacts into these hierarchical circles according to closeness and strength of tie. More centric circle are smaller and consist of close contacts who share an intense and high-quality relationship with the individual whereas the circles at the farther from the center are bigger and contain less close targets who share less intense and lower

quality relationship with the individual. The number and size of circle and the allocation of contacts vary from individuals to individuals but the pattern, that is the inner circle consists of closer contact while the farther circle contains less close contact, is stable (Binder, Roberts, & Sutcliffe, 2012; Dunbar & Spoors, 1995; Roberts et al., 2009; Sutcliffe et al., 2012; Zhou, Sornette, Hill, & Dunbar, 2005). Drawing on this theory, a figure of three successive circles was used to measure and differentiate closeness level. The reason the circle consisting of three layers was because every study that used this item compared two targets. Two levels may have been insufficient to show the difference between targets as the participants would have been forced to choose from only two options. Four or more layers may have been too many and did not reflect a meaningful difference. The figure and the definitions that described the three levels were presented below.

"The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well."

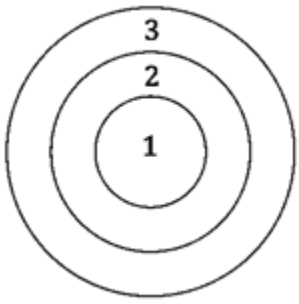

Figure 1.2 Social Circle Item

Inclusion of Other in Self. The last item was based on self-expansion theory which asserted that people are motivated to expand the self (Aron, 2002; Aron, Aron, & Norman, 2001; Aron, Norman, & Aron, 1998). There is a strategy that people use

when they are in a relationship which is to integrate partner's resources including material (e.g., possessions), knowledge (e.g, skills), social (e.g., social status and social network) and identities (e.g., attitudes and preferences) to their self-concept (Aron et al., 2004). Inclusion of Other in Self is more common in a relationship that is high in interdependence particularly romantic relationships (Aron & Aron, 1986; Aron, Ketay, Riela, & Aron, 2007) because the influence of partner is higher in this type of relationship (Kelley & Thibaut, 1978; Rusbult & Arriaga, 2000). As a result, the partner who is included is treated similarly to the way the individual treats themselves. For example, allocation of resources to self was more similar to the allocation to best friend than the allocation to acquaintance, stranger, or enemy (Aron, Aron, Tudor, & Nelson, 1991). Since personality traits are considered as a resource that the partner can be benefitted from (Hall, 2011; Vigil, 2007), they are used in self-expansion as well. From this perspective, there are two dimensions of closeness: feeling close and behaving close. Both can be represented by a Venn diagram that showed different pairs of circles that reflected different levels of closeness: the first pair represented the highest Inclusion or closeness while the seventh pair represented the lowest Inclusion or closeness (Aron et al., 1992: Figure 1.3 below). The scale has been used widely to study relationships (Aron & McLaughlin-Volpe, 2001) and correlated well with other closeness indices (Aron & Fraley, 1999; Dibble et al., 2012; Uleman et al., 2000).

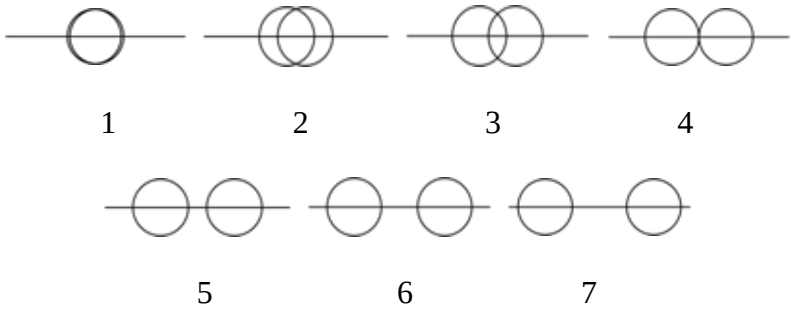

Figure *1.3 Inclusion of Other in Self Scale (Aron et al., 1992).*

Established relationship. The paradigm that has been used frequently to study traits preference in relationships is the ideal paradigm. Participants were asked to describe their ideal romantic partner (Fletcher et al., 1999 study 1) and friend (Hall, 2011) or rated importance of different qualities they would like their potential partner and friend to possess (Conroy-Beam, Goetz, & Buss, 2016; Fletcher et al., 1999 study 2; Gebauer, Leary, & Neberich, 2012; Furnham, 2009; Sprecher & Regan, 2002). Understandably because the researchers were interested in traits implication or predictability on emotional experiences such as desire, relationship satisfaction, passion, love, commitment, trust (Fletcher, Simpson & Thomas, 2000b) and relationship behaviors including relationship initiation, maintenance and dissolution (Eastwick, Finkel, & Eagly, 2011; Eastwick, Luchies, Finkel, & Hunt, 2014; Eastwick & Neff, 2012; Fletcher Simpson & Thomas, 2000a). However, little is known about the evaluation of "real" partner even in romantic relationships that have been extensively studied, let alone other relationships including friendship, acquaintanceship, and kinship. Eastwick and colleague (2011) summarized Levinger and Snoek's (1972) intersection model of pair relatedness. The principle is that romantic relationships can be distinguished into three levels according to the degree of interdependence between the people in the relationship. First is the level of awareness where the two people form an impression about each other also referred to as the "hypothetical stage". Secondly, the surface contact where the pair begins to interact with each other and share minimal information is formed. Otherwise referred to as the "attraction stage". The third is when mutuality develops or where the pair acknowledges being in a relationship and have built a certain level of closeness also known as the "relationship stage". As the pair progresses through these stages, the degree of interdependence increases. The model fits quite nicely with the social

penetration theory (Altman & Taylor, 1973), a model that describes relationship development. It stated that every relationship (not only romantic relationship) goes through different stages and processes. Particularly, established-relationship evokes information and evaluation that is more specific, elaborative, and deliberative (Arriaga, & Agnew, 2001; Soons, Liefbroer, & Kalmijn, 2009), arguably because the target of evaluation is more psychologically distant than would be the case when evaluating an actual relationship (cf. Trope & Liberman, 2010). Eastwick and colleague (2014) then asserted that different stages of relationship should be studied by appropriate research paradigms. That is to investigate the evaluation of ideal relationship partner in the hypothetical stage, to study people who find each other attractive but not in the relationship for the attraction stage for instance in speed dating context or on dating profile evaluation, and to study the evaluation of those who are currently in the relationship. Therefore, the thesis studied established relationships by asking participants to think of an actual relationship partner and evaluate their personality. In the case of sibling and romantic relationship, only individuals who had a sibling and were romantically involved at the time the study took place were recruited. This paradigm would contribute to the limited knowledge of established relationships and be more useful for both social psychology and relationship literature where the ideal partner was extensively covered.

One may question this method as the perception of close other can be inaccurate and/or biased. There is a reason to believe this would not have posed a serious problem. As a relationship grows, knowledge about partner tends to be more accurate over time, a phenomenon known as the acquaintanceship effect (Colvin & Funder, 1991). Accuracy and bias co-exist and people are motivated to form an accurate perception of their relationship partner (Gagné & Lydon, 2004; Ickes &

Simpson, 1997; Kenny & Acitelli, 2001) because incorrect trait ascription, especially for close others, can be harmful (Murray, Holmes, & Collins, 2006; Tausch, Kenworthy, & Hewstone, 2007). Although positive illusion, particularly about a romantic partner, tends to be exaggerated, it is nonetheless ground on reality (Murray & Holmes, 1996). In some cases, the tendency to view close others in positive light serves as a relationship-regulation strategy that is to maintain relationship satisfaction (Murray et al., 2011; Murray, Homes, & Griffin, 1996). The research question for the thesis was to compare trait perception of different targets that one knew in real life. Even though the perception may not be completely accurate, this would have applied to every target and eliminates this confound effect. The motivation to preserve positive thoughts toward relationship partners was also tested in the thesis.

Overview of Studies

The thesis consisted of 4 empirical chapters that consisted of trait perception study and trait transgression study.

Chapter 2 compared friend and acquaintance. There were 3 studies in the chapter. Study 1 addressed trait perception of close friend, casual friend, and acquaintance. Study 2 was a follow-up study from Study 1. It was improved in terms of methodology (as discussed in Closeness section) and examined trait perception of close friend and acquaintance. Study 3 used transgression paradigm to study trait perception of close friend and acquaintance before and after trait transgression of competence and warmth. Chapter 3 was an extension of Chapter 2. It did not only study explicit trait perception of close friend and acquaintance but it also incorporated an implicit test to further examine trait perception in Study 4

Chapter 4 compared friend and romantic partner. It consisted of two studies. Study 5 addressed trait perception and Study 6 used transgression paradigm to examine trait perception of close friend and romantic partner before and after trait transgression of competence and warmth.

Chapter 5 focused on friend and sibling. It had the same structure as Chapter 4 that was Study 7 addressed trait perception and Study 8 used transgression paradigm to examine trait perception of close friend and sibling before and after trait transgression of competence and warmth.

For trait perception studies (1,2,4,5 and 7) participants were first asked to think of different targets that is a close friend, an acquaintance, a romantic partner, and a sibling. They completed trait perception questionnaire by evaluating the target's personality in terms of competence and warmth and answered the questions about closeness.

For trait transgression studies (3,6, and 8) participants were first asked to think of different targets, evaluated the target's personality and answered the questions about closeness the same way in trait perception studies. They then read scenarios that described the targets committing in competence and warmth transgressions before evaluated the target's personality again.

Trait perception studies (Study 1-2,4-5 and 7) addressed three research questions. Trait transgression studies (Study 3, 6, and 8) addressed four research questions. Hypothesis 1 queried whether trait perception was more positive in the closer target. Specifically, it asked if the closer target was perceived as more competent and warmer than the less close target. The closer and less close target differed for each study but whatever they were, this prediction stood. This hypothesis would be supported if there was a main effect of target in trait perception studies and

trait transgression studies. Additionally, trait transgression studies would have shown higher decrease in trait perception of the closer target following trait transgression.

Hypothesis 2 proposed that closeness could account for different trait perception for both trait perception studies and transgression studies. If trait perception of targets who varied in closeness was different, this hypothesis would have been supported. If there was a difference in closeness but no difference in trait perception or vice versa, it would mean closeness was not a factor driving the process.

Hypothesis 3 asked if warmth was more important than competence (the primacy-of-warmth hypothesis). This proposition would have been correct if there was a main effect of trait with warmth being higher than competence. This applied for both trait perception studies and trait transgression studies. Additionally for the trait transgression studies, if warmth transgression affected the following trait perception to a greater degree than competence transgression, this hypothesis would have been supported.

The last hypothesis only applied to the trait transgression studies (Study 3,6, and 8). It addressed the effect of trait transgression on trait perception. If there was a motivation to preserve a positive evaluation toward the target, a positive correlation of trait perception before and after trait transgressions would have been presented despite being exposed to behaviors that suggested lack of the trait. More details about the hypotheses were provided in the empirical chapters.

Contributions

The contributions of the thesis theoretically and practically were expected. Studying different relationships by the same paradigm would lead to more conclusive

and meaningful findings. At the end of the thesis, the following would have been achieved. First, the role of closeness in trait perception would have been shown. If closeness distinguished relationships and the trait perception was different, the influence of closeness on trait perception would have been shown. Closeness can then be compared to interdependence. This marks theoretical implication regarding construct that distinguishes relationship quality.

If a closer target is perceived as more competent and/or warmer, it would confirm that these traits are not only desirable when considering an ideal partner but they are in fact sought after. That is, people form a close meaningful relationship with individuals with these qualities. The advantage of studying established relationships instead of ideal partner's attributes is that ecological validity of competence and warmth would be highlighted. Moreover, as competence and warmth are directly pitted against each other. It can be concluded if one is more influential than the other or not. Lastly, because partner's positive image preservation would be studied. We can see that the process behind it. Is it a function of relationship or if it is limited to a certain relationship? Does it depend on how positive the initial impression? Does one fall harder when the thought was extremely high or is the higher the initial thought is, the more resistance there would be? Altogether, by providing the answers to these questions the thesis would significantly contribute to personality perception and relationship literature.

Considering the topic of the thesis is one that is prevalent and not limited to social psychologists, the practical contribution is substantial. The reader including a relationship scholar, a therapist, and a layperson can learn about the processes that we are directly involved and experience first-hand, deliberate about it, and apply it to our daily and professional life. For instance, an evolutionary psychologist can extend the

studies by investigating how these traits are beneficial to survival. If a couple does not understand the need of each other and incapable of expressing the qualities their partner wants, a couple therapist can give the insight to their client. If one does not understand why they are not happy with their friend, they can reflect and deliberate if their friend has the attribute that they need to continue the relationship. It is my hope that the thesis would help one learning about oneself and people around them, what they want from a relationship, and apply it appropriately.

Chapter 2: Trait Perception of Close Friend and Acquaintance

"Keep your friends close but keep your enemies closer" Godfather II (1974)

The quotation from the famous movie leads to different interpretations and triggers different reactions. Some may agree with this on the basis that it is a good strategy to be informed about your enemy, so you would be able to oversee and predict their next move and prevent it should it be potentially harmful. On the contrary, some may argue otherwise seeing it as an insensible move. It is not wise to be close to an enemy because you are then more exposed to them and allow more opportunity for them to potentially harm you. This quotation was analyzed via the lens of empirical literature to support the proposition that it may be more beneficial to have a close other who possesses a number of great qualities than having an enemy or a distant other with those attributes. The section first described friendship, a close relationship, and their functions. Research on personality trait, specifically competence and warmth, was then drawn on to illustrate the implication of positive traits on friendships, compared to acquaintanceship, a distant relationship.

Friendships

Friendships are flexible voluntary platonic close bonds (Allan, 2001; Becker et al., 2009; Seyfarth & Cheney, 2012). They are common throughout the lifespan (Blieszner & Adams, 1992; Fehr, 1996; Ginsberg, Gottman, & Parker, 1986; Hartup & Stevens, 1997; Werking, 1997) and cultures (Adams, 2005; Cheng, Bond, & Chan, 1995; Krappman, 1996). Friendship is distinct from kinship as friendship is formed voluntarily and friends do not necessarily share the genetic tie as kins do (Rotkirch, Lyons, David-Barrett, & Jokela, 2014; Stewart-Williams, 2007). . The relationship is

differentiated from romantic relationships as friends do not typically engage in intimate acts as romantic partners do (Hays, 1988; Monsour, Harris, Kurzweil, & Beard, 1994; Wiseman, 1986).

Friends provide companionship, intimacy, happiness (Fehr, 1996; Hartup, 1996), support, and self-affirmation (Golden, Conroy, & Lawlor, 2009; Hruschka, 2010; Lempers & Clark-Lempers, 1992). Additionally, a fulfilling friendship, one that has high level of shared closeness, security, support, and agreement between the friends, also enhances physical and psychological well-being (Allen, Uchino, & Hafen, 2015; Chu, Saucier, & Hafner, 2010; Cohen, 2004; Demir & Özdemir, 2010; Thoits, 2011). In conclusion, accumulative amount of research from different fields have shown that friendships have both emotional and instrumental provisions that ultimately fulfill need for belonging, agency, and autonomy, the three fundamental human needs (Baumeister & Leary, 1995; Deci & Ryan, 2000) across the life course (Adams & Blieszner, 1989; Bukowski, Hoza, & Boivin, 1994; Seeman, Lusignolo, Albert, & Berkman, 2001; Sherman, de Vries & Lansford, 2000). Not only friendship has implication on health and well-being, it also provides evolutionary benefit. Friends facilitate resource acquisition by engaging in cooperation and information exchange (DeScioli & Kurzban, 2009; Tooby & Cosmides, 1996). They also help identifying threat (Beckes, Coan & Hasselmo, 2013). Friends participate in different behaviors that promote survival chance, the ultimate goal of evolution. These benefits of friendship are compatible to that of traits as explained in Chapter 1. Lastly, friendship is a relationship that is flexible in nature (Allan, 2001; Becker et al., 2009; Seyfarth & Cheney, 2012) which means it lends itself well to the experimental design. As seen throughout the thesis, friendship was used as the comparison point

with other relationships including acquaintanceship (this chapter and Chapter 3), romantic relationship (Chapter 4) and sibling relationship (Chapter 5).

For this chapter friend was compared to acquaintance. Acquaintanceship was selected because the majority of studies focused on close relationships. Distant others such as acquaintances and strangers were understudied (Fingerman, 2009) even though the comparison between friendship and acquaintanceship was a logical one. They are more similar to one another than when they are compared to a relationship with a romantic partner or a kin. That is, both relationships are voluntary social bonds between nonkin and characterized by platonic nature. The difference is friendship is a progression of acquaintanceship (Altman & Taylor, 1973) and involves more investment (more details in the next section). From this reason, the comparison of friend and acquaintance were presented first in this thesis.

Trait Implication on Friendships and Acquaintanceships

Studies that looked into implications of warmth and competence in friends and acquaintances are very limited to my knowledge. Abele and Wojciszke (2007, study 4) looked into the importance of traits for different targets that differed on outcome dependency, referred to the extent that the behavior of the target has on the perceiver. The targets were self, a fellow student (lower dependency), and a close friend (higher dependency). The result suggested that both warmth and competence were deemed more important in a close friend than in a fellow student. Another study that was relevant to the present research is a study by Abele and Brack (2013, study 1). This study, however, provided a somewhat conflicting result. That is, different patterns were found for competence and warmth. For warmth, they replicated the finding of Abele and Wojciszke (2007). Competence and interdependence positively

correlated with one another. Conversely, warmth was deemed as the least important in the mutual dependence relationship. It was less relevant than in independence and unilateral dependence relationships. At the beginning of the relationship, the two people, from now on referred to as relationship partners, are merely strangers. The relationship can be constant that is no progress or regress hence no change in status. It can regress or cease signified by relationship termination but it can also develop, characterized by a change of status of the relationship partners and the relationship. The partners become acquaintances and friends respectively (Altman & Taylor, 1973). It is the motivation to initiate or further develop a high-quality relationship that makes personality traits relevant. For a friendship to be established, a significant amount of a variety of investment is required (Buhrmester & Prager, 1995; Hruschka, 2010; Sutcliffe et al., 2012; Trivers, 1971). Individuals vary on relationship investment potential (Kendrick et al., 2005). To attract a good potential relationship partner, they must be able to signal their potential to investment (Tooby & Cosmides, 1996) as well as to precisely estimate the potential of others (Cosmides & Tooby, 2005). Therefore, it is crucial to choose a friend that has beneficial qualities (Hall, 2014; Kurzban & Neuberg, 2005). As discussed in Chapter 1, traits have functional implication on relationships that is, an individual uses traits to firstly estimate the willingness to invest and if they portray the willingness, whether they would accomplish in making the contribution to the relationship. Specifically, warmth signals the willingness to invest and competence indicates the likelihood to succeed (Cuddy et al., 2011; Vigil, 2007). Considering friendship is a step above acquaint-tanceship, it is, therefore, logical to assume that a great amount of investment is required in friendship whereas the same amount is not needed for acquaintanceship. It was hypothesized that the findings from Abele and Wojciszke (2007), warmth and

competence were higher in the closer relationship, would have been replicated (Hypothesis 1).

Closeness and interdependence are related but not similar (Berscheid & Reis, 1998). Interdependence describes influence the partners have on one another whereas closeness is the connection they have between them. They are mutually exclusive constructs as discussed in Chapter 1. Therefore, the present research tested the effect of closeness on the implication of competence and warmth. If the importance of traits varied as a function of closeness of different relationships namely friendship and acquaintanceship, the pattern is likely to be present in friends who differed in level of closeness as well. To further show the effect of closeness, two types of friends were compared to acquaintances. The levels or types of friends that have been commonly studied in friendship literature include casual, close, and best friends (Becker et al., 2009; Hays, 1989; Johnson, Wittenberg, Villagran, Mazur, & Villagran, 2003; Oswald et al., 2004; Rose & Serafica, 1986; Wright, 1984). Closeness was found to positively relate to a variety of relationship maintenance behaviors such as contact of frequency, support provision, (Hays, 1989; Oswald et al., 2004) and commitment (Becker et al., 2009) in close and casual friends. Conversely, best friends were more self-maintained yet more intimate and more satisfying (Rose & Serafica, 1986; Wright, 1984). Therefore, the present research hypothesized a linear relationship between closeness and traits. Competence and warmth would be the highest in close friends, casual friends, and the lowest in acquaintances. If this prediction was supported, we would be able to conclude that closeness accounted for differential trait implication (Hypothesis 2).

The last hypothesis tested in the present research was the primacy-of-warmth hypothesis (Hypothesis 3) In the past, there was a consensus that warmth was more

important than competence in relationships (Cuddy et al., 2011; De Bruin & Van Lange, 1999; Fiske et al., 2007; Helgeson, 1994; Sprecher & Regan, 2002). A model that described desirable attributes of friends in great depth seems to support this hypothesis as well. The model is The Ideal Standard Model of same-sex friendship (Hall, 2011). The model summarized findings from different lines of research and proposed six standards or requirements that are important in the ideal friend and the ideal friendship. Symmetrical reciprocity is a preference for a friend that is committed, trustworthy, and loyal. Communion expectations referred to self-disclosure and intimacy from a friend. Enjoyment is the desire for a friendship that is pleasant and fun. Instrumental aid is expectations that a friend would provide help and support as requested. The ideal friend is also expected to share similarities. The last standard is agency, that is a preference for a wealthy, attractive, athletic, and well-connected friend (Hall, 2014). It can be seen that every requirement except agency can be linked to warmth while agency is compatible to competence. However, considering there was an imbalance between the number of competence and warmth traits in the past studies, the model was systematically biased. Therefore, it was ambiguous to conclude that warmth was more important than competence. The present study then controlled for the number of competence and warmth traits to allow better comparison. The three hypotheses were tested in Study 1 to 4. Firstly, a pretest was conducted to choose the targets to be used in the main study.

Pretest

The targets used in the pretest were best friend, close friend, casual friend, friend of a friend, and acquaintance. They are the people that are well-embedded in social environment. Thus, it should be easy for individuals to think of a representative

for each category (Bukowski, Newcomb, & Hartup, 1996).

The participants were recruited through the university participants pool. There were 75 participants: 54 females and 21 males. There were 57 Whites, 11 Asians, 5 Blacks, 1 other ethnicity, and 1 mixed-ethnicities participants. They completed the pretest questionnaire on Qualtrics. They were asked, "How close are you to the following people?". There were 14 targets including 5 targets that were used in previous research: best friend, close friend, casual friend, friend of a friend, and acquaintance and 9 fillers. The presentation order was randomized. The participants answered by using a 7-level Likert scale ranging from 1 "Not Close at All" to 7 "Extremely Close" (see Appendix A for the full questionnaire).

Figure 2.1 on the next page showed the closest to the least close target. That is best friend (M = 6.08, SD = 0.87), close friend (M = 5.65, SD = 0.89), casual friend (M = 3.60, SD = 1.00), friend of a friend (M = 2.57, SD = 1.12), and acquaintance (M = 2.56, SD = 1.07). A repeated-measures ANOVA was used to analyze the difference between targets. There was a significant difference between targets, $F(4,296) = 317.62$, $p < .001$, $\eta_p^2 = .81$. The difference between every pair of targets were significant (ps < .001) except between a friend of a friend and an acquaintance (p = .92). A significant and appropriate distance between the scores as well as the comparison to the existing literature was considered in this decision. Although best friend was the highest rated, it was not chosen because it might have led to the ceiling effect. Ultimately close friend, casual friend, and acquaintance were chosen for the following studies.

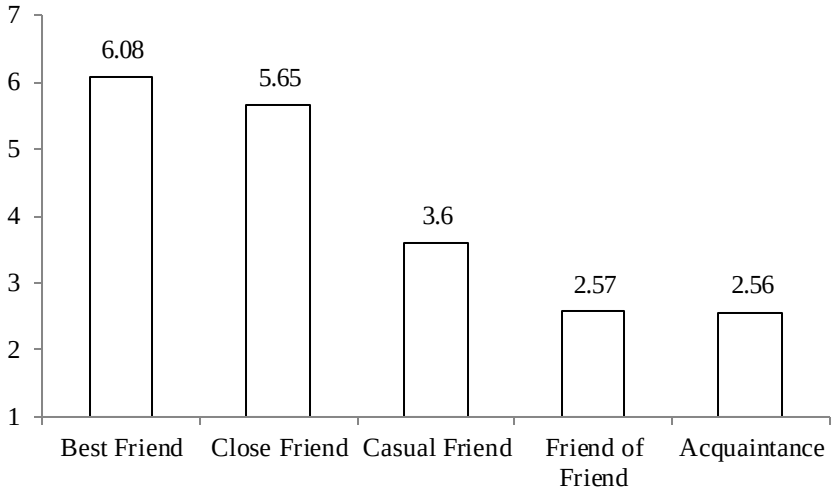

Figure 2.1. Closeness Score: Pretest (N = 75)

Study 1: Trait Perception of Close Friend, Casual Friend, and Acquaintance

Following the pretest, the first study was carried out. The purpose was to show different trait perceptions of targets differing in closeness namely close friend, casual friend, and acquaintance. Hypothesis 1 speculated the linear trend between closeness and trait perception. Specifically, it predicted that close friend would have been perceived as the most competent and warmest, followed by casual friend, and acquaintance. Hypothesis 2 tested the effect of closeness on trait perception. If closeness had a positive correlation with trait perception and able of predicting trait perception, this hypothesis would have been supported. Lastly, primacy-of-warmth hypothesis (Hypothesis 3) proposed that warmth was more important than competence. If warmth was higher than competence for every target, this hypothesis would have been supported.

Method

Design. The study was a 3 (targets: close friend vs. casual friend vs. acquaintance) by 2 (traits: competence vs. warmth) repeated-measures study.

Participants. The participants were recruited through the university participants pool. There were 126 participants with 99 being female and 27 being male. There were 91 Whites, 14 Asians, 13 Blacks, 4 Mixed, and 4 other ethnicities.

Materials and Procedure. The study was conducted online using Qualtrics. The participants completed a survey that comprised of questions for 7 targets which were a close friend, a casual friend, an acquaintance, oneself, and 3 filler targets. The presentation order of the targets was randomized. For each target, the participants were first asked to think about the target and rate their personality on a set of items. For instance, the instruction for the close friend was "Please think of your close friend (only one) and rate their personality". A list of 8 personality traits selected from Kervyn, Yzerbyt, Judd and Nunes (2009) were presented in random order. The competence traits were capable, competence, determined, and skilled. The warmth traits comprised caring, popular, sociable, and warm. The scale was a 7-point Likert scale ranging from 1 "Extremely Uncharacteristic" to 7 "Extremely Characteristic". After answering the question regarding personality of a target, a closeness item immediately followed asking "Please indicate how close you are to him/her". It was a 7-level Likert scale ranging from 1 "Not Close at All" to 7 "Extremely Close". Next, the demographic information including sex and ethnicity was collected. Finally, a debrief about the study was provided. The full questionnaire can be found in Appendix B.

Results

Closeness. Firstly, a repeated-measures ANOVA was used to analyze the closeness scores of close friend, casual friend, and acquaintance measuring by a 7-level Likert scale. The analysis suggested that there was a significant difference for

the closeness between the targets, $F(2,250) = 205.03$, $p < .001$, $\eta_p^2 = .78$. Participants reported that they were closer to their close friend ($M = 6.12$, $SD = .93$), than their casual friend ($M = 4.34$, $SD = 1.40$) and their acquaintance ($M = 3.16$, $SD = 1.56$). The pairwise comparisons revealed a significant difference between every pair, that is between close friend and casual friend, close friend and acquaintance, as well as casual friend and acquaintance (all $p < .001$). Thus, there was a linear trend for the closeness level in the expected direction.

Trait perception. Descriptive statistics of competence and warmth scores of close friend and sibling as well as Cronbach's alphas were presented in Table 2.1 below.

Table 2.1

Trait Ratings (Ms and SDs) and Cronbach's α of Close Friend, Casual Friend, and Acquaintance

	Competence	α	Warmth	α
Close Friend	5.69 (1.05)	.89	5.47 (1.07)	.80
Casual Friend	5.19 (1.09)	.87	5.27 (1.04)	.83
Acquaintance	5.16 (1.12)	.91	4.94 (1.01)	.82

N = 126

Target & trait. A 3 (targets: close friend vs. casual friend vs. acquaintance) by 2 (traits: competence vs. warmth) repeated-measures ANOVA was conducted to analyze the effect of difference in closeness on the trait ratings.

The analysis indicated that there was a significant main effect of target: $F(2,250) = 15.79$, $p < .001$, $\eta_p^2 = .11$. Close friend score was the highest ($M = 5.58$, $SE = .08$) followed by casual friend ($M = 5.23$, $SE = .08$) and acquaintance ($M = 5.05$, $SE = .08$). The pairwise comparisons revealed a significant difference between every

pair of targets. That is, close friend was perceived to possess more positive traits than casual friend and acquaintance (both *p*s < .001). However, casual friend was not perceived to possess more positive traits than acquaintance ($p = .059$). This means close friend was seen as more competent and warmer than casual friend and acquaintance. Casual friend and acquaintance were similar on the global evaluation (also see Figure 2.2 below). The main effect of trait was not significant.

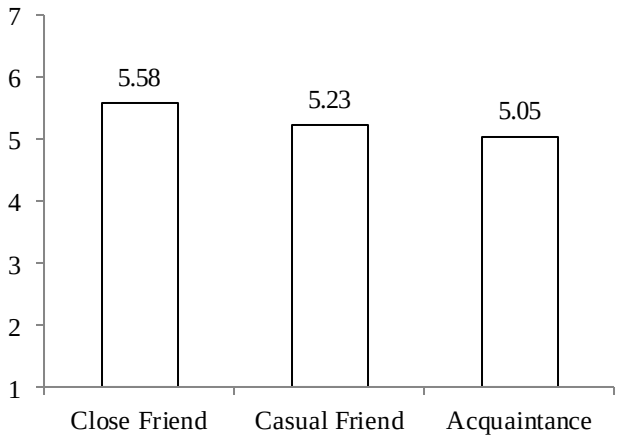

Figure 2.2. Main Effect of Target on Trait Ratings

There was a significant interaction of targets and traits: $F(2,250) = 3.63$, $p = .028$, $\eta_p^2 = .03$. The pairwise comparisons revealed a simple main effect of target on competence, $F(2,250) = 13.09$, $p < .001$, $\eta_p^2 = .10$. Competence score of close friend ($M = 5.69$, $SE = .09$) was higher than casual friend ($M = 5.19$, $SE = .10$; $p < .001$) and acquaintance ($M = 5.16$, $SE = .10$; $p < .001$). However, competence score of casual friend was not higher than acquaintance ($p = .812$). The pairwise comparisons also revealed a simple main effect of target on warmth, $F(2,250) = 10.81$, $p < .001$, $\eta_p^2 = .08$ with slightly different results between the pairs. Warmth rating of close friend ($M = 5.47$, $SE = .10$) was not different than casual friend ($M = 5.27$, $SE = .09$, $p = .078$) but it was significantly higher than acquaintance

(M = 4.94, SE = .09, p < .001) Warmth rating of casual friend was also higher than acquaintance (p = .004). Slightly different results for the two traits led to the significant interaction of targets and traits (also see Figure 2.3 below). Nonetheless, it can be seen that the closer target was perceived to be more competent and warmer than the less close targets.

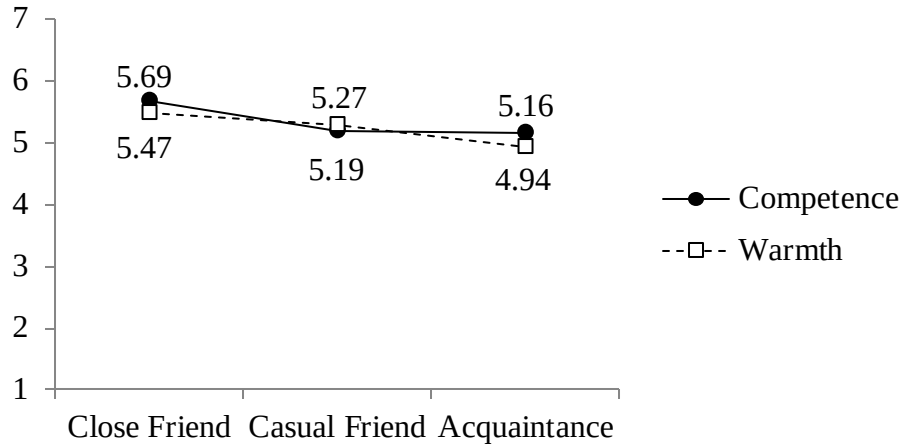

Figure 2.3. Traits Perception of Close Friend, Casual Friend, and Acquaintance

Correlations. To examine the relationship between closeness and trait perception, correlation analyses were conducted. The results were presented in Table 2.2 below and on the next page.

Table 2.2

Correlations of Closeness and Trait Ratings of Close Friend, Casual Friend, and Acquaintance

	Closeness	Competence	Warmth
Close Friend			
Closeness	1	.35**	.37**
Competence		1	.38**
Warmth			1

Table 2.2 (cont.)

Correlations of Closeness and Trait Ratings of Close Friend, Casual Friend, and Acquaintance

	Closeness	Competence	Warmth
Casual Friend			
Closeness	1	.30*	.24*
Competence		1	.56**
Warmth			1
Acquaintance			
Closeness	1	.25*	.30*
Competence		1	.51**
Warmth			1

*** p < .001* ** p < .005*

The analysis indicated that closeness positively correlated with competence and warmth for every target. The correlations were medium (Cohen's conventions for *r* effect sizes). This means as perceived closeness increased or decreased, so did the traits and vice versa.

Mediation. Following the results of correlation and ANOVA, mediational analyses were conducted to directly test the effect of closeness on trait perception. The traditional method was appropriate for between-subject design but not for repeated-measures design that was used for this study. Therefore, I conducted separate mediational analyses for competence and warmth perception using MEMORE (Montoya & Hayes, 2017). It uses path-analytical approach and bootstrapping method to simultaneously analyze the direct effect of independent variable on dependent variable, the indirect effect of mediator on the dependent

variable, as well as the total effect of the independent variable while controlling for the mediator. MEMORE requires the entering of an even number of dependent variables and mediators at a time. The independent variable is automatically implied by the coding. Therefore, no dummy coding of the independent variable is necessary as in the between-subjects design. For this study, target was the independent variable, closeness was the mediator, and the trait perception was the dependent variable. Competence and warmth were analyzed separately. The dependent variables and moderators were entered in pairs.

Competence. In the first analysis, competence ratings of close friend and casual friend were entered as the dependent variables while the closeness ratings of close friend and casual friend were entered as the mediators. The model was significant, $R^2 = .076$, $F(2,123) = 5.06$, $p = .008$. Target and closeness accounted for approximately 8% of variance of competence rating. The total effect of target and closeness on competence was significant, $b = .504$, $SE = .115$, $t(125) = 4.37$, $p < .001$. But after controlling for closeness, the direct effect of target on competence rating was no longer significant, $b = .062$, $SE = .181$, $t(123) = .34$, $p = .73$. This indicated the mediation effect. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The analysis revealed the significant indirect effect, $b = .442$, $SE = .140$, 95% CI [.175, .728]. This means closeness fully mediated competence perception of close friend and casual friend. As closeness score increased by 1 point, competence rating increased by .44 units.

In the next analysis, competence ratings of close friend and acquaintance were entered as the dependent variables while the closeness ratings of close friend and acquaintance were entered as the mediators. The model was significant, $R^2 = .106$, $F(2,123) = 7.32$, $p = .001$. Target and closeness accounted for approximately 11% of

variance of competence rating. The total effect of target and closeness on competence was significant, $b = .532$, $SE = .119$, $t(125) = 4.46$, $p < .001$. However, after controlling for closeness, the direct effect of target on competence rating was no longer significant, $b = -.295$, $SE = .263$, $t(123) = -1.12$, $p = .265$. This indicated mediation effect. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The analysis revealed the significant indirect effect, $b = .826$, $SE = .232$, 95% CI [.394, 1.300]. This means closeness fully mediated competence perception between close friend and acquaintance. As closeness score increased by 1 point, competence rating increased by .83 units.

Competence ratings of casual friend and acquaintance were entered as the dependent variables while the closeness ratings of casual friend and acquaintance were entered as the mediators. The model was significant, $R^2 = .084$, $F(2,123) = 5.66$, $p = .005$. Target and closeness accounted for about 8% of variance of competence rating. The total effect of target and closeness on competence was not significant, $b = .028$, $SE = .117$, $t(125) = .239$, $p = .812$. The direct effect of target on competence rating remained nonsignificant after controlling for closeness, $b = -.218$, $SE = .135$, $t(123) = -1.61$, $p = .101$. This indicated a possible mediation. The indirect effect of closeness was then tested using bootstrapping method with 5000 samples. The analysis revealed the significant indirect effect, $b = .246$, $SE = .095$, 95% CI [.068, .437]. This means closeness fully mediated competence perception between close friend and acquaintance. As closeness score increased by 1 point, competence rating increased by .25 units.

Warmth. For this analysis, warmth ratings of close friend and casual friend were entered as the dependent variables while the closeness ratings of close friend and casual friend were entered as the mediators. The model was significant,

R^2 = .069, F(2,123) = 4.56, p = .012. Target and closeness accounted for about 7% of variance of warmth rating. The total effect of target and closeness was not significant, b = .200, SE = .113, t(125) = 1.78, p = .078. After controlling for closeness, the direct effect of target remained non-significant, b = -.200, SE = .177, t(123) = -1.13, p = .26. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The analysis revealed the significant indirect effect, b = .400, SE = .155, 95% CI [.108, .721]. This means closeness partially mediated warmth perception between close friend and casual friend. As closeness score increased by 1 point, warmth rating increased by .4 units.

In the next analysis, warmth ratings of close friend and acquaintance were entered as the dependent variables while the closeness ratings of close friend and acquaintance were entered as the mediators. The model was significant, R^2 = .076, F(2,123) = 5.02, p = .008. Target and closeness accounted for approximately 8% of variance of warmth rating. The total effect of target and closeness on warmth was significant, b = .538, SE = .124, t(125) = 4.33, p < .001. However, after controlling for closeness, the direct effect of target on warmth rating was no longer significant, b = -.257, SE = .278, t(123) = -.922, p = .358. The results indicated mediation effect. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The analysis revealed the significant indirect effect, b = .794, SE = .263, 95% CI [.298, 1.331]. This means closeness fully mediated warmth perception of close friend and acquaintance. As closeness score increased by 1 point, warmth rating increased by .79 units.

For the last analysis, warmth ratings of casual friend and acquaintance were entered as the dependent variables while the closeness ratings of casual friend and acquaintance were entered as the mediators. The model was significant, R^2 = .124,

$F(2,123) = 8.71$, $p = .001$. Target and closeness accounted for approximately 12% of variance of warmth rating. The total effect of target and closeness on warmth was significant, $b = .337$, $SE = .114$, $t(125) = 2.97$, $p = .004$. The direct effect of target on warmth rating was not significant after controlling for closeness, $b = .038$, $SE = .129$, $t(123) = .295$, $p = .769$. This indicated the mediational effect. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The analysis revealed the significant indirect effect, $b = .299$, $SE = .078$, 95% CI [.161, .463]. This means closeness fully mediated warmth perception of casual friend and acquaintance. As closeness score increased by 1 point, warmth rating increased by .29 units.

Discussions

The present study explored perceptions of competence and warmth of targets who differed in closeness level namely close friend, casual friend, and acquaintance. The study was a fully within-subject study with target and trait as the variables. It was found that close friend was the closest target, casual friend was the second closest while acquaintance was the least close. Thus, Hypothesis 1 speculated a linear trend between closeness and trait perception. That is, close friend would have been perceived as the most competent and warmest, followed by casual friend, and acquaintance that would have been perceived as the least competent and warm. ANOVA was used to test this hypothesis. Overall, the hypothesis was supported as the closer target was perceived to be more competent and warmer than the less close target. That is close friend was perceived to be the most competent and warm. Casual friend was perceived to be less competent and warm than close friend but more competent and warm than acquaintance. Although the difference between certain pairs was not significant, the linear trend between closeness and trait perception was

shown. Mediation analysis was then used to test Hypothesis 2 stating that closeness could account for differential trait perception between the target who differed in closeness. The analysis showed the mediational effect of closeness. That is, the increase in closeness score resulted in the increase of trait rating. The results provided strong support for Hypothesis 2. Lastly, Hypothesis 3 testing the primacy-of-warmth hypothesis was not supported as the difference between warmth and competence was not found. The finding is not in line with the previous research that emphasized higher importance or implication of warmth over competence in friends (Hall, 2011; Sprecher & Regan, 2002) and acquaintances (Wojciszke & Abele, 2008). However, because it was unclear why no difference was found in casual friend at all and the effect of closeness was not as clear as I expected, a follow-up study with improvement was conducted.

Study 2: Traits Perception of Close Friend, Casual Friend, and Acquaintance II

This study was extended from Study 1. It had the same hypotheses and design. However, there were certain changes in terms of methodology. Firstly, the targets in Study 1 were not defined. It may be important to define the targets (Sutcliffe et al., 2012) as participants may have different ideas of who their casual friend is for example. The operationalization would have ensured that participants had the similar idea about the targets and preventing confound effect. Therefore, the targets were given clear definitions in this study. Secondly, Study 1 only asked participants to think about the targets of either sex. In this study, they were instructed to choose same-sex friends and acquaintances to prevent a potential sex difference effect. They were also asked to name them at the beginning of the survey completion. The final change was the closeness measurement. Study 1 used a Likert item to ask a

simple question ("How close are you to your close friend?"). This item was capable of showing the different levels of closeness between the targets that had the effect on trait perception. But closeness is a construct that can be defined and measured in different ways. Therefore, two additional measurements that addressed different aspects of closeness were added.

Method

Design. The design of this study was 3 (targets: close friend vs. casual friend vs. acquaintance) by 2 (traits: competence vs. warmth) repeated-measures.

Participants. The participants were recruited through the university participants pool. One hundred and thirty-eight participants took part in this study. They were 99 females and 39 males. There were 74 Whites, 35 Asians, 16 Blacks, 7 Mixed-ethnicities and 6 other ethnicities.

Materials and Procedure. The study was conducted online using Qualtrics. At the beginning of the study, participants were asked to think of and provide the name of three targets that fit the definitions that signified and distinguished the relationships. Different elements of relationship including affective, behavioral, as well as cognitive were incorporated into the definitions. The definitions were similar to the ones that were used in previous research (Feng & Magen, 2016). Romantic experiences are more common among cross-sex friendship (Afifi & Faulkner, 2000; Bleske-Rechek & Buss, 2001; Bleske-Rechek et al., 2012; Guerrero & Chavez, 2005 Halatsis & Christakis, 2009; Kaplan & Keys, 1997) and the expectations for desirable traits for cross-sex friends are often higher than the expectations for same-sex friends (Sprecher & Regan, 2002). This makes the cross-sex friendship different to same-sex friendship and more similar to romantic relationship (Fehr, 1996) which was not the

relationship the present study focused on. Therefore, the same-sex targets were used to prevent the confounding effect. The following definitions were used throughout the thesis.

"Think of a close friend. This would be a same-sex friend whom you want to meet regularly, feel very comfortable with, and can identify as being your close friend. It is important that you choose a friend whom you do not have any romantic feelings towards."

"Think of a casual friend. This would be a same-sex friend whom you meet quite often but are currently not very close to. It is important to that you choose a friend whom you do not have romantic feelings towards."

"Think of an acquaintance. This would be a same-sex person who you meet occasionally. You would not consider this person as a friend, and you do not know them well."

Personality evaluation. After providing the information about the targets, participants then answered questions about 7 targets which were close friend, casual friend, acquaintance, oneself and 3 filler targets. The presentation order of targets was randomized. The targets were evaluated separately on a set of 8 personality traits (Kervyn et al., 2009). The competence traits were capable, competence, determined, and skilled. The warmth traits were caring, popular, sociable, and warm. Their presentation order was also randomized. The scale was a 7-point Likert scale ranging from 1 "extremely uncharacteristic" to 7 "extremely characteristic".

Closeness. Participants then answered 3 questions about the closeness they shared with each target. For the target named John, for example, the first item, Perceived Closeness then asked "How close are you to John?" This item was retained from the first study. It was a 7-level Likert scale ranging from 1 "Not Close at All" to

7 "Extremely Close". The second item was called Social Circle. Participants chose from the 3 circles (as shown in Figure 2.4 below) in which one they would place the target, Circle 1 represented the most inner circle, Circle 2 was the middle circle, whereas Circle 3 represented the farthest circle. The last item was the Inclusion of Other in Self item (Aron et al., 1992). Participants chose from 7 pairs of circles that best represented their relationship with each target, 1 depicted the most distant connection while 7 depicted the closest connection (as shown in Figure 2.5 below).

After participant answered the questions about personality and closeness of every target, they were asked to provide their demographic information. Finally, they were debriefed. The full questionnaire can be found in Appendix C.

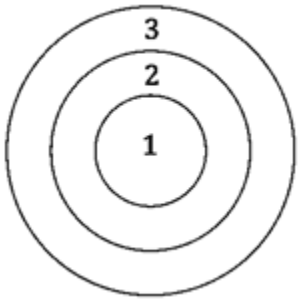

Figure 2.4. Social Circle Item

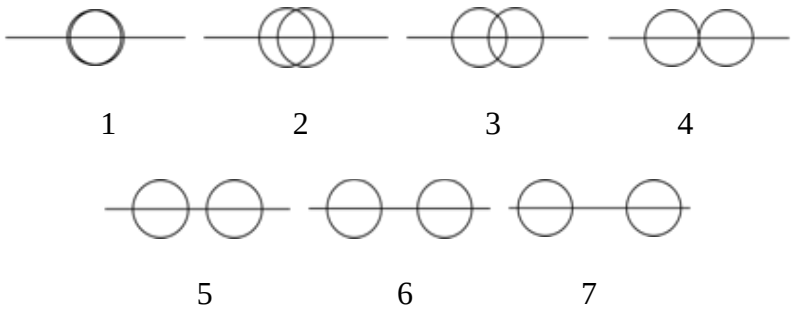

Figure *2.5.* Inclusion of Other in Self Scale (Aron et al., 1992)

Results

Closeness[1]. Firstly, closeness scores were analyzed to see if there was a difference between close friend, casual friend, and acquaintance measured by three items: a 7-level Likert scale, a social circle item, and an Inclusion of Other in Self item. The social circle and the Inclusion of Other in Self items were reverse-scored to allow the comparison with the Likert scale. The higher score reflected higher level of closeness. Reliability analysis was conducted to check if the items measured the same construct. The scores and Cronbach's alphas were presented in Table 2.3 below. A repeated-measures ANOVA was then used to analyze the difference between targets for the three items.

Table 2.3

Descriptive statistics (Ms and SDs) and Cronbach's alphas of Closeness Scores

Items	Close Friend	Casual Friend	Acquaintance
Perceived closeness	6.05 (.08)	4.07 (.10)	2.43 (.10)
Social circle	2.80 (.42)	1.93 (.54)	1.28 (.50)
Inclusion of Other in Self	5.56 (1.03)	4.01 (1.06)	2.66 (1.29)
α	.81	.81	.84

Perceived closeness. The analysis revealed a significant difference for the closeness scores between the three targets, $F(2,274) = 491.18$, $p < .001$, $\eta_p^2 = .78$. The pairwise comparisons showed a significant difference between every pair ($p < .001$). The participants felt that they were closer to their close friend than casual friend and

[1] To ascertain that culture did not influence closeness and trait perception, regression analyses were conducted to see if the pattern of closeness was similar across culture. Asians and Blacks were grouped together (dummy code = 0) and entered into the model with Whites (dummy code = 1) as the predictors. Closeness was entered as the dependent variable. The first regression analyzed close friend closeness. The second regression analyzed casual friend closeness. The third analyzed acquaintance closeness. The analyses showed no difference between the cultures for any target. Asians and Blacks perceived the targets to be as close to them as Whites did. The findings then ruled out the potential confound of cultures on closeness and trait perception.

acquaintance. They also felt closer to their casual friend than acquaintance. As shown in Figure 2.6 below, there was a linear trend for the closeness level measured by this item.

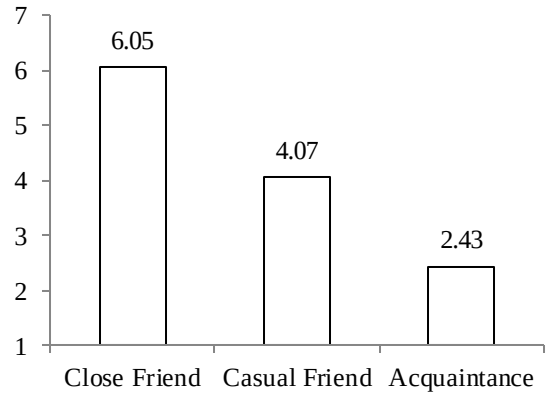

Figure 2.6. Closeness measured by 7-level Likert Perceived Closeness Item

Social circle. The analysis revealed a significant difference between the position in social circle the three targets were placed in, $F(2,274) = 408.25$, $p < .001$, $\eta_p^2 = .75$. The pairwise comparisons showed a significant difference between every pair ($p < .001$). Close friend was placed more centrally than casual friend and acquaintance. Casual friend was also placed more centrally than acquaintance. As shown in Figure 2.7 below, there was a linear trend for the closeness level measured by this item.

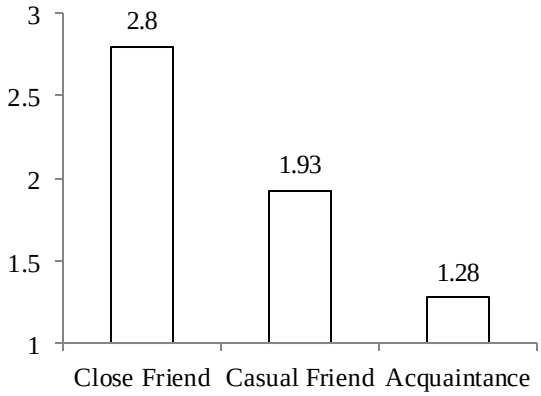

Figure 2.7. Closeness measured by Social Circle Item

Inclusion of Other in Self. The analysis also revealed a significant difference between inclusion of the three targets in self, $F(2,274) = 338.02$, $p < .001$, $\eta_p^2 = .71$. The pairwise comparisons showed a significant difference between every pair ($p < .001$). There was a higher inclusion of close friend to self than casual friend and acquaintance. Inclusion of casual friend to self was also higher than inclusion of acquaintance to self. As shown in Figure 2.8 below, there was a linear trend for the closeness level measured by this item.

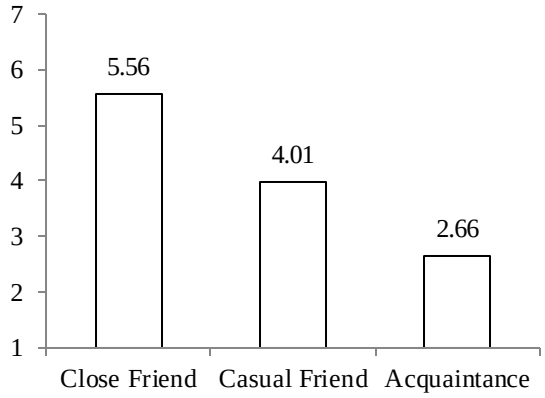

Figure 2.8. Closeness measured by Inclusion of Other in Self Item

The three items yielded similar finding. Close friend was the closest target. Casual friend was the second closest. Acquaintance was the least close.

Trait perception. Descriptive statistics of competence and warmth scores of the three targets as well as Cronbach's alphas were presented in Table 2.4 below.

Table 2.4

Traits Perception (Ms and SDs) and Cronbach's α of Close Friend, Casual Friend, and Acquaintance

	Competence	α	Warmth	α
Close Friend	5.65 (.94)	.85	5.72 (.90)	.76
Casual Friend	5.23 (1.00)	.87	5.12 (1.00)	.77
Acquaintance	4.92 (1.09)	.92	4.80 (1.05)	.80

Target & Traits. A 3 (targets: close friend vs. casual friend vs. acquaintance) by 2 (traits: competence vs. warmth) repeated-measures ANOVA was conducted to analyze the effect of difference in closeness on the trait ratings.

The analysis revealed a significant main effect of target: $F(2,274) = 42.22$, $p < .001$, $\eta_p^2 = .24$. Close friend score was the highest ($M = 5.68$, $SE = .07$). It was higher than casual friend ($M = 5.18$, $SE = .08$) and acquaintance ($M = 4.86$, $SE = .08$). This means close friend was perceived as possessing more positive traits than casual friend and acquaintance. Casual friend was also perceived to possess more positive traits than acquaintance. The difference between every pair was significant ($p < .001$). As shown in Figure 2.9 below, there was a clear difference of trait ratings of the targets. The main effect of trait was not significant.

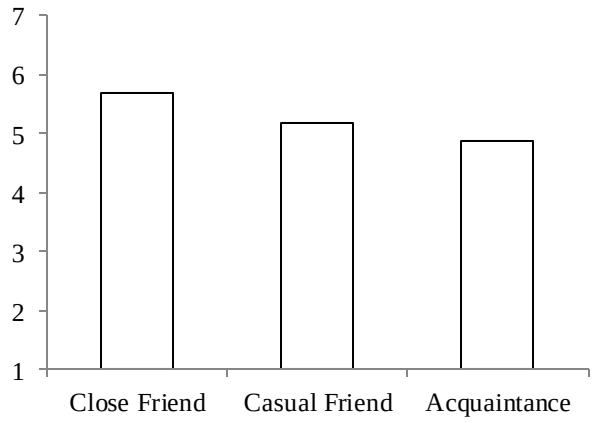

Figure 2.9. Main Effect of Target

Due to the identical pattern of competence and warmth, the interaction of target and trait was not significant: $F(2,274) = 1.79$, $p = .170$, $\eta_p^2 = .013$. Nonetheless, the pairwise comparisons revealed a significant difference between every pair for both traits ($p < .001$) which indicated a linear trend of target and trait. Close friend was perceived to be more competent and warmer than casual friend and acquaintance.

Casual friend was also perceived to be more competent and warmth than acquaint-tance.

Correlations. To examine the relationship between closeness and trait perception, correlation analyses were conducted. The scores of three items measuring closeness were standardized and composited for each target. These scores were then entered into the analysis with scores of competence and warmth. The results were presented in Table 2.5 below.

Table 2.5

Correlations of Closeness and Trait Ratings of Close Friend, Casual Friend, and Acquaintance

	Closeness	Competence	Warmth
Close Friend			
Closeness	1	.30	.31
Competence		1	.50
Warmth			1
Casual Friend			
Closeness	1	.30	.36
Competence		1	.56
Warmth			1
Acquaintance			
Closeness	1	.30	.39
Competence		1	.52
Warmth			1

All $p < .001$

The analysis indicated that for every target, closeness had a positive correlation with trait rating. The correlations ranged from medium to medium to large (Cohen's conventions for *r* effect sizes). This means as perceived closeness increased or decreased, so did the traits and vice versa.

Mediation. Following the correlation analysis, the mediation analyses were conducted to directly test the effect of closeness as the mediator. Competence and warmth were analyzed separately. MEMORE was used (refer to p. 43).

Competence. In the first analysis, competence ratings of close friend and casual friend were entered as the dependent variables while the closeness ratings of close friend and casual friend were entered as the mediators. The model was significant, $R^2 = .070$, $F(2,135) = 5.04$, $p = .0077$. Target and closeness accounted for 7% of variance of competence. The total effect of target and closeness on competence was significant, $b = .419$, $SE = .091$, $t(137) = 4.62$, $p < .001$. But after controlling for closeness, the direct effect of target on competence rating was no longer significant, $b = -.080$, $SE = .180$, $t(135) = -.444$, $p = .657$. The results indicated mediational effect of closeness on competence rating. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The analysis revealed the significant indirect effect, $b = .499$, $SE = .168$, 95% CI [.172, .827]. This means closeness fully mediated competence perception of close friend and casual friend. As closeness score increased by 1 point, competence rating increased by .50 units.

In the next analysis, competence ratings of close friend and acquaintance were entered as the dependent variables while the closeness ratings of close friend and acquaintance were entered as the mediators. The model was significant, $R^2 = .147$, $F(2,135) = 7.32$, $p < .001$. Target and closeness accounted for approximately 15% of variance of competence rating. The total effect of target and closeness on competence

was significant, $b = .728$, $SE = .116$, $t(137) = 6.27$, $p < .001$. However, after controlling for closeness, the direct effect of target on competence rating was no longer significant, $b = -.565$, $SE = .292$, $t(135) = -1.93$, $p = .056$. The results indicated the mediational effect of closeness on the rating. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The analysis revealed the significant indirect effect, $b = 1.29$, $SE = .350$, 95% CI [.653, 2.014]. This means closeness fully mediated competence perception of close friend and acquaintance. As closeness score increased by 1 point, competence rating increased by 1.29 units.

Next, competence ratings of casual friend and acquaintance were entered as the dependent variables while the closeness ratings of casual friend and acquaintance were entered as the mediators. The model was significant, $R^2 = .179$, $F(2,135) = 14.78$, $p < .001$. Target and closeness accounted for about 18% of variance of competence rating. The total effect of target and closeness on competence was significant, $b = .301$, $SE = .102$, $t(137) = 3.05$, $p = .003$. The direct effect of target on competence rating remained significant after controlling for closeness, $b = -.377$, $SE = .158$, $t(135) = -2.37$, $p = .018$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The analysis revealed the significant indirect effect, $b = .687$, $SE = .145$, 95% CI [.416, .985]. This means closeness partially mediated competence perception of casual friend and acquaintance. As closeness score increased by 1 point, competence rating only increased by .69 units.

Warmth. In this analysis, warmth ratings of close friend and casual friend were entered as the dependent variables. The closeness ratings of close friend and casual friend were entered as the mediators. The model was significant, $R^2 = .132$, $F(2,135) = 10.31$, $p = .001$. Target and closeness accounted for approximately 13% of variance of warmth rating. The total effect of target and closeness on warmth was

significant, $b = .596$, $SE = .099$, $t(137) = 6.03$, $p < .001$. After controlling for closeness, the direct effect of target on warmth became nonsignificant, $b = -.143$, $SE = .190$, $t(135) = -.753$, $p = .453$. The results indicated the mediational effect of closeness. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The analysis revealed the significant indirect effect, $b = .739$, $SE = .193$, 95% CI [.358, 1.12]. This means closeness fully mediated warmth perception of close friend and casual friend. As closeness score increased by 1 point, warmth rating only increased by .74 units.

In the next analysis, warmth ratings of close friend and acquaintance were entered as the dependent variables while the closeness ratings of close friend and acquaintance were entered as the mediators. The model was significant, $R^2 = .129$, $F(2,135) = 10.00$, $p = .001$. Target and closeness accounted for almost 13% of variance of warmth rating. The total effect of target and closeness on warmth was significant, $b = .919$, $SE = .121$, $t(137) = 7.61$, $p < .001$. However, after controlling for closeness, the direct effect of target on warmth rating was no longer significant, $b = -.296$, $SE = .307$, $t(135) = -.963$, $p = .337$. The results indicated the mediational effect of closeness on warmth rating. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The analysis revealed the significant indirect effect, $b = 1.21$, $SE = .389$, 95% CI [.477, 2.00]. As closeness score increased by 1 point, warmth rating increased by 1.21 units. This means closeness fully mediated differential warmth perception of casual and acquaintance.

For the last analysis, warmth ratings of casual friend and acquaintance were entered as the dependent variables while the closeness ratings of casual friend and acquaintance were entered as the mediators. The model was significant, $R^2 = .104$, $F(2,135) = 7.85$, $p = .001$. Target and closeness accounted for approximately 10% of

variance of warmth rating. The total effect of target and closeness on warmth was significant, $b = .323$, $SE = .108$, $t(137) = 2.99$, $p = .003$. However, after controlling for closeness, the direct effect of target on warmth rating was not significant became non-significant, $b = -.236$, $SE = .175$, $t(135) = -1.35$, $p = .181$. This indicated the mediational effect of closeness on warmth rating. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The analysis revealed the significant indirect effect, $b = .558$, $SE = .161$, 95% CI [.238, .866]. This means closeness fully mediated differential warmth perception of casual friend and acquaintance. As closeness score increased by 1 point, warmth rating increased by .56 units.

Discussion

The present study explored perceptions of competence and warmth of targets who differed in closeness level namely close friend, casual friend, and acquaintance. The study was a fully repeated-measures study. It was found that close friend was the closest target, casual friend was the second closest while acquaintance was the least close. Thus, Hypothesis 1 speculated that the closer target was perceived to be more competent and warmer than the less close target. The hypothesis was strongly supported as close friend was perceived as the most competent and warmest, followed by casual friend whereas acquaintance, the least close target, was perceived as the least competent and warm among the three. Seeing that the finding of this study was more conclusive than Study 1, it showed that the changes made on methodology in this study were effective. The inconclusive findings in Study 1 was likely caused by the targets not being defined. The importance of operationalization and manipulation of target (Sutcliffe et al., 2012) should be noted. Friends and acquaintances alike should be clearly defined and controlled for in order to achieve a conclusive finding.

Mediation analysis was then used to test Hypothesis 2 stating that closeness could account for differential trait perception between the target who differed in closeness. The analysis showed the mediational effect of closeness. That is, the increase in closeness score resulted in the increase of trait rating. The results provided strong support for Hypothesis 2. Lastly, Hypothesis 3 testing the primacy-of-warmth hypothesis was not supported as the difference between warmth and competence was not found. The finding is not in line with the previous research that emphasized higher importance or implication of warmth over competence in friends (Hall, 2011; Sprecher & Regan, 2002) and acquaintances (Wojciszke & Abele, 2008).

Study 3: Trait Transgressions in Close Friend and Acquaintance

The first two studies focused on the positive side of friendships and acquaintanceship. But relationships can go through disarray as well. Thus, this study tapped into the situation where the partner does not behave in the expected way. Particularly, the effect of competence and warmth transgression on trait perception of close friend and acquaintance was examined. Casual friend was dropped in this study because the results from the pretest, Study 1 and 2 consistently showed that close friends and acquaintances differed on closeness and trait perception. Therefore, two targets was posited to be sufficient to reveal the difference in this study as well.

Friendship is characterized by mutual disclosure, support, trust, and closeness (DeScioli & Kurzban, 2009; Hartup, 1996; Lempers & Clark-Lempers, 1992) that two individuals voluntarily provide and negotiate with one another (Allan, 2001). Over time, people interact more (Altman & Taylor, 1973) get to know each other better, leading to fewer misunderstandings and conflicts (Reis et al., 2004) and increased accurate perception of personality (Colvin & Funder, 1991). As a result, an

individual develops certain expectations regarding attributes (Hall, 2011) and behaviors that a friend should engage in (Fehr, 2004). These expectations are not implied in distant relationship, including acquaintanceship (Reis et al., 2004). The findings from Study 1 and 2 suggested that compared to acquaintances, close friends were perceived as more competent and warm. It implied that expectations toward close friends were higher compared to acquaintances. Consequently, trait transgressions were hypothesized to have a stronger impact on close friend than acquaintance (Hypothesis 1). In other words, when a close friend behaves in such a way that is seen as not warm or competent, the perception towards them would change more drastically than when an acquaintance engages in the same action because the initial expectation toward friends was higher than the expectations toward acquaintances. This applied to both competence and warmth. This hypothesis would have been supported if trait perception before and after trait transgression of close friend changed more drastically than the trait perception of acquaintance. If Hypothesis 1 was validated, Hypothesis 2 stating that closeness could account for different trait perception, would have been supported as well. The effect of closeness was not tested directly in this study. Hypothesis 3 proposed that warmth was more important than competence (the primacy-of-warmth hypothesis). If warmth transgression was shown to have more impact to the following trait perception than competence transgression, this hypothesis would have been supported. Lastly, Hypothesis 4 addressed the effect of trait transgression. Specifically, if there was a motivation to preserve positive thoughts toward the target, a positive correlation of trait perception before and after trait transgression would be have been found.

Pretest: Trait Transgressions

Another important point to make is that there was a new factor being investigated in this study that was not present in the previous studies was transgressions or behaviors that violated friendship expectations. Through a pretest, scenarios that described transgressions of competence and transgressions of warmth were created.

The goal of the pretest was to select transgressions that differed in dimension: competence or warmth with a similar degree of severity. A number of behaviors from previous literature in the area of friendship expectations that were categorized differrently (Cohen, 2010; MacEvoy & Asher, 2012) were compiled together with items that I created. This resulted in 42 behaviors that were used in the pretest. For each behavior 3 questions were asked. First, if the behavior was related to competence of the person engaged in the behavior. Next, if the behavior was related to warmth of the person engaged in the behavior. Lastly, the unexpectedness of the behavior or its severity was rated. Sixty-four students completed the survey. There were 2 selection criteria for the behaviors that would be used in the main study. First, the behavior had to be rated significantly higher in one dimension than the other. The other criterion is that its severity must be similar to the others as there is supporting evidence that severity of transgression led to different results (Morse & Metts, 2011). Accordingly, we chose 4 behaviors that met the criteria to be used in the main study. Two competence behaviors were based on 1) low performance on an easy exam and 2) low driving skill. Two warmth behaviors were based on 1) deception and betrayal and 2) not being supportive. For the main study, we created a storyline for these behaviors to induce the imagination of the participants. The vignettes can be found in Appendix D.

Method

Design. There were 3 factors being investigated in this study: closeness, transgression types, and traits. Thus, a fully repeated-measures design with 2 targets (close friend vs. acquaintance) by 2 traits (competence vs. warmth) by 2 types of transgressions (competence vs. warmth) was used.

Participants. The participants were recruited through the university participants pool. There were 97 participants in this study consisting of 77 female participants and 20 male participants. There were 25 Asians, 11 Blacks, 1 Hispanic, 2 Mixed, and 58 Whites.

Materials and Procedure. The study was an online study. First, the participants were first asked to think about 1 close friend and 1 acquaintance who were the same sex as them and filled in the initials or the names to be used later.

Personality evaluation. After providing the information about the targets, the participants then rated the personality of the targets. The presentation order of targets was randomized. The targets were evaluated separately on a set of 8 personality traits (Kervyn et al., 2009). The competence traits were capable, competence, determined, and skilled. The warmth traits were caring, popular, sociable, and warm. Their presentation order was also randomized. The scale was a 7-point Likert scale ranging from 1 "extremely uncharacteristic" to 7 "extremely characteristic". Closeness measurement was not included in this study to prevent fatigue effect and because the findings from the previous studies consistently suggested that close friend was the closer target.

Trait transgressions. Following the pre-transgression evaluation and the closeness evaluation, two scenarios describing either competence (for participants who completed the competence transgression questionnaire) or warmth transgressions

(for those who completed the warmth transgression questionnaire) that were carried out by the nominated close friend and acquaintance were presented in a random order. The target was randomized for each vignette. Neither the target of the scenario was repeated. The name John was used as an example.

Competence transgression vignettes.

"You and John took a test. You found that the test was much easier than you expected. You looked around and apparently many people finished quickly. But John looked nervous and used up all the time. After the time was up, he told you that he found the test rather difficult and was not confident at all. Later, the mark was announced. John told you that he got a very bad mark"

"You were always reluctant when John asked if you wanted a lift. You saw his car always full of scratches here and there all over the car. John was known to be a bad driver. He took 3 times to get a driving license. He got into an accident a lot since he had been driving for a few years even when the vision was good. A few days later, you learned that John had an accident when driving again."

Warmth transgression vignettes.

"The weekend was coming and you planned to spend time with John. You decided to ask him if he wanted to do something together. You gave him choices of activity: going to the sports center, going for a movie, going to a pub to watch a match, or having dinner. John said he couldn't because the family wanted to do something on the weekend too. On Monday, you overheard him talking with your mutual friend about how fun the weekend they spent together was."

"Your parents and you had been arguing a lot lately. They always nagged that you were not home enough and when you were home they nagged that you were being lazy and wasting time. Frustrated, you told John about this. He did not react

much. You had a feeling that he was not really listening. When you asked him what he reckoned you should do he simply said "you will get over it".

Post-transgression evaluation. Each scenario was followed by the same personality evaluation scale used in the pre-transgression evaluation stage. These scores were used as post-transgression scores. Following that, the self-rating scale was presented. The participants evaluated their personality with the same traits used for close friend and romantic partner. Demographic information was collected before the debrief. The full questionnaire can be found in Appendix E.

Results

Reliability analyses. The Cronbach's alphas of trait ratings from both transgressions were presented in Table 2.6 below. The results of the main analysis were presented separately later on. Note that the Cronbach alphas for the pre-transgression ratings were identical in competence and warmth transgressions because the participants completed this evaluation only once.

Table 2.6

Reliability Analyses of Trait Ratings (N = 97)

Target	Pre		Post	
	Competence	Warmth	Competence	Warmth
Competence transgression				
Friend	.79	.68	.88	.85
Acquaintance	.85	.77	.90	.83
Warmth transgression				
Friend	.79	.68	.90	.82
Acquaintance	.85	.77	.93	.85

Competence transgressions[2]. Descriptive statistics of competence and warmth scores of close friends and acquaintances were presented in Table 2.7 below.

Table 2.7

Trait Ratings (Ms and SDs) of Close Friends and Acquaintances: Competence Transgression

Target	Competence		Warmth	
	Pre	Post	Pre	Post
Friend	5.96 (.75)	5.27 (1.16)	5.74 (.87)	5.51 (1.11)
Acquaintance	5.27 (1.12)	4.47 (1.31)	4.76 (1.11)	4.74 (1.14)

The data were then analyzed by a 2 (time: before vs. after) by 2 (targets: close friend vs. acquaintance) by 2 (traits: competence vs. warmth) repeated-measures ANOVA.

The analysis revealed the main effect of time, $F(1,96) = 46.14$, $p < .001$, $\eta_p^2 = .33$. The overall trait rating was significantly higher before the competence transgressions ($M = 5.43$, $SE = .07$) than after the transgressions ($M = 5.00$, $SE = .09$). This means competence transgression had the negative impact on global impression toward the targets. After being exposed to the behaviors that indicated lack of competence, close friend and acquaintance were perceived to be less warm and competent in general.

The analysis suggested that there was the main effect of target, $F(1,96) = 59.25$, $p < .001$, $\eta_p^2 = .38$. Overall trait rating of close friend was higher ($M = 5.62$, $SE = .07$) than acquaintance ($M = 4.81$, $SE = .10$). Close friend was perceived to possess more positive traits than acquaintance. The main effect of trait was not significant.

[2] To ensure that the scenarios had the same effect, 2 (time: pre vs. post) by 2 (trait: competence vs. warmth) repeated-measures ANOVAs were carried out for the scenarios to see if they had the same effect on trait ratings. Close friend and acquaintance was analyzed separately. The two scenarios yielded the same results. That is, they led to significant decrease of competence and nonsignificant decrease of warmth.

For 2-way interactions, the analysis revealed the significant interaction of time and traits, $F(1,96) = 82.10$, $p < .001$, $\eta_p^2 = .46$. The pairwise comparisons showed that time had the significant effect on competence, $F(1,96) = 84.06$, $p < .001$, $\eta_p^2 = .47$. Competence rating before competence transgression ($M = 5.61$, $SE = .08$) was higher than after the transgression ($M = 4.87$, $SE = .10$). This means competence transgressions only affected the perception of competence but not warmth (also see Figure 2.10 below). No other 2-way interaction was significant.

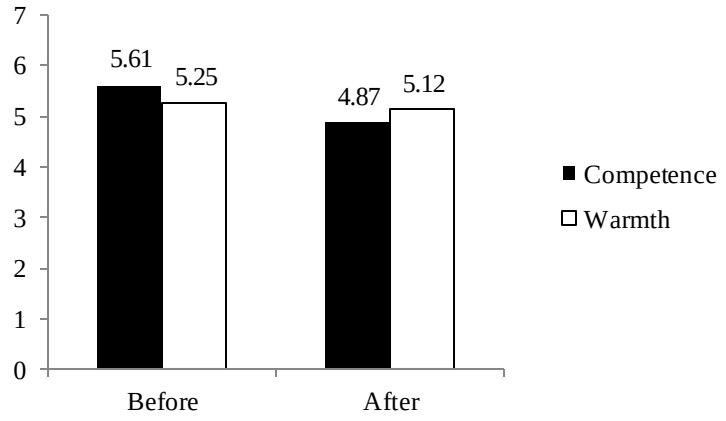

Figure 2.10. Trait Ratings before and after Competence Transgressions

Lastly, the analysis also revealed the 3-way interaction between time, target, and trait to be significant, $F(1,96) = 6.30$, $p < .05$, $\eta_p^2 = .06$ (as shown in Figure 2.11 on the next page). Because the 3-way interaction was significant, additional analyses were conducted to see if competence transgression had different effect on competence and warmth. The 2 (time: before vs. after) by 2 (targets: close friend vs. acquaintance) repeated-measure ANOVAs were carried out for both traits.

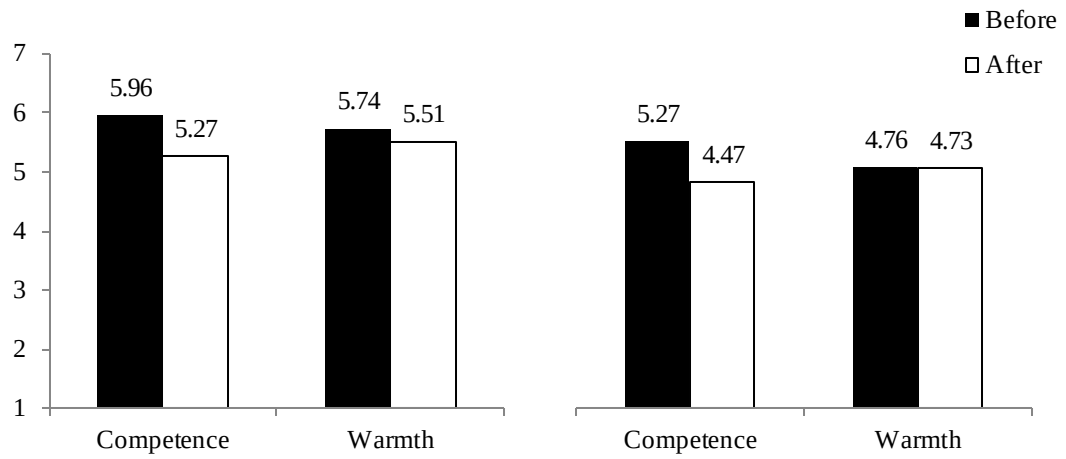

Figure 2.11. Trait Ratings of Close Friend (left) and Acquaintance (right) before and after Competence Transgression

Competence Perception. The analysis revealed the main effect of time, $F(1,96) = 84.06$, $p < .001$, $\eta_p^2 = .47$. The overall rating was higher before competence transgression ($M = 5.61$, $SE = .08$) than after the transgression ($M = 4.87$, $SE = .10$). This means competence transgression had a negative impact on the perception of competence. After being exposed to the behaviors that indicated lack of competence, close friend and acquaintance were perceived to be less competent.

The analysis also revealed the significant main effect of target, $F(1,96) = 38.15$, $p < .001$, $\eta_p^2 = .28$. Competence rating of close friend was higher ($M = 5.62$, $SE = .08$) than acquaintance ($M = 4.87$, $SE = .11$). The results indicated that close friend was perceived to be more competent than acquaintance.

Lastly, the interaction of time and target was not significant, $F(1,96) < 1$, $p = .41$, $\eta_p^2 = .01$. Competence rating of both targets significantly decreased following the competence transgression. This means competence transgression had the similar effect on competence perception of close friend and acquaintance.

Warmth perception. The analysis suggested a marginally significant main effect of time, $F(1,96) = 3.93$, $p = .05$, $\eta_p^2 = .04$. The overall rating before competence transgression was higher ($M = 5.25$, $SE = .08$) than after the transgression ($M = 5.12$, $SE = .09$). The results suggested that the competence transgression had a negative impact on the perception of warmth. After being exposed to the behaviors that indicated lack of competence, close friend and acquaintance were perceived to be less warm.

The analysis also revealed the significant main effect of target, $F(1,96) = 49.87$, $p < .001$, $\eta_p^2 = .34$. Warmth rating of close friend was significantly higher ($M = 5.62$, $SE = .09$) than acquaintance ($M = 4.75$, $SE = .11$). The results indicated that overall close friend was perceived to be warmer than acquaintance.

Lastly, the interaction of time and target was not significant, $F(1,96) = 3.00$, $p = .087$, $\eta_p^2 = .03$. Warmth rating of both targets significantly decreased following competence transgression. This means competence transgression had the similar effect on warmth perception of close friend and acquaintance.

Correlations. To examine the relationship between trait ratings before and after transgression, correlation analyses were conducted.

Close friend. Competence rating of close friend before and after competence transgression was positive, $r = .399$, $p < .001$. The correlation was medium (Cohen's conventions for *r* effect sizes). This means as competence rating before the transgression increased or decreased, so did the rating after and vice versa. Warmth rating of close friend before and after competence transgression was also positive, $r = .557$, $p < .001$. The correlation was large (Cohen's conventions for *r* effect sizes). This means as warmth rating before the transgression increased or decreased, so did the

rating after and vice versa.

Acquaintance. Correlation of competence ratings before and after competence transgression was positive, $r = .678$, $p < .001$. The correlation was large (Cohen's conventions for *r* effect sizes). This means as the competence rating before the transgression increased or decreased, so did the rating after and vice versa. Warmth rating of acquaintance before and after competence transgression was also positive, $r = .789$, $p < .001$. The correlation was large (Cohen's conventions for *r* effect sizes). This means as warmth rating before the transgression increased or decreased, so did the rating after and vice versa.

Warmth Transgression[3]. Descriptive statistics of competence and warmth scores of close friend and acquaintance were presented in Table 2.8 below.

Table 2.8

Descriptive Statistics (Ms and SDs) of Close Friend and Acquaintance Trait Ratings: Warmth Transgression

Target	Competence		Warmth	
	Pre	Post	Pre	Post
Friend	5.96 (.75)	5.00 (1.21)	5.74 (.87)	4.24 (1.33)
Acquaintance	5.27 (1.12)	4.68 (1.33)	4.76 (1.11)	3.84 (1.30)

The data were then analyzed by a 2 (time: before vs. after) by 2 (targets: close friends vs. acquaintances) by 2 (traits: competence vs. warmth) repeated-measures ANOVA.

The analysis revealed the significant main effect of time, $F(1,96) = 157.16$, $p < .001$, $\eta_p^2 = .62$ showing that the overall rating before warmth transgression was

[3] To ensure that the scenarios had the same effect, 2 (time: pre vs. post) by 2 (trait: competence vs. warmth) repeated-measures ANOVAs were carried out for the scenarios to see if they had the same effect on trait ratings. Close friend and acquaintance was analyzed separately. The two scenarios yielded the same results. That is, they led to significant decrease of competence and nonsignificant decrease of warmth.

higher (M = 5.43, SE = .07) than after the transgression (M = 4.44, SE = .10). This means warmth transgression had a negative impact on global impression toward the targets. After being exposed to the behaviors that indicated lack of warmth, close friend and acquaintance were perceived to be less warm and competent in general.

The analysis suggested that there was the significant main effect of target, $F(1,96) = 41.59$, $p < .001$, $\eta_p^2 = .30$. Close friend score (M = 5.23, SE = .08) was higher than acquaintance score (M = 4.64, SE = .10). Overall, close friend was perceived to possess more positive traits than acquaintance.

The analysis also revealed the significant main effect of trait, $F(1,96) = 87.45$, $p < .001$, $\eta_p^2 = .48$. Competence (M = 5.23, SE = .08) was significantly higher than warmth (M = 4.64, SE = .08). Overall, close friend and acquaintance were perceived to possess more competence traits than warmth traits.

For the 2-way interactions, the interaction of time and target was significant, $F(1,96) = 12.20$, $p = .001$, $\eta_p^2 = .11$. The pairwise comparisons revealed the simple main effect of time on close friend, $F(1,96) = 115.06$, $p < .001$, $\eta_p^2 = .55$. The score before warmth transgression (M = 5.85, SE = .07) was significantly higher than after the transgression (M = 4.62, SE = .12). The simple main effect of time on acquaint-tance was also found, $F(1,96) = 65.20$, $p < .001$, $\eta_p^2 = .40$. The score before the transgression (M = 5.01, SE = .10) was significantly higher than after the trans-gression (M = 4.26, SE = .13). This means warmth transgression had negative impact to the overall perception of close friend and acquaintance. After being exposed to the behaviors that indicated lack of warmth, close friend and acquaintance were perceived to be less warm and competent in general. Although warmth transgression affected both targets significantly, it can be seen from the descriptive statistics that it

led to the starker decrease of trait perception in close friend compared to in acquaintance (also see Figure 2.12 below).

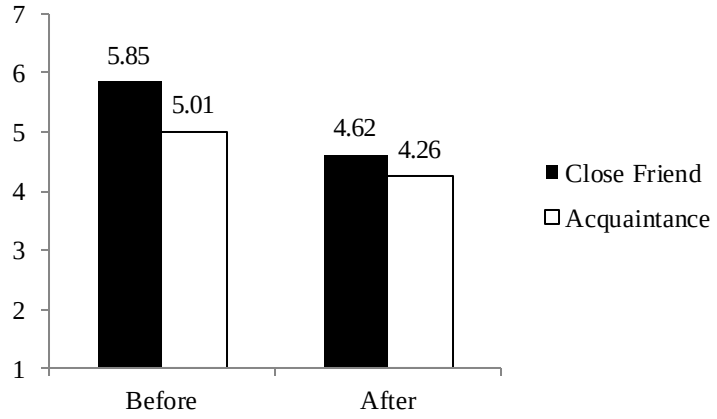

Figure 2.12. Trait Perception of Close Friend and Acquaintance before and after Warmth Transgression

The analysis also revealed the significant interaction of time and trait, $F(1,96) = 29.61$, $p < .001$, $\eta_p^2 = .24$. The pairwise comparison revealed the significant simple main effect of time on competence, $F(1,96) = 74.36$, $p < .001$, $\eta_p^2 = .44$. The rating before warmth transgression ($M = 5.61$, $SE = .08$) was higher than the rating after the transgression ($M = 4.84$, $SE = .11$). The significant simple main effect of time on warmth was also revealed, $F(1,96) = 190.64$, $p < .001$, $\eta_p^2 = .67$. Warmth rating before the transgression ($M = 5.25$, $SE = .08$) was significantly higher than the rating after the transgression ($M = 4.04$, $SE = .11$). Although both traits significantly decreased following the transgressions involving warmth, it can be seen from the descriptive statistics that the decrease was starker in warmth than in competence. Thus, warmth transgression affected the perception of warmth to the greater degree than the perception of competence (also see Figure 2.13 on the next page).

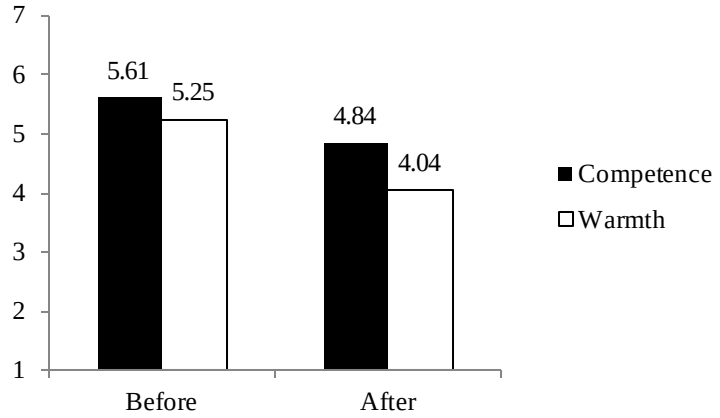

Figure 2.13. Trait Perception before and after Warmth Transgression

Correlations. To examine the relationship between trait ratings before and after warmth transgression, correlation analyses were conducted.

Close friend. Competence rating of close friend before and after the transgresssion was positive, $r = .344$, $p = .001$. The correlation was medium (Cohen's conventions for *r* effect sizes). When competence rating before the transgression increased or decreased, so did the rating after and vice versa. Warmth rating of close friend before and after warmth transgression was positive, $r = .394$, $p < .001$. The correlation was medium (Cohen's conventions for *r* effect sizes). As warmth rating before the transgression increased or decreased, so did the rating after and vice versa.

Acquaintance. Competence ratings of acquaintance before and after warmth transgression was positive, $r = .731$, $p < .001$. The correlation was large (Cohen's conventions for *r* effect sizes). As competence rating before the transgression increased or decreased, so did the rating after and vice versa. Warmth rating of acquaintance before and after warmth transgression was positive, $r = .497$, $p < .001$. The correlation was medium. As warmth rating before the transgression increased or decreased, so did the rating after and vice versa.

Discussion

This study explored perceptions of competence and warmth of targets whose differed in closeness level namely close friends and acquaintances before and after trait transgressions committed by the targets. There were two types of trait transgression, one indicated lack of competence and the other suggesting lack of warmth. The study was a fully repeated-measures study with transgression types, targets, and traits as the variables.

Hypothesis 1 stated that the trait transgressions would have affected close friends more than acquaintances. Competence transgressions had the similar effect on close friends and acquaintances. Warmth transgressions however affected close friends in the slightly higher degree. Thus, this hypothesis was partially supported. It appears that close friend, the closer target, was expected to be particularly warm whereas the expectation for acquaintance, although present, was not as high as for close friend. However, there was no difference in expectations regarding competence. Both close friend and acquaintance were expected to be competent. The interpretations are two-fold. It could imply higher preference for desirable attributes from friend compared to acquaintance. This assumption is supported by the findings in Study 1 and 2 which found the traits to be higher in close friend, suggesting higher relevance of positive traits in friends (Abele & Wojciszke, 2007; Peeters, 1992). Alternatively, it may indicate that closeness is more related to and regulated warmth more than competence which would be in line with the primacy-of-warmth hypothesis (Abele & Wojciszke, 2007; Hall, 2011; Sprecher & Regan, 2002). This explanation seems to be more likely since it was found that warmth transgression was more detrimental to the following trait perception than competence transgression. That is, warmth transgression affected perception of warmth as well as perception of

competence whereas competence transgressions only affect the perception of competence. In hindsight, it would have been better to include the measurement of closeness so more definitive conclusion for Hypothesis 2 could be made. Finally, Hypothesis 4 predicting the positive correlation of trait perceptions before and after trait transgressions were validated. This suggests the motivation to maintain evaluation toward friends and acquaintances that could be seen as a strategy to maintain the relationship (Murray et al., 1996; 2011).

Chapter 3: Trait Perception of Close Friend and Acquaintance

Implicit and Explicit Test

The studies in chapter 2 examined the effect of closeness on trait perception at the explicit level. That is self-reported measure was utilized. In this chapter, the explicit measurements, identical to the ones used in the previous studies, and an implicit test were used to explore the relationship between closeness and the perception of warmth and competence. This study would have replicated and added to the findings from the previous studies (Study 1-3) showing that close friend was perceived to be more competent and warmer.

Implicit Trait Perception

Measurements that have been commonly used in psychological research include interview and self-report questionnaires (Yovel & Friedman, 2013). They are categorized as explicit assessments because they require deliberate introspection for participants to report the information. An example would be when a respondent completes a Big 5 questionnaire in the form of Likert scale from 1 to 7 to indicate whether the statements apply to them. The response from this type of measures is argued to tap into and represent the underlying psychological construct in a straight-forward way.

Whilst explicit assessments have long been used, their validity has been questioned and different criticisms can be roughly divided into two. The first is that the measurement may not be able to access the information outside of awareness. This critique stems from a reasonably established idea in social cognition field that there are dual systems for information processing. Researchers argue that individuals

process information about themselves and their environment not only deliberatively or consciously but also automatically or outside of awareness (Asendorpf, Banse, & Mücke, 2002; Chaiken & Trope, 1999; Evans, 2008; Gawronski & Bodenhausen, 2006; Greenwald et al., 2002; Strack, 1992; Strack & Deutsch, 2004). Some even assert that most human cognition occurs unconsciously and uncontrollably. Explicit measurements however are only capable of accessing information processed in the controlled conscious mode (Greenwald & Banaji, 1995; Nosek, Hawkins, & Frazier, 2011; Schnabel, Banse, & Asendorpf, 2006; Wilson, 2009).

The second criticism is that the explicit assessments may not reflect "real" cognition. Real in this context means the response from the measurement does not necessarily reflect their true thoughts for different reasons. For instance, some individuals have a tendency to choose extreme values in self-reports (Schwarz, 1999) or an individual may be motivated to portray themselves in the way that does not necessarily reflect their true personality (Rothstein & Goffin, 2006; Schnabel et al., 2006) or attitude (Greenwald & Banaji, 1995) in order to make themselves appear more socially desirable in different contexts such as job appli-cation (Birkeland, Manson, Kisamore, Brannick, & Smith, 2006; Holoien & Fiske, 2013; Nezlek, Schütz, & Sellin, 2007). This impression management strategy can affect the validity of explicit self-rating measure (Asendorpf et al., 2002; Nunnally & Bernstein, 1994).

Following the criticisms, social psychologists have increasingly focused on so-called implicit social cognition in the past two decades. Implicit social cognition refers to well-documented constructs such as stereotype, prejudice, and attitude that are processed outside of awareness (Greenwald & Banaji, 1995; Nosek, Hawkins, & Frazier, 2011, 2012). Naturally, there was a need for the measurement that would assess this form of constructs and this was why implicit measures were developed and

advocated. First, implicit measures allow the part of cognition that is not otherwise accessible by the explicit measures to be examined (Nosek et al., 2011; see also Nosek, Greenwald, & Banaji, 2007a, 2007b for an extensive review). Implicit measures are also much less susceptible to social desirability concerns (Egloff & Schmukle, 2002; Fazio & Olson, 2003; McDaniel, Beier, Perkins, Goggin, & Frankel, 2009; Nosek, 2005; Schnabel et al., 2006; Stark, Chernyshenko, Chan, Lee, & Drasgow, 2001; Steffens, 2004). Finally, the predictive validity of implicit measures is superior to explicit measures for automatic or impulsive behaviors that do not require any demanding or effortful processes that could be triggered by construct association (Asendorpf et al., 2002; Back, Schmukle, & Egloff, 2009; Egloff & Schmukle, 2002; Friese, Hofmann, & Schmitt, 2008; Greenwald, Poehlman, Uhlmann, & Banaji, 2009; Grumm & von Collani, 2007; Nosek et al., 2011; Richetin, Perugini, Adjali, & Hurling, 2007; Richetin, Richardson, & Mason, 2010; Schnabel et al., 2006, Steffens & Schulze, 2006).

However, implicit measures themselves have disadvantages. Although they are less affected by motivational factors such as social desirability, they are prone to factors that do not affect explicit measures. This includes thinking styles (the relative degree that one relies on rational thinking and intuitive thinking: Epstein, 2014; Richetin et al., 2007a; for a review see Klauer, Schmitz, Teige-Mocigemba, & Voss, 2010) and speed of responding, the characteristics that implicit measures heavily rely upon (Teige-Mocigemba, Klauer, & Sherman, 2010). Experimental manipulation such as the operational definition of the construct being investigated, the way the IAT was set-up and scored as well as the stimuli also influence the reliability of the implicit measures (Blair, 2002; Gawronski & Bodenhausen, 2006; Nosek et al., 2007a). Self-report measurement is more commonly used (Schnabel et al., 2006). It

has been a valuable instrument that provides insight on different topics compared to the findings derived from implicit measures which were developed much later (Wilson, 2009; Yovel & Friedman, 2013). Therefore, the present study used both implicit and explicit assessments with the belief that the two measures would complement each other and provide insightful information that is more comprehensive than using one measure.

The implicit measure that we chose to use in the present research was the Implicit Association Test (IAT). It was developed by Greenwald, McGhee, and Schwartz in 1998 and it is possibly the most well-known implicit technique (Fazio & Olson, 2003). It is a computerized task that aims to assess the relative strength of association between two target categories and two attribute categories. For instance, the association of "self" with "warm" compared to "other" with "cold" and vice versa. The task is to select which category a word (e.g., friendly, selfish, me, friend) that appears in the center of the screen is associated with. Faster categorization is theorized as indicative of a relatively stronger association. For example, if less time is used to categorize "self" with "warm" and "other" and "cold" than "self" with "cold" and "other" with "war", the association of self and warmth is then theorized to be stronger than the association of self and coldness (Greenwald & Nosek, 2009).

Like any other test, the IAT has been critiqued. First, because it only assesses relative association, a conclusion regarding absolute attitude may not be drawn (De Houwer, 2002). This property, in fact, worked in favor of the present research as it asked if close friend was perceived to be more competent and warmer than acquaintance. Another point was that IAT may assess state construct rather than stable construct (see Egloff, Schwerdtfeger, & Schmukle, 2005 and Teige-Mocigemba et al., 2010 for the reviews) hence it may not concur with the finding provided by explicit

measures that provide more stable findings (Fazio & Olson, 2003; Ziegler, Schmukle, Egloff, & Bühner, 2010) and reduces its reliability (LeBel & Paunonen, 2011). To prevent this, the time gap between the explicit and implicit test was a week apart. It is unlikely that the perception toward friend and acquaintance would change in this amount of time. The results of the two tests were analyzed to see if they were positively correlated as well. Despite the criticisms, the IAT is proved to be the most effective measure to date as it is easy to use and yields more reliable and larger effect than other implicit tests (Bar-Anan & Nosek, 2014; Greenwald et al., 2009; Lane, Banaji, Nosek, & Greenwald, 2007; Nosek et al., 2007a; Ranganath, Smith, & Nosek, 2008; Roefs et al., 2011; Teige-Mocigaba, Schnabel, Banse, & Asendorf, 2004). It is effectively adapted and used in different area of research including racial stereotypes and prejudices (for a review see Nosek et al., 2007b), gender (Rudman & Glick, 2001), cultures (Park, Uchida, & Kitayama, 2016), sexual orientations (Banse, Seise, & Zerbes, 2001), self-esteem (Farnham, Greenwald, & Banaji, 1998; Greenwald & Farnham, 2000), clinical conditions (Nock et al., 2010; Rooke, Hine, & Thorsteinsson, 2008; Teachman, Gregg, Woody, 2001; Teachman & Woody, 2003; Wiers, van Woerden, Smulders, & de Jong, 2002 for a discussion see De Houwer, 2002), hiring (Rooth, 2010), consumer research (for a review see Dimofte, 2010), and even criminology (Gray, Brown, MacCulloch, Smith-Janik, & Snowden, 2005).

There are a good number of studies in the field of personality and group perception that effectively utilized the IAT. The first work was conducted by Asendorpf and colleague (2002). They explained personality as a network of different qualities that an individual associate themselves with, therefore the IAT that aims to capture the association of different concepts and categories is a suitable assessment to study implicit personality. Thus, Asendorpf and colleague (2002) used the IAT to

investigate implicit and explicit shyness and their predictive validities on controlled and spontaneous shy behaviors. The IAT was used to assess the association of self (vs. other) and shy (vs. not shy). They successfully showed that the IAT could be used capture implicit shyness that was not accessible by a self-rating scale. This result led them to argue that "any trait that can be described by adjectives can be studied by an IAT procedure (p. 392)". Moreover, they also found that spontaneous shy behaviors were better predicted by the implicit shyness whereas controlled shy behaviors were better predicted by the explicit shyness. In this study, the correlation between the results from the IAT and the self-rating was moderately correlated.

Schnabel and colleague (2006) went a step further and used the IAT to simultaneously examine two constructs: anxiety and anger. They found that the anxiety IAT was moderately correlated with anxiety self-rating but had higher predictive validity for anxious behavior than the anxiousness self-report measure. In contrast, the anger IAT did not predict angry behaviors or correlated with the explicit measure. In addition, the authors found unexpected order effect for the IAT on IAT correlations where the two correlated moderately if the anxiety IAT was completed first but the correlation was not significant when the anger IAT was completed first. Nosek and colleague (2007a) also voiced out their concern about the order effect. However, others (Greenwald et al., 2002, Greenwald, Nosek, & Banaji, 2003; Teachman et al., 2001; Teachman & Woody, 2003; Wiers, van Woerden, Smulders, & De Jong, 2002) did not report order effect. Hofman, Gawronski, Gschwendner, Le, and Schmitt (2005) concluded from their meta-analytic study that there was no consistent effect of the measurement order.

Steffens and Schulze (2006) used the IAT and self-report measure to study five-factor personality namely agreeableness, conscientiousness, extraversion,

neuroticism, and openness in order to predict related behaviors. The finding concurred with Asendorpf and colleague (2002) where the IATs predicted spontaneous behaviors whereas explicit measures predicted conscious behaviors. However, only the IAT measuring conscientiousness was moderately correlated with the self-rating scale. Following this, the authors argued personality should be differentiated into implicit and explicit levels.

Later, Schmukle, Back and Egloff (2008) observed that Steffens and Schulze-König's study (2006) priori specified the structure of personality. Thus, in their study, they used factor analysis to validate that the IAT could capture the same structure of personality implicitly. The correlations between the IATs and the self-report ratings were generally small and only significant for extraversion and conscientiousness but the patterns of means and factor intercorrelations were highly similar. The studies elaborated above provide the basis for the present study to some level in terms of paradigm but the topics were less relevant. Therefore, from this point on the studies that focused on competence and warmth of different social groups were elaborated.

Rudman and Glick (2001) were interested in the effect of the implicit gender stereotypes that were agency or competence as masculine versus communality or warmth as feminine on females' job application. There was one IAT. The targets included female and male names. The attributes were communal and agentic words. They found that implicit but not explicit gender stereotypes predicted discrimination against agentic females meaning that they were deemed as unfitting for the female job. On the other hand, the discrimination was absent if the applicant was androgynous. The finding suggested that there was an inherent belief that women should be "nice" above all other qualities. The correlations between the IAT and the implicit test were low to moderate.

Carlsson and Björklund (2015) discussed causes of the discrepancy between implicit and explicit measures. First, it may be due to different designs of the two. For example, the two may measure different constructs thus led to conflicting results (Hofmann et al., 2005a). Another reason is that if the topic is socially sensitive, the finding captured by the explicit test would be significantly different to that of implicit tests and affected the correlation between the two (Hofmann, Gschwendner, Nosek, & Schmitt, 2005; Nosek, 2005). Accordingly, they designed their study according to these observations and used the IAT to test the stereotype of the groups that were speculated by the Stereotype Content Model (SCM: Fiske et al., 2002) to have ambivalent stereotypes, in this case, lawyers (high on competence but low on warmth) and preschool teachers (low on competence but high on warmth). They developed two IATs: warmth and competence with 8 attributes in each. Half of the participants completed the warmth IAT whilst the rest participated in the competence IAT. Lawyers were found to be implicitly and explicitly associated with less warmth but higher competence relative to preschool teachers. The competence IAT was moderately correlated with the explicit competence scale but not with the explicit warmth scale. However, contrary to the predictions, the warmth IAT was not significantly correlated with the explicit warmth scale. It did not correlate with the explicit competence scale either. They speculated that this was due to a rather small sample size (approximately 40 for each group). Nonetheless, their findings supported the SCM nicely.

The research previously elaborated provided theoretical and methodological background to the present study. Specifically, the IAT can be used to show how self and different groups are implicitly perceived. More than one IAT can be used in the same experiment. Lastly, the correlation between the IATs and the explicit measures

were generally low to moderate. The present study adopted most of the procedures but with a few changes.

In the work of Rudman and Glick (2001), gender stereotypes were theoretically argued to be opposite, the use of agency and communality as the opposite categories was appropriate. However, in our study warmth and competence should not be treated as such. Therefore, two IATs were developed and used in the present research: the warmth IAT where the opposite categories were warm and cold and the competence IAT where the categories were competence and incompetence. This is in accordance with Carlsson and Björklund (2015). However, instead of the between-subject design, the within-subject design was used to see if competence and warmth perception was similar or different. Lastly, more participants were recruited as suggested by Carlsson and Björklund (2015) to achieve a satisfactory correlation between the implicit and explicit methods.

The important distinction between the present study and the past research was the social groups of interest. This study addressed trait perception of close friend and acquaintance that none of the research to my knowledge linked to competence and warmth, whether explicitly or implicitly. Thus, this study was the first that explored these constructs and targets by using both explicit measure and the IAT. Based on the findings from our previous studies (Study 1 to 3) suggesting that both traits were explicitly perceived to be higher in the closer target i.e. close friend, the similar result would have been shown by the IAT. Particularly, the reaction time of the compatible block (e.g., for warmth IAT: warm & close friend and cold & acquaintance) would be lower than the reaction time of the incompatible block cold & close friend and warm & acquaintance). As a result, the d-value would be positive which means compared to acquaintance close friend is associated with higher warmth. Therefore, Hypothesis 1

predicted that close friend would have been perceived as more competent and warmer than acquaintance for both implicit and explicit tests. If Hypothesis 1 was validated, Hypothesis 2 stating that closeness could account for different trait perception would have been supported as well. The primacy-of-warmth hypothesis was also tested (Hypothesis 3). If warmth rating was higher than competence in the explicit test and if the d-score from the warmth IAT was larger than the d-score from the competence IAT, it would imply that warmth is more important than competence for friendship and acquaintanceship.

In terms of the relationship between the two measures, the strength, and direction of relationship depend on the topic and individual factors (Nosek et al., 2007b). The past findings in the personality research revealed a weak to moderate correlation between the implicit and explicit measurements (Asendorpf et al., 2002). On one hand, the correlation may be stronger than the previous findings because the topic should not be susceptible to social desirability for the explicit measure. In other words, it is natural for humans to organize their social network as it is impossible to invest in every individual in our environment (Dunbar, 1998) one should not feel obliged to perceive their acquaintance as positive as their close friend. However, it may be possible that the difference in the two measures may contribute to low correlation as the past studies suggested. Individuals may feel more obliged to portray their close friend in the positive light when asked to do so explicitly whereas the difference was not as stark implicitly or it may be the other way around. Therefore, no strong claim regarding the correlation between the implicit and explicit measures was made.

Pretest: Trait Selection

Because stimuli are crucial for the IAT (De Houwer, 2001, 2002; Teige-Mocigemba et al., 2010) a pretest was conducted to choose the stimuli or traits that reflected different levels of competence and warmth. Although the IAT can produce reliable and valid results with as few as two attributes per category (Nosek, Greenwald, & Banaji, 2005) and the past research supported the notion (e.g., Carlsson & Björklund, 2015), more attributes were used. There were two reasons behind this decision. First, these words were also used in the explicit questionnaire and the reliability of the explicit measures depends on a good number of items. Also, the correlation between the implicit-explicit measures increases as the stimuli in the two measures become more similar (Payne, Burkley, & Stokes, 2008). Therefore, the aim of the pretest was to select approximately 10 competence traits (5 that reflected competence and 5 that reflected incompetence) and 10 warmth traits (5 that reflected warmth and 5 that reflected coldness).

Two groups of participants (24 for competence and 26 for warmth) completed an online questionnaire in Qualtrics. They were asked to read 50 personality traits and imagine if the traits conveyed any information about competence or warmth when a person is described by those words. A slider scale was used to indicate competence level with 0 indicating incompetence or cold and 100 indicating competence or warm. If the trait does not describe competence or warmth, they could choose the option not applicable.

The final words were selected according to the following criteria. First, at least 20 participants had to agree the word conveyed the information about competence. The average scores (*Ms*) had to be appropriate (70 or higher for competence and warmth attributes and 20 or lower for incompetence and cold

attributes). The *SD*s should be less than 20. Avoid the word that was the categorical name in this case "competence" "incompetence" "warm" and "cold". The selected traits (shown in Table 3.1 and 3.2 together with their descriptive statistics on the next two pages) were used in both implicit and explicit tests.

Table 3.1

Attributes for Competence IAT

Highest	*M* (*SD*)	Responses	Lowest	*M* (*SD*)	Responses
Skilled	81.50 (17.59)	24	Unreliable	12.00 (15.97)	19
Capable	79.83 (18.55)	24	Unproductive	12.61 (15.55)	18
Knowledgeable	75.23 (17.64)	22	Clueless	14.00 (20.09)	21
Well-qualified	75.23 (18.79)	22	Irresponsible	14.56 (16.84)	18
Leadership	75.05 (18.58)	19	Lazy	15.94 (20.52)	17

N = 24

Table 3.2

Attributes for Warmth IAT

Highest	*M* (*SD*)	Responses	Lowest	*M* (*SD*)	Responses
Friendly	83.81 (14.98)	26	Spiteful	12.04 (22.59)	23
Supportive	81.25 (14.99)	24	Selfish	12.41 (19.36)	17
Generous	77.48 (15.84)	25	Disliked	13.24 (16.88)	17
Sociable	73.39 (14.95)	23	Bad-tempered	13.56 (13.90)	18
Sincere	73.35 (19.08)	23	Indifferent	16.56 (17.23)	18

N = 26

Study 4 Trait Perception of Close Friend and Acquaintance: Implicit versus Explicit Test

Participants

Sixty-three psychology undergraduates at University of Essex took part in the study for course credits. There were 54 female students and 9 male students. The age range was 18 to 23 years old. The median was 19 years old. The students also identified themselves in terms of ethnicity. They were Whites (41), Asians (11), Blacks (4), other ethnicities (4) and Mixed (3).

Explicit Test

As the first part of the study, participants were asked to complete an online questionnaire in Qualtrics which was used as the explicit measurement. At the beginning, they were asked to provide the names of 3 close friends and 3 names of their acquaintances according to the definitions below. Participants were advised to use a name that would allow them to think of real people and not to make the names similar to each other. The names were also used in the IATs together with the attribute stimuli (more details to follow in the next section).

"Close Friend

*This would be the **same-sex close friend** whom you want to meet regularly, someone you feel very comfortable to be with. You would identify these people as your close friend. It is important that you choose close friend whom you do not have any romantic feelings towards."*

"Acquaintance

*This would be the **same-sex** acquaintance whom you meet occasionally, someone you cannot say if you are comfortable to be with, someone whom you do not know them well. You would not consider these people as a friend."*

Personality evaluation. After providing the information about the targets, participants then answered questions about the targets. The presentation order of targets was randomized. The targets were evaluated separately on a set of 20 personality traits (refer to Pretest). The competence traits were capable, competence, determined, and skilled. The warmth traits were caring, popular, sociable, and warm. Their presentation order was also randomized. The scale was a 7-point Likert scale ranging from 1 "strongly disagree" to 7 "strongly agree".

Closeness. Participants then answered 3 questions about the closeness they shared with each target. For the target named John, for example, the first item, Perceived Closeness then asked: "How close are you to John?" This item was retained from the first study. It was a 7-level Likert scale ranging from 1 "Not Close at All" to 7 "Extremely Close". The second item was Social Circle item. Participants chose from the 3 circles in which one they would place the target, Circle 1 was the most inner circle whereas Circle 3 was the farthest circle. The last item was the Inclusion of Other in Self item (Aron et al., 1992). Participants chose from 7 pairs of circles that best represented their relationship with each target, 1 depicted the most distant connection while 7 depicted the closest connection.

After answering the questions about personality and closeness of every target, they were asked to provide their demographic information and email for verification purpose in the second part of the study. The full questionnaire can be found in Appendix F.

Implicit Associate Test (IAT)

The participants took part in the IAT at the university a week after completing the explicit test. This time gap was determined in order to prevent possible salience effect the participants may have experienced following the explicit test completion (for the discussion see Fazio & Olson, 2003). The experimenter assigned the computer that each participant would be using beforehand. This protocol allowed the experimenter to enter the names i.e. stimuli that the participants provided in the first part of the study into the program before the participants arrived. The program used to run the experiment was Inquisit (Millisecond software version 4.0).

When the participants arrived, they were asked to confirm their email and led to their booth that was equipped with a computer iMac running OSX Yosemite with a screen of 21.5 inches and a keyboard as well as a Cedrus response box. The response box (depicted in Figure 3.1 below) was used to simplify the procedure as it had fewer buttons than the computer keyboard, the buttons were bigger than a letter button on the computer keyboard and the response box buttons were differentiated by colors. Hence, we believed it would provide a more accurate result. Only one participant was in a booth to prevent distraction. Prior to the experiment, they were instructed about when to use the keyboard and when to use the response box and if so which buttons.

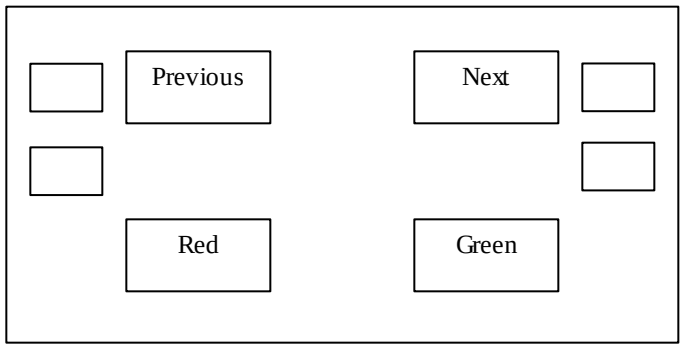

Figure 3.1. The response box used in the IAT experiment

At the beginning of the experiment, participants were asked to provide the information about age, sex, and ethnicity. This was followed by the IATs. They were asked to press the appropriate button to sort the word that appeared at the center of the screen (one by one for 300 ms) to the right category. They were instructed to answer as quickly as they could with as few mistakes as possible. If they did not respond in time or if they made a mistake a red cross appeared underneath the word. Each IAT consisted of 7 tasks or blocks (Greenwald, Nosek & Banaji, 2003; Nosek et al., 2005; Lane et al., 2007). The sequence for the competence IAT and the warmth IAT can be found in Table 3.3 and Table 3.4 on the next two pages. The participants

completed both IATs. The order was randomized. After the participants completed both IATs, they were given a debriefing sheet and dismissed.

Table 3.3

Sequence of Tasks for Competence IAT

Block	Trials (N)	Stimuli	Left Category Red Button	Right Category Green Button
1 attribute categorization	20	Attributes	Competence	Incompetence
2 target categorization	20	Names	Close Friend	Acquaintance
3 attribute and target categorization (practice)	20	Attributes & names	Close Friend Competence	Acquaintance Incompetence
4 attribute and target categorization (test)	40	Attributes & names	Close Friend Competence	Acquaintance Incompetence
5 target categorization new position	20	Names	Acquaintance	Close Friend
6 attribute and target categorization new position (practice)	20	Attributes & names	Acquaintance Competence	Close Friend Incompetence
7 attribute and target categorization new position (test)	40	Attributes & names	Acquaintance Competence	Close Friend Incompetence

Table 3.4

Sequence of Tasks for Warmth IAT

Block	Trials (N)	Stimuli	Left Category Red Button	Right Category Green Button
1 attributes categorization	20	Attributes	Warm	Cold
2 target categorization	20	Names	Close Friend	Acquaintance
3 attribute and target categorization (practice)	20	Attributes & names	Close Friend Warm	Acquaintance Cold
4 attribute and target categorization (test)	40	Attributes & names	Close Friend Warm	Acquaintance Cold
5 target categorization new position	20	Names	Acquaintance	Close Friend
6 attribute and target categorization new position (practice)	20	Attributes & names	Acquaintance Warm	Close Friend Cold
7 attribute and target categorization new position (test)	40	Attributes & names	Acquaintance Warm	Close Friend Cold

Results

Closeness. Firstly, closeness scores were analyzed to see if there was a difference between close friend and acquaintance measuring by three items: a 7-level Likert scale, a social circle item, and an Inclusion of Other in Self item. The social circle and the Inclusion of Other in Self items were reverse-scored to allow the comparison with the Likert scale. The higher score reflected a higher level of

closeness. Reliability analyses were conducted to check if the three items measured the same construct. The items had good reliability for both close friend ($\alpha = .79$) and acquaintance ($\alpha = .83$).

Paired *t*-tests were then used to analyze the difference between the targets. As shown in Table 3.5 below, there was a robust significant difference of closeness between the targets. Results for every item indicated that close friend was perceived to be closer than acquaintance.

Table 3.5

Descriptive statistics (Ms and SDs), t-test statistics, and effect sizes (Cohen's d) for Closeness (N = 63) of Close friend and Acquaintance

	Friend	Acquaintance	*t*	*d*
Perceived closeness	6.01 (.67)	2.56 (.94)	23.94	3.02
Social circle	2.74 (.31)	1.36 (.41)	25.20	3.18
Inclusion of Other in Self	5.59 (.78)	2.55 (.93)	22.85	2.88

All $p < .001$

Explicit trait perception. For the explicit test, negative items (unreliable, bad-tempered) were reverse-scored. Competence and warmth scores of close friend and acquaintance were then averaged. This method of calculation has been used in previous studies (Connelly & Ones, 2010; Liu, Yuan, Chen, & Yu, 2016). The Cronbach's alphas, as well as the descriptive statistics of the trait ratings, were presented in Table 3.6 on the next page.

Table 3.6

Trait Ratings (Ms and SDs) and Cronbach's α of Close friend and Acquaintance

	Competence	α	Warmth	α
Close Friend	5.30	.84	5.69	.84
Acquaintance	4.61	.87	4.74	.89

A 2 (targets: close friend vs. acquaintance) by 2 (traits: competence vs. warmth) repeated-measures ANOVA was then used to analyze the trait ratings.

The ANOVA revealed the significant main effect of target: $F(1,62) = 87.71$, $p < .001$, $\eta_p^2 = .59$. Overall, close friend score was higher ($M = 5.49$, $SE = .07$) than acquaintance score ($M = 4.68$, $SE = .08$). This means close friend was perceived to possess more positive traits than acquaintance.

The main effect of trait was also significant, $F(1,62) = 27.27$, $p < .001$, $\eta_p^2 = .31$. Warmth rating was higher ($M = 5.21$, $SE = .06$) than competence rating ($M = 4.95$, $SE = .06$). This means close friend and acquaintance were generally perceived to possess more warmth traits than competence traits.

The interaction of targets and traits was significant: $F(1,62) = 6.84$, $p = .011$, $\eta_p^2 = .10$. The pairwise comparison revealed the significant main effect of target on competence rating, $F(1,62) = 47.44$, $p < .001$, $\eta_p^2 = .43$. Close friend score was higher ($M = 5.30$, $SE = .08$) than acquaintance score ($M = 4.61$, $SE = .08$). The pairwise comparison also revealed the significant main effect of target on warmth, $F(1,62) = 86.30$, $p < .001$, $\eta_p^2 = .58$. Close friend score was higher ($M = 5.69$, $SE = .07$) than acquaintance ($M = 4.74$, $SE = .09$). This means close friend was seen as more competent and warmer than acquaintance. Lastly, when traits were compared, the

pairwise comparison revealed the difference in close friend, $F(1,62) = 34.59$, $p < .001$, $\eta_p^2 = .36$. Warmth of close friend was higher ($M = 5.69$, $SE = .07$) than competence ($M = 5.30$, $SE = .08$). This means warmth was higher than competence in close friend (also see Figure 3.2 below).

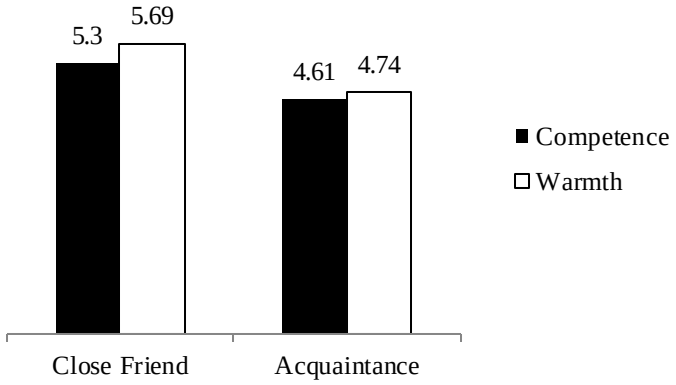

Figure 3.2. Explicit Trait Ratings of Close friend and Acquaintance

Correlation. Correlation analyses were conducted to examine the relationship between the trait ratings and closeness. The scores from the three items measuring closeness were standardized and averaged. These composited scores were then entered into the analysis with scores of competence and warmth. The results were presented in Table 3.7 below and on the next page.

Table 3.7

Correlations of Closeness and Trait Ratings of Close Friend and Acquaintance

	Closeness	Competence	Warmth
Close Friend			
Closeness	1	.26*	.36**
Competence		1	.60**
Warmth			1

** $p < .005$ * $p < .05$

Table 3.7 (cont.)

Correlations of Closeness and Trait Ratings of Close Friend and Acquaintance

	Closeness	Competence	Warmth
Acquaintance			
Closeness	1	.24	.25*
Competence		1	.62**
Warmth			1

*** p < .005* ** p < .05*

For close friend, the analysis indicated that closeness had a positive correlation with competence. The correlation was medium (Cohen's conventions for *r* effect sizes). This was unique in close friend. Closeness had a positive correlation with warmth of close friend as well. The correlation was also medium. This means as the perceived closeness toward close friend increased or decreased, so did the traits, and vice versa. Closeness of acquaintance only positively correlated with the rating of warmth. The correlation was medium.

Implicit trait perception. We followed the scoring guidelines suggested by Greenwald et al. (2003). The time taken to respond correctly to a stimulus, so-called the reaction time (RT) was recorded in the unit of millisecond (ms). The accuracy (whether the response was correct or not) was also recorded. None of the participants took less than 400 ms or longer than 10000 ms for a trial. Thus, every response was kept for the analysis. The mean of the RTs from Block 3, 4, 6 and 7 for each participant was calculated. The mean of Block 3 to 6 was then subtracted and divided by the participant's *SD* of the 2 blocks. The same procedure was carried out for Block 4 and 7. Then, the scores from blocks 3,4 and 6,7 were averaged. This resulted in the d-score. The higher d-score reflects the stronger association of competence and warmth

to close friend compared to acquaintance.

The results indicated a strong association of competence to close friend (M = .52, SD = .27). Following the calculation of d-score, a one-sample t-test was also conducted to examine if the d-score was different from 0. The analysis indicated that to be the case, $t(62) = 15.20$, $p < .001$, $d = 1.92$ with the mean difference of .52, 95% CI [0.45, 0.59]. The analyses revealed a significant difference of the targets with close friend being implicitly perceived as more competent than acquaintance.

The same result was found in the warmth IAT. The d-score indicated a strong association of warmth and close friend (M = .61, SD = .30). A one-sample t-test was also conducted to examine if the d-score was different from 0. The analysis indicated that to be the case, $t(62) = 16.16$, $p < .001$, $d = 2.03$ with the mean difference of .61, 95% CI [0.54 to 0.69]. The analyses revealed a significant difference of the targets with close friend being implicitly perceived as warmer than acquaintance.

Correlations. The results from the explicit and implicit tests were analyzed by the correlation analysis. If the two measurements tapped onto the same construct, the correlation should be positive. The correlations were not significant for either trait: competence, $r(61) = .02$, warmth, $r(61) = .16$.

Discussion

This study was an extension of the first three studies. It examined explicit perceptions of competence and warmth of targets who differed in closeness level namely close friend and acquaintance similar to the first three studies as well as implicit trait perception by using the implicit association test. The study was a fully within-subject study with targets and traits as the variables.

It was found that closes friend was perceived to be closer than acquaintance.

Therefore, Hypothesis 1 stated that close friend would have been perceived as more competent and warmer than acquaintance, implicitly and explicitly. The results strongly supported the hypothesis as both implicit and explicit tests revealed that close friend was perceived to be more competent and warmer than acquaintance. Consequently, Hypothesis 2 stated that closeness accounted for differential trait perception was also supported. Additional analysis also found that closeness was positively correlated with the perception of competence and warmth for close friend. In contrast, it only correlated with warmth but not competence of acquaintance. This provides further support for Hypothesis 1 that the preference for positive attributes is stronger in closer relationship (Abele & Brack, 2013; Wojciszke & Abele, 2008). This result also shows that closeness is more related to warmth more than competence which is in line with the primacy-of-warmth hypothesis. (Hall, 2011; Sprecher & Regan, 2002; Wojciszke & Abele, 2008). The explicit measure revealed that close friend was perceived to possess more warmth traits than competence traits. The implicit test also revealed a larger difference between the targets for the perception of warmth. The effect sizes were also bigger for warmth rating. Therefore, this hypothesis was strongly supported.

Despite our best attempt to control for confound effects such as identical stimuli, the span between the two assessments (De Houwer, 2001, 2002; Payne et al., 2008; Teige-Mocigemba et al., 2010) the correlation between the implicit and explicit measures was not significant and lower than the past research (Carlsson & Björklund, 2015; Rudman & Glick, 2001). The descriptive statistics showed higher variability in perception of close friend when measured implicitly than when measured explicitly. This applied for both traits but especially for warmth. The explanation may be that when we are asked directly about our friends, we feel obliged to say good things

about them. As the saying goes "birds of the same feather flock together" perhaps by describing those close to us in the positive light, we would also be seen as positively. But this is unlikely because the anonymity and confidentiality were guaranteed. It is also unlikely that the two measures tapped into different constructs (Hofmann et al., 2005a) because traits used in both measurements were identical and the results from the implicit and explicit measures were in the same pattern and valence for both traits. Moreover, the level and direction of the correlations were in line with the past studies (Asendorpf et al., 2002; Rudman & Glick, 2001; Schmukle et al., 2008; Schnabel et al., 2006; Steffens & Schulze, 2006). It is more likely due to individual differences in implicit cognitive processes and preferences (Klauer et al., 2010; Nosek et al., 2007; Teige-Mocigemba et al., 2010). Higher variability was revealed in the implicit trait ratings than in the explicit trait ratings. This reflected a difference of response pattern between participants which may have resulted in the implicit responses being more spread out which in turn lowered the correlation with the responses given by the explicit measure. To reduce the effect of moderating variables, future research may need to include cognitive styles measurements to see if this has any relationship with response pattern and result. The Rational-Experiential Inventory (Epstein, Pacini, Denes-Raj, & Heier, 1996; Norris & Epstein, 2011; Pacini & Epstein, 1999) that includes two subscales: faith in intuition that measures experiential mode and revised need for cognition scale that measures rational mode for these individual differences or the Preference for Intuition and Deliberation scale (Richetin et al., 2007a) would be suitable.

In addition, Carlsson and Björkund (2015) made a valid suggestion. Because the IAT assesses the relative difference it is possible that the explicit assessment can be in the same format. Instead of asking about each target individually, the Likert

scale can ask the participants to compare warmth and competence of pairs of close friend and acquaintance. An explicit test that was more spontaneous i.e. did not require deliberate thinking also led to a higher correlation between the two measures (Hofmann et al., 2005b) therefore time-limited questionnaire may be used to boost the correlation (Ranganath et al., 2008; Yovel & Friedman, 2013). Moreover, although the past research has proved that the IAT yielded more reliable and bigger effects compared to the other implicit tests in a wide range of topics (Bar-Anan & Nosek, 2014; Fazio & Olson, 2003; Greenwald et al., 2009; Lane et al., 2007; Roefs et al., 2011; Teige-Mocigaba, et al., 2004) maybe it will be different for this topic. Other implicit tests may be used.

In terms of methodology of the IAT, instead of presenting names in text, a picture of the targets may be used. Pictures are argued to induce emotional responses better than words (Holmes & Mathews, 2005; Kensinger & Schacter, 2006) and easier to process than words (Amit, Algom, & Trope, 2009; Carnevale, Fujita, Han & Amit, 2015), it may correspond better with the targets who also share affective relationship with the participants. For example, Imhoff, Woelki, Hanke, and Dotsch (2013) used faces as their stimuli to study warmth and competence perception of male nursery teachers and managers and the teachers were perceived to be warmer and less competent than managers. Although they did not study the targets that the participants know in real life as the present study did, the adaptation is possible for future research provided that confidentiality of participants and targets is not compromised.

Nonetheless, the present research supports the argument that the IAT can be an alternative tool to study personality if one doubts the credibility of direct measures as other research has advocated (Asendorpf et al., 2002; Back et al., 2009; Grumm & von Collani, 2007; Schnabel et al., 2006, Steffens & Schulze, 2006). Additionally, the

study demonstrated that IAT can be used to assess association of personality traits categorized by fundamental dimension of social perception (Carlsson & Björkund, 2015; Ebert, Steffens, & Kroth, 2014; Rohmer & Louvet, 2012; Rudman & Glick, 2001; Wade & Brewer, 2006) with the targets that prior to the present study was not investigated i.e. real close friend and acquaintance. This can be adapted and applied more widely in the field of relationship studies. For example, a researcher may be interested to compare the association between traits with different types of romantic relationship such as short-term relationship versus long-term relationship.

The other implication of the concurrent use of the two measures is implicit and the explicit test can be compared to see which better predicts related behaviors. Research in different fields (Asendorpf et al., 2002; Back, et al., 2009; Egloff & Schmukle, 2002; Greenwald et al., 2009; Grumm & von Collani, 2007; Nosek et al., 2011; Richetin, et al., 2007b; Richetin, et al., 2010; Schnabel et al., 2006, Steffens & Schulze, 2006) have demonstrated that the two attitudes had different predictability toward related behaviors. It would be plausible and interesting to see if implicit traits perception or explicit traits perception better predict relationship maintenance behaviors such as sharing intimate information, the attempt to keep contact, or forgiving.

General Discussion

Considering that friendships and acquaintanceships have been overshadowed by the studies of romantic relationships and kinships (Berscheid & Regan, 2005; Fehr, 2012; Fingerman, 2009; Sprecher & Regan, 2002; Stevens & van Tilburg, 2011) despite their prevalence in our life (Binder, et al., 2012; Dunbar, 1998), the first 2 chapters contribute to friendship and acquaintanceship research by showing that

there are expectations regarding their attributes. The first four studies focused on trait perception of close friend and acquaintance. When asked to explicit and implicit evaluate personality traits of close friend and acquaintance (Study 1,2 and 4), close friend was consistently reported as warmer and more competent than acquaintance. The trait transgression study (Study 3) did not provide as strong support as close friend was more affected by warmth transgression but not competence transgression. Nonetheless, the findings mostly provided support for Hypothesis 1. Close friend, the closer target, was expected hence perceived to be more competent and warmer than acquaintance. The results are in line with the previous research that emphasizes the implication of positive attributes in close others compared to distant others (Abele & Brack, 2013; Wojciszke & Abele, 2008). At the beginning of the chapter, the validity of the quotation "Keep your friends close, but keep your enemy closer" was discussed. Our findings suggested otherwise. It is preferable to have a close other who has desirable qualities. This is logical as a warm and competent partner is more likely than a cold and incompetent partner to be beneficial to our well-being (Sheldon et al., 2004) and survival (De Bruin & Van Lange, 1999; Peeters, 1992; Wojciszke, 2005b).

For the most part, closeness accounted for the differential trait perception between close friend and acquaintance. A person with desirable attributes is more likely to be chosen as a friend than a person who lacks those qualities. While a relationship between an individual and a relational partner who has positive traits progresses to friendship, the relationship with the person who lacks desirable traits remains constant as acquaintanceship or dissolves. As a result, the closeness between friends is higher than the closeness of acquaintanceship. Consequently, friend, the closer the target, is then perceived as more competent and warmer. In sum, closeness

is indicative of the preference for desirable attributes and behaviors from friend (Fehr, 2004; Hall, 2014) and acquaintance (Abele & Wojciszke, 2007). Therefore, it seems to be an appropriate construct to differentiate the two relationships (Dibble, et al., 2012; Reis et al., 2004).

Lastly, the evidence for the primacy-of-warmth hypothesis is mixed. Preference for warmth was not shown in the first two studies. Friend and acquaintance were not reported to have more warmth traits than competence. However, Study 3 and 4 showed that warmth had more implication than competence. It appears that traits are not only sensitive to the context (see Chapter 1), they are also contingent to the methodology. Firstly, the primacy of warmth is not as profound in established relationships as when ideal or hypothetical relationships were concerned (Abele & Brack, 2013; Abele & Wojciszke, 2007; Helgeson, 2004; Sprecher & Regan, 2002). The findings are in line with the argument that different stages of a relationship are distinct (Altman & Taylor, 1973; Arriaga & Agnew, 2011; Soons et al., 2009; Trope & Liberman, 2010) and should be studied with the appropriate paradigm (Eastwick et al., 2011, 2014). Another methodological difference is the systematic comparison of traits. Past studies used unequal numbers of competence and warmth traits (Abele & Wojciszke, 2007; Cottrell et al., 2007; Lusk et al., 1998; Sprecher & Regan, 2002) whereas the thesis used an identical number of the traits and showed less importance of warmth. Future research should consider methodology for the appropriate interpretation of results.

Chapter 4: Trait Perceptions of Close friend and Romantic Partner

Romantic Relationship

Close or communal relationships are a primary source of happiness and satisfaction for most people (Berscheid, & Reis, 1998). Romantic relationships are a communal relationship (Clark & Mills, 1993) that is central in our life especially in contemporary Western society (Altman, Brown, Staples, & Werner, 1992; Cherlin, 2009; Sarkisian & Gerstel, 2008; Wu, Cross, Wu, Cho, & Tey, 2016). The romantic relationships become common in adolescence (Carver, Joyner, & Udry, 2003) and begin to take priority in adolescence (see Collins, Welsh, & Furman, 2009 for a review). It is distinguishable from other types of relationships because it is typically more exclusive, more intense in terms of contact and closeness (Campbell, Lackenbauer, & Muise, 2006; Collins, 2003; Laursen & Williams, 1997), and induces different emotions and cognitive constructs (Hendrick & Hendrick, 2000). Romantic partners are expected to and do engage in sexual-related behaviors such as courtship, public display of affection, kissing and sexual intercourse which builds physical intimacy that is unique for this type of relationships (Brown, Feiring, & Furman, 1999; Collins, 2003). A romantic relationship can be shared between a same-sex or cross-sex pair or couple (Manning, Giordano, & Longmore, 2006).

To have a satisfying marriage or a long-term relationship is one of the main life goals (Baumeister & Leary, 1995) and this is understandable because a high-quality romantic relationship reduces psychological distress (Cox, Buhr, Owen, & Davidson, 2016) and contributes to life satisfaction (Diener & Lucas, 2000). Therefore, choosing the right partner is crucial. An impressive amount of research has documented the so-called ideal mate preference.

Ideal Mate Preference: Trait Preference in Romantic Partner

Ideal mate preferences or the preference for certain characteristics in a romantic partner is one of the main standards that humans hold (Eastwick, Luchies, Finkel & Hunt, 2013). It is still a lively topic to date (Schmitt et al., 2012) and considered to be important for evolutionary (Webster, 2007; Webster, Jonason, & Schember, 2009) as it guides humans to make a choice that would guarantee successful reproduction (Buss & Hawley, 2010; Murphy et al., 2015; Sugiyama, 2005). Some researchers even stated that "the most important questions in life revolve around love and sex" (Jonason, Webster & Gesselman, 2013, p. 167). It is important to study these preferences because they are functional and have behavioral implications (Eastwick et al., 2011; Fletcher, Simpson, Thomas, & Giles, 1999). That is they drive people to evaluate and adjust their behavior particularly in the stage of relationship initiation and maintenance (Eastwick et al., 2013). Hence, there is no surprise that for decades an accumulative amount of research in the domain of romantic relationship has been consistently documenting traits preference or desired attributes of an ideal partner particularly in the hypothetical stage (Buss, 1989; Li, Bailey, Kenrick, & Linsenmeier, 2002; Sprecher, Sullivan, Hatfield, 1994).

A model that is possibly the most explanative for the ideal partner preference is the ideal standards model (Fletcher & Simpson, 2000). The model combines relationship theories and evolutionary psychology to explain the content that is the characteristics of the ideal mate or long-term romantic partner as well as the function of the ideal partner preferences. According to the model, different traits indicate different reproductive success probability. People have different preferences for these traits, for instance, some emphasize intelligence more than the others. The model was derived from a study by Fletcher and colleague (1999). They were the first to present

traits preference that reflected more than the intuition of the researchers. They asked the participants to list the attributes of the ideal dating or marital partner resulted in 49 traits. The researchers then factor analyzed these traits and concluded that there were three distinct factors underlying preference for the ideal partner. The factors are warmth/trustworthiness (e.g., understanding, supportive), attractiveness/vitality (e.g., nice body, adventurous), and status/resources (good job, financially secure). The ideals were found to be independently predictive of relationship quality, relationship satisfaction, love and commitment (Campbell, Simpson, Kashy, & Fletcher, 2001).

Evolutionary psychology also describes the ideal mate (Gangestad & Simpson, 2000). Two mating criteria were proposed. First, a good mate should have good genes that will be passed on to the offspring i.e. attractive and healthy. The second and more relevant criterion is the good investment theory. A good mate should possess certain characteristics that make them willing to be helpful and supportive in child-rearing. Moreover, they should have a high capacity to attain resources and status. Traits are used to estimate these qualities. Specifically, warmth signals the willingness to provide help and support while competence predicts resource and status attainment (Cosmides & Tooby, 2005; Kendrick et al., 2005; Tooby & Cosmides, 1996; Vigil, 2007).

Another model that corresponds to the ideal standards model and good investment theory is interpersonal attraction model proposed by Montoya and Horton (2014). The model is based on person perception and relationship studies, highly similar to the present research. It proposes two forms of evaluations of a target: the willingness to help the perceiver achieve goals/needs and the capacity to do so. Those who are perceived to possess these qualities are liked and seen as an attractive partner. Again, warmth and competence are well aligned with the two evaluations.

A good amount of research has consistently presented an impressively coherent story. Desirable traits are considerate, exciting, funny, kindness, interesting, generosity, good sense of humor, supportive, trustworthy, understanding (Buss, 2003; Stewart, Stinnett, & Rosenfeld, 2000). Recently, some researchers also looked at a different perspective by identifying traits that people avoid when choosing a potential partner as they impair close relationships. This includes narcissism (Campbell & Foster, 2002), high neuroticism (Donnellan, Larsen-Rife & Conger, 2005; White, Hendrick & Hendrick, 2004), psychoticism (Apostolou, 2016), angry, abusive, untrustworthy, lazy, needy, lacks sense of humour, lacks self-confidence, stubborn, talks too much or too little even too athletic (Jonason et al., 2015). Altogether, traits involving a low level of warmth that is not beneficial to a relational partner are deemed undesired while traits indicative of high level of warmth are consistently shown to be desirable in a prospective partner. Having a firm belief of these characteristics enhances security and makes people more willing to make a connection and build a relationship with those possessing these traits (Murray, Holmes, & Collins, 2006). Overall, the implication of warmth and competence traits on partner selection is clear.

Warmth has been regarded as more important than competence for a long-term romantic relationship and close friendship. But the past studies and the current research had different methodologies. First, as discussed in Chapter 1 most of the past research relied on the ideal paradigm (Campbell et al., 2001; Fletcher et al., 2004; Jonason et al., 2013; Li, Valentine, & Patel, 2011). Little is known about real partner and they should be studied by a different paradigm (Eastwick et al., 2013). Hence, trait perception of actual partner was examined in the present research. Additionally, the majority of the past studies did not have an equal number of traits (Cann, 2004;

Sprecher & Regan, 2002). Warmth traits were included more than competence traits and this could qualify as systematic confound. The study that was the closest to the present study in terms of their methodology was conducted by Rodriguez and colleague (2015). They linked the ideals from the ideal standards model to self-determination theory to test for predictability of trustworthiness, status, and attractiveness on relationship satisfaction. They found that relationships that closely matched trustworthiness ideals led to higher relationship satisfaction than relationships that met status and attractiveness ideals. In the present research, the equal amount of competence and warmth traits were used to reduce the confounding effect.

Lastly, some studies did not define the relationship. For instance, romantic partner is not specified as a short or long term (Cann, 2004). When the romantic relationship was specified as a long-term committed relationship, the priority for warmth over competence reduced (Jonason, Li, & Madson, 2012). Warmth had more immediate effect on the relationship. This effect was presented even before the relationship was initiated whereas competence becomes more beneficial over time as the relationship develops (Jonason et al., 2013) and partner become more interdependent to each other (Abele & Brack, 2013; Abele & Wojciszke, 2007). Therefore, the primacy-of-warmth hypothesis was also tested in this chapter.

Comparison of Romantic Relationship and Friendship

Another goal of the chapter was to identify the relationship that is more important between romantic relationship and friendship. Although friendship researchers endorsed the importance of friendship (Berscheid & Regan, 2005; Fehr, 2012; Stevens & van Tilburg, 2011), romantic relationship researchers maintained

that romantic relationship takes priority (Collins et al., 2009; Jonason et al., 2013). Moreover, a limited number of studies simultaneously addressed friendship and romantic relationship (Fuhrman et al., 2009; Sprecher & Regan, 2002). Hence, the present research used the same paradigm to compare them directly to establish a conclusive finding. If the expectation for desirable traits was found to be higher in either relationship, it would mean the relationship with higher trait expectation was more important.

Romantic relationship and friendship are communal relationships, which means relationship partner (romantic partner and friend) are concerned about each other's welfare (Clark & Mills, 1993). But the romantic relationships have a unique quality that friendship typically lacks, that is exclusivity (Argyle et al., 1985; Blieszner & Adams, 1992; Cramer, 1988; Davis & Todd, 1982; Duck, 1988; Flannagan, Marsh, & Fuhrman, 2005; Wiseman, 1986). It is common to have more than one close friend but not as common to have more than one long-term romantic partner. It is also more common to engage in sexual activities that enhance intimacy with the romantic partner than with friends. The exclusivity of the romantic relationship leads to higher investment (Baxter et al., 1997; Fuhrman et al., 2009), interdependence (Hall, 2014; Rusbult & van Lange, 2003), as well as commitment between romantic partner, compared to between close friend (Arriaga & Agnew, 2001; Rusbult, 1983; Rusbult, Olsen, Davis, & Hannon, 2001). Considering higher investment and commitment characterizing long-term romantic relationship, the standard for the right mate is high. Therefore, the expectation toward romantic partner was likely to be higher than the expectation toward friends. A limited amount of research provided support for this statement. Expectations for behaviors that promote closeness or intimacy is emphasized more in romantic relationships than in

friendships (Brown et al., 1999, Cann, 2004; Collins, 2003; Davis & Todd, 1982; Fuhrman et al., 2009; Hall, 2014). An ideal partner possesses more desirable traits than an ideal friend (Cann, 2004; Sprecher & Regan, 2002). Those who are in a romantic relationship often turn to their partner for support compared to friends (Jensen & Rauer, 2016). Evolutionary perspective prioritizes romantic relationship. Reproduction is an important goal in survival. Typically, the nature of romantic relationship allows higher chance of reproduction compared to friendship. Therefore, the present chapter hypothesized that the expectation for beneficial traits in romantic partner was higher than in close friend. Similar to the previous chapter, trait perception of close friend and romantic partner were studied by two paradigms: trait perception (Study 5) and trait transgression (Study 6).

However, there was another question that was exclusive to the next two studies. Sex differences research in the area of romantic relationship is abundant. This is rooted in evolution theories. According to Parental Investment Theory (Trivers, 1972), women are likely to be more selective about their relationship partner because their reproduction investment, or pregnancy, is higher than men's (providing sperm; Buss & Schmitt, 1993; Haselton & Buss, 2000). There are studies that supported this assumption such as women avoiding negative traits more than men (Jonason, Garcia, Webster, Li, & Fisher, 2015). Women prefer a potential mate who is dominant, ambitious, status-driven (Bryan et al., 2011) and whose resources are sufficient (Li et al., 2002). However, there are studies that found similarities between sexes. That is both men and women deem intelligence and kindness important (Li et al., 2002). There was no sex difference in earning capacities, resources and physical attractive-ness (Buss, Shackelford, Kirkpatrick, & Larsen, 2001; Eastwick et al., 2014; Fletcher et al., 1999). It seems that the difference lies in preference for competence. As time

goes by, men and women are more alike than different (Hyde, 2014). Therefore, I would like to revisit this question by studying if females and males perceived their partner differently on competence and warmth.

Study 5: Trait Perception of Close friend and Romantic Partner

The present study used trait perception paradigm to examine competence and warmth of close friend and romantic partner. Three hypotheses were proposed. Hypothesis 1 queried whether trait perception was more positive in the closer target. Specifically, it asked if the closer target, predicting to be romantic partner, would have been perceived as more competent and warmer than the less close target, close friend. If Hypothesis 1 was validated, Hypothesis 2 stating that closeness could account for different trait perception would have been supported as well. In contrast, if there was a difference in closeness but no difference in trait perception or vice versa, it would mean closeness was not a factor driving the process. Hypothesis 3, the primacy-of-warmth hypothesis was tested. If warmth rating was higher than competence, this hypothesis would have been supported. Lastly, Hypothesis 4 tested sex difference. If women were more selective than men especially for competence, this would have reflected in the trait perception of the current partner. That is they would have rated their male partner higher in competence compared to when male rated their female partner. The overall trait perception of a male partner would have been higher than trait perception of a female partner.

Method

Design. The study was a 2 (targets: close friend vs. romantic partner) by 2 (traits: competence vs. warmth) repeated-measures study.

Participants. The participants were recruited through the university participants pool. There were 70 participants with 51 being female and 19 being male. They were 48 Whites, 9 Asians, 5 Blacks, 3 other ethnicities, 2 Hispanics and 2 mixed-ethnicities. The average age of the participants was 22.09 years old (*SD* = 5.45). The average duration of the relationship was 24.21 months (*SD* = 26.71) or approximately 2 years. Every participant except 2 reported their sexual orientation to be heterosexual. Every participant except 4 reported having a same-sex close friend.

Materials and Procedure. The study was conducted online using Qualtrics. First, the participants were asked to confirm that they were in a relationship at the time they took part in the study. After the confirmation, they were asked to think of their romantic partner and one close friend according to the definitions below (Li, Bailey, Kenrick, & Linsenmeier, 2002; Li & Kenrick, 2006). They were asked to fill in the targets' initials or the names to be used later on, sex of the targets, and the length of their romantic relationship. The length of friendship was not asked in this study.

"Romantic Partner

This would be someone you are currently in a ***serious committed romantic relationship*** *with. They are someone you share romantic feelings with and wish you have a long term relationship with. You would identify this person as your girlfriend/ boyfriend/partner/husband/wife. They can be female or male."*

"Close friend

This would be the ***same-sex close friend*** *whom you want to meet regularly. They are someone you feel very comfortable to be with and talk to. You would identify this person as your close friend. It is important that you choose close friend whom you do not have any romantic feelings towards."*

Personality evaluation. After providing the information about the targets, participants evaluated the targets' personality on two separate lists. The presentation order of the list was randomized. The previous studies used 8 traits and yielded reliable results. But since there was a pretest to select traits to be used in Study 4, I decided to use these traits to test if they led to different results that the positive traits that I used in the previous studies. The list consisted of 20 personality traits that indicate low and high level of warmth and competence. The examples of warmth traits were friendly, generous, bad-tempered and selfish. The examples of competence traits were capable, well-qualified, irresponsible and unproductive. The presentation order of the traits was randomized. The participants indicated if the traits described the target on the 7-level Likert scale with 1 indicating strongly disagree and 7 indicating strongly agree.

Closeness. Participants then answered 3 questions about the closeness they shared with each target. For the target named John, for example, the first item, Perceived Closeness then asked: "How close are you to John?". The item was a 7-level Likert scale ranging from 1 "Not Close at All" to 7 "Extremely Close". The second item was called Social Circle. Participants chose from the 3 circles in which one they would place the target, Circle 1 represented the most inner circle whereas Circle 3 represented the farthest circle. The last item was the Inclusion of Other in Self item (Aron et al., 1992). Participants chose from 7 pairs of circles that best represented their relationship with each target, 1 represented the most distant connection while 7 suggested the closest connection (refer to Chapter 2 for the figures).

After participants answered the questions about personality and closeness of every target, they were asked to provide their demographic information. Finally, they were debriefed. The full questionnaire can be found in Appendix G.

Results

Closeness[4]. Firstly, closeness scores were analyzed to see if there was the difference between close friend and romantic partner measuring by three items: a 7-level Likert scale, a social circle item, and an Inclusion of Other in Self item. The social circle and the Inclusion of Other in Self items were reverse-scored to allow the comparison with the Likert scale. The higher score reflected a higher level of closeness. Reliability analysis was conducted to check if the items measured the same construct. The items had good reliability for both close friend ($\alpha = .77$) and romantic partner ($\alpha = .69$).

Paired *t*-tests were then used to analyze the difference between the two targets for the items. As shown in Table 4.1 below, there was a robust significant difference between the targets. Results from every item indicated that romantic partner was perceived to be the closer target compared to close friend.

Table 4.1

Descriptive statistics (Ms and SDs) and t-test results for Closeness

	Friend	Partner	*t*	*d*
Perceived closeness	5.86 (.92)	6.59 (.65)	-5.07*	.61
Social circle	2.71 (.46)	2.91 (.28)	-3.17*	.34
Inclusion of Other in Self	5.19 (1.20)	6.09 (.83)	-5.44*	.65

** $p < .001$*

[4] Sex difference in closeness scores was analyzed by independent t-tests. The composite scores of close friend and partner were analyzed. No sex difference was found at all. Thus, the following analyses for closeness did not include sex.

Trait Perception. Descriptive statistics of competence and warmth scores of close friend and romantic partner as well as the Cronbach's for females and males were presented in Table 4.2 below.

Table 4.2

Descriptive Statistics (Ms and SDs) and Cronbach's α of Trait Ratings (N = 70)

	Competence	α	Warmth	α
Friend	5.45 (.86)	.82	5.69 (.69)	.71
Partner	5.58 (.71)	.74	5.72 (.73)	.75

Target & Traits. To determine whether differences in the closeness of targets had any effect on the perception of competence and warmth, a 2 (targets: close friend vs. romantic partner) by 2 (traits: competence vs. warmth) repeated-measure ANOVA was used to analyze the data.

The analysis revealed a significant main effect of trait: $F(1,69) = 5.91$, $p = .018$, $h_p^2 = .08$. Overall, the two targets were perceived to possess more warmth traits ($M = 5.70$, $SE = .07$) than competence traits ($M = 5.52$, $SE = .08$). Both close friend and romantic partner were perceived to have a higher number of warmth attributes than competence attributes.

The main effect of target was not significant: $F(1,69) < 1$, $p = .38$, $h_p^2 = .01$. Romantic partner ($M = 5.65$, $SE = .07$) and close friend ($M = 5.57$, $SE = .08$) were perceived to be similar in overall impression of warmth and competence.

Lastly, there was no significant interaction of target and trait: $F(1,69) < 1$, $p = .445$, $h_p^2 = .01$. Close friend and romantic partner were perceived to be similar on competence and warmth.

Correlations. To examine the relationship between closeness and trait ratings, correlation analyses were conducted. The scores from three items measuring closeness were standardized and averaged for close friend and romantic partner. These composite scores were then entered into the analysis with scores of competence and warmth. The results were presented in Table 4.3 below.

Table 4.3

Correlations of Closeness and Trait Perception: Close Friend and Romantic Partner

	Closeness	Competence	Warmth
Friend			
Closeness	1	.27**	.22*
Competence		1	.55**
Warmth			1
Partner			
Closeness	1	.40**	.49**
Competence		1	.46**
Warmth			1

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

For close friend, closeness had a positive correlation with competence and warmth. The correlation was medium (Cohen's conventions for *r* effect sizes). This means as closeness increased or decreased, so did the traits. For romantic partner, closeness had a large (Cohen's conventions for *r* effect sizes) positive correlation with both competence and warmth. As closeness increased or decreased, so did the traits.

Mediation. Following the results of correlation and ANOVA, the mediation analyses were conducted to directly test the effect of closeness as the mediator.

Competence and warmth were analyzed separately. MEMORE and bootstrapping method were used. For more details, please refer to p. 43.

Competence. For this analysis, competence ratings of close friend and romantic partner were entered as the dependent variables while the closeness ratings of close friend and romantic partner were entered as the mediators. The model was significant, $R^2 = .105$, $F(2,67) = 3.94$, $p = .024$. Target and closeness accounted for about 11% of variance of competence rating. The total effect of target and closeness on competence rating was not significant, $b = .127$, $SE = .112$, $t(69) = -1.13$, $p = .261$. After controlling for closeness, the direct effect of target on competence remained non-significant, $b = -.087$, $SE = .133$, $t(69) = .669$, $p = .506$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The analysis revealed the significant indirect effect, $b = .216$, $SE = .075$, 95% CI [-.370, -.077]. This means closeness predicted competence perception. As closeness score increased by 1 point, competence rating increased by .22 units.

Warmth. For this analysis, warmth ratings of close friend and romantic partner were entered as the dependent variables while the closeness ratings of close friend and romantic partner were entered as the mediators. The model was not significant, $R^2 = .056$, $F(2,67) = 1.97$, $p = .147$. Target and closeness accounted for about 6% of variance of difference in the warmth ratings. The total effect of the target and closeness on warmth rating was not significant, $b = .034$, $SE = .107$, $t(69) = .294$, $p = .769$. After controlling for closeness, the direct effect of target on warmth remained non-significant, $b = -.113$, $SE = .129$, $t(67) = -.873$, $p = .386$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was not significant, $b = .145$, $SE = .084$, 95% CI [-.006, .331]. This means closeness did not mediate warmth perception.

Target, Trait & Sex. To determine whether differences in the closeness of targets had any effect on the perception of competence and warmth, a mixed ANOVA with targets (close friend vs. romantic partner) and traits (competence vs. warmth) as within-subject variables and sex (female vs. male) as a between-subject variable was conducted.

The main effects of target, trait, and sex were not significant. There was only one significant interaction that was trait and sex, $F(1,68) = 4.11$, $p = .047$, $\eta_p^2 = .057$. For males, there was no difference between the traits. They perceived their close friend and long-term romantic partner to be equally competent and warm. However, the difference was found among females, $F(1,68) = 4.11$, $p = .047$, $\eta_p^2 = .057$. They rated warmth ($M = 5.81$, $SE = .074$) higher than competence ($M = 5.53$, $SE = .089$). In general, close friend and long-term romantic partner of women were perceived to possess warmth traits more than competence traits. The results indicated that sexes did not lead to different perception for friend and partner. In fact, it showed that females prioritized warmth over competence in close others.

Discussion

The present study explored perceptions of competence and warmth of close friend and long-term committed romantic partner. The study was a fully repeated-measures study with target and trait as the variables. It was found that romantic partner was perceived to be the closer target than close friend. The results support the previous findings (Campbell et al., 2006; Collins, 2003). Romantic relationship is inherently more exclusive and more dependent than friendship and that the partner have to rely on each other to fulfil their relational needs which resulted in the higher level of perceived closeness and integration of their partner in self compared to

friendship (Brown et al., 1999, Cann, 2004; Collins, 2003; Davis & Todd, 1982; Fuhrman et al., 2009; Rusbult & Van Lange, 2003).

ANOVA was used to test Hypothesis 1 that speculated a linear trend between closeness and trait perception. Following the preliminary result suggesting that romantic partner was perceived to be closer than close friend, Hypothesis 1 asked if romantic partner would have been perceived as more competent and warmer than close friend. However, romantic partner was not perceived to be more competent and warmer than close friend. The linear trend between closeness and trait perception was not found when close friend was compared to romantic partner.

Mediation analysis was used to test Hypothesis 2 stating that closeness could account for differential trait perception. The influence of closeness was very minimal. It did not affect warmth perception. It had an indirect effect on the perception of competence but ANOVA showed that its influence was not sufficient to induce differential trait perception between partner and friend.

Next, Hypothesis 3 testing the primacy-of-warmth hypothesis was not supported. Close friend and romantic partner were perceived to have an equal number of competence and warmth traits. The finding is not in line with the previous research that emphasized higher importance or implication of warmth over competence in friends (Abele & Brack, 2013; Abele & Wojciszke, 2007) and romantic partner (Fletcher et al., 2004; Li et al., 2002; Rodriguez et al., 2015; Sprecher & Regan, 2002). The findings can be explained by the past research that found the importance of competence in the relationships that were highly interdependence (Abele & Brack, 2013; Abele & Wojciszke, 2007; Jonason et al., 2012, 2013). Interdependence and closeness tend to be similar. In this study, participants reported being closer to their partner than friend. Therefore, the importance of competence increased to the same

level as warmth. This was why there was no difference between competence and warmth. Additionally, when sex was included in the analysis, it was found that females emphasized warmth more than competence for both types of relationship. Therefore, primacy-of-warmth hypothesis only seems to apply to females. This contradicted past research in the area of evolutionary psychology that argued female preference for a mate who has the ability to acquire resources and status (Bryan et al., 2011; Li et al., 2002; Trivers, 1972). It is possible that sex roles have been changing in modern time. It is not only males that work anymore. Females also have career and capable of providing resources. Therefore, competence of male partner is becoming less important compared to the past and makes it comparable to warmth. The result supports the previous findings that found no sex difference for attributes related to competence (Buss, Shackelford, Kirkpatrick, & Larsen, 2001; Eastwick et al., 2014; Fletcher et al., 1999). This was the only sex difference that was found in the present research. Females were not more selective than males. Sexes did not lead to different perception between target either. It seems to be the case that as time goes by, men and women are becoming more alike than different (Hyde, 2014).

Study 6: Trait Transgression of Close Friend and Romantic Partner

Research comparing effects of transgression of romantic partner and close friend is sparse and inconclusive. Some found that betrayals or expectation violations committed by the romantic partner was deemed as more serious than the betrayals committed by friends (Flannagan et al., 2005) whereas the others did not find the difference between friendships and romantic relationship (Haden & Hojjat, 2006; Jones, Moore, Scratter, & Negel, 2001). In this study, the romantic relationship was hypothesized to be more vulnerable to trait transgression. Because we can have more

than one friend, if one friend lacks the certain quality we look for it is acceptable to seek for it in another friend (Argyle et al., 1985; Blieszner & Adams, 1992; Cramer, 1988; Davis & Todd, 1982; Duck, 1988; Wiseman, 1986). This is less likely for the romantic relationship as it has the exclusivity property. Romantic partners typically compromise to work around each other's shortcomings if any. Additionally, the level of interdependence of partner in the long-term committed romantic relationship is higher than friendships (Hall, 2014; Rusbult & van Lange, 2003). The exclusivity and the higher level of interdependence the romantic relationship has, results in the higher expectations towards the romantic partner than friends (Brown et al., 1999; Cann, 2004; Collins, 2003; Fuhrman, Flannagan, & Matamoros, 2009; Hall, 2014; Sprecher & Regan, 2002). Consequently, trait transgressions were hypothesized to have a stronger impact on romantic partner than close friend (Hypothesis 1). In other words, when the romantic partner behaves in such a way that is seen as not warm or competent, the perception towards them would change more drastically than when a close friend engages in the same action because the initial expectation toward the one committed partner was higher than the expectations toward a close friend. This applied to both competence and warmth. This hypothesis would have been supported if trait perception of romantic partner changed more drastically than the trait perception of close friend following trait transgression. If Hypothesis 1 was validated, Hypothesis 2 stating that closeness could account for different trait perception, would have been supported as well. In contrast, if there was a difference in closeness but no difference in trait perception or vice versa, it would mean closeness was not a factor driving the process. Hypothesis 3 proposed that warmth was more important than competence (primacy-of-warmth hypothesis). If warmth transgression was shown

to have more impact on the following trait perception than competence transgression, this hypothesis would have been supported. Lastly, Hypothesis 4 addressed the effect of trait transgression. Specifically, if there was a motivation to preserve positive thoughts toward the target, a positive correlation of trait perception before and after trait transgression would be have been found.

Method

This study was an online study using Qualtrics. Two questionnaire links (one for competence transgression and one for warmth transgression) were sent to potential participants whom were asked to take part in either of the surveys.

Participants[5]. The participants were recruited through the university participants pool. Only participants who were involved in a committed romantic relationship were invited to take part.

Competence transgression. After excluding those who did not report their sex and selected a cross-sex close friend, there were 68 participants that completed competence transgression questionnaire with 53 females and 15 males. They were 53 Whites, 5 Asians, 5 Blacks, 3 Mixed, 1 Hispanic, and 1 other ethnicity. Every participant except 4 had an opposite-sex romantic partner. Every participant confirmed at the beginning of the study that they were in a committed romantic relationship at the time the study took place. The average duration[5] of the relationship was 26.49 months (*SD* = 32.23) or approximately 2 years 2 months. The average duration of the close friendship was 95.75 months (*SD* = 81.96) or approximately 8 years.

[5] Because the duration of friendship and romantic relationship were very different, duration was included as a covariate. ANOVAs for friend and partner were conducted. Both were a 2 (time) by 2 (trait) repeated-measures with duration of the relationship as a covariate. Duration did not affect the scores in warmth transgression. For competence transgression, only duration of romantic relationship interacted with trait rating. Thus, 2 follow-up ANOVAs were conducted separately for competence and warmth. There was a significant difference between pre and post-transgression ratings of competence. The difference was not significant for warmth.

Warmth transgression. Sixty-six participants completed warmth transgression questionnaire, consisting of 52 female participants and 14 male participants. There were 48 Whites, 7 Asians, 6 Mixed, 4 Blacks, and 1 Hispanic. The average age of the participants was 23.20 years old (*SD* = 5.59). Every participant confirmed at the beginning of the study that they were in a committed romantic relationship at the time the study took place. The average duration of the relationship was 30.14 months (*SD* = 36.34) or approximately 2.5 years. Every participant except 3 reported their partner to be cross-sex. The average duration of the close friendship was 91.03 months (*SD* = 70.17) or approximately 7 years 7 months.

Materials and Procedure. The studies were conducted on Qualtrics. First, the participants were asked to confirm that they were in a relationship at the time they took part in the study. After the confirmation, they were asked to think of their romantic partner and one close friend that fit the description below and filled in their initials or the names to be used later. In addition to the names or initials, the participants were asked to identify the sex of the targets and provide the duration they had known the targets.

"Close friend

*This would be the **same-sex close friend** whom you want to meet regularly. They are someone you feel very comfortable to be with and talk to. You would identify this person as your close friend. It is important that you choose close friend whom you do not have any romantic feelings towards."*

"Romantic Partner

*This would be someone you are currently in a **serious committed romantic relationship** with. They are someone you share romantic feelings with and wish you*

have a long-term relationship with. You would identify this person as your girlfriend/ boyfriend/partner/husband/wife. They can be female or male."

Pre-transgression evaluation. After reporting information about the relationships and their partner, the participants were asked to think about each target and rate their personality in a random order. The names that the participants provided in the previous stage were integrated into the instructions. If a participant named John, for example, the instructions for trait rating read "Please think of your close friend, John. In your opinion, do the following traits describe him?". The scale was a 7-point Likert scale with 7 as "strongly agree" and 1 as "strongly disagree". Because the traits that were used in Study 5 did not yield a different result from the traits that were used in the previous studies, 8 traits taken from Kervyn and colleague (2009) were used again from this study onwards. The warmth traits were caring, popular, sociable, and warm. The competence traits were capable, competence, determined, and skilled. The presentation order of the traits was randomized. The scores from this stage were used as pre-transgression scores. In addition to answering the question about the traits, the participants answered 3 questions about closeness they shared with each target. The first was a perceived closeness scale in the form of 7-level Likert scale ranging from 1 "Not Close at All" to 7 "Extremely Close". The second item was a social circle. The participants chose from 3 circles in which one they would place the target. The last closeness item was an Inclusion of Other in Self (Aron et al., 1992). The participants chose from 7 pairs of circles the pair that best represented their relationship with each target (refer to Chapter 2 for the figures).

Trait transgression. Following the pre-transgression evaluation, two scenarios describing either competence transgression or warmth that were carried out by the nominated close friend and romantic partner were presented in a random order.

The target was randomized for each vignette. Neither target or the scenario was repeated. The name John was used as an example.

Competence transgression vignettes.

"You and John took a test. You found that the test was much easier than you expected. You looked around and apparently many people finished quickly. But John looked nervous and used up all the time. After the time was up, he told you that he found the test rather difficult and was not confident at all. Later, the mark was announced. John told you that he got a very bad mark"

"You were always reluctant when John asked if you wanted a lift. You saw his car always full of scratches here and there all over the car. John was known to be a bad driver. He took 3 times to get a driving license. He got into an accident a lot since he had been driving for a few years even when the vision was good. A few days later, you learned that John had an accident when driving again."

Warmth transgression vignettes.

"The weekend was coming and you planned to spend time with John. You decided to ask him if he wanted to do something together. You gave him choices of activity: going to the sports center, going for a movie, going to a pub to watch a match, or having dinner. John said he couldn't because the family wanted to do something on the weekend too. On Monday, you overheard him talking with your mutual friend about how fun the weekend they spent together was.

"Your parents and you had been arguing a lot lately. They always nagged that you were not home enough and when you were home they nagged that you were being lazy and wasting time. Frustrated, you told John about this. He did not react much. You had a feeling that he was not really listening. When you asked him what he reckoned you should do he simply said: You will get over it".

Post-transgression evaluation. Each scenario was followed by the same personality evaluation scale used in the pre-transgression evaluation stage. These scores were used as post-transgression scores. Following that, the self-rating scale was presented. The participants evaluated their personality with the same traits used for close friend and romantic partner. Demographic information was collected before the debrief. The full questionnaire can be found in Appendix H.

Results

The data from competence transgression and warmth transgression were analyzed separately. Firstly, the results of closeness and reliability analyses from both transgression were presented together. The results of ANOVA, correlation, and mediation for each transgression were presented separately later on in the section.

Closeness[6]. Firstly, closeness scores were analyzed to see if there was the difference between close friend and romantic partner measuring by three items: a 7-level Likert scale, a social circle item, and an Inclusion of Other in Self item. The social circle and the Inclusion of Other in Self items were reverse-scored to allow the comparison with the Likert scale. The higher score reflected a higher level of closeness. Reliability analysis was then conducted to check if the items measured the same construct. The results were presented in Table 4.4 below.

Table 4.4

Cronbach's α of Closeness Items of Close Friend and Romantic Partner

	Competence transgression (N = 68)	Warmth transgression (N = 66)
Friend	.61	.65
Partner	.70	.68

[6] Sex difference in closeness scores was analyzed by independent t-tests. The composite scores of close friend and partner were analyzed. No sex difference was found at all. Thus, the following analyses for closeness did not include sex.

Paired *t*-tests were then used to analyze the difference between the two targets for the items. As shown in Table 4.5 below, there was a robust significant difference between the targets. Results from every item indicated that romantic partner was perceived to be the closer target compared to close friend.

Table 4.5

Descriptive statistics (Ms and SDs), t-test statistics, and Effect Sizes of Closeness Scores

	Friend	Partner	*t*	*d*
Competence transgression				
Perceived closeness	6.04 (.82)	6.65 (.64)	-4.66**	.57
Social circle	2.82 (.38)	2.97 (.17)	-2.80*	.34
Inclusion of Other in Self	5.18 (.99)	6.16 (.82)	-6.90**	.84
Warmth transgression				
Perceived closeness	6.06 (.74)	6.67 (.56)	-5.14**	.63
Social circle	2.73 (.48)	2.95 (.21)	-3.36*	.41
Inclusion of Other in Self	5.20 (1.10)	6.12 (.85)	-6.04**	.74

Reliability analyses. The scores from the pre and post-transgression evaluation of the two targets were analyzed. Overall, the items had good reliability as shown in Table 4.6 below and on the next page.

Table 4.6

Reliability Analyses of Trait Ratings

Target	Pre		Post	
	Competence	Warmth	Competence	Warmth
Competence transgression				
Friend	.80	.55	.80	.63
Partner	.80	.71	.86	.77

Table 4.6 (cont).

Reliability Analyses of Trait Ratings

Target	Pre		Post	
	Competence	Warmth	Competence	Warmth
Warmth transgression				
Friend	.74	.70	.70	.82
Partner	.79	.68	.91	.69

Competence transgression[7]. Descriptive statistics of competence and warmth scores of close friend and romantic partner were presented in Table 4.7 below.

Table 4.7

Descriptive Statistics (Ms and SDs) of Close friend and Romantic Partner: Competence Transgression

Target	Competence		Warmth	
	Pre	Post	Pre	Post
Friend	5.95 (.79)	5.40 (1.13)	5.79 (.78)	5.77 (.86)
Partner	6.14 (.69)	5.48 (1.09)	5.91 (.85)	5.70 (.89)

The data were then analyzed with 2 (time: pre vs. post) by 2 (targets: close friend vs. romantic partner) by 2 (traits: competence vs. warmth) within-subjects design[8].

The ANOVA revealed the significant main effect of time, $F(1,67) = 34.75$, $p < .001$, $h_p^2 = .34$ showing that overall rating before competence transgression was

[7] To ensure that the scenarios had the same effect, 2 (time: pre vs. post) by 2 (trait: competence vs. warmth) repeated-measures ANOVAs were carried out for the scenarios to see if they had the same effect on trait ratings. Close friend and romantic partner was analyzed separately. The two scenarios yielded the same results. That is, they led to the higher decrease of competence than warmth. Therefore, the scores from both scenarios were used in the following analyses.

[8] Sex was included in the analysis but there was no difference. Therefore, it was excluded.

higher (M = 5.95, SE = .07) than overall rating after the transgression (M = 5.59, SE = .09). The results indicated that after being exposed to the vignettes suggesting a lack of competence, the targets were perceived to be less warm and competent in general. The main effects of target and trait were not significant.

The analyses suggested the significant interaction of time and traits in competence transgression, $F(1,67) = 44.78$, $p < .001$, $\eta_p^2 = .401$. Similar result was found for both traits. The pairwise comparisons revealed the significant simple main effect of time on competence, $F(1,67) = 53.41$, $p < .001$, $\eta_p^2 = .44$. Competence before the transgression (M = 6.04, SE = .07) was higher than competence after the transgression (M = 5.44, SE = .11). The same pattern was found for warmth, $F(1,67) = 4.22$, $p = .044$, $\eta_p^2 = .06$. Warmth before the transgression (M = 5.85, SE = .08) was higher than warmth after the transgression (M = 5.74, SE = .09). The results showed that competence transgression significantly affected both competence and warmth but to a greater degree on competence (also see Figure 4.1 below). No other interaction was found to be significant.

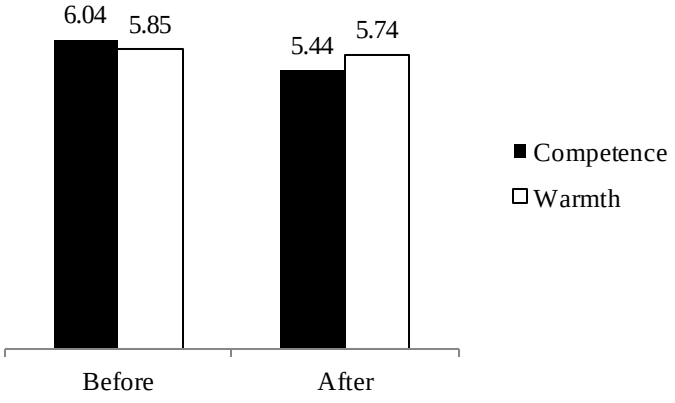

Figure 4.1 Traits Rating before and after Competence Transgression

Correlations. To examine the relationship between closeness and trait ratings, correlation analyses were conducted. The scores from three items measuring

closeness were standardized and averaged for close friend and romantic partner. These composite scores were then entered into the analysis with scores of competence and warmth.

The only significant correlations were the correlation between closeness and warmth ratings of close friend. Closeness and warmth rating before the transgression was positive, $r = .40$, $p = .001$. The correlation was medium to large (Cohen's conventions for *r* effect sizes). This means as closeness increased or decreased, so did warmth rating before the transgression and vice versa. Closeness and warmth rating after the transgression was also positive, $r = .41$, $p = .001$. The correlation was medium to large (Cohen's conventions for *r* effect sizes). This means as closeness increased or decreased, so did warmth rating after the transgression and vice versa. Closeness did not correlate with competence rating of close friend. None of the correlations of closeness and trait rating of romantic partner was significant.

Mediation. Following the ANOVA and correlation analysis, the mediation analyses were conducted to directly test the effect of closeness as the mediator. Competence and warmth scores before and after competence transgression were analyzed separately. MEMORE and boot-strapping method were used. For more details, please refer to p. 43.

Competence. Firstly, pre-transgression competence ratings of close friend and romantic partner were entered as the dependent variables while the closeness ratings of close friend and romantic partner were entered as the mediators. The model was not significant, $R^2 = .008$, $F(2,65) < 1$, $p = .76$. Target and closeness barely accounted for 1% of variance of difference in competence rating. The total effect of target and closeness on competence was not significant, $b = .195$, $SE = .102$, $t(67) = 1.91$, $p = .061$. After controlling for closeness, the direct effect of target on competence

rating remained non-significant, $b = .195$, $SE = .143$, $t(65) = 1.89$, $p = .064$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was not significant, $b < 1$, $SE = .015$, 95% CI [-.037, .026]. This means closeness did not mediate competence perception before competence transgression.

Next, post-transgression competence ratings of close friend and romantic partner were entered as the dependent variables while the closeness ratings of close friend and romantic partner were entered as the mediators. The model was not significant, $R^2 = .02$, $F(2,65) < 1$, $p = .523$. Target and closeness accounted for only 2% of variance of difference in competence. The total effect of target and closeness on competence was not significant, $b = .081$, $SE = .154$, $t(67) < 1$, $p = .601$. After controlling for closeness, the direct effect of target on the competence rating remained non-significant, $b = .081$, $SE = .155$, $t(65) = < 1$, $p = .603$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was not significant, $b < 0$, $SE = .024$, 95% CI [-.063, .041]. This means Closeness did not mediate competence perception after competence transgression.

Warmth. For this analysis, pre-transgression warmth ratings of close friend and romantic partner were entered as the dependent variables while the closeness ratings of close friend and romantic partner were entered as the mediators. The model was significant, $R^2 = .198$, $F(2,65) = 8.03$, $p = .001$. Target and closeness accounted for approximately 20% of variance of difference in warmth rating. The total effect of target and closeness on warmth was not significant, $b = .118$, $SE = .113$, $t(67) = 1.04$, $p = .302$. After controlling for closeness, the direct effect of target on warmth remained non-significant, $b = .118$, $SE = .103$, $t(65) = 1.15$, $p = .256$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The

indirect effect was not significant, $b < 1$, $SE = .053$, 95% CI [-.097, .119]. Closeness did not mediate warmth perception before competence transgression.

Lastly, post-transgression warmth ratings of close friend and romantic partner were entered as the dependent variables while the closeness ratings of close friend and romantic partner were entered as the mediators. The model was significant, $R^2 = .134$, $F(2,63) = 3.38$, $p = .041$. Target and closeness accounted for about 13% of variance of difference in warmth rating. The total effect of target and closeness on warmth was not significant, $b < 1$, $SE = .128$, $t(67) < -1$, $p = .569$. After controlling for closeness, the direct effect of target on warmth remained non-significant, $b < -1$, $SE = .121$, $t(65) < -1$, $p = .547$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was not significant, $b < 1$, $SE = .045$, 95% CI [-.097, .090]. Closeness did not mediate warmth perception after competence transgression.

Pre-Post Transgression Correlations. The last analysis was conducted to examine the correlations between trait ratings before and after competence transgression.

Close friend. Competence rating of close friend before and after the transgression was positive, $r = .554$, $p < .001$. The correlation was large (Cohen's conventions for *r* effect sizes). This means as competence rating before the transgression increased or decreased, so did the rating after and vice versa. Warmth rating of close friend before and after competence transgression was positive, $r = .846$, $p < .001$. The correlation was large (Cohen's conventions for *r* effect sizes).

As warmth rating before the transgression increased or decreased, so did the rating after and vice versa .

Romantic partner. Competence rating of romantic partner before and after competence transgression was positive, $r = .503$, $p < .001$. The correlation was large (Cohen's conventions for *r* effect sizes). This means as competence rating before the transgression increased or decreased, so did the rating after and vice versa. Warmth rating of romantic partner before and after competence transgression was positive, $r = .693$, $p < .001$. The correlation was large (Cohen's conventions for *r* effect sizes). This means as warmth rating before the transgression increased or decreased, so did the rating after and vice versa. The results suggested that the trait perception before and after competence transgression were similar. This applied for both traits and both targets.

Warmth transgression[9]. The scores of competence and warmth before and after the transgression involving a lack of warmth were analyzed. Descriptive statistics of competence and warmth scores of close friend and romantic partner were presented in Table 4.8 below.

Table 4.8

Descriptive Statistics (Ms and SDs) of Close friend and Romantic Partner: Warmth Transgressions

Target	Competence		Warmth	
	Pre	Post	Pre	Post
Friend	6.10 (.63)	5.47 (.95)	6.05 (.72)	5.02 (1.15)
Partner	6.11 (.78)	5.38 (1.41)	5.80 (.96)	4.58 (1.27)

[9] To ensure that the scenarios had the same effect, 2 (time: pre vs. post) by 2 (trait: competence vs. warmth) repeated-measures ANOVAs were carried out for the scenarios to see if they had the same effect on trait ratings. Close friend and romantic partner was analyzed separately. The two scenarios yielded the same results. That is, they led to the decrease of both traits. Therefore, the scores from both scenarios were used in the following analyses.

The data were then analyzed with 2 (time: pre vs. post) by 2 (targets: close friend vs. romantic partner) by 2 (traits: competence vs. warmth) repeated-measures design[10].

There was the significant main effect of time, $F(1,65) = 69.08$, $p < .001$, $\eta_p^2 = .515$. Pre-transgression score ($M = 6.01$, $SE = .06$) was significantly higher than post-transgression score ($M = 5.11$, $SE = .12$). The results indicated that warmth transgression had a negative impact on global impression toward the targets. Specifically, after being exposed to the vignettes suggesting lack of warmth, the targets were perceived to be less warm and competent in general.

The main effect of target was significant, $F(1,65) = 4.15$, $p = .046$, $\eta_p^2 < 1$. Overall, close friend ($M = 5.66$, $SE = .07$) were viewed more positively (warmer and more competent) than romantic partner ($M = 5.47$, $SE = .11$).

The analysis also suggested a significant main effect of trait, $F(1,65) = 29.03$, $p < .001$, $\eta_p^2 = .309$. Competence ($M = 5.77$, $SE = .08$) was higher than warmth ($M = 5.36$, $SE = .09$). This means close friend and romantic partner were generally seen as more competent than warm.

The analyses revealed the significant interaction of time and trait in warmth transgression, $F(1,65) = 24.50$, $p < .001$, $\eta_p^2 = .27$. A similar result was found for both traits as the pre-transgression scores were higher than the post-transgression scores. The pairwise comparisons revealed the significant simple main effect of time on competence, $F(1,65) = 33.81$, $p < .001$, $\eta_p^2 = .34$. Competence rating before warmth transgression ($M = 6.11$, $SE = .07$) was higher than the rating after the transgression ($M = 5.43$, $SE = .13$). The same pattern was found for warmth, $F(1,65) = 90.73$, $p < .001$, $\eta_p^2 = .58$. Warmth rating before warmth transgression ($M = 5.92$,

[10] Sex was included in the analysis but there was no difference. Therefore, it was excluded.

SE = .08) was higher than the rating after the transgression (*M* = 4.80, *SE* = .13). The results showed that warmth transgression significantly affected both competence and warmth, but to a greater degree on warmth (also see Figure 4.2 below).

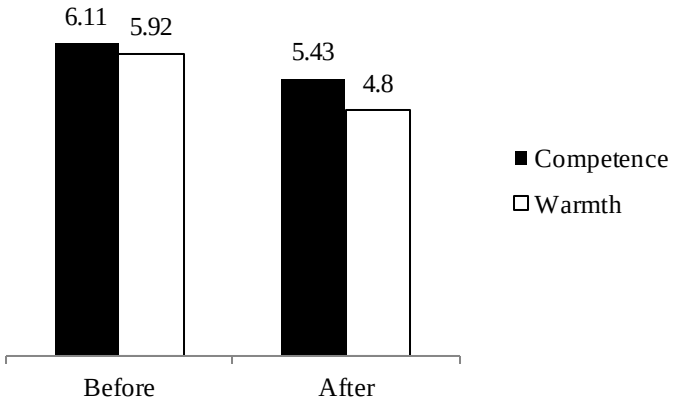

Figure 4.2 Trait Ratings before and after Warmth Transgression

Correlations. To examine the relationship between closeness and trait ratings, correlation analyses were conducted. The scores from three items measuring closeness were standardized and averaged for close friend and romantic partner. These composite scores were then entered into the analysis with scores of competence and warmth.

There was only one significant correlation for close friend. Closeness and warmth rating before the transgression was positive, $r = .42$, $p = .001$. The correlation was medium to large (Cohen's conventions for *r* effect sizes). As closeness increased or decreased, so did warmth rating before the transgression and vice versa. For romantic partner, there were 2 significant correlations. Interestingly, none included warmth. Closeness and competence rating of partner before the transgression was positive, $r = .32$, $p = .009$. The correlation was medium (Cohen's conventions for *r* effect sizes). This means as closeness increased or decreased, so did competence

rating before the transgression and vice versa. Finally, closeness and competence rating of romantic partner after the transgression was also positive, $r = .27$, $p = .026$. The correlation was small to medium (Cohen's conventions for r effect sizes). This means as closeness increased or decreased, so did competence rating after the transgression and vice versa.

Mediation. Following the ANOVA, the mediation analyses were conducted to directly test the effect of closeness as the mediator. Competence and warmth scores before and after warmth transgression were analyzed separately. MEMORE and bootstrapping method was used. For more details, please refer to p. 43.

Competence. Firstly, pre-transgression competence ratings of close friend and romantic partner were entered as the dependent variables while the closeness rating of close friend and romantic partner were entered as the mediators. The model was not significant, $R^2 = .076$, $F(2,63) = 2.60$, $p = .082$. Target and closeness accounted for 7% of variance of difference in competence rating. The total effect of target and closeness on competence rating was not significant, $b = .008$, $SE = .115$, $t(65) < 1$, $p = .948$. After controlling for closeness, the direct effect of target on competence remained non-significant, $b = -.157$, $SE = .143$, $t(63) = -1.10$, $p = .275$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was not significant, $b = .165$, $SE = .107$, 95% CI [-.020, .401]. Closeness did not mediate competence perception before warmth transgression.

Next, post-transgression competence ratings of close friend and romantic partner were entered as the dependent variables while the closeness rating of close friend and romantic partner were entered as the mediators. The model was not significant, $R^2 = .06$, $F(2,63) = 2.05$, $p = .137$. Target and closeness accounted for 6% of variance of difference in the competence rating. The total effect of target and

closeness on competence rating was not significant, $b < -1$, $SE = .149$, $t(65) < 1$, $p = .528$. After controlling for closeness, the direct effect of target on competence remained non-significant, $b = -.306$, $SE = .186$, $t(63) = -1.64$, $p = .106$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was not significant, $b = .211$, $SE = .196$, 95% CI [-.150, .606]. Closeness did not mediate competence perception after warmth transgression.

Warmth. For this analysis, pre-transgression warmth ratings of close friend and romantic partner were entered as the dependent variables while the closeness ratings of close friend and romantic partner were entered as the mediators. The model was significant, $R^2 = .146$, $F(2,63) = 5.40$, $p = .007$. Target and closeness accounted for 15% of variance of the difference in warmth rating. The total effect of target and closeness on warmth was not significant, $b = -.254$, $SE = .134$, $t(65) = -1.89$, $p = .063$. After controlling for closeness, the direct effect of target on warmth became significant, $b = -.559$, $SE = .160$, $t(63) = -3.50$, $p = .001$. This indicated the mediational effect. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was significant, $b = .306$, $SE = .139$, 95% CI [.130, .684]. Closeness mediated warmth rating before warmth transgression. As closeness score increased by 1 point, warmth rating increased by .31 units.

Lastly, post-transgression warmth ratings of close friend and romantic partner were entered as the dependent variables while the closeness ratings of close friend and romantic partner were entered as the mediators. The model was significant, $R^2 = .097$, $F(2,63) = 3.38$, $p = .041$. Target and closeness accounted for about 10% of variance of the difference in the warmth rating. The total effect of target and closeness on warmth was significant, $b = -.436$, $SE = .162$, $t(65) = -2.68$, $p = .009$. After controlling for closeness, the direct effect of target on warmth rating remained

significant, $b = -.688$, $SE = .199$, $t(63) = -3.46$, $p = .001$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The analysis revealed the significant indirect effect, $b = .252$, $SE = .104$, 95% CI [.101, .508]. Closeness mediated warmth perception after warmth transgression. As closeness score increased by 1 point, warmth rating increased by .25 units.

Pre-Post Transgression Correlations. To examine the relationship between trait ratings before and after transgression, correlation analyses were conducted.

Close friend. Competence rating of close friend before and after warmth transgression was not significant, $r = .188$, $p = .130$. The result was unexpected. Therefore, the data were examined if there was any outlier. There were 2 outliers. The cases were filtered and not included in further analysis. After reanalysis, correlation became positive, $r = .257$, $p = .040$. The correlation was small to medium (Cohen's conventions for r effect sizes). As competence rating before warmth transgression increased or decreased, so did the rating after and vice versa. Warmth rating of close friend before and after warmth transgression was positive, $r = .427$, $p < .001$. The correlation was medium to large (Cohen's conventions for r effect sizes). This means as warmth rating before warmth transgression increased or decreased, so did the rating after and vice versa.

Romantic partner. Competence rating of romantic partner before and after warmth transgression was positive, $r = .584$, $p < .001$. The correlation was large (Cohen's conventions for r effect sizes). This means as competence rating before the transgression increased or decreased, so did the rating after and vice versa. Warmth rating of romantic partner before and after warmth transgression was positive, $r = .536$, $p < .001$. The correlation was large (Cohen's conventions for r effect sizes).

As warmth rating before the transgression increased or decreased, so did the rating after and vice versa.

Discussion

The present study explored perceptions of competence and warmth of close friend and long-term committed romantic partner. The study was a fully repeated-measures study with target and trait as the variables. It was found that romantic partner was perceived to be the closer target than close friend. The results support the previous findings (Campbell et al., 2006; Collins, 2003). Romantic relationship is inherently more exclusive and more dependent than friendship as the partners have to rely on each other to fulfil their relational needs which resulted in the higher level of perceived closeness and integration of their partner in self compared to friendship (Brown et al., 1999, Cann, 2004; Collins, 2003; Davis & Todd, 1982; Fuhrman et al., 2009; Rusbult & Van Lange, 2003).

ANOVA was used to test Hypothesis 1 that speculated a linear trend between closeness and trait perception. Following the preliminary result which found that romantic partner was perceived to be the closer target, Hypothesis 1 asked if the romantic partner would have been perceived as more competent and warmer than close friend. The difference between close friend and romantic partner was not existing. They were affected to the similar degree by the transgression. Thus, Hypothesis 1 was not supported. When the close friend or the partner shows incompetence or coldness, it is equally unexpected. Hence, the following trait perception was similar for both targets. The results do not suggest that romantic relationship takes priority over close friendship (Altman et al., 1992; Collins et al.,

2009; Jonason et al., 2013). If that was the case, trait transgression would have affected romantic partner more than close friend.

Furthermore, closeness was not correlated with trait perception as predicted. For competence transgression, it only had a positive relationship with warmth perception of close friend before and after the transgression. For warmth transgression, closeness of friend correlated with pre-transgression warmth. Closeness of partner correlated with pre and post-transgression competence. Naturally, it had very little influence on trait perception. For competence transgression, closeness did not mediate trait perception at all. Its effect was stronger in warmth transgression as it mediated warmth perception. As the ANOVA showed, it was not sufficient to induce different perception between romantic partner and close friend nonetheless. Therefore, Hypothesis 2 stating that closeness was a factor that regulated differential trait perception between romantic partner and close friend was not supported.

The findings that closeness was not always correlated with trait perception may be more related to the differential implication of traits on the two relationships. When close friend was compared to romantic partner, the importance of competence was downplayed while the importance of warmth was highlighted. This makes closeness between friends related to warmth perception. In contrast, long-term romantic relationship is exclusive and partners are highly interdependent (Campbell et al., 2006; Cann, 2004; Davis & Todd, 1982; Fuhrman et al., 2009; Rusbult & Van Lange, 2003). Their interaction ranges from socially to sexually (Brown et al., 1999; Collins, 2003). They build a family together and share resources with one another, to a higher degree than friends do. In this context, competence does not only benefit the person but also their partner (Peeters, 1992; Wojciszke, 2005b). As evolutionary theories suggest a mate who is willing to invest their resource in child-rearing and

capable of acquiring the resources is desired (Cosmides & Tooby, 2005; Kendrick et al., 2005; Shackelford & Boss, 1996, Vigil, 2007). Therefore, there is a preference for a partner who is both warm (indicating the willingness) and competent (predicting the success to gain resources). When compared to close friend that is less interdependent, the importance of competence was highlighted while the importance of warmth was reduced (Abele & Brack, 2013; Cuddy et al., 2011; Wojciszke & Abele, 2008). This was why closeness of partner was only related to competence. The way to check this assumption would be to evaluate friend and partner separately such as in different time points. The results of correlation may also provide the support for Hypothesis 3 which is the primacy-of-warmth hypothesis, at least for close friend (Abele & Wojciszke, 2007; Sprecher & Regan, 2002). However, because the ANOVA did not show that warmth transgression was not more detrimental than competence transgression, the hypothesis receive small support.

Lastly, Hypothesis 4 stating that the trait perception before and after the trait transgression would have been positively correlated as a reflection of the motivation to preserve positive thoughts toward the targets despite being exposed to the behaviors that suggested otherwise. This hypothesis was strongly supported. The correlation between pre and post-transgression perception was positive for close friend and romantic partner for both types of transgression. This means overall individuals have the tendency to maintain the perception about their close friend and romantic partner (Murray et al., 1996; 2011).

General Discussion

This chapter studied trait perception of close friend and long-term committed romantic partner. Study 5 used the trait perception paradigm while study 6 used the

trait transgression paradigm. The romantic relationship was mostly perceived as the closer relationship than the friendship. However, both studies found no difference in trait perception as hypothesized. The findings show difference as well as similarity between close friendship and romantic relationship. Although romantic relationship is typically more exclusive and intimate (Campbell et al., 2006; Collins, 2003), ultimately both relationships are close communal relationships (Clark & Mills, 1993) that are beneficial to well-being (Allen et al., 2015; Berscheid & Reis, 1998). Therefore, competence and warmth are desired in friends (Fehr, 2004; Hall, 2014) and partner (Fletcher et al., 1999; Montoya & Horton, 2014).

Collectively, both studies found some evidence suggesting that warmth is more important than competence. In established relationships that the partners share a high level of interdependence or closeness, both traits have an implication. Specifically, competence becomes increasingly important (Abele & Brack, 2013; Cuddy et al., 2011; Wojciszke & Abele, 2008). The primacy of warmth is not as profound in established relationships as when ideal or hypothetical relationships were concerned (Abele & Brack, 2013; Abele & Wojciszke, 2007; Helgeson, 2004; Sprecher & Regan, 2002). The findings are in line with the argument that a relationship has distinct stages (Altman & Taylor, 1973; Arriaga & Agnew, 2011; Soons et al., 2009; Trope & Liberman, 2010) and should be studied with the appropriate paradigm (Eastwick et al., 2011, 2014). Another methodological difference is the systematic comparison of traits. Past studies used unequal numbers of competence and warmth traits (Abele & Wojciszke, 2007; Cottrell et al., 2007; Lusk et al., 1998; Sprecher & Regan, 2002) whereas the thesis used an identical number of the traits and showed less importance of warmth. Future research should consider methodology for the appropriate interpretation of results. Furthermore, the

sample sizes of the two studies were not big (on average 70). If the sample size was bigger, the significant result may arise. Alternatively, it may be that majority of the participants were in their twenties hence their romantic relationship was a dating relationship. If married individuals were recruited, the distinction between romantic relationship and friendship may be clearer and the result may have been different. For instance, if married couple is compared to a long-term partner and a short-term partner, competence may be dependent on the relationship (Jonason et al., 2013; Li & Kenrick, 2006; Stewart et al., 2000).

Sex difference was studied but it contradicts the literature that predominantly predicts female preference for competence and male preference for warmth (Bryan et al., 2011; Li et al., 2002) However, the sample size was not big and the participants were mostly female. Future research can study the sex difference in a bigger sample size to find more conclusive finding (Fisman, Iyengar, Kamenica, & Simonson, 2006; Fletcher et al., 2004; Furnham et al., 2009; Sprecher, Sullivan, & Hatfield, 1994; Stewart et al., 2000, Stewart-Williams & Thomas, 2013). It may be more informative if individual differences are also studied. A meta-analysis suggested that despite the literature documenting individual difference being smaller, it predicts romantic evaluation for those who are in the relationship better than sex difference (Eastwick et al., 2013). This is possibly because it explains how one interprets and forms an impression towards others at a deeper personal level thus has higher predictive validity for choosing a partner. For example, theories of love styles (Hendrick, & Hendrick, 2000; Lee, 1973) and components of love (Sternberg, 1986, 1998; Sternberg & Weis, 2006) which are arguably the most comprehensive theories of love (Engel, Olson & Patrick, 2002) asserted that there is an individual difference in terms of beliefs and expectations about love and this tendency has behavioral implications.

Levine, Aune, and Park (2006) found that love styles were predictive of traits preference for a prospective partner. Particularly, those who love with their head (pragma) consider traits that fall along competence such as money, sex, and success to be important. On the other hand, those who take a long time to develop a romantic relationship (storge) and those who view tolerance and sacrifices as the characteristics of love (agape) valued traits that fall along warmth such as caring, sensitive, humor, understanding, good personality, compassionate, and a good communicator.

Personality differences can be studied. People who are highly narcissistic, psychotic and Machiavellian tend to prefer game-playing and loving with one's head styles of love (Jonason & Kavanagh, 2010). They prefer short-term relationship as opposed to long-term (Jonason et al., 2009). Thus, they may express low concern about how warm their partner is but more concerned about their competence as this will benefit them more. Moreover, Jonason and Schmitt (2012) found that these individuals also choose friends strategically. They consider friendship as an exchange relationship than a communal relationship. Thus, the need for characteristics such as kindness was relatively low (Jonason et al., 2011). Engel and colleague (2002) also found that conscientiousness which is theoretically related to competence significantly predicted intimacy, passion, and commitment. Thus, the inclusion of a basic personality test such as a five-factor inventory (Big 5) would potentially provide more information. Lastly, different cultures could be compared as there is evidence that romantic relationships are not always deemed as the most important relationship (Bejanyan, Marshall, & Ferenczi, 2014, 2015; Wu et al., 2016) therefore implication of competence and warmth may differ accordingly.

Chapter 5: Trait Perceptions of Close friend & Sibling

Sibling Relation

A number of people have at least one sibling (Crispell, 1996; Rowland, 2007). Sibling relation is most likely the richest and longest relation a person can have (Cicirelli, 1995; Connidis, 2001; White & Riedmann, 1992). Unsurprisingly, sibling influence and rely on each other throughout the life course (Bedford & Volling, 2003; Cicirelli, 1991). As a result, sibling share strong emotional ties and intimacy (Dunn, 2007; East, 2009). Research has suggested that sibling relationship quality has an outcome in life. For instance, the lower quality relationship was associated with poor adjustment and problematic behaviors (Bank, Burraston, & Snyder, 2004; Compton, Snyder, Schrepferman, Bank, & Shortt, 2003; Pike, Coldwell, & Dunn, 2005). In contrast, positive sibling relationship was linked to higher self-esteem, academic competence, and empathy (Volling, 2003). Having a sibling allows individuals to learn about social skills they can use in other relationships later on in their life (Conger, Cui, Bryant, & Elder, 2000). Given its significance, developmental psychologists have paid a considerable amount of attention to a sibling relationship. However, sibling has been understudied in the field of social psychology. Therefore, it was the last relationship that was compared to close friendship in this thesis.

Trait Perception of Sibling

Sibling researchers are mostly interested in the personality of sibling with different birth orders (Bleske-Rechek & Kelley, 2014; Damian & Roberts, 2015; Marini & Kurtz, 2011; Salmon, Cuthbertson, & Figueredo, 2016). This line of research is rooted in evolutionary psychology that theorizes sibling to adopt different

roles that are specific to their birth order to maximize investment from parents. As a result, their personalities are shaped by birth order (Lawson & Mace, 2009; Mock, 2004; Sulloway, 1995; Trivers, 1985). Recently, Sulloway (2011) conducted a meta-analysis and found that firstborns are judged by their sibling to be more achieving and conscientious, and later borns are judged as more rebellious and open. Their focuses are also different. Firstborns gain a good amount of investment from their parents, therefore, they reciprocate by prioritizing their family (Pollet & Nettle, 2007; Rohde et al., 2003; Salmon & Daly, 1998). On the other hand, later borns tend to broaden their social network and often turn their focus outward to friends and other exchange partners to gain more emotional support from outside family (Rohde et al., 2003; Salmon & Schumann, 2011). Other research also showed that personality has an influence on the quality of sibling relation. Specifically, sibling who scored high in agreeableness had warmer, less conflicting, and less competitive relationship with their sibling (Furman & Lanthier, 1996; Lanthier, 2007).

Friends have yet to be studied within the scope of warmth and competence as well but the link is clearer. The representative model is the ideal friendship standards model (Hall, 2012). The model proposes six requirements for an ideal same-sex friendship which are symmetrical reciprocity included expectations of commitment, trust, loyalty, and genuineness in friendship. Communion expectations focused on self-disclosure given and received, and expectations of intimacy in friendship. Enjoyment measured the having fun, a sense of humor, and the pleasure of friendship. Instrumental aid were expectations of help, assistance, and support for tasks and duties from friends. Expectations of similarity measured sharing similar attitudes, behaviors, and hobbies with friends. Finally, agency expectations included wanting a friend that is wealthy, attractive, athletic, and well connected." (Hall, 2014 p. 21).

The first five ideals can be linked to warmth dimension whereas agency is arguably related to competence dimension. Therefore, the model implies that a friend who is warm and competent is desirable.

Comparison of Sibling Relation and Friendship

The reason why sibling relation was chosen to be compared with close friendship was that the two relationships share similarities and differences. In terms of duration, friendships and sibling relationships are most likely the longest compared to other relationships (Floyd, 1995). There is also a similarity in demographics because sibling and friends tend to be in the same age group, unlike parent-child relationship. Both relationships are considered to be close although closeness in friendship is a result of similarity whereas closeness between sibling is due to dependability (Floyd, 1995). There is variability in closeness in both relationships (Hartup & Stevens, 1997; Stewart et al., 2001). Close kin differs from distant kin in the same way as a close and distant friend. For instance, sibling (close kin) share more genes than cousin (distant kin). Close friend tends to have more links with each other than do distant friends (Fischer & Shavit, 1995). Furthermore, both relationships are horizontal and egalitarian, again unlike parent-child relationship (Connidis, 2001). They are both governed by mutual concern that leads to an altruistic exchange between partners that is not strictly reciprocal (Clark & Mills, 1993; Tooby & Cosmides, 1996; Walker, Allen, & Connidis, 2005). These theories implied that both relationships have similar mechanisms. However, there has been accumulative evidence that suggested otherwise, which was the stance this chapter took.

The most obvious difference between sibling and friends is a genetic tie. At times, siblings may consider each other as friends and friends may consider each other as sworn sibling at some point in their life (Curry, Roberts, & Dunbar, 2012; Floyd, 1995). But the objective fact remains that sibling share genes through descent whereas friends do not (Ackerman et al., 2007). This biological connection is closely related to another distinction namely voluntariness of relationship. Friendship is voluntary whereas sibling relation is characterized by obligation (Kruger, 2003). Put simply, sibling is given by parents whereas friendship is fluctuating as we have full freedom to choose and change our friends. Although it is true that during emerging adulthood sibling may feel less obligated by the relationship (Aquilino, 2005; Connidis, 2001; Stocker, Lanthier, & Furman, 1997; White, 2001; White & Riedmann, 1992) and this may lead to the higher similarity between the relationship between sibling and friends. But friendship is voluntary throughout the life span (Adams & Blieszner, 1989, 1994; Adams et al., 2000; Antonucci, Akiyama, & Takahashi, 2004), hence makes it more voluntary nonetheless and emerging adults have positive attitudes toward their friends (Kruger, 2003) and to some extent friends can replace kin (Fehr, 1996). In particular, good quality friendship was found to compensate low-quality sibling relation whereas good quality sibling relation did not compensate low-quality friendship (Sherman et al., 2006). In some cases, friends receive the same or more help than a family member (Ackerman et al., 2007; Stacey, 1996; Weeks, Donovan, & Heaphy, 2001). Different natures of the two relationships have implications on their process. Voluntary relationships such as romantic relationship and friendship rely more heavily on investment from partner whereas kinship is characterized by obligation (Allan, 1996; Blieszner & Adams, 1992; Buunk & Prins, 1998; Collins & van Dulmen, 2006; Oswald & Clark, 2003; Plickert, Cote, & Wellman,

2007; Reis, Collins, & Berscheid, 2000; Roberts, 2005; Roberts & Dunbar, 2011b; Rotkirch, Lyons, David-Barrett, & Jokela, 2014).

Traits have implication on the relationship because it predicts whether the person will invest in the relationship or not (Cosmides & Tooby, 2005; Kendrick et al., 2005). One has full control over non-kinship. In contrast, kinship exists as long as there is a genetic tie whereas likelihood to invest in the relationship is not quite relevant. Therefore, traits would be less relevant in the sibling relationship. This would apply to both warmth and competence. As for closeness, it was inconclusive whether close friend or sibling was closer. There has been evidence suggesting that close friend were the closer target (Kruger, 2003; Lempers & Clark-Lempers, 1992; Rotkirch et al., 2014). Conversely, some studies reported that family members (Uleman et al., 2000) were perceived as closer. There were some cases where both were similar (Roberts & Dunbar, 2011). The following studies should provide more conclusive findings regarding this construct.

Study 7: Trait Perception of Close friend and Sibling

The present study used trait perception paradigm to examine competence and warmth of close friend and sibling. Three hypotheses were proposed. Hypothesis 1 queried whether trait perception was more positive in the closer target. Specifically, it asked if the closer target was perceived as more competent and warmer than the less close target. If Hypothesis 1 was validated, Hypothesis 2 stating that closeness could account for different trait perception would have been supported as well. In contrast, if there was a difference in closeness but no difference in trait perception or vice versa, it would mean closeness was not a factor driving the process. Lastly, the primacy-of-warmth hypothesis was tested. It proposed that warmth was more

important than competence. If warmth rating was higher than competence, this hypothesis would have been supported.

Method

Design. The study was a 2 (targets: close friend vs. sibling) by 2 (traits: competence vs. warmth) repeated-measures study.

Participants. The participants were recruited through the university participants pool. There were 118 participants with 95 being female and 23 being male. There were 70 Whites, 17 Asians, 11 Blacks, 7 Hispanics, 7 Mixed, and 6 other ethnicities. The average age of the participants was 22.24 years old (*SD* = 6.31). The majority of the participants (84%) reported having a same-sex close friend. Roughly half evaluated a same-sex sibling (43%) while the rest (57%) evaluated an opposite-sex sibling. Roughly half of the participants (47%) were older than their sibling while the rest was younger than their sibling (53%). Although there were equal splits of birth order and sibling sex, they were not included in the analysis because they were not variables of interest of the present study. Furthermore, most participants were female which would potentially affect the dynamic sibling regardless of the nice split of sibling compositions.

Materials and Procedure. The study was conducted online using Qualtrics. At the beginning of the survey, participants were asked to confirm that they had a sibling. They were then asked to think of one close friend and one sibling and give an initial or name of the targets. They were advised to use any name that would allow them to think of real people and not to make the names similar to each other. The definitions of both targets were on the next page.

"Close friend

*This would be the **same-sex close friend** whom you want to meet regularly. They are someone you feel very comfortable to be with and talk to. You would identify this person as your close friend. It is important that you choose a close friend whom you do not have any romantic feelings towards."*

"Sibling

*If you have more than 1 sibling, please choose the one whose **age** is the most similar to you. For instance, you have a brother and a sister. A brother is 5 years older than you and a sister is 3 years younger than you, you will then proceed with your sister in mind. It does not matter if they are older or younger than you.*

If you have more than 1 sibling whose age is equally different from you e.g., brother is 5 years older than you and sister is 5 years younger, you can proceed with the one who is same sex with you if you have any, if not you can choose either sibling but only 1."

Personality evaluation. After providing the information about the targets, participants evaluated the targets' personality on two separate lists. The presentation order of the list was randomized. The lists consisted of 20 personality traits indicating low and high lever of warmth and competence. The traits were selected from a pretest (refer to Chapter 3). The examples of warmth traits were friendly, generous, bad-tempered and selfish. The examples of competence traits were capable, well-qualified, irresponsible and unproductive. The presentation order of the traits was randomized. The participants indicated if the traits described the target on the 7-level Likert scale with 1 indicating strongly disagree and 7 indicating strongly agree.

Closeness. Participants then answered 3 questions about the closeness they shared with each target. For the target named John, for example, the first item,

Perceived Closeness then asked: "How close are you to John?" This item was retained from the first study. It was a 7-level Likert scale ranging from 1 "Not Close at All" to 7 "Extremely Close". The second item was called Social Circle. Participants chose from the 3 circles in which one they would place the target, Circle 1 represented the most inner circle whereas Circle 3 represented the farthest circle. The last item was the Inclusion of Other in Self item (Aron et al., 1992). Participants chose from 7 pairs of circles that best represented their relationship with each target, 1 depicted the most distant connection while 7 depicted the closest connection.

After participants answered the questions about personality and closeness of every target, they were asked to provide their demographic information. Finally, they were debriefed. The full questionnaire can be found in Appendix I.

Results

Closeness. Firstly, closeness scores were analyzed to see if there was the difference between close friend and sibling measuring by three items: a 7-level Likert scale, a social circle item, and an Inclusion of Other in Self item. The social circle and the Inclusion of Other in Self items were reverse-scored to allow the comparison with the Likert scale. The higher score reflected a higher level of closeness. Reliability analysis was conducted to check if the items measured the same construct. The items had good reliability for both close friend ($\alpha = .70$) and sibling ($\alpha = .84$).

Paired *t*-tests were then used to analyze the difference between the two targets for the items. As shown in Table 5.1 on the next page, there was a robust significant difference between the targets. Results from every item indicated that close friend was perceived to be the closer target compared to sibling.

Table 5.1

Descriptive statistics (Ms and SDs), t-test statistics, and effect sizes (Cohen's d) for Closeness of Close friend and Sibling (N = 118)

	Friend	Sibling	*t*	*d*
Perceived closeness	6.09 (.81)	5.11 (1.59)	6.16*	.57
Social circle	2.76 (.45)	2.51 (.64)	3.37*	.31
Inclusion of Other in Self	5.35 (1.04)	4.70 (1.48)	4.58*	.42

* $p \leq .001$

Trait perception. Descriptive statistics of competence and warmth scores of close friend and sibling, as well as Cronbach's alphas, were presented in Table 5.2 below.

Table 5.2

Trait Ratings (Ms and SDs) and Cronbach's α of Close friend and Sibling

	Competence	α	Warmth	α
Friend	5.92 (.81)	.81	5.88 (.78)	.64
Sibling	5.61 (1.15)	.87	5.37 (1.11)	.75

Target & traits. To determine whether difference in the closeness level of targets has any effect on the perception of competence and warmth, a 2 (targets: close friend vs. sibling) by 2 (traits: competence vs. warmth) repeated-measures ANOVA was used to analyze the trait ratings.

The analysis revealed the significant main effect of target: $F(1,117) = 17.77$, $p < .001$, $\eta_p^2 = .13$. Overall, close friend ($M = 5.90$, $SE = .06$) were seen as more

competent and warmer than sibling (M = 5.49, SE = .09). This means global impression of close friend was more positive than that of sibling.

The analysis also revealed the significant main effect of traits: $F(1,117)$ = 4.18, p = .043, η_p^2 = .04. Overall, the targets were perceived to possess more competence traits (M = 5.76, SE = .07) than warmth traits (M = 5.63, SE = .07). The close friend and the sibling were perceived to be more competent than warm.

The interaction between targets and traits was not significant, $F(1,117)$ = 2.42, p = .122, η_p^2 = .02. This was because close friend scored significantly higher than sibling on both traits as shown in Figure 5.1 below. The pairwise comparisons revealed the significant simple main effect of target on competence, $F(1,117)$ = 7.11, p = .009, η_p^2 = .06. Competence of close friend (M = 5.92, SE = .07) was higher than competence of sibling (M = 5.88, SE = .07). The same pattern was found for warmth, $F(1,117)$ = 19.45, p < .001, η_p^2 = .14. Warmth of close friend (M = 5.61, SE = .11) was higher than warmth of sibling (M = 5.37, SE = .10).

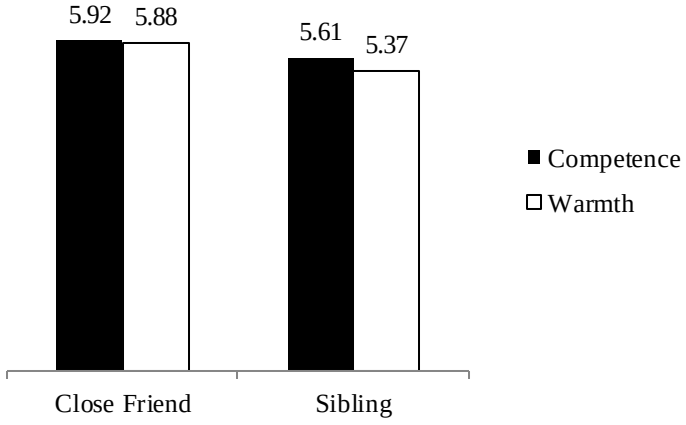

Figure 5.1 Trait Ratings of Close friend and Sibling

Correlations. To examine the relationship between closeness and the trait perceptions, correlation analyses were conducted. The scores from three items

measuring closeness were standardized and averaged for a close friend and sibling. These composite scores were then entered into the analysis with scores of competence and warmth. The results were presented in Table 5.3 below.

Table 5.3

Correlations of Closeness and Trait Ratings of Close friend and Sibling

	Closeness	Competence	Warmth
Friend			
Closeness	1	.28**	.21*
Competence		1	.30**
Warmth			1
Sibling			
Closeness	1	.61**	.59**
Competence		1	.56**
Warmth			1

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

For close friend, closeness had a positive correlation with competence and warmth. The correlations were medium (Cohen's conventions for *r* effect sizes). This means as closeness of the friendship increased or decreased, so did the trait perceptions of the friend. For sibling, closeness had a positive correlation with competence and warmth. The correlations were large (Cohen's conventions for *r* effect sizes). This means as closeness of sibling relationship increased or decreased, so did the trait perception of the sibling

Mediation. Following the results of correlation and ANOVA, the mediation analyses were conducted to directly test the effect of closeness as the mediator. Competence and warmth were analyzed separately. MEMORE and bootstrapping method were used. For more details, please refer to p. 43.

Competence. For this analysis, competence ratings of close friend and sibling were entered as the dependent variables while the closeness ratings of close friend and sibling were entered as the mediators. The model was significant, $R^2 = .197$, $F(2,115) = 14.09$, $p < .001$. Target and closeness accounted for about 20% of variance of competence. The total effect of the target and closeness on competence rating was significant, $b = .311$, $SE = .117$, $t(117) = 2.67$, $p = .009$. After controlling for closeness, the direct effect of target on competence became non-significant, $b = .078$, $SE = .123$, $t(115) < 1$, $p = .528$. This indicated mediational effect of closeness. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was significant, $b = .234$, $SE = .092$, 95% CI [.062, .423]. This means closeness mediated competence perception. As closeness score increased by 1 point, competence rating increased by .23 units.

Warmth. For this analysis, warmth ratings of close friend and sibling were entered as the dependent variables while the closeness ratings of close friend and sibling were entered as the mediators. The model was significant, $R^2 = .335$, $F(2,115) = 28.94$, $p < .001$. Target and closeness accounted for about 34% of variance of warmth rating. The total effect of the target and closeness on warmth rating was significant, $b = .508$, $SE = .115$, $t(117) = 4.41$, $p < .001$. After controlling for closeness, the direct effect of target on warmth remained significant, $b = .248$, $SE = .110$, $t(115) = 2.25$, $p = .026$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was significant, $b = .26$, $SE = .075$, 95% CI [.126, .416]. This means closeness partially warmth perception. As closeness score increased by 1 point, warmth rating increased by .26 units.

Discussion

The present study explored perceptions of competence and warmth of close friend and sibling. The study was a fully repeated-measures study with target and trait as the variables. It was found that participants felt closer to their close friend than sibling. This supports the past research (Kruger, 2003; Roberts & Dunbar, 2011; Rotkirch et al., 2014). Therefore, close friend was predicted to be perceived as warmer and more competent than sibling.

ANOVA was used to test Hypothesis 1 that speculated a linear trend between closeness and trait perception. Following the preliminary result, Hypothesis 1 asked if close friend, the closer target, would have been perceived as more competent and warmer than sibling. The results support the hypothesis as close friend was perceived as more competent and warmer than sibling. The findings can be explained by different relationship mechanisms between the two. While voluntary relationships such as friendship is voluntary and based on investment between relational partners, kinship is based on an obligation (Allan, 1996; Collins & van Dulmen, 2006; Oswald & Clark, 2003; Rotkirch et al., 2014). Traits have more implications on a voluntary relationship which is the relationship that an individual has control over. In contrast, one does not have control of kinship and traits are less important. As discussed, there is a preference for a friend who has positive traits as they are likely to be beneficial to the perceiver or their friend (Hall, 2011; Peeters, 1992). Therefore, desirable attributes are more sought after in close friend than in sibling. This increases closeness between friends and leads to positive evaluation towards them, It seems that closeness was able to differentiate relationship between friends and siblings. Nonetheless, a mediation analysis was used to directly test the effect of closeness. As expected, closeness mediated perception of competence and warmth. Consequently,

Hypothesis 2 stating that closeness accounted for differential trait perception was supported.

Lastly, the primacy-of-warmth hypothesis was not supported (Hypothesis 3). Close friend and sibling were seen as possessing more competence traits than warmth traits. The finding is not in line with the previous research that emphasized the higher importance of warmth over competence in friendship (Abele & Wojciszke, 2007; Hall, 2011; Helgeson, 2004). It is in line with the past research that found the increased importance of competence in the relationships that the level of inter-dependence was high (Abele & Brack, 2013; Wojciszke et al., 1998; Wojciszke & Abele, 2008). Since both close friendship and sibling relation were shown to be high in closeness it is possible that the importance of competence increased.

Study 8: Trait Transgression of Close friend & Sibling

A relational partner does not always meet relationship expectations. This is particularly true for close relationships such as friendship and familial relationships that partners spend significant time together (Johnson, 2005; Petronio, 1994). For instance, friends elicit negative emotions such as anger more than other people (Brendgen, Markiewicz, Doyle, & Bukowski, 2001; Fehr & Baldwin, 1996; Russell & Fehr, 1994). The same holds true for sibling that compete for familial resources (Behrman, 1997; Behrman et al., 1995; Foster, 2002; Pollet & Hoben, 2011; Trivers, 1985; Yeung, Linver, & Brooks-Gunn, 2002) and prone to experience sibling rivalry and jealousy (Rauer & Volling, 2007; Volling, McElwain, & Miller, 2002).

Trait transgression was not presented before and not for sibling and close friend. But following the results from Study 7 that found warmth and competence to be higher in friends, it would be safe to assume that friends would be more suscep-

tible to trait transgression indicating a lack of competence and warmth more than sibling (Hypothesis 1). If this prediction was confirmed, it would provide additional support for the findings from Study 7 and to the previous literature which described friendship as more transitory than sibling relationship (Allan, 1996; Buunk & Prins, 1998; Collins & van Dulmen, 2006; Oswald & Clark, 2003; Reis et al., 2000; Plickert et al., 2007; Roberts, 2010; Roberts & Dunbar, 2011). It would also confirm the proposition that closeness could account for different trait perception of close friend and sibling. The primacy-of-warmth hypothesis proposed that warmth was more important than competence. If warmth transgression was shown to have more impact than competence transgression, this hypothesis would have been supported. However, the results from Study 7 showed that competence was more emphasized for close friendship and sibling relationship. Therefore, a competing hypothesis was proposed, that is competence transgression would have had stronger impact on close friend and sibling. If competence transgression were shown to have more impact than warmth transgression, this hypothesis would have been supported. Lastly, Hypothesis 4 addressed the effect of trait transgression. Specifically, if there was a motivation to preserve positive thoughts toward the target, a positive correlation of trait perception before and after the trait transgression would have been found.

Method

This study was an online study using Qualtrics. Two questionnaire links (one for competence transgression and one for warmth transgression) were sent to potential participants whom were asked to take part in either of the surveys.

Participants. Two groups of participants completed the questionnaires. They were recruited through the university participants pool.

Competence transgression. Sixty-one participants completed the questionnaire for competence transgression. They were 52 females and 9 being males. There were 36 Whites, 10 Blacks, 8 Asians, 4 Hispanics and 3 Mixed-ethnicities participants. The average age of the participants was 22.58 years old (*SD* = 4.79). Roughly half evaluated a younger sibling while completing the survey (57.4%) and the rest (42.6%) evaluated an older sibling.

Warmth transgression. Fifty-six participants took part in this questionnaire. with 44 being female and 12 were male. There were 35 White, 9 Asian, 6 Black, 3 Hispanic, 1 Mixed and 2 participants who identified themselves as other ethnicities. The average age of the participants was 22.61 years old (*SD* = 5.08). More than half reported thinking of a younger sibling whilst completing the survey (60.7%) while the rest (39.3%) reported thinking of an older sibling whilst completing the survey.

Materials and Procedure. The studies were conducted online using Qualtrics. First, the participants were asked to confirm that they were in a relationship at the time they took part in the study. After the confirmation, they were asked to think of one close friend and one sibling that fit the description below and filled in their initials or the names to be used later.

"Close friend

*This would be the **same-sex close friend** whom you want to meet regularly. They are someone you feel very comfortable to be with and talk to. You would identify this person as your close friend. It is important that you choose a close friend whom you do not have any romantic feelings towards."*

"Sibling

*If you have more than 1 sibling, please choose the one whose **age** is the most similar to you. For instance, you have a brother and a sister. A brother is 5 years*

older than you and a sister is 3 years younger than you, you will then proceed with your sister in mind. It does not matter if they are older or younger than you.

If you have more than 1 sibling whose age is equally different from you e.g., brother is 5 years older than you and sister is 5 years younger, you can proceed with the one who is same sex with you if you have any, if not you can choose either sibling but only 1."

Pre-transgression evaluation. After reporting information about the relationships and their partners, the participants were asked to think about each target and rate their personality in a random order. The names that the participants provided in the previous stage were integrated into the instructions. If a participant named John, for example, the instructions for trait rating read "Please think of your close friend, John. In your opinion, do the following traits describe him?". The scale was a 7-point Likert scale with 7 as "strongly agree" and 1 as "strongly disagree". Eight traits taken from Kervyn and colleague (2009) were used. The warmth traits were caring, popular, sociable, and warm. The competence traits were capable, competence, determined, and skilled. The presentation order of the traits was randomized. The scores from this stage were used as pre-transgression scores. In addition to answering the question about the traits, the participants answered 3 questions about closeness they shared with each target. The first was a perceived closeness scale in the form of 7-level Likert scale ranging from 1 "Not Close at All" to 7 "Extremely Close". The second item was a social circle. The participants chose from 3 circles in which one they would place the target. The last closeness item was an Inclusion of Other in Self (Aron et al., 1992). The participants chose from 7 pairs of circles the pair that best represented their relationship with each target.

Trait transgression. Following the pre-transgression evaluation, two scenarios describing either competence transgression or warmth that were carried out by the nominated close friend and sibling were presented in a random order. The target was randomized for each vignette. Neither target or the scenario was repeated. The name John was used as an example.

Competence transgression vignettes.

"You and John took a test. You found that the test was much easier than you expected. You looked around and apparently many people finished quickly. But John looked nervous and used up all the time. After the time was up, he told you that he found the test rather difficult and was not confident at all. Later, the mark was announced. John told you that he got a very bad mark"

"You were always reluctant when John asked if you wanted a lift. You saw his car always full of scratches here and there all over the car. John was known to be a bad driver. He took 3 times to get a driving license. He got into an accident a lot since he had been driving for a few years even when the vision was good. A few days later, you learned that John had an accident when driving again."

Warmth transgression vignettes.

"The weekend was coming and you planned to spend time with John. You decided to ask him if he wanted to do something together. You gave him choices of activity: going to the sports center, going for a movie, going to a pub to watch a match, or having dinner. John said he couldn't because the family wanted to do something on the weekend too. On Monday, you overheard him talking with your mutual friend about how fun the weekend they spent together was.

"Your parents and you had been arguing a lot lately. They always nagged that you were not home enough and when you were home they nagged that you were

being lazy and wasting time. Frustrated, you told John about this. He did not react much. You had a feeling that he was not really listening. When you asked him what he reckoned you should do he simply said: You will get over it".

Post-transgression evaluation. Each scenario was followed by the same personality evaluation scale used in the pre-transgression evaluation stage. These scores were used as post-transgression scores. Following that, the self-rating scale was presented. The participants evaluated their personality with the same traits used for the close friend and the sibling. Demographic information was collected before the debrief. The full questionnaire can be found in Appendix J.

Results.

The data for competence and warmth transgressions were analyzed separately. The results from closeness and reliability analyses were first presented together. The results for ANOVA, correlation, and mediation analyses were presented separately later on.

Closeness. Firstly, closeness scores were analyzed to see if there was the difference between close friend and sibling measuring by three items: a 7-level Likert scale, a social circle item, and an Inclusion of Other in Self item. The social circle and the Inclusion of Other in Self items were reverse-scored to allow the comparison with the Likert scale. The higher score reflected a higher level of closeness. Reliability analysis was then conducted to check if the items measured the same construct. The results were presented in Table 5.4 on the next page.

Table 5.4

Cronbach's α of Closeness Items of Close friend and Sibling: Transgression Study

	Competence transgression (N = 61)	Warmth transgression (N = 56)
Close friend	.65	.58
Sibling	.80	.76

Paired *t*-test was then used to analyze the difference between the two targets for the items. As shown in Table 5.5 below, there was a robust significant difference between the targets in the competence transgression questionnaire whereas participants who took part in the warmth transgression questionnaire felt as close to their friend as they were to their sibling.

Table 5.5

Descriptive statistics (Ms and SDs), t-test statistics and effect sizes (Cohen's d) for Closeness of Close friend and Sibling: Transgression Study

	Friend	Sibling	*t*	*d*
Competence transgression				
Perceived closeness	5.54 (.99)	5.08 (1.51)	2.24*	.29
Social circle	2.67 (.54)	2.57 (.59)	.93	.12
Inclusion of Other in Self	5.46 (.92)	4.89 (1.36)	2.86**	.37
Warmth transgression				
Perceived closeness	5.57 (1.08)	5.61 (1.34)	-.24	.03
Social circle	2.63 (.52)	2.73 (.49)	-1.18	.16
Inclusion of Other in Self	5.16 (1.25)	5.25 (1.41)	-.49	.07

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

Reliability analyses. Scores from pre and post-transgression evaluation of the two targets, as well as score from self-rating, were analyzed. Overall, the items had good reliability. The Cronbach alphas are presented in Table 5.6 below.

Table 5.6

Reliability Analyses of Trait Ratings of Close friend and Sibling: Transgression Study

Target	Pre		Post	
	Competence	Warmth	Competence	Warmth
Competence transgression				
Friend	.74	.75	.87	.80
Sibling	.84	.79	.89	.83
Warmth transgression				
Friend	.80	.75	.87	.81
Sibling	.90	.82	.91	.81

Competence transgression[10]. Descriptive statistics of competence and warmth scores of close friend and sibling were presented in Table 5.7 below.

Table 5.7

Trait Ratings (Ms and SDs) of Close friend and Sibling: Competence Transgression

Target	Competence		Warmth	
	Pre	Post	Pre	Post
Friend	5.77 (.83)	5.20 (1.11)	5.72 (.86)	5.63 (.96)
Sibling	5.49 (1.11)	4.91 (1.35)	5.39 (1.20)	5.37 (1.22)

[10] To ensure that the scenarios had the same effect, 2 (time: pre vs. post) by 2 (trait: competence vs. warmth) repeated-measures ANOVAs were carried out for the scenarios to see if they had the same effect on trait ratings. Close friend and sibling was analyzed separately. Scenario 2 led to starker decrease of competence for both targets. Since a half of participants read scenario 2 for either target and scenario 1 for the other, its effect would have been cancelled out.

The data were then analyzed with 2 (time: pre vs. post) by 2 (targets: close friend vs. sibling) by 2 (traits: competence vs. warmth) within-subjects design.

The ANOVA revealed the significant main effect of time, $F(1,60) = 26.10$, $p < .001$, $\eta_p^2 = .30$, showing that the overall rating was higher before the competence transgression ($M = 5.70$, $SE = .10$) than after the transgression ($M = 4.85$, $SE = .14$). These results indicated that the competence transgression had a negative impact on global impression toward the targets. After being exposed to the behaviors that indicated a lack of competence, close friend and sibling were perceived to be less warm and competent in general.

The analysis also revealed the significant main effect of target, $F(1,60) = 4.55$, $p = .037$, $\eta_p^2 = .07$. The trait rating of close friend was higher ($M = 5.58$, $SE = .09$) than sibling ($M = 5.29$, $SE = .13$). The finding shows that close friend was seen to possess more warmth and competence than sibling. The main effect of traits was not significant. The overall ratings of warmth and competence were equivalent.

The analysis suggested the significant interaction of time and traits, $F(1,60) = 30.72$, $p < .001$, $\eta_p^2 = .34$. The pairwise comparisons revealed the significant simple main effect of time on competence, $F(1,60) = 4.81$, $p = .032$, $\eta_p^2 = .074$. Competence score before the competence transgression ($M = 5.74$, $SE = .09$) was higher than after the transgression ($M = 5.42$, $SE = .13$). The simple main effect of time on warmth was not significant, $F(1,60) = 3.52$, $p = .066$, $\eta_p^2 = .06$. The results show that transgression indicating a lack of competence only affected the perception of competence (also see Figure 5.2 in the next page). No other interaction was significant.

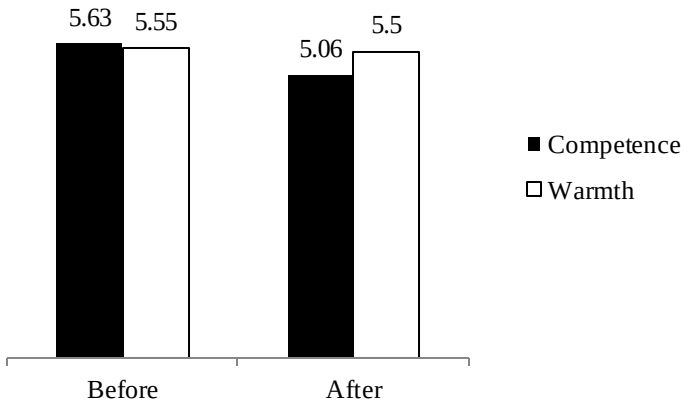

Figure 5.2 Trait Ratings of Close friend and Sibling before and after Competence Transgression

Correlations. To examine the relationship between closeness and trait perception of close friend and sibling, correlation analyses were conducted. The scores from three items measuring closeness were standardized and averaged for close friend and sibling. These composite scores were then entered into the analysis with scores of competence and warmth. The results were presented in Table 5.8 below and on the next page.

Table 5.8

Correlations of Closeness and Trait Perception: Competence Transgression

Friend	1	2	3	4	5
1. Closeness	1	.39**	.41**	.25	.39**
2. Pre Competence		1	.47**	.59**	.43**
3. Pre Warmth			1	.25	.81**
4. Post competence				1	.31*
5. Post warmth					1

Table 5.8 (continued)

Correlations of Closeness and Trait Perception: Competence Transgression

Sibling	1	2	3	4	5
1. Closeness	1	.53**	.63**	.39**	.56**
2. Pre Competence		1	.52**	.72**	.45**
3. Pre Warmth			1	.37**	.90**
4. Post competence				1	.40**
5. Post warmth					1

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

For close friend, closeness had a positive correlation with pre-transgression competence and warmth as well as post-transgression warmth. The correlations were medium to large (Cohen's conventions for *r* effect sizes). This means as closeness increased or decreased, so did the competence rating after the transgression, warmth before and after the transgression.

The correlation was stronger in sibling. Closeness had a positive correlation with every trait rating. The correlations were medium to large (Cohen's conventions for *r* effect sizes). This means as closeness increased or decreased, so did the trait ratings.

Mediation. Following the ANOVA and correlation analysis, the mediation analyses were conducted to directly test the effect of closeness as the mediator. Competence and warmth scores before and after warmth transgression were analyzed separately. MEMORE and bootstrapping method were used. For more details, please refer to p. 43.

Competence. Firstly, pre-transgression competence ratings of close friend and sibling were entered as the dependent variables while the closeness ratings of close

friend and sibling were entered as the mediators. The model was significant, R^2 = .249, F(2,58) = 9.61, p = .001. Target and closeness accounted for 25% of variance of difference in competence rating. The total effect of target and closeness on competence was not significant, b = .275, SE = .161, t(60) = 1.71, p = .093. After controlling for closeness, the direct effect of target on competence rating remained non-significant, b = .275, SE = .142, t(58) = 1.94, p = .058. The indirect effect of closeness was tested by bootstrapping method with 5000 samples. The indirect effect was not significant, b = 0, SE = .057, 95% CI [-.125, .109]. This means closeness did not mediate competence perception before competence transgression.

Next, post-transgression competence ratings of close friend and sibling were entered as the dependent variables while the closeness ratings of close friend and sibling were entered as the mediators. The model was significant, R^2 = .108, F(2,58) = 3.53, p = .036. Target and closeness accounted for 11% of variance of difference in competence. The total effect of target and closeness on competence was not significant, b = .287, SE = .188, t(60) = 1.53, p = .132. After controlling for closeness, the direct effect of target on the competence rating remained non-significant, b = .287, SE = .181, t(58) = 1.59, p = .118. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was not significant, b = 0, SE = .038, 95% CI [-.070, .095]. This means closeness did not mediate the competence perception after competence transgression.

Warmth. For this analysis, pre-transgression warmth ratings of close friend and sibling were entered as the dependent variables while the closeness ratings of close friend and sibling were entered as the mediators. The model was significant, R^2 = .337, F(2,58) = 9.61, p < .001. Target and closeness accounted for 34% of variance of difference in competence rating. The total effect of target and closeness

on competence was not significant, $b = .332$, $SE = .172$, $t(60) = 1.93$, $p = .058$. After controlling for closeness, the direct effect of target on competence rating became significant, $b = .332$, $SE = .143$, $t(58) = 2.33$, $p = .023$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was not significant, $b = 0$, $SE = .094$, 95% CI [-.176, .206]. This means closeness did not mediate warmth perception before competence transgression.

Lastly, post-transgression warmth ratings of close friend and sibling were entered as the dependent variables while the closeness ratings of close friend and sibling were entered as the mediators. The model was significant, $R^2 = .228$, $F(2,58) = 8.57$, $p = .001$. Target and closeness accounted for 23% of variance of difference in competence. The total effect of target and closeness on competence was not significant, $b = .266$, $SE = .180$, $t(60) = 1.48$, $p = .145$. After controlling for closeness, the direct effect of target on the competence rating remained non-significant, $b = .266$, $SE = .161$, $t(58) = 1.65$, $p = .104$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was not significant, $b = 0$, $SE = .083$, 95% CI [-.140, .199]. This means closeness did not mediate the warmth perception after competence transgression.

Pre-Post Transgression Correlations. The last analysis was conducted to examine the correlation between trait ratings before and after competence transgression.

Close friend. Competence rating of close friend before and after the transgression was positive, $r = .59$, $p < .001$. The correlation was large (Cohen's conventions for *r* effect sizes). This means as competence rating before the transgression increased or decreased, so did the rating after and vice versa. Warmth rating of close

friend before and after competence transgression was positive, $r = .81$, $p < .001$. The correlation was very large (Cohen's conventions for *r* effect sizes). This means as warmth rating before the transgression increased or decreased, so did the rating after and vice versa.

Sibling. Competence rating of sibling before and after competence transgression was positive, $r = .72$, $p < .001$. The correlation was large (Cohen's conventions for *r* effect sizes). This means as competence rating before the transgression increased or decreased, so did the rating after and vice versa. Warmth rating of sibling before and after competence transgression was positive, $r = .90$, $p < .001$. The correlation was large (Cohen's conventions for *r* effect sizes). This means as warmth rating before the transgression increased or decreased, so did the rating after and vice versa. The results suggested that the trait perception before and after competence transgression were similar. This applied for both traits and both targets.

Warmth transgression[11]. The scores of competence and warmth before and after the transgression involving a lack of warmth were analyzed. Descriptive statistics of competence and warmth scores of close friend and sibling were presented in Table 5.9 below.

Table 5.9

Trait Ratings (Ms and SDs) of Close friend and Sibling: Warmth Transgression

Target	Competence		Warmth	
	Pre	Post	Pre	Post
Friend	5.78 (.90)	5.14 (1.10)	5.77 (.93)	4.48 (1.23)
Sibling	5.72 (1.21)	5.16 (1.35)	5.54 (1.23)	4.60 (1.37)

N = 56

[11] To ensure that the scenarios had the same effect, 2 (time: pre vs. post) by 2 (trait: competence vs. warmth) repeated-measures ANOVAs were carried out for the scenarios to see if they had the same effect on trait ratings. Close friend and sibling was analyzed separately. Both scenarios led to significant decreases of both traits for both targets.

The data were then analyzed by a 2 (time: pre vs. post) by 2 (targets: close friend vs. sibling) by 2 (traits: competence vs. warmth) repeated-measures ANOVA.

The analysis revealed the significant main effect of time, $F(1,55) = 56.70$, $p < .001$, $\eta_p^2 = .51$, showing that the overall rating was higher before warmth transgression ($M = 5.70$, $SE = .10$) than after the transgression ($M = 4.85$, $SE = .14$). The results indicate that the warmth transgression had a negative impact on global impression toward the targets. Specifically, after being exposed to behaviors suggesting a lack of warmth, close friend and sibling were perceived to be less warm and competent.

The analysis also revealed the significant main effect of trait, $F(1,55) = 15.70$, $p < .001$, $\eta_p^2 = .22$. Competence rating ($M = 5.45$, $SE = .11$) was higher than warmth rating ($M = 5.10$, $SE = .12$). Close friend and sibling were generally seen as possessing more competence traits than warmth traits. The main effect of target was not significant.

The interaction of time and trait was also significant, $F(1,55) = 21.73$, $p < .001$, $\eta_p^2 = .28$. The pairwise comparisons revealed the significant simple main effect of time on competence, $F(1,55) = 25.43$, $p < .001$, $\eta_p^2 = .32$. Competence rating before warmth transgression ($M = 5.75$, $SE = .10$) was higher than the rating after the transgression ($M = 5.15$, $SE = .14$). Time also had the significant main effect on warmth, $F(1,55) = 69.31$, $p < .001$, $\eta_p^2 = .56$. Warmth rating before warmth transgressions ($M = 5.66$, $SE = .11$) was higher than the rating after the transgression ($M = 4.54$, $SE = .16$). The results showed that the transgression indicating lack of warmth significantly affected the perception of competence and warmth, but to a

greater degree on warmth (also see Figure 5.3 on the next page). No other interaction was significant.

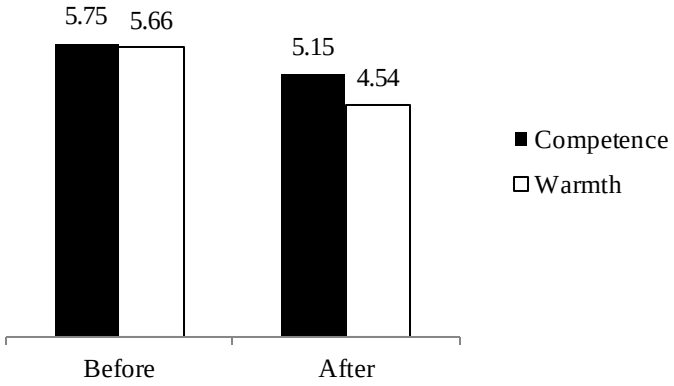

Figure 5.3 Trait Ratings before and after Warmth Transgression

In summary, the ANOVA suggests that warmth transgression affected both competence perception and warmth perception. It had an equivalent impact on close friend and sibling.

Correlations. The scores from three items measuring closeness were standardized and averaged for close friend and sibling. These composite scores were then entered into the analysis with scores of competence and warmth. The results were presented in Table 5.10 on the next page. For close friend, closeness had a positive correlation with pre-transgression competence and warmth. The correlations were medium (Cohen's conventions for *r* effect sizes). This means as the closeness of the friendship increased or decreased so did the competence and warmth ratings of the friend before the transgression.

The correlation was stronger in sibling. Closeness had a positive correlation with every trait rating. The correlations were medium to large (Cohen's conventions for *r* effect sizes). This means as closeness between siblings increased or decreased, so did the trait ratings of the sibling.

Table 5.10

Correlations of Closeness and Trait Perception of Close friend and Sibling: Warmth Transgression

Friend	1	2	3	4	5
1. Closeness	1	.32*	.38**	.06	.14
2. Pre Competence		1	.54**	.45**	.53**
3. Pre Warmth			1	.11	.47**
4. Post competence				1	.59**
5. Post warmth					1
Sibling	1	2	3	4	5
1. Closeness	1	.39**	.61***	.50***	.41**
2. Pre Competence		1	.57**	.62**	.29*
3. Pre Warmth			1	.56**	.62**
4. Post competence				1	.70**
5. Post warmth					1

*** $p < .001$ ** $p < .01$ * $p < .05$

Mediation. Following the ANOVA and correlation analysis, the mediation analyses were conducted to directly test the effect of closeness as the mediator. Competence and warmth scores before and after warmth transgression were analyzed separately. MEMORE and bootstrapping method were used. For more details, please refer to p. 43.

Competence. Firstly, pre-transgression competence ratings of close friend and sibling were entered as dependent variables while the closeness ratings of close friend and sibling were entered as mediators. The model was significant, $R^2 = .129$, $F(2,53) = 3.92$, $p = .026$. Target and closeness accounted for 13% of variance of competence

rating. The total effect of target and closeness on competence was not significant, $b = .063$, $SE = .194$, $t(55) < 1$, $p = .749$. After controlling for closeness, the direct effect of target on competence rating remained non-significant, $b = .108$, $SE = .185$, $t(53) < 1$, $p = .561$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was not significant, $b = -.046$, $SE = .070$, 95% CI [-.169, .121]. This means closeness did not mediate competence perception before warmth transgression.

Next, post-transgression competence ratings of close friend and sibling were entered as the dependent variables while the closeness ratings of close friend and sibling were entered as the mediators. The model was significant, $R^2 = .162$, $F(2,53) = 5.13$, $p = .009$. Target and closeness accounted for 16% of variance of competence. The total effect of target and closeness on competence was not significant, $b = -.022$, $SE = .169$, $t(55) < -1$, $p = .895$. After controlling for closeness, the direct effect of target on the competence rating remained non-significant, $b = -.005$, $SE = .158$, $t(53) < -1$, $p = .974$. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was not significant, $b < 1$, $SE = .034$, 95% CI [-.093, .048]. Closeness did not mediate competence perception after warmth transgression.

Warmth. For this analysis, pre-transgression warmth ratings of close friend and sibling were entered as the dependent variables while the closeness ratings of close friend and sibling were entered as the mediators. The model was significant, $R^2 = .237$, $F(2,53) = 8.25$, $p = .001$. Target and closeness accounted for 24% of variance of warmth rating. The total effect of target and closeness on warmth was not significant, $b = .228$, $SE = .195$, $t(55) = 1.17$, $p = .248$. After controlling for closeness, the direct effect of target on warmth rating remained non-significant, $b = .278$,

SE = .174, *t*(53) = 1.60, *p* = .116. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was not significant, *b* < -1, *SE* = .082, 95% CI [-.213, .129]. This means closeness did not mediate warmth perception before warmth transgression.

Lastly, post-transgression warmth ratings of close friend and sibling were entered as the dependent variables while the closeness ratings of close friend and sibling were entered as the mediators. The model was not significant, R^2 = .061, *F*(2,53) = 1.73, *p* = .188. Target and closeness accounted for 6% of variance of warmth rating. The total effect of target and closeness on warmth was not significant, *b* = -.125, *SE* = .150, *t*(55) < -1, *p* = .409. After controlling for closeness, the direct effect of target on the warmth rating remained non-significant, *b* = -.016, *SE* = .149, *t*(53) < 1, *p* = .468. The indirect effect of closeness was tested using bootstrapping method with 5000 samples. The indirect effect was not significant, *b* = -.016, *SE* = .040, 95% CI [-.116, .051]. Closeness did not mediate warmth perception after warmth transgression.

Pre-Post Transgression Correlations. The last analysis was conducted to examine the correlation between trait ratings before and after warmth transgression.

Close friend. Competence rating of close friend before and after the transgression was positive, *r* = .45, *p* < .001. The correlation was medium to large (Cohen's conventions for *r* effect sizes). This means as competence rating before the transgression increased or decreased, so did the rating after and vice versa. Warmth rating of close friend before and after competence transgression was positive, *r* = .47, *p* < .001. The correlation was medium to large (Cohen's conventions for *r* effect sizes). This means as warmth rating before the transgression increased or decreased, so did the rating after and vice versa.

Sibling. Competence rating of sibling before and after warmth transgression was positive, $r = .62$, $p < .001$. The correlation was large (Cohen's conventions for r effect sizes). This means as competence rating before the transgression increased or decreased, so did the rating after and vice versa. Warmth rating of sibling before and after competence transgression was positive, $r = .62$, $p < .001$. The correlation was large (Cohen's conventions for r effect sizes). This means as warmth rating before the transgression increased or decreased, so did the rating after and vice versa. The results suggested that the trait perception before and after competence transgression were similar. This applied for both traits and both targets.

Discussion

This study explored the perceptions of competence and warmth of close friend and sibling, before and after experiencing transgression of different types: one that was indicative of competence of the targets and one that concerned warmth of the targets.

Participants who completed the questionnaire of competence transgression were more likely to perceive friends as the closer targets compared to sibling. This difference was not found in participants who took part in warmth transgression questionnaire. This finding seemingly had the impact on the trait perceptions as the impact of competence and warmth transgression was equivalent on the perception of close friend and sibling. This did not replicate the previous findings that found friendship a closer relationship (Kruger, 2003; Roberts & Dunbar, 2011; Rotkirch et al., 2014). Therefore, when ANOVA was used to test Hypothesis 1 stating that the closer target would have been affected by trait transgression, the hypothesis was not supported. Consistently, when mediation analyses were used to test Hypothesis 2

which proposed that closeness could account for the different trait perceptions of close friend and sibling, it was found that closeness did not influence trait perception. Thus, Hypothesis 2 was not supported either. This study did not show that close friend and sibling are perceived differently as hypothesized. The most likely cause is the small sample size (about 60 for each type of transgression). A bigger sample size is needed to show a significant result.

Hypothesis 3 tested the primacy-of-warmth hypothesis. Both types of transgression affected both traits but warmth transgression had a stronger effect to some extent. Therefore, there is some evidence for this hypothesis. This is in line with the previous findings that suggested the higher importance of warmth in close relationships (Helgeson, 2004; Rodriguez et al., 2015; Sprecher & Regan, 2002). As a close friend and sibling are considered close relationships, both competence and warmth have implications. Lastly, Hypothesis 4 speculating a motivation to preserve positive thoughts toward close others despite being exposed to the behaviors that suggested otherwise. This hypothesis was strongly supported by the correlation between trait ratings before and after trait transgression. This means, there was an attempt to maintain the initial positive perception toward close friend and sibling even though they showed incompetence or coldness (Murray et al., 1996a, 2001).

General Discussion

The past two studies used different paradigms to study trait perception of close friend and sibling. Study 7 used the trait perception paradigm while study 8 used the trait transgression paradigm. It was not clear which relationship is the closer relationship as the studies provided somewhat conflicting results. Study 7 clearly showed that close friend was the closer target compared to sibling whereas Study 8

provided somewhat consistent result. As expected only Study 7 showed that closeness mediated trait perception. That is, close friend was perceived as warmer and more competent than sibling. When trait transgression was used, the same result was not found as trait transgressions had the similar effect on close friend and sibling. It is possible that the difference methodologies led to inconsistency. The way to test if the difference was in the paradigms is to recruit more participants and invite them to take part in both paradigms.

Regarding the importance of competence and warmth, only trait transgression study found the supportive evidence for the primacy-of-warmth hypothesis. In established relationships that the partners share a high level of interdependence or closeness, both traits have implication. Specifically, competence becomes increasingly important (Abele & Brack, 2013; Cuddy et al., 2011; Wojciszke & Abele, 2008). The primacy of warmth is not as profound in established relationships as when ideal or hypothetical relationships were concerned (Abele & Brack, 2013; Abele & Wojciszke, 2007; Helgeson, 2004; Sprecher & Regan, 2002). The findings are in line with the argument that a relationship has different stages that are distinct from one another (Altman & Taylor, 1973; Arriaga & Agnew, 2011; Soons et al., 2009; Trope & Liberman, 2010) and should be studied with the appropriate paradigm (Eastwick et al., 2011, 2014). Another methodological difference of the present work and the previous studies is the systematic comparison of traits. Past studies used unequal numbers of competence and warmth traits (Abele & Wojciszke, 2007; Cottrell et al., 2007; Lusk et al., 1998; Sprecher & Regan, 2002) whereas the thesis used an identical number of the traits and showed less importance of warmth. Future research should consider methodology for the appropriate interpretation of results.

In summary, the present chapter contributes to social psychology and relationship research. Only a handful of studies has compared sibling and friend (Rotkirch et al., 2014; Sherman et al., 2006; Voorpostel & Van Der Lippe, 2007). The past two studies (Study 7 and 8), to my knowledge, were the first two to examine the perception of sibling and close friend along the dimensions of personality perception which is a well-established model in the field of social psychology. Study 8 was also the first study that explored the cognitive outcome in the form of trait perception following transgressions that suggested a lack of competence and warmth.

Chapter 6: General Discussion

Summary and Discussion of Findings

The thesis studied trait perceptions, specifically competence and warmth of social contacts that differed on the closeness level by the means of basic trait perception paradigm and trait transgressions paradigm. Chapter 2 and 3 studied close friend and acquaintance. Chapter 4 compared long-term committed romantic partner to close friend. Chapter 5 studied close friend and sibling. Four hypotheses were proposed. The first three applied for trait perception studies and trait transgressions studies, while the fourth only applied to the trait transgression studies.

Hypothesis 1 speculated the linear trend between closeness and trait perception. Specifically, it asked if the closer target was perceived as more competent and warmer than the less close target. The closer and the less close target differed for each study but whatever they were, this pattern stood. Analysis of variance (ANOVA) was used to test this prediction. If the closer target was perceived as more competent and warmer, this hypothesis would have been supported. In contrast, if there was a difference in closeness but no difference in the trait perception or vice versa, the effect of closeness on trait perception would have been dismissed. Hypothesis 2 addressed the direct influence of closeness. Mediation analysis was used to test the hypothesis. If closeness mediated trait perception, this hypothesis would have been supported. Hypothesis 3, so-called primacy of warmth hypothesis, proposed higher importance of warmth over competence. The ANOVA was used to test this hypothesis. If the targets were perceived to possess more traits that were related to warmth than traits that were related to competence or if warmth transgression was more detrimental to trait perception than competence transgression,

this hypothesis would have been supported. Lastly, Hypothesis 4 speculated the motivation to preserve positive evaluation regarding relational partners. Correlation analysis was used to test this hypothesis. If the correlation of trait perceptions before and after trait transgressions, behaviors that showed lack of competence and warmth, was positive, this hypothesis would have been supported. The first two hypotheses were discussed first.

Study 1 compared friendship and acquaintanceship using trait perception paradigm. Firstly, the pretest was conducted to select the targets that differed in closeness. With consideration of the significant and appropriate distance between the scores, close friends, casual friends, and acquaintances were chosen and used in Study 1 to 3. Study 1 examined the trait perceptions of close friend, casual friend, and acquaintance. There was a clear difference of closeness between the three targets as expected. Close friend was the closest target. Casual friend was the second closest. Acquaintance was the least close. Overall, the closer target was perceived to be more competent and warmer than the less close target, although the difference was not significant for every pair. Namely, casual friend and acquaintance were seen as equally competent while close friend and casual friend were seen as equally warm. Closeness mediated trait perception of close friend and acquaintance. Study 2 was a follow-up study from Study 1 but with improvement in methodology. In this study, closeness was measured by three items as opposed to a single item in Study 1. The targets were clearly defined to ensure that the same type of targets was being studied for each category (close friend, casual friend, and, acquaintance). There was a clear difference of closeness between close friend and casual friend, close friend and acquaintance as well as casual friend and acquaintance. This replicated the

results from the pretest and Study 1. Close friend was perceived to be the most competent and warmest. Casual friend was perceived to be less competent and warm than close friend but more competent and warmer than acquaintance. The difference was clear in every pair. We can see that the result from this study is more conclusive than the finding from Study 1. The mediational effect of closeness was shown. Study 3 examined the trait perception of close friend and acquaintance using trait transgression paradigm. A pretest was first conducted to choose behaviors that indicated a lack of competence and warmth prior to the study. Four behaviors (two that described competence transgression and two that described warmth transgression) were then used in Study 3. The effect of the trait transgressions was not stronger on close friend than on acquaintance as predicted. Study 4 examined the trait perception of close friends and acquaintances by an explicit and an implicit measurement. Implicit Association Test (IAT) was used to study the implicit trait perceptions. The same measurements that were used in Study 1 to 3 were used to study the explicit trait evaluation. Both implicit and explicit tests revealed that close friend was perceived as warmer and more competent than acquaintance. Study 5 focused on trait perception of close friend and committed romantic partner. The partner was deemed the closer target than friends. However, their trait perception was similar. Closeness mediated competence perception but not warmth perception. Study 6 addressed the trait perception of close friend and romantic partner using trait transgression paradigm. The finding regarding closeness was replicated as romantic partner was seen as closer than close friend. However, trait transgressions had the same impact on the targets. Closeness only mediated warmth perception both before and after warmth transgression. Study 7 examined the trait perception of close friend and sibling. Close friend was perceived as the closer target. They were also perceived as warmer and

more competent than sibling as predicted. Closeness mediated trait perception. The last study (Study 8) examined the trait perceptions of close friend and sibling using trait transgression paradigm. There was no clear difference in closeness between the targets. Trait transgressions did not affect close friend and sibling differently. Closeness did not mediate trait perception in this study.

Overall, there is some support for the first two hypotheses. Close friend, who was perceived as closer than acquaintance, was also evaluated to be higher in competence and warmth (Study 1,2,4). In contrast, close friend was not affected by trait transgression more than acquaintance (Study 3). Although romantic partner was reported to be closer than close friend, in both Study 5 and 6 they were perceived to be equally competent and warm (Study 5). Romantic partner was not affected by trait transgressions more than close friend either (Study 6). Lastly, close friend was perceived to be more competent and warmer than sibling in Study 7 that showed a clear difference in closeness between them. However, Study 8 did not find a robust difference in closeness and neither close friend or sibling was affected more by trait transgression. Altogether, the results suggest that closeness was able to differentiate friendship from acquaintance but not from long-term romantic relationship and sibling relation. Even though Study 5 to 7 were able to detect difference in closeness between close friendship and romantic relationship and sibling relation, in reality they are considered as close relationships whereas acquaint-tanceship is considered a distant relationship (Clark & Mills, 1993). This is why closeness was able to account for differential trait perception between close friend and acquaintance. In contrast, when relationships that are considered close are compared, its effect was very limited. Altogether the studies showed the preference for beneficial traits

in close others such as friends (Fehr, 2004; Hall, 2014) and long-term romantic partner (Fletcher & Simpson, 2000; Montoya & Horton, 2014). A person with desirable attributes are more likely to be chosen as a friend and partner than a person who lacks those qualities. While a relationship between an individual and a relational partner who has positive traits progresses to friendship or romantic relationship, the relationship with the person who lacks desirable traits remains constant as acquaintanceship or dissolves. As a result, the closeness between friends and partners is higher than the closeness of acquaintanceship. Consequently, the closer the target is then perceived as more competent and warmer. Therefore, closeness seems to be an appropriate construct to differentiate close and distant relationships (Dibble, et al., 2012; Reis et al., 2004). It can be used as an alternative measurement of interdependence to study trait and relationship (Abele & Brack, 2013; Wojciszke & Abele, 2008).

The evidence for the primacy-of-warmth hypothesis is mixed. Preference for warmth in close friend and acquaintance was not shown in the first two studies. When trait perception paradigm was used, friend and acquaintance were not reported to have more warmth traits than competence. However, Study 3 using trait transgression paradigm and Study 4 using explicit and implicit trait perception paradigm showed that warmth had more implication than competence. Primacy of warmth in romantic partner and close friend was found in Study 5 when trait perception paradigm was used but not in Study 6 when trait transgression paradigm was used as warmth did not affect trait perception of romantic partner and close friend more than competence transgression. The results were replicated when close friend was compared to sibling. Study 7 that used trait perception paradigm suggested the primacy of competence over warmth. But Study 8

that used trait transgression paradigm showed that warmth transgression affected trait perception of close friend and sibling more than competence transgression. The distinctions of the thesis and the previous studies are the systematic comparison of traits and the relationships studied were real. These changes showed the results that were different from the previous research. The primacy of warmth is not as profound in established relationships as when ideal or hypothetical relationships were concerned (Abele & Brack, 2013; Abele & Wojciszke, 2007; Helgeson, 2004; Sprecher & Regan, 2002). In established relationships that the partners share a high level of interdependence or closeness, both traits have an implication. Specifically, competence becomes more important (Cuddy et al., 2011; Wojciszke & Abele, 2008; Wojciszke et al., 1998 study 3; Wojciszke & Abele, 2008 study 1). The findings are in line with the argument that relationships in different stages are distinct (Altman & Taylor, 1973; Arriaga & Agnew, 2011; Soons et al., 2009; Trope & Liberman, 2010) and should be studied with the appropriate paradigm (Eastwick et al., 2011, 2014). Another methodological difference is the systematic comparison of traits. Past studies used unequal numbers of competence and warmth traits (Abele & Wojciszke, 2007 study 4; Cottrell et al., 2007; Fletcher et al., 2004; Li et al., 2002; Lusk et al., 1998; Sprecher & Regan, 2002) whereas the thesis used identical number of the traits and showed less importance of warmth. Future research should consider methodology for the appropriate interpretation of results.

Finally, there is strong support for Hypothesis 4 regarding the motivation to maintain evaluation towards close others. Study 3 found the evidence for close friend and acquaintance. Study 6 found the evidence for close friend and romantic partner. Study 8 found the support for close friend and sibling. Initially, it was argued that the tendency to

view others positively was limited to close others as it is used as a strategy to maintain a relationship that one has invested in substantially (Murray et al., 1996; 2001). The thesis found that not only this is true for close others but this strategy is also used in acquaintanceship. It seems that the evaluation toward those in our social network is resistant to change especially close ones. For instance, if someone leaves a bad first impression should we let that dictate the following thoughts towards them? What if that was the only time the person behaved that way? Or what if our partner keeps cheating on us, should we not change our thoughts toward them? It may be wise to be aware of this bias and to adjust our perception accordingly to the reality.

Implications & Future Directions

As discussed in the first chapter, the thesis aimed to contribute to the literature of personality-social psychology as well as relationship. The theoretical and practical implications shown by the thesis are discussed.

Social-personality research. The thesis took a different route than the previous research to study trait implication on relationship. The main difference concerns methodology. First, the thesis studied trait perception of real partner as opposed to ideal. This paradigm shows ecological validity of traits better than the ideal paradigm as these partners were chosen to be in actual relationships. Second, the thesis studied traits in a systematic way. That is, by using an equal number of competence and warmth traits. The paradigms led to different results than in the previous research. Therefore, the thesis provides alternatives in the methodology. Limitations also have to be noted. First, a power analysis to estimate an adequate number of participants was not conducted. When we planned data collection, we set a timeline for each study and a rough number of

participants for each study to be around 100. If the time allowed, we would come back to collect more data if needed. After excluding the data that did not meet the requirement, the number reduced and due to time constraint, more data could not be collected. In the future, power analysis may help creating a more efficient plan for data collection.

The thesis shows that context or relationship type is influential to the traits. Context is an external factor that determining the role trait plays. However, internal factors were not studied in the thesis. Future research can include both factors in a study. Particularly, the thesis used different samples to study different pairs of relationship. If close friendship, acquaintanceship, romantic relationship, and sibling relationship are investigated simultaneously using only one sample, the statistical power would increase and the effect of relationship type would be more conclusive. Other variables such as internal factors can then be focused on. For relationship researchers whose interest lies in relationship dynamic and process, the dyadic approach can be employed. When both partners take part in the same study, the effects of the actor (the perceiver) and the partner (the target) and their implication relationship can be examined. For instance, would a cold person prefer a cold person as a partner or would they prefer warm person? Does this preference only apply to a particular relationship or it is stable? Study of personality compatibility in relationships is still to grow (Harris & Vazire, 2016; Nelson, Thorne, & Shapiro, 2011). It has been shown that relationships fluctuate across the lifespan (Goetting, 1986; White, 2001). Therefore, different age groups can be compared to see if this influences trait preference and partner selection (Buunk, Dijkstra, Fetchen-hauer, & Kenrick, 2002). Lastly, culture difference can also be studied. Collectivistic cultures are based on harmony and interdependence. In contrast, individualistic cultures

accentuate achievement and independence (Markus & Kitayama, 1991; Triandis, 1995). It is not surprising that warmth and competence are valued differently. Because warmth promotes cooperation and tolerance, it is deemed as more important in collectivistic cultures. On the other hand, competence is more highlighted in individualistic cultures as it is a mean to achieve success and status (Chen, Jing, Lee, & Bai, 2016; Gaertner, Sedikides, & Chang, 2008; Gebauer, Wagner, Sedikides, & Neberich, 2013; Sedikides, Gaertner, & Toguchi, 2003; Sedikides, Gaertner, & Vevea, 2005). Given this evidence, future research could study the effect of cultures on the importance of traits in different contexts (Bejanyan, Marshall, & Ferenczi, 2014, 2015; Chen & Jing, 2012; Chen, Jing, & Li, 2012). Including external (e.g., relationship type) and internal factors (individual differences) would provide the answer to the big debate between personality and social psychology.

Fundamental dimensions of personality perception literature: Morality. Recently, researchers argued that within the warmth dimension there are two distinct subcategories that are sociability and morality (Goodwin, Piazza, & Rozin, 2014). Sociability refers to a disposition to cooperate and form a connection with others and includes traits such as friendliness, outgoing, and warm (Leach, Ellemers, & Barreto, 2007). Thus, sociability is more related to likability and benevolence. In contrast, the morality dimension addresses "good or bad" character. Traits such as honest, sincere, trustworthiness fall in this dimension. Morality was shown to be more relevant than competence and sociability. Global evaluation of in-group and out-group significantly relied on morality (Brambilla, Sacchi, Rusconi, Cherubini, & Yzerbyt, 2012; Phalet & Poppe, 1997). Information about morality is sought after more than information about

sociability and competence (Brambilla, Rusconi, Sacchi & Cherubini, 2011). Morality transgression committed by others triggered stronger affective response whereas transgression involving competence triggered a stronger affective response when committed by self (Wojciszke, 2005a). However, this thesis did not include morality for a few reasons. Theoretically, warmth and competence are differentiated according to the relative degree of profitability to self and other (Peeters, 1992; Wojciszke, 2005b). Morality is shaped and determined by society. Therefore, it is subsumed by warmth dimension that is inherently other-beneficial. Another reason is that when studying established relationships, morality would be more prone to social desirability than competence and warmth. For example, when asked if their friend or sibling is moral, it would be unlikely for one to say they are not because it has directly reflection on the person. That is, their own character would be questioned. For example, a remark "My sibling served in the prison" is more likely to face negative backlash than a remark "My sibling is grumpy" or "My sibling is not too successful". Even though there was a finding of morality being higher for every target or higher for the closer target, the finding may not be as ecologically fruitful as in another research area such as moral psychology (for a review see Leach, Bilali, & Pagliaro, 2013).

Relationship studies. In the field of relationship research, affective experiences (Fletcher et al., 2000b) and behavioral outcomes during relationship (Eastwick et al., 2011, 2014; Eastwick & Neff, 2012; Fletcher et al., 2000a) have been well-documented compared to the cognitive process. The thesis showed that a prominent model in social-personality psychology that categorized personality into competence and warmth (Fiske et al., 2002; Judd et al., 2005) can be adapted to study trait preference, a ubiquitous

cognitive process in relationships (Fletcher & Simpson, 2000; Gangestad & Simpson, 2000; Hall, 2012; Montoya & Horton, 2014). Drawing on the evolutionary approach traits have implications in relationship that is they indicate if a person will be a good partner or not (Cosmides & Tooby, 2005; De Bruin & Van Lange, 1999; Kendrick, Maner, & Li, 2005; Peeters, 1992; Shackelford & Buss, 1996; Wojciszke, 2005b). The thesis showed that traits determine partner selection with a partner with warmth and competence are preferred. Trait transgressions, relationship-related behaviors, were also based on the model and were shown to have the influence on the trait perception. This shows that behavioral component (trait transgression) interacted with cognitive component (trait perception). Other relationship constructs and processes such as affective (hurt, rejection) and behavioral responses (retaliation, neglect), relationship satisfaction, and relationship dissolution can be linked to trait perception and trait transgression. Specifically, trait perception and trait transgression would be related, if not predictive of other relationship outcomes. This gives a complete understanding regarding relationship process.

The relationship construct that was used in the thesis was closeness. This is the extension from the previous studies that used interdependence (Abele & Brack, 2013; Wojciszke & Abele, 2008). It showed that closeness can be used as an alternative measure of relationship quality. Closeness is able to differentiate close and distant relationships (Dibble, et al., 2012; Reis et al., 2004).

The thesis also showed the motivation to maintain positive evaluation towards people in our social network. The dyadic approach can also be applied to study if this is accurate (Gagné & Lydon, 2004; Ickes & Simpson, 1997; Kenny & Acitelli, 2001) and if

it has implication on relationship satisfaction and personal well-being (Murray & Holmes, 1996, 2001; Murray et al., 1996, 2006; Tausch et al., 2007). Considering the topic of the thesis is one that is prevalent and not limited to social psychologists, the practical contribution is substantial. The reader including a relationship scholar, a therapist, and a layperson can learn about the processes that we are directly involved and experience first-hand, deliberate about it, and apply it to our daily and professional life. For instance, if a couple does not understand the need of each other and incapable of expressing the qualities their partner wants, a couple therapist can give the insight to their client. If one does not understand why they are not happy with their friend, they can reflect and deliberate if their friend has the attribute that they need to continue the relationship. It is my hope that the thesis would help one learning about oneself and people around them, what they want from a relationship, and apply it appropriately. To conclude, the thesis synthesized and integrated the research of social personality psychology and relationship studies and showed that the two can be examined by the same research paradigm. Different routes can be taken to further expand the knowledge of personality and relationships. The possibility is endless.

References

Aaker, J., Vohs, K. D., & Mogilner, C. (2010). Nonprofits are seen as warm and for-profits as competent: Firm stereotypes matter. *Journal of Consumer Research, 37*, 224–237. doi:10.1086/651566

Abele, A. E. (2003). The dynamics of masculine-agentic and feminine-communal traits: Findings from a prospective study. *Journal of Personality and Social Psychology, 85*(4), 768-776. doi:10.1037/0022-3514.85.4.768

Abele, A. E., & Brack, S. (2013). Preference for other persons' traits is dependent on the kind of social relationship. *Social Psychology, 44*(2), 84-94. doi: 10.1027/1864-9335/a000138

Abele, A. E., & Bruckmüller, S. (2011). The bigger one of the ''Big Two''? Preferential processing of communal information. *Journal of Experimental Social Psychology, 47*, 935-948. doi:10.1016/j.jesp.2011.03.028

Abele, A. E., Bruckmüller, S., & Wojciszke, B. (2014). You are so kind–and I am kind and smart: Actor–Observer Differences in the Interpretation of On-going Behavior. *Polish Psychological Bulletin, 45*(4), 394-401. doi:10.2478/ppb-2014-0048

Abele, A. E., Rupprecht, T., & Wojciszke, B. (2008a). The influence of success and failure experiences on agency. *European Journal of Social Psychology,38*(3), 436-448. doi:10.1002/ejsp.454

Abele, A. E., Uchronski, M., Suitner, C., & Wojciszke, B. (2008b). Towards an operationalization of the fundamental dimensions of agency and communion: Trait content ratings in five countries considering valence and frequency of word occurrence. *European Journal of Social Psychology, 38*(7), 1202-1217. doi:10.1002/ejsp.575

Abele, A. E., & Wojciszke, B. (2007). Agency and communion from the perspective of self versus others. *Journal of Personality and Social Psychology, 93*, 751–763. doi:10.1037/0022-3514.93.5.751

Abele, A. E., & Wojciszke, B. (2014). Communal and agentic content in social cognition: A dual perspective model. In M. P. Zanna, J. M. Olson (Eds.), *Advances In Experimental Social Psychology: Vol. 50* (pp. 195-255). doi:10.1016/B978-0-12-800284-1.00004-7

Ackerman, J. M., Kenrick, D. T., & Schaller, M. (2007). Is friendship akin to kinship? *Evolution and Human Behavior,* 28, 365–374. doi:10.1016/j.evol humbehav.2007.04.004

Adams, G. (2005). The cultural grounding of personal relationship: Enemyship in North American and west African worlds. *Journal of Personality and Social Psychology, 88*, 948-968. doi:10.1037/0022-3514.88.6.948

Adams, R. G., & Blieszner, R. (Eds.). (1989). *Older adult friendship: Structure and process.* Newbury Park, CA: Sage. doi:10.1017/s0144686x00014082

Adams, R. G., & Blieszner, R. (1994). An integrative conceptual framework for friendship research. *Journal of Social and Personal Relationships*, 11, 163–184. doi:10.1177/0265407594112001

Adams, R. G., Blieszner, R., & De Vries, B. (2000). Definitions of friendship in the third age: Age, gender, and study location effects. *Journal of Aging Studies*, *14*(1), 117-133.

Afifi, W. A., & Faulkner, S. L. (2000). On being "just friends": The frequency and impact of sexual activity in cross-sex friendships. *Journal of Social and Personal Relationships, 17*, 205–222.

Ajzen, I. (2012). Attitudes and Persuasion. In K. Deaux & M. Snyder (Eds.), *The*

Oxford Handbook of Personality and Social Psychology **(**pp. 367-393). Oxford, England: Oxford University Press.

Allan, G. (1996). *Kinship and friendship in modern Britain.* New York: Oxford University Press.

Allan, G. A. (2001). Personal relationships in late modernity. *Personal Relationships, 8*, 325–339. doi:10.1111/j.1475-6811.2001.tb00043.x

Allen, J. P., Uchino, B. N., & Hafen, C. A. (2015). Running With the Pack Teen Peer-Relationship Qualities as Predictors of Adult Physical Health. *Psychological science*, 26(10), 1574-1583. doi:10.1177/0956797615594118

Altman, I., Brown, B. B., Staples, B., & Werner, C. M. (1992). A transactional approach to close relationships: Courtship, weddings, and place making. In W. B. Walsh, K. H. Craik, & R. H. Price (Eds.), *Person-environment psychology: Models and perspectives* (pp. 193-242). Hillsdale, NJ: Lawrence Erlbaum.

Altman, I., & Taylor, D. A. (1973). *Social penetration: The development of interpersonal relationships.* New York: Holt, Rinehart, & Winston.

Ambady, N., Bernieri, F. J., & Richeson, J. A. (2000). Toward a histology of social behavior: Judgmental accuracy from thin slices of the behavioral stream. *Advances in Experimental Social Psychology, 32*, 201–271. doi:10.1016/S0065-2601(00)80006-4

Amit, E., Algom, D., & Trope, Y. (2009). Distance-dependent processing of pictures and words. *Journal of Experimental Psychology: General, 138*, 400–415. doi: 10.1037/a0015835

Antonucci, T., Akiyama, H., & Takahashi, K. (2004). Attachment and close relationships across the life span. *Attachment & human development*, *6*(4), 353-370.

doi:10.1080/1461673042000303136

Apostolou, M. (2016). An evolutionary account of the prevalence of personality traits that impair intimate relationships. *Personality and Individual Differences,* 94, 140-148. DOI:10.1016/j.paid.2016.01.024

Aquilino, W. S. (2005). Family relationships and support systems in emerging adulthood. In J. J. Arnett & J. L. Tanner (Eds.), *Emerging adults in America: Coming of age in the 21st century* (pp. 193–217). Washington, DC: American Psychological Association.

Ardelt, M., & Day, L. (2002). Parent, sibling, and peers: Close social relationships and adolescent deviance. *Journal of Early Adolescence, 22*, 310–349.

Argyle, M., Henderson, M., & Furnham, A. (1985). The rules of social relationships. *British Journal of Social Psychology, 24*, 125–139.

Aron, A. (2002). The self and relationships. In M. R. Leary & J. Tangney (Eds.), *Handbook of self and identity*. New York: Guilford Press.

Aron, A., & Aron, E. N. (1986). *Love as the expansion of self: Understanding attraction and satisfaction.* New York, NY: Hemisphere.

Aron, A., Aron, E. N., & Norman, C. (2001). The self expansion model of motivation and cognition in close relationships and beyond. In M. Clark & G. Fletcher (Eds.), *Blackwell handbook of social psychology. Vol. 2: Interpersonal processes* (pp. 478 – 501). Oxford: Blackwell.

Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology,* 63, 596–612. doi:10.1037/0022-3514.63.4.596

Aron, A., Aron, E. N., Tudor, M., & Nelson, G. (1991). Close relationships as including other in the self. *Journal of Personality and Social Psychology, 60,*

241 – 253.

Aron, A., & Fraley, B. (1999). Relationship closeness as including other in the self: Cognitive underpinnings and measures. *Social Cognition, 17*, 140 – 160.

Aron, A., Ketay, S., Riela, S., & Aron, E. N. (2007). How close others construct and reconstruct who we are and how we feel about ourselves. In J. Wood, A. Tesser, & J. Holmes (Eds.), *The self and social relationships* (pp. 209–229). Philadelphia, PA: Psychology Press.

Aron, A., & McLaughlin-Volpe, T. (2001). Including others in the self: Extensions to own and partner's group memberships. In C. Sedikides & M. B. Brewer (Eds.), *Individual self, relational self, and collective self: Partners, opponents, or strangers?* Philadelphia, PA: Psychology Press.

Aron, A., McLaughlin-Volpe, T., Mashek, D., Lewandowski, G., Wright, S. C., & Aron, E. N. (2004). Including others in the self. *European review of social psychology, 15*(1), 101-132. doi:10.1080/10463280440000008

Aron, A., Norman, C. C., & Aron, E. N. (1998). The self-expansion model and motivation. *Representative Research in Social Psychology, 22*, 1 – 13.

Arriaga, X. B. (2001). The ups and downs of dating: Fluctuations in satisfaction in newly formed romantic relationships. *Journal of Personality and Social Psychology*, 80, 754–765. doi:10.1037//0022-3514.80.5.754

Arriaga, X. B., & Agnew, C. R. (2001). Being committed: Affective, cognitive, and conative components of relationship commitment. *Personality and Social Psychology Bulletin, 27*, 1190–1203. doi:10.1177/0146167201279011

Asch S. E. (1946). Forming impressions of personality. *Journal of Abnormal and Social Psychology, 41*, 258-290. doi:10.1037/h0055756

Asendorpf, J. B., Banse, R., & Mücke, D. (2002). Double dissociation between

implicit and explicit personality self-concept: the case of shy behavior. *Journal of personality and social psychology, 83*(2), 380. doi:10.1037//0022-3514.83.2.380

Back, M. D., Schmukle, S. C., & Egloff, B. (2009). Predicting actual behavior from the explicit and implicit self-concept of personality. *Journal of Personality and Social Psychology*, 97(3), 533. doi:10.1037/a0016229

Bank, L., Burraston, B., & Snyder, J. (2004). Sibling conflict and ineffective parenting as predictors of adolescent boys ' antisocial behavior and peer difficulties:Additive and interactional effect . *Journal of Research on Adolescence, 14*, 99–125.

Banse, R., Seise, J., & Zerbes, N. (2001). Implicit attitudes toward homosexuality: reliability, validity, and controllability of the IAT. *Zeitschrift für experimentelle Psychologie, 48*(2), 145-160. Retrieved from https://www.researchgate.net/profile/Rainer_Banse/publication/11946421_Implicit_attitudes_towards_homosexuality_reliability_validity_and_controllability_of_the_IAT/links/00b495249277a5dd5b000000.pdf

Bar-Anan, Y., & Nosek, B. A. (2014). A comparative investigation of seven indirect attitude measures. *Behavior research methods, 46*(3), 668-688. doi:10.3758/s13428-013-0410-6

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497–529. doi:10.1037/0033-2909.117.3.497

Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1995). Personal narratives about guilt: Role in action control and interpersonal relationships. *Basic and Applied Social Psychology, 17*, 173–198. doi:10.1080/01973533.1995.96461

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Becker, J. A. H., Johnson, A. J., Craig, E. A., Gilchrist, E. S., Haigh, M. M., & Lane, L. T. (2009). Friendships are flexible, not fragile: Turning points in geographically-close and long-distance friendships. *Journal of Social and Personal Relationships, 26*, 347-369.

Beckes, L., Coan, J. A., & Hasselmo, K. (2013). Familiarity promotes the blurring of self and other in the neural representation of threat. *Social Cognitive and Affective Neuroscience, 8*, 670–677. doi:10.1093/scan/nss046

Bedford, V. H., & Volling, B. L. (2003) in F. R. Lang, & K. L. Fingerman (Eds.), *Growing Together: Personal Relationships Across the Life Span* (pp. 76-102). Retrieved from http://site.ebrary.com/lib/universityofessex/detail.action?docID=10130466

Behrman, J. R. (1997). Intrahousehold distribution and the family. In M. R. Rosenzweig & O. Stark (Eds.), *Handbook of population and family economics* (pp. 125 – 187). New York: Elsevier Science .

Behrman, J., Pollack, R. A., & Taubman, P. (1995). Parental preferences and provision for progeny . In J. Behrman , R. A. Pollack , & P. Taubman (Eds.), *Parent to child: Intrahousehold allocations and intergenerational relations in the United States* (p. 23 – 42). Chicago: University of Chicago Press.

Bejanyan, K., Marshall, T. C., & Ferenczi, N. (2014). Romantic ideals, mate preferences, and anticipation of future difficulties in marital life: a comparative study of young adults in India and America. *Frontiers in psychology*, *5*, 1355-. doi:10.3389/fpsyg.2014.01355

Bejanyan, K., Marshall, T. C., & Ferenczi, N. (2015) Associations of Collectivism

with Relationship Commitment, Passion, and Mate Preferences: Opposing Roles of Parental Influence and Family Allocentrism. *PLoS ONE*, *10*(2): e0117374. doi:10.1371/journal.pone.0117374

Berscheid, E., & Regan, P. (2005). *The psychology of interpersonal relationships.* Upper Saddle River, NJ: Pearson Education Inc.

Berscheid, E., & Reis, H. T. (1998). Attraction and close relationships. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., pp. 193-281). New York: McGraw Hill.

Bertolotti, M., Catellani, P., Douglas, K. M., & Sutton, R. M. (2013). The "Big Two" in Political Communication. *Social Psychology, 44*(2), 117-128. doi:10.1027/1864-9335/a000141

Bi, C., Ybarra, O., & Zhao, Y. (2013). Accentuating your masculine side: Agentic traits generally dominates self-evaluation, even in China. *Social Psychology*, *44*, 103-108. doi:10.1027/1864-9335/a000144

Biesanz, J. Z., West S. G., & Millevoi A. (2007). What do you learn about someone over time? The relationship between length of acquaintance and consensus and self-other agreement in judgment of personality. *Journal of Personality and Social Psychology*, 92, 119–135. doi:10.1037/0022-3514.92.1.119

Binder, J. F., Roberts, S. G., & Sutcliffe, A. G. (2012). Closeness, loneliness, support: Core ties and significant ties in personal communities. *Social Networks*, 34, 206–214. doi:10.1016/j.socnet.2011.12.001

Birkeland, S. A., Manson, T. M., Kisamore, J. L., Brannick, M. T., & Smith, M. A. (2006). A meta-analytic investigation of job applicant faking on personality measures. *International Journal of Selection and Assessment*, 14(4), 317-335. doi:10.1111/j.1468-2389.2006.00354.x

Blackburn, R., Renwick, S. J. D., Donnelly, J. P., & Logan, C. (2004). Big Five or Big Two? Superordinate factors in the NEO five factor inventory and the antisocial personality questionnaire. *Personality and Individual Differences, 37*, 957–970. doi:10.1016/j.paid.2003.10.017

Blair, I. V. (2002). The malleability of automatic stereotypes and prejudice. *Personality and Social Psychology Review,* 6(3), 242-261. doi:10.1207/S15327957PSPR0603_8

Bleske-Rechek, A. L., & Buss, D. M. (2001). Opposite-sex friendship: Sex differences and similarities in initiation, selection, and dissolution. *Personality and Social Psychology Bulletin, 27*, 1310–1323.

Bleske-Rechek, A., & Kelley, J. (2014). Birth order and personality: A within-family test using independent self-reports from both firstborn and laterborn siblings. *Personality and Individual Differences, 56*, 15–18.

Bleske-Rechek, A., Somers, E., Micke, C., Erickson, L., Matteson, L., Stocco, C., … & Ritchie, L. (2012). Benefit or burden? Attraction in cross-sex friendship. *Journal of Social and Personal Relationships,* 29(5), 569-596. doi:10.1177/0265407512443611

Blieszner, R., & Adams, R. G. (1992). *Adult friendship*. Newbury Park, CA: Sage.

Bocian, K., & Wojciszke, B. (2014). Self-interest bias in moral judgments of others' actions. *Personality and Social Psychology Bulletin*, 40, 898–909. Doi:10.1177/0146167214529800

Brambilla, M., Rusconi, P., Sacchi, S., & Cherubini, P. (2011). Looking for honesty: The primary role of morality (vs. sociability and competence) in information gathering. *European Journal of Social Psychology*, 41, 135–143. doi:10.1002/ejsp.744

Brambilla, M., Sacchi, S., Rusconi, P., Cherubini, P., & Yzerbyt, V. Y. (2012). You want to give a good impression? Be honest! Moral traits dominate group impression formation. *British Journal of Social Psychology*, 51, 149–166. doi:10.1111/j.2044-8309.2010.02011.x

Brendgen, M., Markiewicz, D., Doyle, A. B., & Bukowski, W. M. (2001). The relations between friendship quality, ranked-friendship preference and adolescents' behavior with their friends. *Merrill-Palmer Quarterly*, 47, 395–415 Abstract retrieved from http://www.jstor.org/stable/23093405

Brown, F., Feiring, C., & Furman, W. (1999). Missing the love boat: Why researchers Have shied away from adolescent romance. In W. Furman, B. B. Brown, & C. Feiring (Eds.), *The development of romantic relationships in adolescence* (pp. 1-16). New York, NY: Cambridge University Press. doi:10.1017/cbo9781316182185.002

Bruckmüller, S., & Abele, A. E. (2013). The density of the Big Two: How are agency and communion structurally represented? *Social Psychology*, 44, 63-74. doi: 10.1027/1864-9335/a000145

Buhrmester, D. (1992). The developmental courses of sibling and peer relationships. In F. Boer & J. Dunn (Eds.), *Children's sibling relationships: Developmental and clinical issues* (pp. 19–40). Hillsdale, NJ: Erlbaum.

Buhrmester, D., & Prager, K. (1995). Patterns and functions of self-disclosure during childhood and adolescence. In Rotenberg, K. J. Rotenberg (Ed.), *Disclosure processes in children and adolescents* (pp. 10–56). Cambridge, England: Cambridge University Press.

Bukowski, W. M., Hoza, B., & Boivin, M. (1994). Measuring friendship quality during pre- and early adolescence: The development and psychometric

properties of the friendship qualities scale. *Journal of Social and Personal Relationships,* 11, 471–484. doi:10.1177/0265407594113011

Bukowski, W. M., Newcomb, A. F., & Hartup, W. W. (Eds.). (1996). *The company they keep: Friendship in childhood and adolescence.* Cambridge, England: Cambridge University Press.

Buss, D. M. (1989). Sex differences in human mate preferences: Evolutionary hypotheses tested in 37 cultures. *Behavioral and Brain Sciences, 12,* 1–49. doi:10.1017/s0140525x00023992

Buss, D. M. (1991). Evolutionary personality psychology. *Annual Review of Psychology 42,* 449–492.

Buss, D. M. (2003). *The evolution of desire: Strategies of human mating* (2nd ed.). New York, NY: Basic Books.

Buss, D. M., & Hawley, P. H. (2010). *The evolution of personality and individual differences*. Oxford: Oxford University Press. doi:10.1093/acprof:oso/9780195372090.001.0001

Buss, D. M., & Schmitt, D. P. (1993). Sexual strategies theory: an evolutionary perspective on human mating. *Psychological Review, 100*(2), 204–232. doi:10.1037/0033-295X.100.2.204.

Buss, D. M., Shackelford, T. K., Kirkpatrick, L. A., & Larsen, R. J. (2001). A half century of American mate preferences: The cultural evolution of values. *Journal of Marriage and the Family, 63*, 491–503. doi:10.1111/j.1741-3737. 2001.00491.x

Buston, P. M., & Emlen, S. T. (2003). Cognitive processes underlying human mate choice: the relationship between self-perception and mate preference in Western society. *Proceedings of the National Academy of Sciences*, 100,

8805-8810. doi:10.1073/pnas.1533220100

Buunk, B. P., Dijkstra, P., Fetchenhauer, D., & Kenrick, D. T. (2002). Age and gender differences in mate selection criteria for various involvement levels. *Personal Relationships, 9*(3), 271-278. doi: 10.1111/1475-6811.00018

Buunk, B. P., & Prins, K. S. (1998). Loneliness, exchange orientation, and reciprocity in friendships. *Personal Relationships*, 5, 1 – 14. doi:10.1111/j.1475-6811.1998.tb00156.x

Cacioppo, J. T., Gardner, W. L., & Berntson, G. G. (1997). Beyond bipolar conceptualizations and measures: The case of attitudes and evaluative space. *Personality and Social Psychology Review*, 1, 3-25. doi:10.1207/s15327957 pspr0101_2

Campbell, W. K., & Foster, C. A. (2002). Narcissism and commitment in romantic relationships: An investment model analysis. *Personality and Social Psychology Bulletin,* 28, 484–495. DOI: 10.1177/0146167202287006

Campbell, L., Lackenbauer, S. D., & Muise, A. (2006). When is being known or adored by romantic partners most beneficial? Self-perceptions, relationship length, and responses to partner's verifying and enhancing appraisals. *Personality and Social Psychology Bulletin*, 32(10), 1283-1294. doi:10.1177/0146167206290383

Campbell, L., Simpson, J. A., Kashy, D. A., & Fletcher, G. J. O. (2001). Ideal standards, the self, and flexibility of ideals in close relationships. *Personality and Social Psychology Bulletin,* 27, 447-462. doi:10.1177/0146167201274006

Cann, A. (2004). Rated importance of personal qualities across four relationships. *Journal of Social Psychology, 144*, 322–335. doi:10.3200/SOCP.144.3.322-334

Carbery, J., & Buhrmester, D. (1998). Friendship and need fulfillment during three phases of young adulthood. *Journal of Social and Personal Relationships*, 15, 393–409. doi:10.1177/ 0265407598153005

Carlsson, R., & Björklund, F. (2015). Implicit stereotype content: Mixed stereotypes can be measured with the implicit association test. *Social Psychology*, 41, 213-222. doi:10.1027/1864-9335/a000029

Carnevale, J. J., Fujita, K., Han, H. A., & Amit, E. (2015). Immersion versus transcendence how pictures and words impact evaluative associations assessed by the Implicit Association Test. *Social Psychological and Personality Science*, 6(1), 92-100. doi:10.1177/1948550614546050

Carver, C. S. (2005). Impulse and constraint: Perspectives from personality psychology, convergence with theory in other areas, and potential for integration. *Personality and Social Psychology Review*, *9*, 312–333.

Carver, K., Joyner, K., & Udry, J. R. (2003). National estimates of adolescent romantic relationships. In P. Florsheim (Ed.) *Adolescent Romantic Relationships and Sexual Behavior: Theory, Research, and Practical Implications* (pp. 291–329). New York, NY: Cambridge University Press.

Casper, D. M., & Card, N. A. (2010). "We Were Best Friends, But...": Two Studies of Antipathetic Relationships Emerging From Broken Friendships. *Journal of Adolescent Research*, *25*(4), 499-526. doi:10.1177/0743558410366596

Chaiken, S. & Trope, Y. (Eds.). (1999). *Dual-Process Theories in Social Psychology*. New York, NY: Guilford Press.

Chen, F. F., Jing, Y., & Lee, J. M. (2014). The looks of a leader: Competent and trustworthy, but not dominant. *Journal of Experimental Social Psychology*, *51*, 27-33. doi:10.1016/j.jesp.2013.10.008

Cheng, C., Bond, M. H., & Chan, S. C. (1995). The perception of ideal best friends by Chinese adolescents. *International Journal of Psychology*, 30(1), 91-108. doi:10.1080/00207599508246975

Cherlin, A. J. (2009). *The marriage-go-round: The state of marriage and the family in America today*. New York, NY: Alfred A. Knopf.

Chu, P. S., Saucier, D. A., & Hafner, E. (2010). Meta-analysis of the relationships between social support and well-being in children and adolescents. *Journal of Social and Clinical Psychology*, *29*(6), 624-645.

Cicirelli, V. G. (1995). *Sibling relationships across the life span*. New York: Plenum Press. doi:10.1007/978-1-4757-6509-0_8

Cicirelli, V. G. (1996). Sibling relationships in middle and old age. In G. H. Brody (Ed.), *Sibling relationships: Their causes and consequences* (pp. 47–74). Norwood, NJ: Ablex.

Cislak, A. (2013). Effects of power on social perception: All your boss can see is agency. *Social Psychology, 44*(2), 138-146. doi:10.1027/1864-9335/a000139

Cislak, A., & Wojciszke, B. (2008). Agency and communion are inferred from actions serving interests of self or others. *European Journal of Social Psychology, 38*(7), 1103–1110. doi:10.1002/ejsp.554

Clark, M. L., & Ayers, M. (1993). Friendship expectations and friendship evaluations: Reciprocity and gender effects. *Youth and Society*, *24*(3), 299-313. doi:10.1177/0044118x93024003003

Clark, M. S., & Mills, J. (1993). The difference between communal and exchange relationships: What it is and is not. *Personality and Social Psychology Bulletin, 19*, 684–691. doi:10.1177/0146167293196003

Cogsdill, E. J., Todorov, A. T., Spelke, E. S., & Banaji, M. R. (2014). Inferring

character from faces: A developmental study. *Psychological science, 25*(5), 1132-1139. doi:10.1177/0956797614523297

Cohen, E. L. (2010). Expectancy violations in relationships with friends and media figures. *Communication Research Reports, 27*(2), 97-111. doi:10.1080/08824091003737836

Cohen, S. (2004). Social relationships and health. *American Psychologist*, 59, 676–684. doi:10.1037/0003-066X.59.8.676

Collins, W. A. (2003). More than myth: The developmental significance of romantic relationships during adolescence. *Journal of Research on Adolescence,* 13(1), 1–24. doi:10.1111/1532-7795.1301001

Collins, A., & van Dulmen, M. (2006). Friendships and romance in emerging adulthood: Assessing distinctiveness in close relationships. In J. J. Arnett & J. L. Tanner (Eds.), *Emerging adults in America: Coming of age in the 21st century* (pp. 219–234). Washington, DC: American Psychological Association. doi:10.1037/11381-009

Collins, W. A., Welsh, D. P., & Furman, W. (2009). Adolescent romantic relationships. *Annual Review of Psychology*, 60, 631–652. doi:10.1146/annurev.psych.60.110707.163459

Colvin, C. R., & Funder, D. C. (1991). Predicting personality and behavior: A boundary on the acquaintanceship effect. *Journal of Personality and Social Psychology, 60*(6), 884-894. doi:10.1037/0022-3514.60.6.884

Compton, K., Snyder, J., Schrepferman, L., Bank, L., & Shortt, J. W. (2003). The contribution of parents and siblings to antisocial and depressive behavior in adolescents: A double jeopardy coercion model. *Development and Psychopathology, 15*, 163–182.

Conger, R. D., Cui, M., Bryant, C. M., & Elder, G. H. (2000). Competence in early adult romantic relationships: A developmental perspective on family influences. *Journal of Personality and Social Psychology*, *79*(2), 224–237. doi:10.1037/0022-3514.79.2.224

Conger, K. J., & Little, W. M. (2010). Sibling relationships during the transition to adulthood. *Child Development Perspectives*, *4*, 87–94. doi:10.1111/j.1750-8606.2010.00123.x

Connelly B. S., & Ones D. S. (2010). An other perspective on personality: Meta-analytic integration of observers' accuracy and predictive validity. *Psychological Bulletin*, *136*, 1092–1122. doi:10.1037/a0021212

Connidis, I. A. (2001). *Family ties & aging*. London: Sage.

Conroy-Beam, D., Goetz, C. D., & Buss, D. M. (2016). What predicts romantic relationship satisfaction and mate retention intensity: mate preference fulfillment or mate value discrepancies? *Evolution and Human Behavior*, *37*(6), 440-448. doi:10.1016/j.evolhumbehav.2016.04.003

Coppola, F. F. (Producer, Director). (1974). Godfather II [Motion Picture]. United States: Paramount Pictures.

Costa, P. T. & McCrae, R. R. (1992). Revised NEO Five Factor Inventory. Professional manual. Odessa, FL: *Psychological Assessment Resources*.

Cottrell, C. A., Neuberg, S. L., & Li, N. P. (2007). What do people desire in others? A sociofunctional perspective on the importance of different valued characteristics. *Journal of Personality and Social Psychology*, *92*, 208-231. doi:10.1037/0022-3514.92.2.208

Couch, L., Jones,W., & Moore, D. (1999). Buffering the effects of betrayal: The role of apology, forgiveness, and commitment. In J. Adams & W. Jones (Eds.),

Handbook of interpersonal commitment and relationship stability (pp. 451–469). New York: Kluwer Academic/Plenum.

Cox, D. W., Buhr, E. E., Owen, J. J., & Davidson, E. (2016). Linking partner emotional support, partner negative interaction, and trauma with psychological distress: Direct and moderating effects. *Journal of Social and Personal Relationships, 33*(3), 303-319. doi:10.1177/0265407515574467

Cramer, D. (1998). *Close relationships: The study of love and friendship*. New York: Arnold.

Crispell, D. (1996). The sibling syndrome. *American Demographics, 18*(8), 24-30.

Cuddy, A. J., Fiske, S. T., & Glick, P. (2004). When professionals become mothers, warmth doesn't cut the ice. *Journal of Social Issues, 60*(4), 701-718. DOI:10.1111/j.0022-4537.2004.00381.x

Cuddy, A. J., Fiske, S. T., & Glick, P. (2008). Warmth and competence as universal dimensions of social perception: The stereotype content model and the BIAS map. *Advances in experimental social psychology*, 40, 61-149. doi:10.1016/S0065-2601(07)00002-0

Cuddy, A. J., Fiske, S. T., Kwan, V. S., Glick, P., Demoulin, S., Leyens, J. P., ... & Htun, T. T. (2009). Stereotype content model across cultures: Towards universal similarities and some differences. *British Journal of Social Psychology, 48*(1), 1-33. doi:10.1348/014466608X314935

Cuddy, A. J., Glick, P., & Beninger, A. (2011). The dynamics of warmth and competence judgments, and their outcomes in organizations. *Research in Organizational Behavior, 31*, 73-98. DOI:10.1016/j.riob.2011.10.004

Curry, O., Roberts, S. G., & Dunbar, R. I. (2012). Altruism in social networks: Evidence for a "kinship premium". *British Journal of Psychology*, 104, 283-

295. doi:10.1111/j.2044-8295.2012.02119.x

Damian, R. I., & Roberts, B. W. (2015). The associations of birth order with personality and intelligence in a representative sample of US high school students. *Journal of Research in Personality, 58,* 96-105.

Davis, K. E., & Todd, M. J. (1982). Friendship and love relationships. *Advances in Descriptive Psychology, 2,* 79–122.

De Bruin, E. N., & Van Lange, P. A. (1999). Impression formation and cooperative behavior. *European Journal of Social Psychology, 29*(23), 305-328. doi:10.1002/(SICI)1099-0992(199903/05)29:2/3<305::AID-EJSP929>3.0.CO;2-R

De Bruin, E. N., & Van Lange, P. A. (2000). What people look for in others: Influences of the perceiver and the perceived on information selection. *Personality and Social Psychology Bulletin, 26*(2), 206-219. doi:10.1177/0146167200264007

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227-268. doi:10.1207/s15327965pli1104_01

De Houwer, J. (2001) A structural and process analysis of the Implicit Association Test. *Journal of Experimental Social Psychology,* 37, 443–451. doi:10.1006/jesp.2000.1464

De Houwer, J. (2002). The implicit association test as a tool for studying dysfunctional associations in psychopathology: Strengths and limitations. *Journal of Behavior Therapy and Experimental Psychiatry,* 33, 115–133. doi:10.1016/S0005-7916(02)00024-1

Demir, M., & Özdemir, M. (2010). Friendship, need satisfaction and happiness. *Journal of Happiness Studies,* 11, 243–259. doi:10.1007/s10902-009-9138-5

DeScioli, P., & Kurzban, R. (2009). The alliance hypothesis for human friendship. *PloS one*, 4(6), 1–8 (e5802). doi:10.1371/journal.pone.0005802

DeYoung, C. G. (2006). Higher-order factors of the Big Five in a multi-informant sample. *Journal of personality and social psychology*, *91*(6), 1138-1151. doi:10.1037/0022-3514.91.6.1138

DeYoung, C. G., Weisberg, Y. J., Quilty, L. C., & Peterson, J. B. (2013). Unifying the aspects of the big five, the interpersonal circumplex, and trait affiliation. *Journal of Personality*, 81, 465–475. doi:10.1111/jopy.12020

Dibble, J. L., Levine, T. R., & Park, H. S. (2012). The Unidimensional Relationship Closeness Scale (URCS): Reliability and validity evidence for a new measure of relationship closeness. *Psychological Assessment*, 24, 565–572. doi: 10.1037/a0026265

Diener, E., & Lucas, R. (2000). Subjective emotional well-being. In M. Lewis & J. M. Haviland-Jones (Eds.)., *Handbook of Emotions* (2nd ed.). New York: The Guilford Press.

Digman, J. M. (1997). Higher-order factors of the Big Five. *Journal of Personality and Social Psychology*, *73*(6), 1246-1256. doi:10.1037/0022-3514.73.6.1246

Dimofte, C. V. (2010). Implicit measures of consumer cognition: A review. *Psychology & Marketing*, 27(10), 921-937. doi:10.1002/mar.20366

Donnellan, M. B., Larsen-Rife, D., & Conger, R. D. (2005). Personality, family history, and competence in early adult romantic relationships. *Journal of Personality and Social Psychology, 88,* 562–576. doi:10.1037/0022-3514. 88.3.562

Duck, S. (1988). *Handbook of personal relationships: Theory, research and interventions.* New York: Wiley.

Dunbar, R. I. M. (1998). The social brain hypothesis. *Evolutionary Anthropology, 6,* 178–190.

Dunbar, R. I. M., & Spoors, M. (1995). Social networks, support cliques and kinship. *Human Nature, 6,* 273–290. doi:10.1007/BF02734142

Dunning, D. (2004). On the motives underlying social cognition. In M. Brewer & M. Hewstone (Eds.), *Emotion and motivation* (pp. 137–164). Oxford: Blackwell.

Dunn, J. (2007). Siblings and socialization. In J. Grusec & P. D. Hastings (Eds.), *Handbook of socialization: Theory and research* (pp. 309–327). New York: Guilford.

East, P. L. (2009). Adolescents' relationships with siblings. In R. M. Lerner, & L. Steinberg (Eds.), *Handbook of adolescent psychology* (pp. 43–73). Hoboken, NJ: Wiley. doi:10.1002/ 9780470479193.adlpsy002003

Eastwick, P. W., Finkel, E. J., & Eagly, A. H. (2011). When and why do ideal partner preferences affect the process of initiating and maintaining romantic relationships? *Journal of Personality and Social Psychology*, 101, 1012–1032. doi:10.1037/a0024062

Eastwick, P. W., Luchies, L. B., Finkel, E. J., & Hunt, L. L. (2014). The predictive validity of ideal partner preferences: A review and meta-analysis. *Psychological Bulletin*, *140*(3), 623-640. doi:10.1037/a0032432

Eastwick, P. W., & Neff, L. A. (2012). Do ideal partner preferences predict divorce? A tale of two metrics. *Social Psychological and Personality Science*, 3, 667–674. doi: 10.1177/1948550611435941

Ebert, I. D., Steffens, M. C., & Kroth, A. (2014). Warm, but maybe not so competent?—Contemporary implicit stereotypes of women and men in Germany. *Sex Roles*, 70(9), 359-375. doi:10.1007/s11199-014-0369-5

Egloff, B., & Schmukle, S. C. (2002). Predictive validity of an Implicit Association Test for assessing anxiety. *Journal of personality and social psychology*, 83(6), 1441-1455. doi:10.1037//0022-3514.83.6.1441

Egloff, B., Schwerdtfeger, A., & Schmukle, S. C. (2005). Temporal stability of the Implicit Association Test-anxiety. *Journal of Personality Assessment*, 84, 82–88. doi:10.1207/s15327752jpa8401_14

Emmers-Sommer, T. M. (2003). When partners falter: Repair after a transgression. In D. J. Canary & M. Dainton (Eds.), *Maintaining relationships through communication: Relational, contextual, and cultural variations* (pp. 185–205). Mawah, NJ: Erlbaum.

Ellsworth, P. C., & Scherer, K. R. (2003). Appraisal processes in emotion. In R. J. Davidson, H. Goldsmith, & K. R. Scherer (Eds.), *Handbook of affective sciences* (pp. 572–595).New York: Oxford University Press.

Engel, G., Olson, K. R., & Patrick, C. (2002). The personality of love: Fundamental motives and traits related to components of love. *Personality and Individual Differences*, 32(5), 839-853. doi:10.1016/S0191-8869(01)00090-3

Epstein, S. (2014). *Cognitive-experiential theory: An integrative theory of personality*. Oxford, England: University Press.

Epstein, S., Pacini, R., Denes-Raj, V., & Heier, H. (1996). Individual differences in intuitive–experiential and analytical–rational thinking styles. *Journal of Personality and Social Psychology*, 71(2), 390–405. doi:10.1037/0022-3514.71.2.390.

Evans, J. S. B. T. (2008). Dual-processing accounts of reasoning, judgment and social cognition. *Annual Review of Psychology*, 59, 255–278. doi:10.1146/annurev.psych.59.103006.093629

Farnham, S. D., Greenwald, A. G., & Banaji, M. R. (1998). Implicit self-esteem. In D. Abrams & M. A. Hogg (Eds.), *Social cognition and social identity* (pp. 230–248). London, England: Blackwell.

Fazio, R. H., & Olson, M. A. (2003). Implicit measures in social cognition research: Their meaning and uses. *Annual Review of Psychology*, 54, 297-327. doi:10.1146/annurev.psych.54.101601.145225

Fehr, B. (1996). *Friendship processes*. Thousand Oaks, CA: Sage.

Fehr, B. (1999). Stability and commitment in friendships. In J. M. Adams & W. H. Jones (Eds.), *Handbook of interpersonal commitment and relationship stability* (pp. 259–280). New York, NY: Plenum. doi:10.1007/978-1-4615-4773-0_15

Fehr, B. (2004). Intimacy expectations in same-sex friendships: A prototype interaction-pattern model. *Journal of Personality and Social Psychology*, 86, 265-284. doi:10.1037/0022-3514.86.2.265

Fehr, B. (2008). Friendship formation. In S. Sprecher (Ed.), *Handbook of relationship initiation* (pp. 29–54). New York, NY: Psychology Press.

Fehr, B. (2012). Friendship. In V. S. Ramachandran (Ed.), *Encyclopedia of human behavior* (2nd ed., pp. 205-213). London, England: Elsevier. doi:10.1016/b978-0-12-375000-6.00174-9

Fehr, B., & Baldwin, M. (1996). Prototype and script analyses of laypeople's knowledge of anger. In G. J. O. Fletcher & J. Fitness (Eds.), *Knowledge structures and interaction in close relations: A social psychological approach* (pp. 219–245). Hillsdale, NJ: Erlbaum.

Feng, B., & Feng, H. (2013). Examining cultural similarities and differences in responses to advice: A comparison of American and Chinese college students.

Communication Research, 40, 623–644. doi:10.1177/0093650211433826

Feng, B., & MacGeorge, E. L. (2006). Predicting receptiveness to advice: Characteristics of the problem, the advice-giver, and the recipient. S*outhern Communication Journal*, 71, 67–85. doi:10.1080/10417940500503548

Feng, B., & Magen, E. (2016). Relationship closeness predicts unsolicited advice giving in supportive interactions. *Journal of Social and Personal Relationships*, 33, 751-767. doi:10.1177/0265407515592262

Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7,* 117–140.

Fingerman, K. L. (2009). Consequential strangers and peripheral ties: The importance of unimportant relationships. *Journal of Family Theory & Review*, *1*(2), 69-86. doi:10.1111/j.1756-2589.2009.00010.x

Finkel, E. J., Rusbult, C. E., Kumashiro, M., & Hannon, P. A. (2002). Dealing with betrayal in close relationships: does commitment promote forgiveness?. *Journal of Personality and Social Psychology, 82*(6), 956. doi: 10.1037//0022-3514.82.6.956

Fischer, C. S., & Shavit, Y. (1995). National differences in network density: Israel and the United States. *Social Networks*, 17, 129–145. doi:10.1016/0378-8733(94)00251-5

Fiske, S. T., Cuddy, A. J. & Glick, P. (2007). Universal dimensions of social cognition: Warmth and competence. *Trends in Cognitive Sciences, 11*, 77-83. doi:10.1016/j.tics.2006.11.005

Fiske, S. T., Cuddy, A. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social*

Psychology, 82, 878–902. doi:10.1037/0022- 3514.82.6.878

Fisman, R., Iyengar, S. S., Kamenica, E., & Simonson, I. (2006). Gender differences in mate selection: evidence from a speed dating experiment. The Quarterly Journal of Economics, 121(2), 673-697. doi: 10.1162/qjec.2006.121.2.673.

Fitness, J. (2001). Betrayal, rejection, revenge, and forgiveness: An interpersonal script approach. In M. R. Leary (Ed.), *Interpersonal rejection* (pp. 73–103). New York, NY: Oxford University Press. doi:10.1093/acprof:oso/9780195130157.003.0004

Fletcher, G. J. O., & Simpson, J. A. (2000). Ideal standards in close relationships: Their structure and functions. C*urrent Directions in Psychological Science*, *9*, 102-105. doi:10.1111/1467-8721.00070

Fletcher, G. J. O., Simpson, J. A., & Thomas, G. (2000a). Ideals, perceptions, and evaluations in early relationship development. *Journal of Personality and Social Psychology*, *79*, 933–940. doi:10.1037/0022-3514.79.6.933

Fletcher, G. J. O., Simpson, J. A., & Thomas, G. (2000b). The measurement of perceived relationship quality components: A confirmatory factor analytic approach. *Personality and Social Psychology Bulletin, 26*, 340–354. doi:10.1177/0146167200265007

Fletcher, G. J. O., Simpson, J. A., Thomas, G., & Giles, L. (1999). Ideals in intimate relationships. *Journal of Personality and Social Psychology*, *76*, 72– 89. doi:10.1037/0022-3514.76.1.72

Fletcher, G. J. O., Tither, J. M., O'Loughlin, C., Friesen, M., & Overall, N. (2004). Warm and homely or cold and beautiful? Sex differences in trading off traits in mate selection. *Personality and Social Psychology Bulletin, 30*, 659-672. doi:10.1177/0146167203262847

Floyd, K. (1995). Gender and closeness among friends and siblings. *The Journal of Psychology, 129*(2), 193-202.

Foster, E. M. (2002). How economists think about family resources and child development. *Child Development, 73*, 1904 – 1914.

Friese, M., Hofmann, W., & Schmitt, M. (2008). When and why do implicit measures predict behavior? Empirical evidence for the moderating role of opportunity, motivation, and process reliance. *European Review of Social Psychology*, 19, 285–338. doi:10.1080/10463280802556958

Frimer, J. A., Walker, L. J., Dunlop, W. L., Lee, B., & Riches, A. (2011). The integration of agency and communion in moral personality: Evidence of enlightened self-interest. *Journal of Personality and Social Psychology, 101*, 149-163. doi:10.1037/a0023780

Fuhrman, R. W., Flannagan, D., & Matamoros, M. (2009). *Behavior expectations in cross-sex friendships, same-sex friendships, and romantic relationships. Personal Relationships, 16*, 575–596. doi:10.1111/j.1475-6811.2009.01240.x

Furman, W., & Lanthier, R. (1996) Personality and sibling relationships. In G. Brody (Ed.), *Sibling relationships: their causes and consequences* (pp. 127-146). Norwood, NJ: Ablex.

Gagné, F. M., & Lydon, J. E. (2004). Bias and accuracy in close relationships: An integrative review. *Personality and Social Psychology Review*, *8*, 322–338. doi:10.1207/s15327957pspr0804_1

Gangestad, S. W., & Simpson, J. A. (2000). The evolution of human mating: Trade-offs and strategic pluralism. *Behavioral and brain sciences*, *23*(04), 573-587. doi:10.1017/s0140525x0000337x

Gawronski, B. & Bodenhausen, G. V. (2006) Associative and propositional processes

in evaluation: An integrative review of implicit and explicit attitude change. *Psychological Bulletin, 132,* 692–731. doi:10.1037/0033-2909.132.5.692

Gebauer, J. E., Leary, M. R., & Neberich, W. (2012). Big Two personality and Big Three mate preferences: Similarity attracts, but country-level mate preferences crucially matter. *Personality and Social Psychology Bulletin, 38*, 1579-1593. doi:10.1177/0146167212456300

Ginsberg, D., Gottman, J., & Parker, J. (1986). The importance of friendship. In. J. M. Gottman & J. G. Parker (Eds.*), Conversations of friends: Speculations On affective development* (pp. 3-48). New York: Cambridge University Press.

Goetting, A. (1986). The developmental tasks of siblingship over the life cycle. *Journal of Marriage and the Family, 48*(4), 703-714. doi:10.2307/352563

Goldberg, L. R. (1992). The development of markers for the Big-Five structure. *Psychological Assessment*, 4, 26–42. doi:10.1037/1040-3590.4.1.26

Golden, J., Conroy, R. M., & Lawlor, B. A. (2009). Social support network structure in older people: underlying dimensions and association with psychological and physical health. *Psychology, Health & Medicine, 14*(3), 280-290.

Goodwin, G. P., Piazza, J., & Rozin, P. (2014). Moral character predominates in person perception and evaluation. *Journal of Personality and Social Psychology, 106*, 148-168. doi:10.1037/a0034726

Gray, N. S., Brown, A. S., MacCulloch, M. J., Smith, J., & Snowden, R. J. (2005). An implicit test of the associations between children and sex in pedophiles. *Journal of Abnormal Psychology*, 114(2), 304–308. doi:10.1037/0021-843x.114.2.304.

Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review*, 102(1), 4-27. doi:10.1037/00

33-295X.102.1.4

Greenwald, A. G., Banaji, M. R., Rudman, L. A., Farnham, S. D., Nosek, B. A., & Mellott, D. S. (2002). A unified theory of implicit attitudes, stereotypes, self-esteem, and self-concept. *Psychological review*, 109(1), 3-25. doi:10.1037//0033-295X.109.1.3

Greenwald, A. G., & Farnham, S. D. (2000). Using the implicit association test to measure self-esteem and self-concept. *Journal of Personality and Social Psychology*, 79, 1022–1038. doi:10.1037/0022-3514.79.6.1022

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology*, 74, 1464–1480. doi:10.1037/0022-3514.74.6.1464

Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: I. an improved scoring algorithm. *Journal of Personality and Social Psychology*, 85(2), 197-216. doi:10.1037/0022-3514.85.2.197

Greenwald, A. G., Poehlman, T. A., Uhlmann, E. L., & Banaji, M. R. (2009). Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology*, 97(1), 17-41. doi:10.1037/a0015575

Grumm, M., & von Collani, G. (2007). Measuring Big-Five personality dimensions with the implicit association test–Implicit personality traits or self-esteem?. *Personality and Individual Differences*, 43(8), 2205-2217. doi:10.1016/j.paid.2007.06.032

Hall, J. A. (2011). Sex differences in friendship expectations: A meta-analysis.

Journal of Social and Personal Relationships, 28, 723-747. doi:10.1177/0265407510386192

Hall, J. A. (2012). Friendship standards: The dimensions of ideal expectations. *Journal of Social and Personal Relationships,* 29(7), 884-907. doi:10.1177/0265407512448274

Hall, J. A. (2014). Applying the ideal standards model to unmet expectations and satisfaction in friendship. *Studies in Communication Sciences,* 14(1), 20-28. doi:10.1016/j.scoms.2014.03.008

Harris, K., & Vazire, S. (2016). On friendship development and the Big Five personality traits. *Social and Personality Psychology Compass, 10*(11), 647-667. doi:10.1111/spc3.12287

Hartup, W. W. (1996). The company they keep: Friendships and their developmental significance. *Child Development*, 67, 1-13. doi: 10.1111/j.1467-8624.1996.tb01714.x

Hartup, W. W., & Stevens, N. (1999). Friendships and adaptation across the life span. *Current Directions in Psychological Science, 8*, 76–79. doi:10.1111/1467-8721.00018

Hays, R. B. (1988). Friendship. In S. E. Duck (Ed.), *Handbook of personal relationships* (pp. 391-408). Oxford, England: Wiley.

Hays, R. B. (1989). The day-to-day functioning of close versus casual friendships. *Journal of Social and Personal Relationships, 6*, 21–37. doi:10.1177/0265407 58900600102

Hazen, C., & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52*, 511–524.

Hendrick, S. S., & Hendrick, C. (2000). Romantic love. In C. Hendrick & S. S.

Hendrick (Eds.), *Close relationships: A sourcebook* (pp. 2003–2015). Thousands Oaks, CA: Sage.

Hill, R. A., & Dunbar, R. I. M. (2003). Social network size in humans. *Human Nature*, 14, 53–72. doi:10.1007/s12110-003-1016-y.

Hofmann, W., Gawronski, B., Gschwendner, T., Le, H., & Schmitt, M. (2005a). A meta-analysis on the correlation between the Implicit Association Test and explicit self-report measures. *Personality and Social Psychology Bulletin*, 31(10), 1369-1385. doi:10.1177/0146167205275613

Hofmann, W., Gschwendner, T., Nosek, B. A., & Schmitt, M. (2005b). What moderates implicit—Explicit consistency?. *European Review of Social Psychology*, 16(1), 335-390. doi:10.1080/10463280500443228

Hogan, R. (1982). A socioanalytic theory of personality. In M. Page (Ed.), Nebraska symposium on motivation (Vol. 30, pp. 55-89). Lincoln: University of Nebraska Press.

Holmes, E. A., & Mathews, A. (2005). Mental imagery and emotion: A special relationship? *Emotion*, 5, 489–497. doi:10.1037/1528-3542.5.4.489

Holoien, D. S., & Fiske, S. T. (2013). Downplaying positive impressions: Compensation between warmth and competence in impression management. *Journal of Experimental Social Psychology*, 49(1), 33-41. doi:10.1016/j.jesp.2012.09.001

Hoyt, W. T., Fincham, F. D., McCullough, M. E., Maio, G., & Davila, J. (2005). Responses to interpersonal transgressions in families: Forgivingness, forgivability, and relationship-specific effects. *Journal of Personality and Social Psychology*, 89, 375–394. doi:10.1037/0022-3514.89.3.375

Hruschka, D. J. (2010). *Friendship: Development, ecology, and evolution of a*

relationship. Berkeley, CA: University of California Press.

Ickes, W., & Simpson, J. A. (1997). Managing empathic accuracy in close relationships. In W. Ickes (Ed.), *Empathy accuracy* (pp. 218-260). New York, NY: Guilford.

Imhoff, R., Woelki, J., Hanke, S., & Dotsch, R. (2013). Warmth and competence in your face! Visual encoding of stereotype content. *Frontiers in Psychology*, 4, 386. doi:10.3389/fpsyg.2013.00386

Jensen, J. F. & Rauer, A. (2016). Young adult females' relationship work and its links to romantic functioning and stability over time. *Journal of Social and Personal Relationships*, 33, 687-708. doi:10.1177/0265407515588221

Johnson, H. D. (2005). Conflict goals associated with adolescent perceptions of relationship expectation violations during conflicts with same-sex friends. In A. V. Lee (Ed.), *Psychology of coping* (pp. 41–63). Hauppauge, NY: Nova Science Publishers.

Johnson, A. J., Wittenberg, E., Haigh, M., Wigley, S., Becker, J., Brown, K., & Craig, E. (2004). The process of relationship development and deterioration: Turning points in friendships that have terminated. *Communication Quarterly*, 52, 54–67. doi:10.1080/01463370409370178

Johnson, A. J., Wittenberg, E., Villagran, M. M., Mazur, M., & Villagran, P. (2003). Relational progression as a dialectic: Examining turning points in communication among friends. *Communication Monographs*, *70*, 230–249. doi:10.1080/0363775032000167415

Jonason, P. K., & Kavanagh, P. (2010). The dark side of love: Love styles and the Dark Triad. *Personality and Individual Differences*, *49*(6), 606-610. doi:10.1016/j.paid.2010.05.030

Jonason, P. K., Garcia, J. R., Webster, G. D., Li, N. P., & Fisher, H. E. (2015). Relationship Dealbreakers Traits People Avoid in Potential Mates. *Personality and Social Psychology Bulletin*, *41*(12), 1697-1711. doi:10.1177/0146167215609064

Jonason, P. K., Li, N. P., & Madson, L. (2012). It's not all about the Benjamins: Understanding preferences for mates with resources. *Personality and Individual Differences, 52,* 306-310. doi:10.1016/j.paid.2011.10.032

Jonason, P. K., & Schmitt, D. P. (2012). What have you done for me lately? Friendship-selection in the shadow of the Dark Triad traits. *Evolutionary Psychology*, *10*(3), doi:10.1177/147470491201000303.

Jonason, P. K., Valentine, K. A., Li, N. P., & Harbeson, C. L. (2011). Mate-selection and the Dark Triad: Facilitating a short-term mating strategy and creating a volatile environment. *Personality and Individual Differences*, *51*(6), 759-763. doi:10.1016/j.paid.2011.06.025

Jonason, P. K., Webster, G. D., & Gesselman, A. N. (2013). The structure and content of long-Term and short-term mate preferences. *Interpersona*, *7*(2), 167-179. doi:10.5964/ijpr.v7i2.125

Jones,W., & Burdette, M. (1994). Betrayal in relationships. In A. Weber & J. Harvey (Eds.), *Perspectives on close relationships* (pp. 243–262). Needham Heights, MA: Allyn & Bacon.

Jones, W., Moore, D., Scratter, A., & Negel, L. (2001). Interpersonal transgression And betrayals. In R. M. Kowalski (Ed.), *Behaving badly: Aversive behavior in interpersonal relationships* (pp. 233–256). Washington, DC: American Psychological Association. doi:10.1037/10365-009

Judd, C. M., James-Hawkins, L., Yzerbyt, V., & Kashima, Y. (2005). Fundamental

dimensions of social judgment: understanding the relations between judgments of competence and warmth. *Journal of personality and social psychology, 89*(6), 899-913. doi:10.1037/0022-3514.89.6.899

Kaniasty, K., & Norris, F. H. (2000). Help-seeking comfort and receiving social support: The role of ethnicity and context of need. *American Journal of Community Psychology*, 28, 545–581. doi:10.1023/a:1005192616058

Kelley, H. H. (1950). The warm-cold variable in first impressions of persons. *Journal of personality, 18*(4), 431-439. doi:10.1111/j.1467-6494.1950.tb01260.x

Kelley, H. H., Berscheid, E., Christensen, A., Harvey, J. H., Huston,T. L., & Levinger, G., …Peterson, D. R. (1983). *Analyzing close relationships.* In H. H. Kelley, E. Berscheid, A. Christensen, J. Harvey, T. L. Huston, G. Levinger, E. McClintock, L. A. Peplau, & D. R. Peterson (Eds.), *Close relationships* (pp. 20–67). San Francisco, CA: Freeman.

Kelley, H., & Thibaut, J. (1978). *Interpersonal relations: A theory of interdependence.* New York, NY: Wiley.

Kenny, D. A., & Acitelli, L. K. (2001). Accuracy and bias in the perception of the partner in a close relationship. *Journal of Personality and Social Psychology, 80*, 439 – 448. doi:10.1037/0022-3514.80.3.439

Kensinger, E. A., & Schacter, D. L. (2006). Amygdala activity is associated with the successful encoding of item, but not source information, for positive and negative stimuli. The Journal of Neuroscience, 26, 2564–2570. doi:10.1111/ j.1467-8721.2007.00506.x

Kenworthy, J. B., & Tausch, N. (2008). Expectations about the accuracy and stability of warmth versus competence traits: An intergroup analysis. *European Journal of Social Psychology, 38*(7), 1121-1129. doi:10.1002/ejsp.543

Kervyn, N., Fiske, S. T., & Malone, C. (2012). Brands as intentional agents framework: How perceived intentions and ability can map brand perception. *Journal of Consumer Psychology, 22*(2), 166-176. doi:10.1016/j.jcps.2011.09.006.

Kervyn, N., Yzerbyt, V. Y., Judd, C. M., & Nunes, A. (2009). A question of compensation: the social life of the fundamental dimensions of social perception. *Journal of Personality and Social Psychology*, 96(4), 828-842. doi:10.1037/a0013320

Klauer, K. C., Schmitz, F., Teige-Mocigemba, S., & Voss, A. (2010). Understanding the role of executive control in the Implicit Association Test: Why flexible people have small IAT effects. *The Quarterly Journal of Experimental Psychology,* 63(3), 595-619. doi:10.1080/17470210903076826

Korchmaros, J. D., & Kenny, D. A. (2001). Emotional closeness as a mediator of the effect of genetic relatedness on altruism. *Psychological Science*, 12, 262 – 265. doi:10.1111/1467-9280.00348

Krappman, L. (1996). Amicitia, drujba, shin-yu, philia, Freundschaft, friendship: On The cultural diversity of a human relationship. In W. M. Bukowski, A. F. Newcomb, & W. W. Hartup (Eds.), *The company they keep: Friendship in childhood and adolescence* (pp. 19-40). New York, NY: Cambridge University Press.

Kruger, D. J. (2003). Evolution and altruism: Combining psychological mediators with naturally selected tendencies. *Evolution and Human Behavior,* 24, 118 – 125. doi:10.1016/s1090-5138(02)00156-3

Kurzban, R., & Neuberg, S. L. (2005). Managing ingroup and outgroup relationships. In D. M. Buss (Ed.), *Handbook of evolutionary psychology*

(pp. 653–675). New York: Wiley.

Lam, B. C., Cross, S. E., Wu, T. F., Yeh, K. H., Wang, Y. C., & Su, J. C. (2016). What Do You Want in a Marriage? Examining Marriage Ideals in Taiwan and the United States. *Personality and Social Psychology Bulletin, 42*(6), 703-722. doi:10.1177/0146167216637842

Lane, K. A., Banaji, M. R., Nosek, B. A., & Greenwald, A. G. (2007). Understanding And using the implicit association test: IV: What we know (so far) about the method. In B. Wittenbrink, & N. Schwarz (Eds.), *Implicit measures of attitudes*. (pp. 59-102). NY: Guilford Press.

Lanthier, R. P. (2007). Personality traits and sibling relationships in emerging adults. *Psychological Reports*, 100, 672–674. doi:10.2466/pr0.100.2.672-674

Laursen, B., & Williams, V. A. (1997). Perceptions of interdependence and closeness in family and peer relationships among adolescents with and without romantic partners. In S. Shulman, W. A. Collins (Eds.), *Romantic Relationships in Adolescence: Developmental Perspectives*, (pp. 3–20). San Francisco, CA: Jossey-Bass. doi:10.1002/cd.23219977803

Laustsen, L., & Petersen, M. B. (2015). Does a competent leader make a good friend? Conflict, ideology, and the psychologies of friendship and followership. *Evolution and Human Behavior*, 36, 286 –293. doi:10.1016/j.evolhumbehav. 2015.01.001

Lawson, D. W., & Mace, R. (2009). Trade-offs in modern parenting: a longitudinal study of sibling competition for parental care. *Evolution and Human Behavior, 30*(3), 170-183.

Leach, C. W., Ellemers, N., & Barreto, M. (2007). Group virtue: The importance of morality (vs. competence and sociability) in the positive evaluation of in-

groups. *Journal of Personality and Social Psychology, 93*, 234–249. doi:10.1037/0022-3514.93.2.234

LeBel, E. P., & Paunonen, S. V. (2011). Sexy but often unreliable: The impact of unreliability on the replicability of experimental findings with implicit measures. *Personality and Social Psychology Bulletin, 37*(4), 570–583. doi:10.1177/0146167211400619.

Lee, J. A. (1973). *Colours of love: An exploration of the ways of loving*. New York, NY: New Press.

Lee, J., & Gillath, O. (2016). Perceived closeness to multiple social connections and attachment style: A longitudinal examination. *Social Psychological and Personality Science*, 7(7), 680-689. doi:10.1177/1948550616644963

Lempers, J. D., & Clark-Lempers, D. S. (1992). Young, middle, and late adolescents' comparisons of the functional importance of five significant relationships. *Journal of Youth and Adolescence, 21*, 53–96. doi:10.1007/BF01536983

Levine, T. R., Aune, K. S. & Park, H. (2006) Love styles and communication in relationships: Partner preferences, initiation, and intensification. *Communication Quarterly*, 54(4), 465-486. doi:0.1080/01463370601036515

Li, N. P., Bailey, J. M., Kenrick, D. T., & Linsenmeier, J. A. W. (2002). The necessities and luxuries of mate preferences: Testing the tradeoffs. *Journal of Personality and Social Psychology, 82*, 947-955. doi:10.1037/0022-3514.82.6.947

Li, N. P., & Kenrick, D. T. (2006). Sex similarities and differences in preferences for short-term mates: What, whether, and why. *Journal of Personality and Social Psychology*, 90, 468-489. doi:10.1037/0022-3514.90.3.468

Little, A. C., Roberts, S. C., Jones, B. C., & DeBruine, L. M. (2012). The perception

of attractiveness and trustworthiness in male faces affects hypothetical voting decisions differently in wartime and peacetime scenarios. *The Quarterly Journal of Experimental Psychology*, 65(10), 2018-2032. doi:10.1080/17470218.2012.677048

Liu, C., Yuan, L., Chen, C., & Yu, G. (2016). Authentic and Hubristic Pride as Assessed by Self, Friends, and Strangers. *Social Psychological and Personality Science,* 7(7), 690-696. doi:10.1177/1948550616649240

Locke, K. D., & Nekich, J. C. (2000). Agency and communion in naturalistic social comparison. *Personality and Social Psychology Bulletin, 26*, 864–874. doi:10.1177/0146167200269011

Lusk, J., MacDonald, K., & Newman, J. R. (1998). Resource appraisals among self, friend and leader: Implications for an evolutionary perspective on individual differences. *Personality and Individual Differences*, *24*(5), 685-700. doi:10.1016/S0191-8869(97)00227-4

MacEvoy, J. P., & Asher, S. R. (2012). When friends disappoint: Boys' and girls' Responses to transgressions of friendship expectations. *Child development*, 83(1), 104-119.

Manning, W. D., Giordano, P. C., & Longmore, M. A. (2006). Hooking up the relationship contexts of "nonrelationship" sex. *Journal of Adolescent Research*, *21*(5), 459-483. doi:10.1177/0743558406291692

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 20*, 568–579. doi:10.1037/0033-295X.98.2.224

Marsden, P. V., & Campbell, K. E. (1984). Measuring tie strength. *Social Forces, 63,* 482–501. doi:10.1093/sf/63.2.482

Marini, V., & Kurtz, J. (2011). Birth order differences in normal personality traits: Perspectives from within and outside the family. *Personality and Individual Differences, 51*(8), 910–914.

Mashek, D. J., & Aron, A. (2004). *Handbook of closeness and intimacy*. Mahwah, NJ: Lawrence Erlbaum.

McDaniel, M. J., Beier, M. E., Perkins, A. W., Goggin, S., & Frankel, B. (2009). An assessment of the fakeability of self-report and implicit personality measures. *Journal of Research in Personality*, 43(4), 682-685. doi:10.1016/ j.jrp.2009.01.011

Metts, S. (1994). Relational transgressions. In W. R. Cupach & B. H. Spitzberg (Eds.), *The dark side of interpersonal communication* (pp. 217–239). Hillsdale, NJ: Lawrence Erlbaum.

Metts, S., & Cupach, W. R. (2007). Responses to relational transgressions: Hurt, anger, and sometimes forgiveness. In B. H. Spitzberg & W. R. Cupach (Eds.), *The dark side of interpersonal communication* (2nd ed., pp. 243 – 273). Mahwah, NJ: Erlbaum.

Mock, D. W. (2004). *More than kin and less than kind*. Cambridge, MA: Harvard University Press.

Mok, D., Wellman, B., & Basu, R. (2007). Did distance matter before the Internet? Interpersonal contact and support in the 1970s. *Social Networks, 29*, 430–461. doi:10.1016/j.socnet.2007.01.009

Monsour, M. (1992). Meanings of intimacy in cross- and same-sex friendships. *Journal of Social and Personal Relationships, 9*, 277–295. doi:10.1177/02654 07592092007

Monsour, M., Harris, B., Kurzweil, & Beard, C. (1994). Challenges confronting

cross-sex friendships: "Much ado about nothing?" *Sex Roles, 31*, 55–77.

Montoya, A. K., & Hayes, A. F. (2017). Two-condition within-participant statistical mediation analysis: A path-analytic framework. *Psychological Methods, 22*(1), 6-27. doi:10.1037/met0000086

Montoya, R. M., & Horton, R. S. (2014). A Two-Dimensional Model for the Study of Interpersonal Attraction. *Personality and Social Psychology Review*, *18*(1), 59-86. doi:10.1177/1088868313501887

Morse, C. R., & Metts, S. (2011). Situational and Communicative Predictors of Forgiveness Following a Relational Transgression. *Western Journal of Communication*, 75(3), 239-258. doi:10.1080/10570314.2011.571652

Murray, S. L. (2001). Seeking a sense of conviction: Motivated cognition in close relationships. In G. J. O. Fletcher & M. S. Clark (Eds.), *Blackwell handbook of social psychology: Interpersonal process* (pp. 107-126). Oxford, England: Blackwell. doi:10.1002/9780470998557.ch5

Murray, S. L., Griffin, D. W., Derrick, J. L., Harris, B., Aloni, M., & Leder, S. (2011). Tempting fate or inviting happiness? Unrealistic idealization prevents the decline of marital satisfaction. *Psychological Science*, *22*, 619-626. doi:10.1177/0956797611403155

Murray, S. L., & Holmes, J. G. (1996). The construction of relationship realities. In G. J. O. Fletcher & J. Fitness (Eds.), *Knowledge structures in close relationships: A social psychological approach* (pp. 91–120). Mahwah, NJ: Erlbaum.

Murray, S. L., Holmes, J. G., & Collins, N. L. (2006). Optimizing assurance: The risk regulation system in relationships. *Psychological Bulletin*, 132, 641– 666. doi:10.1037/0033-2909.132.5.641

Murray, S. L., Holmes, J. G., & Griffin, D. (1996a). The benefits of positive illusions: Idealization and the construction of satisfaction in close relationships. *Journal of Personality and Social Psychology, 70,* 79-98. doi:10.1037//0022-3514.70.1.79

Murray, S. L., Holmes, J. G., & Griffin, D. W. (1996b). The self-fulfilling nature of positive illusions in romantic relationships: Love is not blind, but prescient. *Journal of Personality and Social Psychology, 71,* 1155–1180. doi: 10.1037/0022-3514.71.6.1155

Nelson, P. A., Thorne, A., & Shapiro, L. A. (2011). I'm outgoing and she's reserved: The reciprocal dynamics of personality in close friendships in young adulthood. *Journal of personality, 79*(5), 1113-1148. doi:10.1111/j.1467-6494.2011.00719.x

Nettle, D. (2007). *Personality: What makes you the way you are.* Oxford, England: Oxford University Press.

Nezlek, J. B., Schütz, A., & Sellin, I. (2007). Self-presentational success in daily social interaction. *Self and Identity,* 6(4), 361-379. doi:10.1080/15298860600979997

Nock, M. K., Park, J. M., Finn, C. T., Deliberto, T. L., Dour, H. J., & Banaji, M. R. (2010). Measuring the suicidal mind: Implicit cognition predicts suicidal behavior. *Psychological Science,* 21(4), 511–517. doi:10.1177/0956797610364762

Norris, P., & Epstein, S. (2011). An experiential thinking style: Its facets and relations with objective and subjective criterion measures. *Journal of Personality,* 79(5), 1043–1079. doi:10.1111/j.1467-6494.2011.00718.x

Nosek, B. A. (2005). Moderators of the relationship between implicit and explicit

evaluation. *Journal of Experimental Psychology: General*, 134(4), 565-584. doi:10.1037/0096-3445.134.4.565

Nosek, B. A., Banaji, M., & Greenwald, A. G. (2002). Harvesting implicit group attitudes and beliefs from a demonstration web site. *Group Dynamics: Theory, Research, and Practice*, 6, 101-115. doi:10.1037//1089-2699.6.1.101

Nosek, B. A., Greenwald, A. G., & Banaji, M. R. (2005). Understanding and using the Implicit Association Test: II. Method variables and construct validity. *Personality and Social Psychology Bulletin*, 31, 166–180. doi:10.1177/0146167204271418

Nosek, B. A., Greenwald, A. G., & Banaji, M. R. (2007a). The implicit association test at age 7: A methodological and conceptual review. In J. A. Bargh (Ed.), *Social psychology and the unconscious: The automaticity of higher mental processes* (pp. 265-292). New York, NY: Psychology Press.

Nosek, B. A., Hawkins, C. B., & Frazier, R. S. (2011). Implicit social cognition: From measures to mechanisms. *Trends in cognitive sciences*, 15(4), 152-159. doi:10.1016/j.tics.2011.01.005

Nosek, B. A., Hawkins, C. B., & Frazier, R. S. (2012). Implicit social cognition. In S. T. Fiske & C. N. Macrae (Eds.), *The sage handbook of social cognition*. London, England: Sage. doi:10.4135/9781446247631.n3

Nosek, B. A., Smyth, F. L., Hansen, J. J., Devos, T., Lindner, N. M., Ranganath, K. A., . . . & Banaji, M. R. (2007b). Pervasiveness and correlates of implicit attitudes and stereotypes. *European Review of Social Psychology*, 18(1), 36-88. doi:10.1080/10463280701489053

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York, NY: McGraw-Hill.

Olivola, C. Y., & Todorov, A. (2010). Elected in 100 milliseconds: Appearance-based trait inferences and voting. *Journal of Nonverbal Behavior*, 34, 83–110. doi:10.1007/s10919-009-0082-1

Oosterhof, N. N., & Todorov, A. (2008). The functional basis of face evaluation. *Proceedings of the National Academy of Sciences,* 105(32), 11087-11092. doi:10.1073/pnas.0805664105

Orehek, E., & Forest, A. L. (2016). When people serve as means to goals: Implications of a Motivational Account of Close Relationships. *Current Directions in Psychological Science, 25*(2), 79-84. doi:10.1177/0963721415623536

Oswald, D. L., & Clark, E. M. (2003). Best friends forever? High school best friendships and the transition to college. *Personal Relationships,* 10, 187–196. doi:10.1111/1475-6811.00045

Oswald, D. L., Clark, E. M., & Kelly, C. M. (2004). Friendship maintenance: An analysis of individual and dyad behaviours. *Journal of Social and Clinical Psychology,* 23, 413–441. doi:10.1521/jscp.23.3.413.35460

Oyserman, D., Coon, H. M., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: evaluation of theoretical assumptions and meta-analyses. *Psychological bulletin, 128*(1), 3-72. doi:10.1037//0033-2909.128.1.3

Ozer, D. J., & Benet-Martínez, V. (2006). Personality and the prediction of consequential outcomes. *Annual Review of Psychology, 57*, 401-421. doi:10.1146/annurev.psych.57.102904.190127

Pacini, R., & Epstein, S. (1999). The relation of rational and experiential information processing styles to personality, basic beliefs, and the ratio-bias phenomenon. *Journal of Personality and Social Psychology,* 76(6), 972–987. doi:10.1037/0022-3514.76.6.972.

Park, J., Uchida, Y. & Kitayama, S. (2016). Cultural variation in implicit independence: An extension of Kitayama et al. (2009). *International Journal of Psychology*, 51, 269–278. doi:10.1002/ijop.12157

Parks, M. R., & Floyd, K. (1996). Meanings for closeness and intimacy in friendship. *Journal of Social and Personal Relationships,* 13, 85–107.

Paulhus, D. L., & Trapnell, P. D. (2008). Self-presentation of personality: An agency Communion framework. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality psychology: Theory and research (3rd ed.)* (pp. 492–517). New York, NY: Guilford Press.

Payne, B. K., Burkley, M. A., & Stokes, M. B. (2008). Why do implicit and explicit attitude tests diverge? The role of structural fit. *Journal of Personality and Social Psychology*, 94(1), 16–31. doi:10.1037/0022-3514.94.1.16

Peeters, G. (1992). Evaluative meanings of adjectives in vitro and in context: Some theoretical implications and practical consequences of positive negative asymmetry and behavioral-adaptive concepts of evaluation. *Psychologica Belgica*, 32, 211–231.

Pike, A., Coldwell, J., & Dunn, J. F. (2005). Sibling relationships in early/middle childhood: links with individual adjustment. *Journal of Family Psychology*, *19*(4), 523-532. doi:10.1037/0893-3200.19.4.523

Plickert, G., Cote, R. R., & Wellman, B. (2007). It's not who you know, it's how you know them: Who exchanges what with whom?. *Social Networks,* 29, 405–429. doi:10.1016/j.socnet.2007.01.007

Pollet, T. V., & Hoben, A. D. (2011). An evolutionary perspective on siblings: Rivals and resources. In C. Salmon & T. K. Shackelford (Eds.), *The Oxford handbook of evolutionary family psychology* (pp. 128-148). New York:

Oxford University Press.

Pollett, T. V., & Nettle, D. (2007). Birth order and face-to-face contact with a sibling: Firstborns have more contact than laterborns. *Personality and Individual Differences, 43*, 1796–1806.

Rafaeli, E., & Gleason, M. E. (2009). Skilled support within intimate relationships. *Journal of Family Theory & Review*, 1, 20–37. doi:10.1111/j.1756-2589.2009.00003.x

Ranganath, K. A., Smith, C. T., & Nosek, B. A. (2008). Distinguishing automatic and controlled components of attitudes from direct and indirect measurement methods. *Journal of Experimental Social Psychology*, *44*(2), 386-396. doi:10.1016/j.jesp.2006.12.008

Rauer, A. J., & Volling, B. L. (2007). Differential parenting and sibling jealousy: Developmental correlates of young adults' romantic relationships. *Personal Relationships, 14*, 495 – 511.

Reis, H. T., Clark, M. S., & Holmes, J. G. (2004). Perceived partner responsiveness as an organizing construct in the study of closeness and intimacy. In D. J. Mashek & A. Aron (Eds.), *Handbook of closeness and intimacy* (pp. 201–225). Mahwah, NJ: Lawrence Erlbaum.

Reis, H. T., Collins, W. A., & Berscheid, E. (2000). The relationship context of human behavior and development. *Psychological bulletin*, *126*(6), 844-872. doi:10.1037/0033-2909.126.6.844

Richetin, J., Perugini, M., Adjali, I., & Hurling, R. (2007a). The moderator role of intuitive versus deliberative decision making for the predictive validity of implicit and explicit measures. *European Journal of Personality*, 21(4), 529-546. doi:10.1002/per.625

Richetin, J., Richardson, D. S., & Mason, G. D. (2010). Predictive validity of IAT aggressiveness in the context of provocation. *Social Psychology*, 41(1), 27-34. doi: 10.1027/1864-9335/a000005

Robbins, S. A., & Merrill, A. F. (2014). Understanding posttransgressional relationship closeness: The roles of perceived severity, rumination, and communication competence. *Communication Research Reports,* 31(1), 23-32. doi:10.1080/08824096.2013.843164

Roberts, G. (2005). Cooperation through interdependence. *Animal Behaviour*, 70, 901-908. doi:10.1016/j.anbehav.2005.02.006

Roberts, S. G. B., & Dunbar, R. I. M. (2011a). Communication in social networks: Effects of kinship, network size, and emotional closeness. *Personal Relationships,* 18, 439–452. doi:10.1111/j.1475-6811.2010.01310.x

Roberts, S. G. B., & Dunbar, R. I. M. (2011b). The costs of family and friends: An 18-month longitudinal study of relationship maintenance and decay. *Evolution and Human Behavior,* 32, 186-197. doi:10.1016/j.evolhumbehav.2010.08.005

Roberts, S. B. G., Dunbar, R. I. M., Pollet, T., & Kuppens, T. (2009). Exploring variations in active network size: Constraints and Ego characteristics. *Social Networks*, 31, 138–146. doi:10.1016/j.socnet.2008.12.002

Rodriguez, L. M., Hadden, B. W., & Knee, C. R. (2015). Not all ideals are equal: Intrinsic and extrinsic ideals in relationships. *Personal Relationships*, *22*(1), 138-152. doi:10.1111/pere.12068

Roefs, A., Huijding, J., Smulders, F. T. Y., MacLeod, C. M., de Jong, P. J., Wiers, R. W., . . ., Jansen, A. T. M. (2011). Implicit measures of association in psychopathology research. *Psychological Bulletin,* 137(1), 149–193. doi:10.1037/a0021729.

Rohde, P. A., Atzwanger, K., Butovskaya, M., Lampert, A., Mysterud, I., Sanchez-Andres, A., et al. (2003). Perceived parental favoritism, closeness to kin, and the rebel of the family: The effects of birth order and sex. *Evolution and Human Behavior, 24*, 261–276. doi:10.1013/S1090-5138(03)00033-3.

Rohmer, O., & Louvet, E. (2012). Implicit measures of the stereotype content associated with disability. *British Journal of Social Psychology*, 51(4), 732-740. doi:10.1111/j.2044-8309.2011.02087.x

Roloff, M. E., & Cloven, D. H. (1994). When partners transgress: Maintaining violated relationships. In D. J. Canary & L. Stafford (Eds.), *Communication and relational maintenance* (pp. 23–44). San Diego, CS: Academic Press.

Roloff, M. E., Soule, K. P., & Carey, C. M. (2001). Reasons for remaining in a relationship and responses to relational transgressions. *Journal of Social and Personal Relationships*, 18, 362–385. doi:10.1177/0265407501183004.

Rooke, S. E., Hine, D. W., & Thorsteinsson, E. B. (2008). Implicit cognition and substance use: A meta-analysis. *Addictive behaviors*, 33(10), 1314-1328. doi:10.1016/j.addbeh.2008.06.009

Rooth, D. (2010) Automatic associations and discrimination in hiring: real world evidence. *Labour Economics*. 17(3), 523–534. doi:10.1016/j.labeco.2009.04.005

Rose, S., & Serafica, F. C. (1986). Keeping and ending casual, close and best friendships. *Journal of Social and Personal Relationships,* 3, 275-288. Abstract retrieved from http://spr.sagepub.com/content/3/3/275.short

Rosenberg, S., Nelson, C., & Vivekananthan, P. (1968). A multidimensional approach to the structure of personality impressions. *Journal of Personality and Social Psychology, 9*, 283-294. doi:10.1037/h0026086

Rotkirch, A., Lyons, M., David-Barrett, T., & Jokela, M. (2014). Gratitude for help among adult friends and siblings. *Evolutionary Psychology, 12*(4), 673-686.

Rothstein, M. G., & Goffin, R. D. (2006). The use of personality measures in personnel selection: What does current research support?. *Human Resource Management Review*, 16(2), 155-180. doi:10.1016/j.hrmr.2006.03.004

Rowland, D. T. (2007). Historical trends in childlessness. *Journal of Family Issues, 28*, 1311–1337.

Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues*, 57(4), 743–762. doi:10.1111/0022-4537.00239

Rule, N. O., & Ambady, N. (2010). Democrats and Republicans can be differentiated from their faces. *PloS one*, 5(1), e8733. doi:10.1371/journal.pone.0008733

Rusbult, C. E., & Arriaga, X. B. (2000). Interdependence in personal relationships. In W. Ickes & S. Duck (Eds.), *The social psychology of personal relationships* (pp. 79 – 108). Chichester, England: Wiley.

Rusbult C. E., & Buunk B. P. (1993). Commitment processes in close relationships: An interdependence analysis. *Journal of Social and Personal Relationships*, 10, 175–204. doi:10.1177/026540759301000202

Rusbult, C. E., Olsen, N., Davis, J. L., & Hannon, M. A. (2001). Commitment and relationship maintenance mechanisms. In J. H. Harvey & A. E. Wenzel (Eds.), *Close romantic relationships: Maintenance and enhancement* (pp. 87–113). Mahwah, NJ: Erlbaum.

Rusbult, C. E., & Van Lange, P. A. (2003). Interdependence, interaction, and relationships. *Annual review of psychology*, 54(1), 351-375. doi:10.1146/annurev.psych.54.101601.145059

Sackett, P. R., & Walmsley, P. T. (2014). Which personality attributes are most important in the workplace?. *Perspectives on Psychological Science, 9*(5), 538-551. doi: 10.1177/1745691614543972

Salmon, C. A., & Daly, M. (1998). Birth order and familial sentiment: Middleborns are different. *Evolution and Human Behavior, 19*, 299–312.

Salmon, C., & Schumann, K. (2011). *The secret power of middle children*. New York: Hudson Street Press.

Sarkisian, N., & Gerstel, N. (2008). Till marriage do us part: Adult children's relationships with their parents. *Journal of Marriage and Family, 70*, 360-376. doi:10.1111/j.1741-3737.2008.00487.x

Sarkisian, N., & Gerstel, N. (2016). Does singlehood isolate or integrate? Examining the link between marital status and ties to kin, friends, and neighbors. *Journal of Social and Personal Relationships, 33,* 361-384. doi:10.1177/0265407515597564

Schmitt, D. P., Jonason, P. K., Byerley, G. J., Flores, S. D., Illbeck, B. E., O'Leary, K. N., & Qudrat, A. (2012). A reexamination of sex differences in sexuality: New studies reveal old truths? *Current Directions in Psychological Science, 21,* 135-139. doi:10.1177/0963721412436808

Schmukle, S. C., Back, M. D., & Egloff, B. (2008). Validity of the five-factor model for the implicit self-concept of personality. *European Journal of Psychological Assessment, 24*(4), 263-272. doi:10.1027/1015-5759.24.4.263

Schnabel, K., Banse, R., & Asendorpf, J. B. (2006). Assessment of implicit personality self concept using the implicit association test (IAT): Concurrent assessment of anxiousness and angriness. *British Journal of Social Psychology, 45*(2), 373-396. doi:10.1348/014466605X49159

Schwartz, S. H. (1992). Universals in the content and structure of values: Theory and empirical tests in 20 countries. In M. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 1–65). NewYork: Academic Press.

Schwarz, N. (1999) Self-reports: how the questions shape the answers. *American Psychologist, 54*(2), 93–105. doi:10.1037/0003-066X.54.2.93

Sedikides, C., Gaertner, L., & Toguchi, Y. (2003). Pancultural self-enhancement. *Journal of Personality and Social Psychology, 84*, 60-79. doi:10.1037/0022-3514.84.1.60

Seeman, T., Lusignolo, T., Albert, M., & Berkman, L. (2001). Social relationships, social support, and patterns of cognitive aging in healthy, high-functioning older adults: MacArthur Studies of Successful Aging. *Health Psychology, 20,* 243–255.

Seyfarth, R. M., & Cheney, D. L. (2012). The evolutionary origins of friendship. *Annual review of psychology, 63*, 153-177. doi:10.1146/annurev-psych-120710-100337

Shackelford, T. K., Besser, A., & Goetz, A. T. (2008). Personality, marital satisfaction, and probability of marital infidelity. *Individual Differences Research, 6*(1), 13–25.

Shackelford, T., & Buss, D. (1996). Betrayal in mateships, friendships, and coalitions. *Personality and Social Psychology Bulletin, 22*, 1151–1164.

Sheldon, K. M., Ryan, R. M., Deci, E. L., & Kasser, T. (2004). The independent effects of goal contents and motives on well-being: It's both what you pursue and why you pursue it. *Personality and social psychology bulletin, 30*(4), 475-486. doi:10.1177/0146167203261883

Sherman, A. M., de Vries, B., & Lansford, J. E. (2000). Friendship in childhood and adulthood: Lessons across the life span. *International Journal of Aging and Human Development, 51,* 31–51.

Sherman, A. M., Lansford, J. E., & Volling, B. L. (2006). Sibling relationships and best friendships in young adulthood: Warmth, conflict, and well-being. *Personal Relationships, 13,* 151–165.

Siemer, M., Mauss, I., & Gross, J. J. (2007). Same situations–different emotions: How appraisal shape our emotions. *Emotion, 7,* 592–600.

Soons, J. P. M., Liefbroer, A. C., & Kalmijn, M. (2009). The long-term consequences of relationship formation for subjective well-being. *Journal of Marriage and Family, 71,* 1254–1270. doi:10.1111/j.1741-3737.2009.00667.x

Sprecher, S., & Regan, P. C. (2002). Liking some things (in some people) more than others: Partner preferences in romantic relationships and friendships. *Journal of Social and Personal Relationships, 19,* 463–481. doi:10.1177/02654075020 19004048

Sprecher, S., Sullivan, Q., & Hatfield, E. (1994). Mate selection preferences: sex differences examined in a national sample. *Journal of Personality and Social Psychology, 66*(6), 1074–1080. doi:10.1037/0022-3514.66.6.1074.

Stacey, J. (1996). *In the name of the family: Rethinking family values in the postmodern age.* Boston, MA: Beacon Press.

Stark, S., Chernyshenko, O. S., Chan, K. Y., Lee, W. C., & Drasgow, F. (2001). Effects of the testing situation on item responding: Cause for concern. *Journal of Applied Psychology, 86*(5), 943-953. doi:10.1037/0021-9010.86.5.943

Steffens, M. C. (2004). Is the Implicit Association Test immune to faking? *Experimental Psychology, 51,* 165–179. doi:10.1027/1618-3169.51.3.165

Steffens, M. C., & Schulze K. S. (2006). Predicting spontaneous big five behavior with implicit association tests. *European Journal of Psychological Assessment, 22*(1), 13-20. doi:10.1027/1015-5759.22.1.13

Sternglanz, R. W., & DePaulo, B. M. (2004). Reading nonverbal cues to emotions: The advantages and liabilities of relationship closeness. *Journal of Nonverbal Behavior, 28*(4), 245-266. doi:10.1007/s10919-004-4158-7

Stevens, N. L., & Van Tilburg, T. G. (2011). Cohort differences in having and retaining friends in personal networks in later life. *Journal of Social and Personal Relationships, 28*(1), 24-43. doi:10.1177/0265407510386191

Stewart, S., Stinnett, H., & Rosenfeld, L. B. (2000). Sex differences in desired characteristics of short-term and long-term relationship partners. *Journal of Social and Personal Relationships, 17*, 843-853. doi:10.1177/02654075001 76008

Stewart-Williams, S., & Thomas, A. G. (2013). The ape that thought it was a peacock: does evolutionary psychology exaggerate human sex differences? *Psychological Inquiry, 24*(3), 137–168. doi:10.1080/1047840X.2013.804899

Stocker, C. M., Lanthier, R. P., & Furman, W. (1997). Sibling relationships in early adulthood. *Journal of Family Psychology, 11*(2), 210-221.

Strack, F. (1992). The different routes to social judgments: Experiential versus informational strategies. In L. L. Martin & A. Tesser (Eds.), *The construction of social judgments* (pp. 249–275). Hillsdale, NJ: Erlbaum.

Strack, F., & Deutsch, R. (2004). Reflective and impulsive determinants of social behavior. *Personality and Social Psychology Review, 8*, 220–247. doi:10. 1207/s15327957pspr0803_1

Stocker, C. M., Lanthier, R. P., & Furman, W. (1997). Sibling relationships in early

adulthood. *Journal of Family Psychology, 11*, 210 – 221.

Sulloway, F. J. (1995). Birth order and evolutionary psychology: A meta-analytic overview. *Psychological Inquiry, 6*, 75–80.

Sulloway, F. J. (2011). Why siblings are like Darwin's finches: Birth order, sibling competition, and adaptive divergence within the family. In D. M. Buss & P. H. Hawley (Eds.), *The evolution of personality and individual differences.* Oxford, England: Oxford University Press.

Sutcliffe, A., Dunbar, R., Binder, J., & Arrow, H. (2012). Relationships and the social brain: integrating psychological and evolutionary perspectives. British *Journal of Psychology, 103*, 149–168. doi:10.1111/j.2044-8295.2011.02061.x.

Teachman, B. A., Gregg, A. P., & Woody, S. R. (2001). Implicit associations for fear-relevant stimuli among individuals with snake and spider fears. *Journal of Abnormal Psychology, 110*(2), 226-235. doi:10.1037//0021-843X.110.2. 226

Teachman, B. A., & Woody, S. R. (2003). Automatic processing in spider phobia: Implicit fear associations over the course of treatment. *Journal of Abnormal Psychology, 112*(1), 100-109. doi:10.1037/0021-843X.112.1.100

Teige-Mocigemba, S., Klauer, K. C., & Sherman, J. W. (2010). A practical guide to Implicit Association Tests and related tasks. In B. Gawronski, & B. K. Payne (Eds.), *Handbook of implicit social cognition: measurement, theory, and applications* (pp. 117-139). New York, NY: Guilford Press.

Teige-Mocigemba, S., Schnabel, K., Banse, R., & Asendorpf, J. B. (2004). Assessment of multiple implicit self-concept dimensions using the extrinsic affective Simon task (EAST). *European Journal of Personality, 18*, 495–520. doi:10.1002/per.531

Thibaut, J., & Kelley, H. (1959). *The social psychology of groups.* New York, NY: Wiley.

Thoits, P. A. (2011). Mechanisms linking social ties and support to physical and mental health. *Journal of health and social behavior*, *52*(2), 145-161. doi:10.1177/0022146510395592

Thorndike, E. L. (1920). A constant error in psychological ratings. *Journal of Applied Psychology, 4,* 25-29. doi:10.1037/h0071663

Todorov, A. (2008). Evaluating faces on trustworthiness: An extension of systems for recognition of emotions signaling approach/avoidance behaviors. In: A. Kingston, & M. Miller (Eds.), *The year in cognitive neuroscience 2008, Annals of the New York Academy of Sciences, 1124,* 208–224.

Todorov, A. (2011). Evaluating faces on social dimensions. In A. Todorov, S. T. Fiske, & D. Prentice (Eds.), *Social neuroscience, toward understanding the underpinnings of the social mind* (pp. 54-76). Oxford, England: Oxford University Press.

Todorov, A., Loehr, V., & Oosterhof, N. N. (2010). The obligatory nature of holistic processing of faces in social judgments. *Perception*, *39*(4), 514-532. doi: 10.1068/p6501

Todorov, A., Mandisodza, A. N., Goren, A., & Hall, C. C. (2005). Inferences of competence from faces predict election outcomes. *Science, 308,* 1623–1626. doi:10.1126/science.1110589

Todorov, A., Olivola, C. Y., Dotsch, R., & Mende-Siedlecki, P. (2015). Social attributions from faces: Determinants, consequences, accuracy, and functional significance. *Annual Review of Psychology, 66*(1), 519-545. doi:10.1146/annurev-psych-113011-143831

Tooby, J., & Cosmides, L. (1996). Friendship and the Banker's Paradox: Other pathways to the evolution of adaptations of altruism. *Proceedings of the British Academy, 88*, 119–143.

Totenhagen, C. J., Butler, E. A., Curran, M. A., & Serido, J. (2016). The calm after the storm: Relationship length as associated with couples' daily variability. *Journal of Social and Personal Relationships, 33*(6), 768-791. doi: 10.1177/0265407515597562

Triandis, H. C. (1995). *Individualism & collectivism*. Westview Press.

Trivers, R. L. (1971). The evolution of reciprocal altruism. *Quarterly Review of Biology, 46*, 35 – 57. Retrieved from http://www.jstor.org/stable/2822435

Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review, 117*, 440–463. doi:10.1037/a0018963

Tsapelas, I., Fisher, H. E., & Aron, A. (2011). Infidelity: When, where, why. In W. R. Cupach & B. H. Spitzberg (Eds.), *The dark side of close relationships II* (pp. 175–195). New York, NY: Routledge/Taylor & Francis Group.

Uchronski, M. (2008). Agency and communion in spontaneous self-descriptions: Occurrence and situational malleability. *European Journal of Social Psychology, 38*, 1093-1102. doi:10.1002/ejsp.563

Uleman, J .S., Rhee, E., Bardoliwalla, N., Semin, G., & Toyama, M. (2000). The relational self: Closeness to ingroups depends on who they are, culture, and the type of closeness. *Asian Journal of Social Psychology, 3*, 1-17. doi:10. 1111/1467-839X.00052

Vigil, J. M. (2007). Asymmetries in the friendship preferences and social styles of men and women. *Human Nature, 18*(2), 143-161. doi:10.1007/s12110-007-9003-3

Volling, B. L. (2003). Sibling relationships. In M. H. Bornstein, L. Davidson, C. L. M. Keyes, K. A. Moore, & the Center for Child Well-Being (Eds.), *Well-being: Positive development across the life course* (pp. 383–406). Mahwah, NJ: Erlbaum.

Volling, B. L. , McElwain, N. L. , & Miller, A. L. (2002). Emotion regulation in context: The jealousy complex between young siblings and its relations with child and family characteristics. *Child Development, 73,* 581– 600 .

von Rueden, C., Gurven, M., Kaplan, H., & Stieglitz, J. (2014). Leadership in an egalitarian society. *Human Nature, 25*(4), 538-566. doi:10.1007/s12110-014-9213-4

Voorpostel, M., and van der Lippe, T. (2007). Support between siblings and between friends: Two worlds apart? *Journal of Marriage and Family,* 69, 1271-1282.

Wade, M. L., & Brewer, M. B. (2006). The structure of female subgroups: an exploration of ambivalent stereotypes. *Sex Roles: A Journal of Research, 54,* 753-765.

Walker, A. J., Allen, K. R., & Connidis, I. A. (2005). Theorizing and studying sibling ties in adulthood. In V. L. Bengtson, A. C. Acock, K. R. Allen, P. Dilworth-Anderson, & D. M. Klein (Eds.) *Sourcebook of family theory & research* (pp. 167 – 190). Thousand Oaks, CA: Sage.

Webster, G. D. (2007). Evolutionary theory's increasing role in personality and social psychology. *Evolutionary Psychology, 5*(1), 84–91.

Webster, G. D., Jonason, P. K., & Schember, T. O. (2009). Hot topics and popular papers in evolutionary psychology: analyses of title words and citation counts in evolution and human behavior, 1979–2008. *Evolutionary Psychology, 7*(3), 348–362.

Wentura, D., Rothermund, K., & Bak, P. (2000). Automatic vigilance: the attention-grabbing power of approach-and avoidance-related social information. *Journal of personality and social psychology, 78*(6), 1024-1037. doi:10.1037//0022-3514.78.6.1024

Werking, K. (1997). *We're just good friends: Women and men in nonromantic relationships.* New York, NY: Guilford Press.

White, L. (2001). Sibling relationships over the life course: A panel analysis. *Journal of Marriage and the Family, 63,* 555–568.

White, J. K., Hendrick, S. S., & Hendrick, C. (2004). Big five personality variables And relationship constructs. *Personality and Individual Differences, 37,* 1519–1530. doi:10.1016/j.paid.2004.02.019

White, L. K., & Riedmann, A. (1992). Ties among adult siblings. *Social Forces, 71,* 85 – 102.

Wiers, R. W., Van Woerden, N., Smulders, F. T., & De Jong, P. J. (2002). Implicit and explicit alcohol-related cognitions in heavy and light drinkers. *Journal of abnormal psychology, 111*(4), 648-658. doi:10.1037//0021-843X.111.4.648

Wiggins, J. S. (1991). Agency and communion as conceptual coordinates for the understanding and measurement of interpersonal behavior. In W. M. Grove & D. Ciccetti (Eds.), *Thinking clearly about psychology: Vol. 2. Personality and Psychopathology* (pp. 89-113). Minneapolis, MN: University of Minnesota Press.

Willis, J., & Todorov, A. (2006). First impressions: Making up your mind after a 100-ms exposure to a face. *Psychological science*, *17*(7), 592–598. doi:10.1111/j.1467-9280.2006.01750.x

Wilson, T. D. (2009). Know thyself. *Perspectives on Psychological Science, 4*(4),

384–389. doi:10.1111/j.1745-6924.2009.01143.x

Wilson, K., Mattingly, B. A., Clark, E. M., Weidler, D. J., & Bequette, A. W. (2011). The gray area: Exploring attitudes toward infidelity and the development of the perceptions of dating infidelity scale. *The Journal of Social Psychology, 151*, 63–86. doi:10.1080/00224540903366750.

Wiseman, J. P. (1986). Friendship: Bonds and binds in a voluntary relationship. *Journal of Social and Personal Relationships, 3*, 191–211.

Wojciszke, B. (1994). Multiple meanings of behavior: Construing actions in terms of competence or morality. *Journal of Personality and Social Psychology, 67,* 222-232. doi: 10.1037/0022-3514.67.2.222

Wojciszke, B. (1997). Parallels between competence–versus morality related traits and individualistic versus collectivistic values. *European Journal of Social Psychology, 27*(3), 245-256. doi:10.1002/(SICI)1099-0992(199705)27:3

Wojciszke, B. (2005a). Affective concomitants of information on morality and competence. *European Psychologist, 10*(1), 60-70. doi:10.1027/1016-9040.10.1.60

Wojciszke, B. (2005b). Morality and competence in person-and self-perception. *European Review of Social Psychology, 16*(1), 155-188.

Wojciszke, B., & Abele, A. E. (2008). The primacy of communion over agency and its reversals in evaluations. *European Journal of Social Psychology*, *38*(7), 1139-1147. doi:10.1002/ejsp.549

Wojciszke, B., Baryła, W., Parzuchowski, M., Szymkow, A., & Abele, A. E. (2011). Self-esteem is dominated by agentic over communal information. *European Journal of Social Psychology, 40*, 1-11. doi:10.1002/ejsp.791

Wojciszke, B., Bazińska, R., & Jaworski, M. (1998). On the dominance of moral

categories in impression formation. *Personality and Social Psychology Bulletin, 24*, 1245-1257. doi:10.1177/01461672982412001

Wojciszke, B., & Bialobrzeska, O. (2014). Agency versus Communion as Predictors of Self-esteem: Searching for the Role of Culture and Self-construal. *Polish Psychological Bulletin*, *45*(4), 469-479. doi:10.2478/ppb-2014-0057

Wright, P. H. (1984). Self-referent motivation and the intrinsic quality of friendship. *Journal of Social and Personal Relationships, 115*, 115–130.

Wu, T. F., Cross, S. E., Wu, C. W., Cho, W., & Tey, S. H. (2016). Choosing Your Mother or Your Spouse Close Relationship Dilemmas in Taiwan and the United States. *Journal of Cross-Cultural Psychology, 47*(4), 558-580. doi: 10.1177/0022022115625837

Ybarra, O., Chan, E., & Park, D. (2001). Young and old adults' concerns about morality and competence. *Motivation and Emotion, 25*, 85-100. doi:10.1023/A:1010633908298

Ybarra, O., Chan, E., Park, H., Burnstein, E., Monin, B., & Stanik, C. (2008). Life's recurring challenges and the fundamental dimensions: An integration and its implications for cultural differences and similarities. *European Journal of Social Psychology*, *38*(7), 1083-1092. doi:10.1002/ejsp.559

Yeung, W. J. , Linver, M. R., & Brooks-Gunn, J. (2002). How money matters for young children's development: Parental investment and family processes. *Child Development*, *73*, 1861–1879 .

Yovel, I., & Friedman, A. (2013). Bridging the gap between explicit and implicit measurement of personality: The questionnaire-based implicit association test. *Personality and Individual Differences, 54*, 76-80. doi:10.1016/j.paid.2012.08.015

Zarbatany, L., Conley, R., & Pepper, S. (2004). Personality and gender differences in friendship needs and experiences in preadolescence and young adulthood. *International Journal of Behavioral Development, 28,* 299–310. doi:10.1080/1650250344000514.

Zhou, W., Sornette, D., Hill, R. A., & Dunbar, R. (2005). Discrete hierarchical organization of social group sizes. *Proceedings of the Royal Society of London, 272B,* 439–444. doi:10.1098/rspb.2004.2970

Ziegler, M., Schmukle, S., Egloff, B., & Bühner, M. (2010). Investigating measures of achievement motivation(s). *Journal of Individual Differences, 31*(1), 15–21. doi:10.1027/1614-0001/a000002

Appendix A: Closeness Pretest

Introduction

Thank you for taking part in this survey. My name is Jan. I am a Ph.D. psychology student. This survey is a part of my thesis concerning interpersonal relationships and personality. Thus, your help is much appreciated.

The survey would take less than 10 minutes. There should be no risk in the completion of this survey. However, if at any moment you are uncomfortable you are able to withdraw or cease the process at your willingness.

The only pieces of your personal information that we would like to know are your sex and ethnicity. This information and the data will be restricted and only my supervisor Dr. Nicolas Geeraert (geeraert@essex.ac.uk) and I (pchitt@essex.ac.uk) will have the access.

Instructions

This survey is just a short survey asking about your personal opinion of **"how close"** you are with the following people. Please use the slider to indicate how close you are to each target. There is no right or wrong answer. We simply would like to know what you think. Again, thank you for your help :)

	Not Close at All	Not Really Close	Slightly Close	Moderately Close	Quite Close	Very Close	Extremely Close
Friend of a Friend							
Father							
A Casual Friend							
The Best Friend							
A Technician at the Department							
A Close Friend							
A Librarian							
A Neighbor							
A Postman							

	Not Close at All	Not Really Close	Slightly Close	Moderately Close	Quite Close	Very Close	Extremely Close
Mother							
A Colleague (at Work or the Department)							
An Acquaintance							
A Supervisor or a Lecturer							
A Bus Driver							

Demographic Information

Please indicate your sex and ethnicity.

__ Female __ Male

Ethnicity

__ Asian or Asian British (e.g., Bangladesh, Chinese, Indian, Thai)

__ Black or Black British (e.g., African American, Caribbean)

__ Mixed (e.g., Asian&White, Asian&Black, Black&White)

__ White (e.g., American, British, Greek, Irish, Italian, Scottish, Welsh)

__ Other. Please specify. _____

Appendix B: Trait Perception of Close Friend and Acquaintance

Introduction

Thank you for taking part in this survey. My name is Jan. I am a Ph.D. psychology student. This survey is a part of my thesis concerning interpersonal relationships and personality. Thus, your help is much appreciated.

The survey would take less than 10 minutes. There should be no risk in the completion of this survey. However, if at any moment you are uncomfortable you are able to withdraw or cease the process at your willingness.

The only pieces of your personal information that we would like to know are your sex and ethnicity. This information and the data will be restricted and only my supervisor Dr. Nicolas Geeraert (geeraert@essex.ac.uk) and I (pchitt@essex.ac.uk) will have the access.

Please press continue below if you would like to take part.

Instructions

This survey is about personality perception of your social contacts. There are 6 targets for your evaluation: father, mother, a close friend, a casual friend, a colleague, and an acquaintance although not necessarily in this order. Firstly, for each target, you will be asked to rate 8 personality traits of the target and indicate how close you are with them. Next, you will be asked to rate the same 8 personality traits but of yourself. Finally is your demographic information i.e. sex and ethnicity. There is no right or wrong answer. We simply would like to know your opinion. Again, thank you for your help :)

Father

Please think of your father and rate his personality.

	Extremely Uncharacteristic	Very Uncharacteristic	Somewhat Uncharacteristic	Neutral	Moderately Characteristic	Very Characteristic	Extremely Characteristic
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him.

☐Not Close at All ☐Not Really Close ☐Slightly Close ☐Moderately Close ☐Quite Close ☐Very Close ☐Extremely Close

Mother

Please think of your mother and rate her personality.

	Extremely Uncharacteristic	Very Uncharacteristic	Somewhat Uncharacteristic	Neutral	Moderately Characteristic	Very Characteristic	Extremely Characteristic
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to her.

☐Not Close at All ☐Not Really Close ☐Slightly Close ☐Moderately Close ☐Quite Close ☐Very Close ☐Extremely Close

Close Friend

Please think of your close friend and rate his/her personality.

	Extremely Uncharacteristic	Very Uncharacteristic	Somewhat Uncharacteristic	Neutral	Moderately Characteristic	Very Characteristic	Extremely Characteristic
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him/her.

☐Not Close at All ☐Not Really Close ☐Slightly Close ☐Moderately Close ☐Quite Close ☐Very Close ☐Extremely Close

Casual Friend

Please think of your casual friend and rate his/her personality.

	Extremely Uncharacteristic	Very Uncharacteristic	Somewhat Uncharacteristic	Neutral	Moderately Characteristic	Very Characteristic	Extremely Characteristic
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him/her.

☐Not Close at All ☐Not Really Close ☐Slightly Close ☐Moderately Close ☐Quite Close ☐Very Close ☐Extremely Close

Colleague

Please think of your colleague and rate his/her personality.

	Extremely Uncharacteristic	Very Uncharacteristic	Somewhat Uncharacteristic	Neutral	Moderately Characteristic	Very Characteristic	Extremely Characteristic
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him/her.

☐Not Close at All ☐Not Really Close ☐Slightly Close ☐Moderately Close ☐Quite Close ☐Very Close ☐Extremely Close

Acquaintance

Please think of your acquaintance and rate his/her personality.

	Extremely Uncharacteristic	Very Uncharacteristic	Somewhat Uncharacteristic	Neutral	Moderately Characteristic	Very Characteristic	Extremely Characteristic
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him/her.

☐Not Close at All ☐Not Really Close ☐Slightly Close ☐Moderately Close ☐Quite Close ☐Very Close ☐Extremely Close

Demographic Information

Please indicate your sex and ethnicity.

__ Female __ Male

Ethnicity

__ Asian or Asian British (e.g., Bangladesh, Chinese, Indian, Thai)

__ Black or Black British (e.g., African American, Caribbean)

__ Mixed (e.g., Asian&White, Asian&Black, Black&White)

__ White (e.g., American, British, Greek, Irish, Italian, Scottish, Welsh)

__ Other. Please specify.

_____

Appendix C: Trait Perception of Close Friend and Acquaintance II

Introduction

Thank you for taking part in this survey. My name is Jan. I am a Ph.D. psychology student. This survey is a part of my thesis concerning interpersonal relationships and personality. Thus, your help is much appreciated.

The survey would take less than 10 minutes. There should be no risk in the completion of this survey. However, if at any moment you are uncomfortable you are able to withdraw or cease the process at your willingness. The only pieces of your personal information that we would like to know are your sex and ethnicity. This information and the data will be restricted and only my supervisor Dr. Nicolas Geeraert (geeraert@essex.ac.uk) and I (pchitt@essex.ac.uk) will have the access.

Please press continue below if you would like to take part.

Instructions

This survey is about personality perception of your social contacts. There are 6 targets for your evaluation: father, mother, a close friend, a casual friend, a colleague, and an acquaintance although not necessarily in this order.

Firstly, for each target, you will be asked to rate 8 personality traits of the target and indicate how close you are with them. Next, you will be asked to rate the same 8 personality traits but of yourself. Finally is your demographic information i.e. sex and ethnicity. There is no right or wrong answer. We simply would like to know your opinion. Again, thank you for your help :)

Father

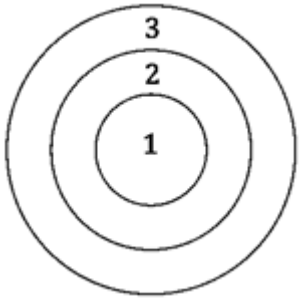
Please think of your father and rate his personality.

	Extremely Uncharacteristic	Very Uncharacteristic	Somewhat Uncharacteristic	Neutral	Moderately Characteristic	Very Characteristic	Extremely Characteristic
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him.

☐Not Close at All ☐Not Really Close ☐Slightly Close ☐Moderately Close ☐Quite Close ☐Very Close ☐Extremely Close

The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well.



In which circle would you place your father?

☐Circle 1 ☐Circle 2 ☐Circle 3

The pairs of circle below represent the relationship between you and your father. One circle is you. The other is your father.

Which pair best reflects your relationship with your father?

1 2 3 4 5 6 7

Mother

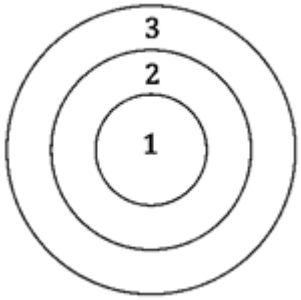
Please think of your mother and rate her personality.

	Extremely Uncharacteristic	Very Uncharacteristic	Somewhat Uncharacteristic	Neutral	Moderately Characteristic	Very Characteristic	Extremely Characteristic
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to her.

☐Not Close at All ☐Not Really Close ☐Slightly Close ☐Moderately Close ☐Quite Close ☐Very Close ☐Extremely Close

The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well.



In which circle would you place your mother?

☐Circle 1 ☐Circle 2 ☐Circle 3

The pairs of circle below represent the relationship between you and your mother. One circle is you. The other is your mother.

Which pair best reflects your relationship with your mother?

1 2 3 4 5 6 7

Close Friend

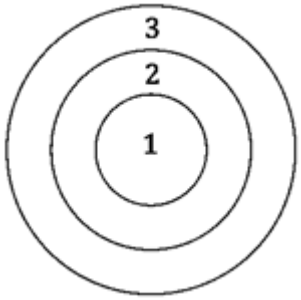
Please think of your close friend and rate his/her personality.

	Extremely Uncharacteristic	Very Uncharacteristic	Somewhat Uncharacteristic	Neutral	Moderately Characteristic	Very Characteristic	Extremely Characteristic
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him/her.

☐Not Close at All ☐Not Really Close ☐Slightly Close ☐Moderately Close ☐Quite Close ☐Very Close ☐Extremely Close

The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well.



In which circle would you place your close friend?

☐Circle 1 ☐Circle 2 ☐Circle 3

The pairs of circle below represent the relationship between you and your close friend. One circle is you. The other is your close friend.

Which pair best reflects your relationship with your close friend?

1 2 3 4 5 6 7

Casual Friend

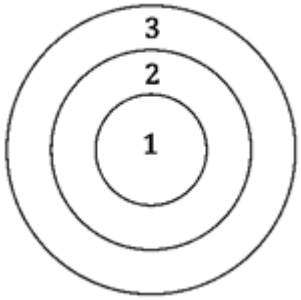
Please think of your casual friend and rate his/her personality.

	Extremely Uncharacteristic	Very Uncharacteristic	Somewhat Uncharacteristic	Neutral	Moderately Characteristic	Very Characteristic	Extremely Characteristic
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him/her.

☐Not Close at All ☐Not Really Close ☐Slightly Close ☐Moderately Close ☐Quite Close ☐Very Close ☐Extremely Close

The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well.



In which circle would you place your casual friend?

☐Circle 1 ☐Circle 2 ☐Circle 3

The pairs of circle below represent the relationship between you and your casual friend. One circle is you. The other is your casual friend

Which pair best reflects your relationship with your casual friend?

1 2 3 4 5 6 7

Colleague

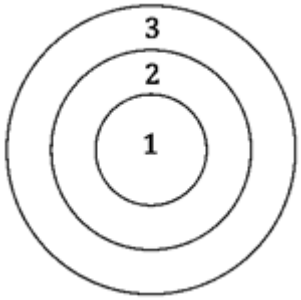
Please think of your colleague and rate his/her personality.

	Extremely Uncharacteristic	Very Uncharacteristic	Somewhat Uncharacteristic	Neutral	Moderately Characteristic	Very Characteristic	Extremely Characteristic
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him/her.

☐Not Close at All ☐Not Really Close ☐Slightly Close ☐Moderately Close ☐Quite Close ☐Very Close ☐Extremely Close

The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well.



In which circle would you place your colleague?

☐Circle 1 ☐Circle 2 ☐Circle 3

The pairs of circle below represent the relationship between you and your colleague. One circle is you. The other is your colleague.

Which pair best reflects your relationship with your colleague?

1 2 3 4 5 6 7

Acquaintance

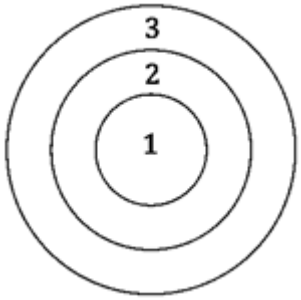
Please think of your acquaintance and rate his/her personality.

	Extremely Uncharacteristic	Very Uncharacteristic	Somewhat Uncharacteristic	Neutral	Moderately Characteristic	Very Characteristic	Extremely Characteristic
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him/her.

☐Not Close at All ☐Not Really Close ☐Slightly Close ☐Moderately Close ☐Quite Close ☐Very Close ☐Extremely Close

The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well.



In which circle would you place your acquaintance?

☐Circle 1 ☐Circle 2 ☐Circle 3

The pairs of circle below represent the relationship between you and your acquaintance. One circle is you. The other is your acquaintance.

Which pair best reflects your relationship with your acquaintance?

1 2 3 4 5 6 7

Demographic Information

Please indicate your sex and ethnicity.

__ Female __ Male

Ethnicity

__ Asian or Asian British (e.g., Bangladesh, Chinese, Indian, Thai)

__ Black or Black British (e.g., African American, Caribbean)

__ Mixed (e.g., Asian&White, Asian&Black, Black&White)

__ White (e.g., American, British, Greek, Irish, Italian, Scottish, Welsh)

__ Other. Please specify.

_____

Appendix D: Trait Transgressions Pretest

Introduction

Thank you for taking part in this survey. My name is Jan. I am a Ph.D. psychology student. This survey is a part of my thesis concerning interpersonal relationships and personality. Thus, your help is much appreciated.

The survey would take less than 10 minutes. There should be no risk in the completion of this survey. However, if at any moment you are uncomfortable you are able to withdraw or cease the process at your willingness.

The only pieces of your personal information that we would like to know are your sex and ethnicity. This information and the data will be restricted and only my supervisor Dr. Nicolas Geeraert (geeraert@essex.ac.uk) and I (pchitt@essex.ac.uk) will have the access.

Please press continue below if you would like to take part.

Instructions

When we interact with someone, there are certain behaviors that we expect from them e.g., to be nice and capable. If the person fulfills these expectations, your expectations about the person are met. But if the person does not fulfill these expectations, your expectations about the person are violated. Violations vary in their severity.

There will be different behaviors for you to read and answer 3 questions about each. The questions are the same for every behavior.

The first asks if the behavior is related to the competence of the person who engaged in the behavior. Competence traits are the ones about ability and capability such as capable, competent, intelligent, smart etc.

The second question asks if the behavior is related to the warmth of the person who engaged in the behavior. Warmth traits are the ones about morality, sociability, support, and trustworthiness such as helpful, sociable, trustworthy, warm etc.

The last question is about the unexpectedness of the behavior. You will be asked how unexpected the behavior is or its severity.

1. A person got a very bad mark for a very easy exam.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

2. A person got expelled from their university.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

3. A person got a very bad mark for a very easy exam.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

4. A person got expelled from their part-time job.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

5. A person lacks knowledge about current news.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

6. A person lacks knowledge about geography.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

7. A person is always lost because they are not good with directions.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

8. A person has had a lot of accidents when driving.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

9. A person misspells a lot.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

10. A person has a hard time communicating with others.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

11. A person makes a lot of irrelevant comments in class discussions.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

12. A person does not know how to operate a washing machine.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

13. A person does not know how to change a light bulb.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

14. A person does not complete their share of work when working with their friend.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

15. A person does not make a coherent argument in a class discussion.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

16. A person exposes their friend's secret when they were told not to.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

17. A person posts or tags a bad picture of a friend on Facebook.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

18. A person gossips about their friend.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

19. A person criticizes their friend's appearance in front of other people.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

20. A person criticizes their friend's outfit when the two of them are together.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

21. A person expresses disapproval on their friend's partner.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

22. A person fails to comfort their friend when they are going through a hard time.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

23. A person is being insensitive or indifferent when their friend tells them that they are upset about something.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

24. A person rejects to help a friend when asked.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

25. A person is being indifferent and does not encourage when their friend tells them about a good news.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

26. A person teases their friend.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

27. A person lies about having no time to spend with their friend but spending time with other people.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

28. Even though their friend asked them to see a movie together, they watch it with someone else.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

29. A person ignores texts or calls from their friend.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

30. A person goes out with someone whom they knew their friend is attracted to.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

31. A person promised to go to a party with their friend but cancel at the last minute without any reason.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

32. A person had sex with their friend's partner.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

33. A person cheats on an exam.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

34. A person shoplifts.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

35. A person does not pay taxes.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

36. A person cheats on their partner.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

37. A person physically assaults someone without any justified reason.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

38. A person uses drugs.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

39. A person drives under influence.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

40. A person lies about their past.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

41. A person makes a lot of offensive or inappropriate comments about other people.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

42. A person is being rude or disrespectful to their friend.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

43. A person is being hypocritical.

Do you think this behavior is relevant to the competence of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

Do you think this behavior is relevant to the warmth of the person who engaged in the behavior?

☐ Completely Irrelevant ☐ Highly Irrelevant ☐ Quite Irrelevant ☐ Neutral ☐ Quite Relevant ☐ Highly Relevant ☐ Completely Relevant

How unexpected is this behavior to you i.e. its severity?

☐ Not at All Severe ☐ Mildly Severe ☐ Not Quite Severe ☐ Neutral ☐ Quite Severe ☐ Highly Severe ☐ Completely Severe

Demographic Information

Please indicate your sex and ethnicity.

__ Female __ Male

Ethnicity

__ Asian or Asian British (e.g., Bangladesh, Chinese, Indian, Thai)

__ Black or Black British (e.g., African American, Caribbean)

__ Mixed (e.g., Asian&White, Asian&Black, Black&White)

__ White (e.g., American, British, Greek, Irish, Italian, Scottish, Welsh)

__ Other. Please specify._____

Appendix E: Trait Transgressions of Close Friend and Acquaintance

Introduction

My name is Jan. I am a Ph.D. student. This survey is about personality perception which is a part of my thesis under the supervision of Dr. Nicolas Geeraert.

In this survey, you will be asked to rate personality traits of a close friend and an acquaintance before and after reading 4 scenarios involving them. This survey should not take longer than 15 minutes. Please proceed if you would like to take part. Thank you :)

We would like some information in order to personalize the survey for you (it will not be shown or stored somewhere else. Only you could see it).

Please indicate your sex.

__ Female __ Male

Please think about a **close friend**. This would be a friend who you want to meet regularly, feel very comfortable with, and can identify as being your close friend. It is important that your choice a friend whom you do not have any romantic feelings towards.

Please write the close friend's first name or initials.

_____

Think about an **acquaintance**. This would be a person who you meet occasionally. You would not consider this person a friend, and you do not know them well.

Please write the acquaintance's first name or initials:

_____

Overall evaluation of close friend

Please think of your **close friend, John**. In your opinion, do the following traits describe him?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Overall evaluation of acquaintance

Please think of your **acquaintance, John**. In your opinion, do the following traits describe him?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Imagine the following scenario happening to your **friend, John**.

"You and John took a test. You found that the test was much easier than you expected. You looked around and apparently many people finished quickly. But John looked nervous and used up all the time. After the time was up, he told you that he found the test rather difficult and was not confident at all. Later, the mark was announced. John told you that he got a very bad mark"

If the above scenario really happened, how would you perceive John now?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Imagine the following scenario happening to your **acquaintance, John.**

"You were always reluctant when John asked if you wanted a lift. You saw his car always full of scratches here and there all over the car. John was known to be a bad driver. He took 3 times to get a driving license. He got into an accident a lot since he had been driving for a few years even when the vision was good. A few days later, you learned that John had an accident when driving again."

If the above scenario really happened, how would you perceive John now?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Imagine the following scenario happening to your **friend, John.**

"The weekend was coming and you planned to spend time with John. You decided to ask him if he wanted to do something together. You gave him choices of activity: going to the sports center, going for a movie, going to a pub to watch a match, or having dinner. John said he couldn't because the family wanted to do something on the weekend too. On Monday, you overheard him talking with your mutual friend about how fun the weekend they spent together was." If the above scenario really happened, how would you perceive John now?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Imagine the following scenario happening to your **acquaintance, John.**

"Your parents and you had been arguing a lot lately. They always nagged that you were not home enough and when you were home they nagged that you were being lazy and wasting time. Frustrated, you told John about this. He did not react much. You had a feeling that he was not really listening. When you asked him what he reckoned you should do he simply said: You will get over it".

If the above scenario really happened, how would you perceive John now?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Demographic Information

Please indicate your ethnicity.

__ Asian or Asian British (e.g., Bangladesh, Chinese, Indian, Thai)

__ Black or Black British (e.g., African American, Caribbean)

__ Mixed (e.g., Asian&White, Asian&Black, Black&White)

__ White (e.g., American, British, Greek, Irish, Italian, Scottish, Welsh)

__ Other. Please specify.

_____

Appendix F: Implicit VS Explicit Trait Perception of Close Friend and Acquaintance

Introduction

Hello and welcome. My name is Jan (pchitt@essex.ac.uk). I am a Ph.D. student. I am currently researching about social judgment or how one perceives people around them as part of my thesis under the supervision of Dr. Nicolas Geeraert (geeraert@essex.ac.uk).

The present research consists of 2 parts. Namely, this questionnaire (Part I) that is a preliminary survey asking about your thoughts of people you know. It would not take longer than 15 minutes to complete. You will have to complete this before taking part in the experiment (Part II) that is a simple computer-based task that measures your reaction time to different words. It will not take longer than 30 minutes. This will take place at department of psychology at the date and time you will be able to choose via SONA after you are finished with this questionnaire.

Anonymity & Confidentiality

The personal information we ask from you is sex, age, and ethnicity. We also need some information about people you know in real life i.e. their first names or nicknames that you know them as (e.g. Alex, Chris). This is only to personalize the study for you. They can be anything as long as they allow you to associate them with the people you know in real life. Lastly, we would ask for your email. It is essential that we have data from both parts of the study thus we would need this in order to match the data before they are analyzed. At the stage of data analysis, the data will become anonymous thus we would not be able to identify your data then. All the information you provide will be used in this study alone. It will be secured and only my supervisor and I will have the access

to the data. It will not be shared with anyone at all. If for any reason you would like your data to be removed, you could make the request within 14 days after you took part.

Participation

Your participation is completely voluntary. No risk is anticipated for taking part in this study. However, you are free to withdraw at any moment if you experience the discomfort of any kind. There will be no penalty. Any question about the study can be raised at any time. You will also receive the debriefing sheet that elaborates the study in detail after you have completed both parts of the study.

After your participation in both parts, you will receive 0.75 credit.

If you have read the statements above and agree to take part, please press the button below to begin.

What is your sex?

__ Female __ Male

What is your age?

__ Years old

In order to personalize the survey for you, we need initials or names of 3 of your same-sex close friends and 3 acquaintances. Be careful not to make similar to each other because you will need to be able to differentiate them later on. This information will only be used to customize the study for you and help you during the process. They can be anything as long as they allow you to associate them with the people you know in real life.

Close friend

This would be the same-sex friends whom you want to meet regularly, someone you feel very comfortable to be with. You would identify these people as your close friends. It is important that you choose close friends whom you do not have any romantic feelings towards.

The 1st close friend's name: _____ The 2nd close friend's name: _____ The 3rd close friend's name:_____

Acquaintance

This would be the same-sex acquaintances whom you meet occasionally, someone you cannot say if you are comfortable to be with, someone whom you do not know them well. You would not consider these people as a friend.

The 1st acquaintance's name: _____ The 2nd acquaintance's name: _____The 3rd acquaintance's name: _____

Overall evaluation of close friends *(Participant used this scale to rate 3 close friends and 3 acquaintances)*

Please think of your **first close friend, John**. In your opinion, do the following traits describe him?

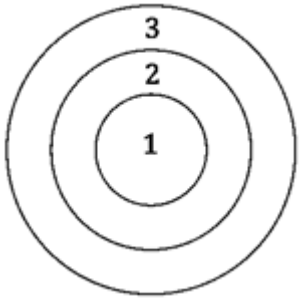
	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Skilled							
Capable							
Knowledgeable							
Well-qualified							
Leadership							
Unreliable							
Unproductive							
Clueless							
Irresponsible							
Lazy							

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Friendly							
Supportive							
Generous							
Sociable							
Sincere							
Spiteful							
Selfish							
Disliked							
Bad-tempered							
Indifferent							

Please indicate how close you are to him.

☐ Not Close at All ☐ Not Really Close ☐ Slightly Close ☐ Moderately Close ☐ Quite Close ☐ Very Close ☐ Extremely Close

The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well.



In which circle would you place your close friend, John?

☐ Circle 1 ☐ Circle 2 ☐ Circle 3

The pairs of circle below represent the relationship between you and your close friend. One circle is you. The other is your close friend.

Which pair best reflects your relationship with your close friend?

1 2 3 4 5 6 7

Demographic Information

Please indicate your ethnicity.

__ Asian or Asian British (e.g., Bangladesh, Chinese, Indian, Thai)

__ Black or Black British (e.g., African American, Caribbean)

__ Mixed (e.g., Asian&White, Asian&Black, Black&White)

__ White (e.g., American, British, Greek, Irish, Italian, Scottish, Welsh)

__ Other. Please specify.

_____

In order to match your data from both parts, please put your Essex email address in the box below. Again, thank you for your time.

_____

Appendix G: Trait Perception of Close Friend and Romantic Partner

Introduction

Hello. Thank you for taking interest in the study. My name is Jan. I am a Ph.D. psychology student. I am currently researching about social judgment or how one perceives people around them as part of my thesis under the supervision of Dr. Nicolas Geeraert (geeraert@essex.ac.uk).

This online questionnaire asks about your thought of 2 people you know namely a close friend and a romantic partner. Specifically, you will be asked for some information about them and to determine if different personality traits describe them or not. The survey would not take longer than 10 minutes to complete.

All the information you provide will be used in this study alone. It will be secured and only my supervisor and I will have the access to the data. It will not be shared with anyone at all.

Any question, please feel free to email me at pchitt@essex.ac.uk. If you have read the statements above and agree to take part, please press the button below to begin.

This study focuses on people who are currently in a serious committed romantic relationship. This relationship can be defined as a relationship that you share romantic feelings with someone. They can be female or male. You would identify this person as your girlfriend/boyfriend/partner/husband/wife. You wish you have a long term relationship with this person.

Please confirm that at this point in time you are in a relationship by selecting yes.

__ Yes __ No

We would like some information in order to personalize the survey for you (It will not be shown or stored somewhere else. Only you could see it).

Please indicate your sex.

__ Female __ Male

In order to personalize the survey for you, we need first names or nicknames of one of your close friends and romantic partner. This information will only be used to customize the study for you and help you during the process. They can be anything as long as they allow you to associate them with the people you know in real life. For instance, your friend's name is Alexandra but you call her Alex then you can just fill in Alex. If you call your partner by a nickname such as sweetheart. Then it is completely ok to put that in as the name.

Close friend

This would be the same-sex close friend whom you want to meet regularly. They are someone you feel very comfortable to be with and talk to. You would identify this person as your close friend. It is important that you choose a close friend whom you do not have any romantic feelings towards. They can be female or male.

The name:_____

Sex of your close friend

☐ Female ☐ Male

How long have you known this friend?

Please put the number in both boxes. For instance, if you have known each other for 3 years, put 3 in the top box and 0 in the lower box. If you have known each other for 3 months, put 0 in the top box and 3 in the lower box.

_____ Years _____ Months

Romantic Partner

This would be someone you are currently in a serious committed romantic relationship with. They are someone you share romantic feelings with and wish you have a long term relationship with. You would identify this person as your girlfriend/boyfriend/partner/husband/wife. They can be female or male.

The name:_____

Sex of your partner

☐ Female ☐ Male

How long have you been in the relationship?

Please put the number in both boxes. For instance, if you have been in the relationship for 3 years, put 3 in the top box and 0 in the lower box. If you have been in the relationship for 3 months, put 0 in the top box and 3 in the lower box.

_____ Years _____ Months

Overall evaluation of close friend

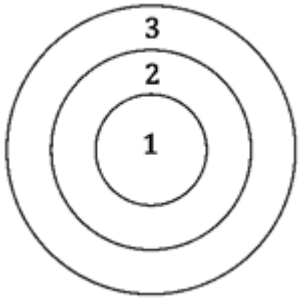
Please think of your **close friend, John**. In your opinion, do the following traits describe him?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him.

☐ Not Close at All ☐ Not Really Close ☐ Slightly Close ☐ Moderately Close ☐ Quite Close ☐ Very Close ☐ Extremely Close

The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well.



In which circle would you place your close friend, John?

☐ Circle 1 ☐ Circle 2 ☐ Circle 3

The pairs of circle below represent the relationship between you and your close friend, John. One circle is you. The other is John.

Which pair best reflects your relationship with your close friend, John?

1 2 3 4 5 6 7

Overall evaluation of partner

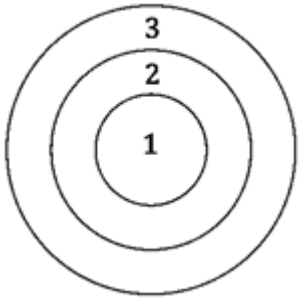
Please think of **your partner, John**. In your opinion, do the following traits describe him?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him.

☐ Not Close at All ☐ Not Really Close ☐ Slightly Close ☐ Moderately Close ☐ Quite Close ☐ Very Close ☐ Extremely Close

The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well.



In which circle would you place your partner, John?

☐ Circle 1 ☐ Circle 2 ☐ Circle 3

The pairs of circle below represent the relationship between you and your partner, John. One circle is you. The other is John.

Which pair best reflects your relationship with your partner, John?

1 2 3 4 5 6 7

Demographic Information

Please indicate your ethnicity.

__ Asian or Asian British (e.g., Bangladesh, Chinese, Indian, Thai)

__ Black or Black British (e.g., African American, Caribbean)

__ Mixed (e.g., Asian&White, Asian&Black, Black&White)

__ White (e.g., American, British, Greek, Irish, Italian, Scottish, Welsh)

__ Other. Please specify.

_____

Appendix H: Trait Transgressions of Close Friend and Romantic Partner

Introduction

Hello. Thank you for taking interest in the study. My name is Jan. I am a Ph.D. psychology student. I am currently researching about social judgment or how one perceives people around them as part of my thesis under the supervision of Dr. Nicolas Geeraert (geeraert@essex.ac.uk).

This online questionnaire asks about your thought of 2 people you know namely a close friend and a romantic partner. Specifically, you will be asked to determine if different personality traits describe them or not before and after reading 2 scenarios involving them. The survey would take about 10 to 15 minutes to complete.

All the information you provide will be used in this study alone. It will be secured and only my supervisor and I will have the access to the data. It will not be shared with anyone at all. Please proceed if you would like to take part. Thank you :)

This study focuses on people who are currently in a serious committed romantic relationship. This relationship can be defined as a relationship that you share romantic feelings with someone. They can be female or male. You would identify this person as your girlfriend/boyfriend/partner/husband/wife. You wish you have a long term relationship with this person.

Please confirm that at this point in time you are in a relationship by selecting yes.

__ Yes __ No

We would like some information in order to personalize the survey for you (It will not be shown or stored somewhere else. Only you could see it).

Please indicate your sex.

__ Female __ Male

In order to personalize the survey for you, we need first names or nicknames of one of your close friends and romantic partner. This information will only be used to customize the study for you and help you during the process. They can be anything as long as they allow you to associate them with the people you know in real life. For instance, your friend's name is Alexandra but you call her Alex then you can just fill in Alex. If you call your partner by a nickname such as sweetheart. Then it is completely ok to put that in as the name.

Close friend

This would be the same-sex close friend whom you want to meet regularly. They are someone you feel very comfortable to be with and talk to. You would identify this person as your close friend. It is important that you choose a close friend whom you do not have any romantic feelings towards. They can be female or male.

The name:_____

Sex of your close friend

☐ Female ☐ Male

How long have you known this friend?

Please put the number in both boxes. For instance, if you have known each other for 3 years, put 3 in the top box and 0 in the lower box. If you have known each other for 3 months, put 0 in the top box and 3 in the lower box.

_____ Years _____ Months

Romantic Partner

This would be someone you are currently in a serious committed romantic relationship with. They are someone you share romantic feelings with and wish you have a long term relationship with. You would identify this person as your girlfriend/boyfriend/partner/husband/wife. They can be female or male.

The name:_____

Sex of your partner

☐ Female ☐ Male

How long have you been in the relationship?

Please put the number in both boxes. For instance, if you have been in the relationship for 3 years, put 3 in the top box and 0 in the lower box. If you have been in the relationship for 3 months, put 0 in the top box and 3 in the lower box.

_____ Years _____ Months

Overall evaluation of close friend

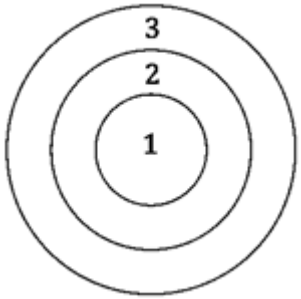
Please think of your **close friend, John**. In your opinion, do the following traits describe him?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him.

☐ Not Close at All ☐ Not Really Close ☐ Slightly Close ☐ Moderately Close ☐ Quite Close ☐ Very Close ☐ Extremely Close

The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well.



In which circle would you place your close friend, John?

☐ Circle 1 ☐ Circle 2 ☐ Circle 3

The pairs of circle below represent the relationship between you and your close friend, John. One circle is you. The other is John.

Which pair best reflects your relationship with your close friend, John?

1 2 3 4 5 6 7

Overall evaluation of partner

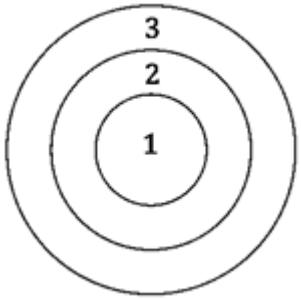
Please think of **your partner, John**. In your opinion, do the following traits describe him?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him.

☐ Not Close at All ☐ Not Really Close ☐ Slightly Close ☐ Moderately Close ☐ Quite Close ☐ Very Close ☐ Extremely Close

The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well.



In which circle would you place your partner, John?

☐ Circle 1 ☐ Circle 2 ☐ Circle 3

The pairs of circle below represent the relationship between you and your partner, John. One circle is you. The other is John.

Which pair best reflects your relationship with your partner, John?

1 2 3 4 5 6 7

Imagine the following scenario happening to **your close friend, John**.

"You and John took a test. You found that the test was much easier than you expected. You looked around and apparently many people finished quickly. But John looked nervous and used up all the time. After the time was up, he told you that he found the test rather difficult and was not confident at all. Later, the mark was announced. John told you that he got a very bad mark"

If the above scenario really happened, how would you perceive John now?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Imagine the following scenario happening to **your acquaintance, John.**

"You were always reluctant when John asked if you wanted a lift. You saw his car always full of scratches here and there all over the car. John was known to be a bad driver. He took 3 times to get a driving license. He got into an accident a lot since he had been driving for a few years even when the vision was good. A few days later, you learned that John had an accident when driving again."

If the above scenario really happened, how would you perceive John now?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Imagine the following scenario happening to **your close friend, John.**

"The weekend was coming and you planned to spend time with John. You decided to ask him if he wanted to do something together. You gave him choices of activity: going to the sports center, going for a movie, going to a pub to watch a match, or having dinner. John said he couldn't because the family wanted to do something on the weekend too. On Monday, you overheard him talking with your mutual friend about how fun the weekend they spent together was." If the above scenario really happened, how would you perceive John now?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Imagine the following scenario happening to **your acquaintance, John.**

"Your parents and you had been arguing a lot lately. They always nagged that you were not home enough and when you were home they nagged that you were being lazy and wasting time. Frustrated, you told John about this. He did not react much. You had a feeling that he was not really listening. When you asked him what he reckoned you should do he simply said: You will get over it".

If the above scenario really happened, how would you perceive John now?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Demographic Information

Please indicate your ethnicity.

__ Asian or Asian British (e.g., Bangladesh, Chinese, Indian, Thai)

__ Black or Black British (e.g., African American, Caribbean)

__ Mixed (e.g., Asian&White, Asian&Black, Black&White)

__ White (e.g., American, British, Greek, Irish, Italian, Scottish, Welsh)

__ Other. Please specify.

_____

Appendix I: Trait Perception of Close Friend and Sibling

Introduction

Hello. Thank you for taking interest in the study. My name is Jan. I am a Ph.D. psychology student. I am currently researching about social judgment or how one perceives people around them as part of my thesis under the supervision of Dr. Nicolas Geeraert (geeraert@essex.ac.uk).

This online questionnaire asks about your thought of 2 people you know namely a close friend and a sibling. Specifically, you will be asked for some information about them and to determine if different personality traits describe them or not. The survey would not take longer than 10 minutes to complete.

All the information you provide will be used in this study alone. It will be secured and only my supervisor and I will have the access to the data. It will not be shared with anyone at all.

Any question, please feel free to email me at pchitt@essex.ac.uk. If you have read the statements above and agree to take part, please press the button below to begin.

The survey focuses on those who have siblings. Please confirm that you have at least one sibling by selecting yes.

___ Yes ___ No

We would like some information in order to personalize the survey for you (the information will not be shown or stored somewhere else. Only you could see it).

Please indicate your sex.

___ Female ___ Male

In order to personalize the survey for you, we need first names or nicknames of one of your close friends and romantic partner. This information will only be used to customize the study for you and help you during the process.

They can be anything as long as they allow you to associate them with the people you know in real life. They can be anything as long as they allow you to associate them with the people you know in real life. For instance, your sister name is Alexandra but you call her Alex then you can just fill in Alex.

Close friend

This would be the same-sex close friend whom you want to meet regularly. They are someone you feel very comfortable to be with and talk to. You would identify this person as your close friend. It is important that you choose a close friend whom you do not have any romantic feelings towards. They can be female or male.

The name:_____

Sex of your close friend

___ Female ___ Male

How long have you known this friend?

Please put the number in both boxes. For instance, if you have known each other for 3 years, put 3 in the top box and 0 in the lower box. If you have known each other for 3 months, put 0 in the top box and 3 in the lower box.

_____ Years _____ Months

Sibling

If you have more than 1 siblings, please choose the one whose **age** is the most similar to you. For instance, you have a brother and a sister. A brother is 5 years older than you and a sister is 3 years younger than you, you will then proceed with your sister in mind. It does not matter if they are older or younger than you.

If you have more than 1 siblings whose age is equally different from you e.g., brother is 5 years older than you and sister is 5 years younger, you can proceed with the one who is same sex with you if you have any, if not you can choose either siblings but only 1."

The name:_____

Sex of your sibling

____ Female ____ Male

Please indicate their age in the format of years and months

_____ Years _____ Months

Overall evaluation of close friend

Please think of your **close friend, John**. In your opinion, do the following traits describe him?

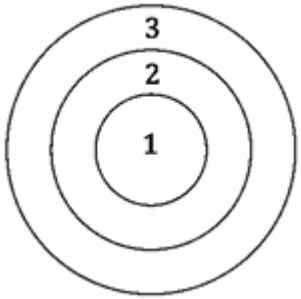
	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Skilled							
Capable							
Knowledgeable							
Well-qualified							
Leadership							
Unreliable							
Unproductive							
Clueless							
Irresponsible							
Lazy							

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Friendly							
Supportive							
Generous							
Sociable							
Sincere							
Spiteful							
Selfish							
Disliked							
Bad-tempered							
Indifferent							

Please indicate how close you are to him.

☐ Not Close at All ☐ Not Really Close ☐ Slightly Close ☐ Moderately Close ☐ Quite Close ☐ Very Close ☐ Extremely Close

The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well.



In which circle would you place your close friend, John?

☐ Circle 1 ☐ Circle 2 ☐ Circle 3

The pairs of circle below represent the relationship between you and your close friend, John. One circle is you. The other is John.

Which pair best reflects your relationship with your close friend, John?

1 2 3 4 5 6 7

Overall evaluation of sibling

Please think of **your sibling John.** In your opinion, do the following traits describe him?

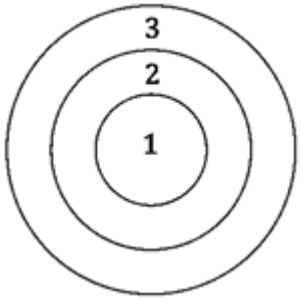
	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Skilled							
Capable							
Knowledgeable							
Well-qualified							
Leadership							
Unreliable							
Unproductive							
Clueless							
Irresponsible							
Lazy							

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Friendly							
Supportive							
Generous							
Sociable							
Sincere							
Spiteful							
Selfish							
Disliked							
Bad-tempered							
Indifferent							

Please indicate how close you are to him.

☐ Not Close at All ☐ Not Really Close ☐ Slightly Close ☐ Moderately Close ☐ Quite Close ☐ Very Close ☐ Extremely Close

The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well.



In which circle would you place your sibling, John?

☐ Circle 1 ☐ Circle 2 ☐ Circle 3

The pairs of circle below represent the relationship between you and your sibling, John. One circle is you. The other is John.

Which pair best reflects your relationship with your sibling, John?

1 2 3 4 5 6 7

Demographic Information

What is your age?

___ Years old

Please indicate your ethnicity.

__ Asian or Asian British (e.g., Bangladesh, Chinese, Indian, Thai)

__ Black or Black British (e.g., African American, Caribbean)

__ Mixed (e.g., Asian&White, Asian&Black, Black&White)

__White (e.g., American, British, Greek, Irish, Italian, Scottish, Welsh)

__ Other. Please specify.

_____

Appendix J: Trait Transgressions of Close Friend and Sibling

Introduction

Hello. Thank you for taking interest in the study. My name is Jan. I am a Ph.D. psychology student. I am currently researching about social judgment or how one perceives people around them as part of my thesis under the supervision of Dr. Nicolas Geeraert (geeraert@essex.ac.uk).

This online questionnaire asks about your thought of 2 people you know namely a close friend and a sibling. Specifically, you will be asked to determine if different personality traits describe them or not before and after reading 2 scenarios involving them. The survey would take about 10 to 15 minutes to complete.

All the information you provide will be used in this study alone. It will be secured and only my supervisor and I will have the access to the data. It will not be shared with anyone at all. Please proceed if you would like to take part. Thank you :)

The survey focuses on those who have siblings. Please confirm that you have at least one sibling by selecting yes.

___ Yes ___ No

We would like some information in order to personalize the survey for you (the information will not be shown or stored somewhere else. Only you could see it).

Please indicate your sex.

___ Female ___ Male

In order to personalize the survey for you, we need first names or nicknames of one of your close friends and romantic partner. This information will only be used to customize the study for you and help you during the process. They can be anything as long as they allow you to associate them with the people you know in real life.

They can be anything as long as they allow you to associate them with the people you know in real life. For instance, your sister name is Alexandra but you call her Alex then you can just fill in Alex.

Close friend

This would be the same-sex close friend whom you want to meet regularly. They are someone you feel very comfortable to be with and talk to. You would identify this person as your close friend. It is important that you choose a close friend whom you do not have any romantic feelings towards. They can be female or male.

The name:_____

Sex of your close friend

___ Female ___ Male

How long have you known this friend?

Please put the number in both boxes. For instance, if you have known each other for 3 years, put 3 in the top box and 0 in the lower box. If you have known each other for 3 months, put 0 in the top box and 3 in the lower box.

_____ Years _____ Months

Sibling

If you have more than 1 siblings, please choose the one whose **age** is the most similar to you. For instance, you have a brother and a sister. A brother is 5 years older than you and a sister is 3 years younger than you, you will then proceed with your sister in mind. It does not matter if they are older or younger than you.

If you have more than 1 siblings whose age is equally different from you e.g., brother is 5 years older than you and sister is 5 years younger, you can proceed with the one who is same sex with you if you have any, if not you can choose either siblings but only 1."

The name:_____

Sex of your sibling

____ Female ____ Male

Please indicate their age in the format of years and months

_____ Years _____ Months

Overall evaluation of close friend

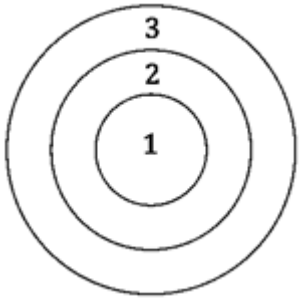
Please think of your **close friend, John.** In your opinion, do the following traits describe him?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him.

☐ Not Close at All ☐ Not Really Close ☐ Slightly Close ☐ Moderately Close ☐ Quite Close ☐ Very Close ☐ Extremely Close

The circles below represent your social network. Circle 1 consists of people who are very close to you and know you very well. Circle 2 consists of people who are moderately close to you and know you reasonably well. Circle 3 consists of people who are not that close to you and do not know you all that well.



In which circle would you place your close friend, John?

☐ Circle 1 ☐ Circle 2 ☐ Circle 3

The pairs of circle below represent the relationship between you and your close friend, John. One circle is you. The other is John.

Which pair best reflects your relationship with your close friend, John?

1 2 3 4 5 6 7

Overall evaluation of sibling

Please think of **your sibling, John.** In your opinion, do the following traits describe him?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Please indicate how close you are to him.

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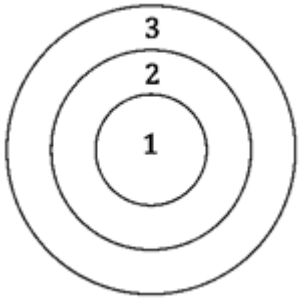

In which circle would you place your sibling, John?

☐ Circle 1 ☐ Circle 2 ☐ Circle 3

The pairs of circle below represent the relationship between you and your sibling, John. One circle is you. The other is John.

Which pair best reflects your relationship with your sibling, John?

1 2 3 4 5 6 7

Imagine the following scenario happening to **your friend, John.**

"You and John took a test. You found that the test was much easier than you expected. You looked around and apparently many people finished quickly. But John looked nervous and used up all the time. After the time was up, he told you that he found the test rather difficult and was not confident at all. Later, the mark was announced. John told you that he got a very bad mark"

If the above scenario really happened, how would you perceive John now?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Imagine the following scenario happening to **your sibling, John.**

"You were always reluctant when John asked if you wanted a lift. You saw his car always full of scratches here and there all over the car. John was known to be a bad driver. He took 3 times to get a driving license. He got into an accident a lot since he had been driving for a few years even when the vision was good. A few days later, you learned that John had an accident when driving again."

If the above scenario really happened, how would you perceive John now?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Imagine the following scenario happening to **your friend, John.**

"The weekend was coming and you planned to spend time with John. You decided to ask him if he wanted to do something together. You gave him choices of activity: going to the sports center, going for a movie, going to a pub to watch a match, or having dinner. John said he couldn't because the family wanted to do something on the weekend too. On Monday, you overheard him talking with your mutual friend about how fun the weekend they spent together was." If the above scenario really happened, how would you perceive John now?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Imagine the following scenario happening to **your sibling, John.**

"Your parents and you had been arguing a lot lately. They always nagged that you were not home enough and when you were home they nagged that you were being lazy and wasting time. Frustrated, you told John about this. He did not react much. You had a feeling that he was not really listening. When you asked him what he reckoned you should do he simply said: You will get over it".

If the above scenario really happened, how would you perceive John now?

	Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Agree	Strongly Agree
Capable							
Caring							
Competent							
Skilled							
Determined							
Sociable							
Popular							
Warm							

Demographic Information

What is your age?

___ Years old

Please indicate your ethnicity.

__ Asian or Asian British (e.g., Bangladesh, Chinese, Indian, Thai)

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__White (e.g., American, British, Greek, Irish, Italian, Scottish, Welsh)

__ Other. Please specify.

_____