Interpersonal Perception: Don't Worry, Be Happy

by

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B.A. University of Winnipeg, 1989
M.A. University of Guelph, 1991

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Abstract

Three studies tested two hypotheses stemming from Gifford's (2004) social evaluation theory (SET) using Kenny's (1994) social relations model. SET proposes that others are judged as potential need satisfiers (e.g., perceived as potential friends, bosses, mentors, etc.). The first hypothesis proposes that others will be perceived as enemies and opponents in non-optimal social situations. The second hypothesis proposes that social success will be positively correlated with judgmental accuracy. Participants responded to a variety of personality questionnaires, which included the Ten-Item Personality Inventory (Gosling, Rentfrow, & Swann, 2003), the Big Five (IPIP, 2005), the sub-scale measuring satisfaction with social life taken from the Extended Satisfaction with Life Scale (Alfonso, Allison, Rader, & Gorman, 1996), Positive Relations with Others Scale (Ryff & Keyes, 1995), and the Need to Evaluate Scale (Jarvis & Petty, 1996), and then worked in a round-robin fashion on either a competitive or cooperative task. Participants then rated one another on dimensions of personality and needs assessment satisfiers (e.g., whether they and others felt like friends, bosses, mentors, etc.). Distributions of rating variances differed depending on whether participants were rating needs or personality

traits. In addition, participants evaluated others differentially depending on whether their social task was cooperative or competitive. The nature of the task and some personality traits of the judge, such as satisfaction with social life, extraversion, and neuroticism, are related to interpersonal perception accuracy.

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CHAPTER I

OVERVIEW

Since its inception, social psychology has been intrigued by perceptions individuals make of others. One line of research has focused on the relation between characteristics of the perceiver and perceiver accuracy. The purpose of the present investigation is to examine the association between characteristics of the perceiver, situational influences, and perceiver accuracy.

This dissertation is organized as follows: In chapter II, I review the relevant literature on this topic. The first section defines the nature of these perceptions by tracing the evolution of research that characterizes the accurate perceiver. The second section focuses on the methods used to study accuracy. In Chapter III, I introduce Gifford's (2004) social evaluation theory and two of its hypotheses. The first hypothesis is that evaluations of others as need satisfiers are influenced by positive or negative situational constraints. The second hypothesis is that social success predicts accurate evaluations of others as need satisfiers. These hypotheses are tested in a series of experiments in which participants responded to self-report measures of personality, worked in round-robin dyads on either cooperative or competitive tasks, and then rated others on various dimensions. Chapter IV, V and VI describe Experiments 1, 2 and 3, respectively. Because multiple experiments are reported, the results and discussion are combined in each experiment. A general discussion follows in Chapter VII.

CHAPTER II

LITERATURE REVIEW

Defining Interpersonal Perception

In this section I will define interpersonal perceptions by first acknowledging the array of synonymous terms used in the literature. Then a note is made about the brevity with which impressions can be formed, which is followed by a brief exposé of the adaptive nature of interpersonal perceptions. Following this is a review of the literature on characteristics of accurate interpersonal perceivers, which includes a discussion of personality characteristics of the perceiver, personality characteristics of the perceived, perceiver gender, and the influence of the situation.

Interpersonal perception has been given many labels by many researchers. For example, some call it empathy, social skill, sensitivity, perspicacity, person perception, person judgment, or interpersonal perception (cf. Cook, 1971, 1979, 1984; Funder, 1995; Ickes, 1993; Jussim, 2005; Jones, 1990; Kenny, 1993; Kenny & Albright, 1987). The term interpersonal perception (IP) will be adopted in the present discussion. Broadly speaking, it is the impression others have of us and we have of them.

These impressions can form quickly. According to a meta-analysis by Ambady and Rosenthal (1992) and a review by Zebrowitz and Collins (1997), accurate IP can occur with as little as five seconds of or no social interaction, (also see Ambady, Bernieri & Richeson, 2000; for a layperson's review, see Gladwell, 2005). Some argue that this perceptual acuity is an evolved skill (e.g., Botwin, Buss, & Shackelford, 1997; Buss, 1996; Maner et al., 2005). This would explain some individuals' ability to make both quick and relatively accurate assessments of others. Buss (1996) suggests that being able

to predict how others will behave is adaptive. The better someone is at evaluating another in terms of various qualities and the more qualities evaluated, the more successful that person's social interactions are going to be and the more adaptive such evaluations become.

The Evolution of IP Research

IP research has evolved over the years. Many early projects focused on accuracy and its relation to character traits (e.g., Adams, 1927; Allport, 1937; Dymond, 1950; Estes, 1938; Taft, 1955, 1956; Vernon, 1933). For example, Adams (1927) asked female students who had interacted together for at least a year to rate themselves and others on 63 character traits (e.g., mentally quick, emotional, joyful, trustworthy, interested in persons, truthful, etc.) and 14 physical traits. Differences between self rankings and rankings of others were calculated and then correlated with personality characteristics. Adams (1927) cast his characterizations of the good judge of others in relation to the good judge of self. The result was that the good judge of others was moody, glum, had a temper, lacked courage, and was asocial.

Vernon (1933) attempted to improve on Adams' (1927) methodological shortcomings by asking 48 men to perform 44 different tests related to judging others. These included rating themselves and others, rating photographs of 10 subjects whom they had not met, but for whom the researchers had personality profiles, matching heads and bodies, matching character sketches with photographs, etc. As a result, Vernon (1933) characterized the good judge of others as artistic, intelligent, and slightly asocial. However, these and related findings were cast in doubt when Cronbach (1955) critiqued

the statistical artifacts inherent in the differential scores commonly used to operationally define accuracy.

According to Cronbach (1955), simply subtracting the criterion (typically, these are ratings on a scale) from the judgment and then squaring the difference conflated four different components of accuracy: elevation, differential elevation, stereotype accuracy, and differential accuracy. To elaborate, elevation represents how a participant might use a scale, possibly judging others higher or lower than others judge themselves. Some refer to elevation as response set or style (cf. Cheung & Chan, 2002). Differential elevation entails differences in this elevation from one person to the next, either in the judgment or criterion. Stereotype accuracy is a judge's ability to rate the generalized other, that is, rate how people in general might respond to a question. Finally, differential accuracy, which is the typical notion of accuracy, is the ability to judge how another individual rates him or herself.

Calculating each component requires systematically subtracting each of the other three components from each raw score. For example, Cronbach's (1955) formulae for calculating a differential accuracy score is "$1/kN \times \sum_o \sum_i (y_{oij}' - x_{oi}')^{2}$" (p. 192), whereby y_{oij}' = the raw score for a judgment minus the mean score across the judgments made for different items within that construct minus the mean score across different ratings of others in that group for that indicator plus the grand mean across others in the group and items. Finally, x_{oi}' represents the criterion and is calculated in a similar fashion as y_{oij}'.

Cronbach's (1955) critique derailed IP accuracy research (Funder, 1995; Kenny, 1994). Some researchers believe the effort needed to make the appropriate analyses was unjustified by the small effect sizes that were typically unearthed (Kenny, 1994; Jussim,

2005). Consequently, investigators shifted their efforts to characterizing the nature of making IPs, which took on a social-cognitive, error-focused emphasis (Funder, 1995; Kenny, 1994; Jussim, 2005; Jones, 1990). However, a handful of scientists continued to wrestle with Cronbach's (1955) statistical recommendations (e.g., Chance & Meaders, 1960; Christensen, 1967, 1970; Cline, 1964; Cline & Richards, 1960; Cook, 1971, 1979; Crow & Hammond, 1957; Hale, 1979; Richards & Cline, 1963; Taft, 1955, 1956, 1966). In time, the collective efforts of those actively studying IP were aided by the number-crunching power of the personal computer. Thanks to technology, accuracy research in IP was reborn (Kenny, 1994). With this rebirth came renewed interest in defining personality characteristics associated with IP accuracy, what Funder (1995) refers to as characterizing the good judge. The following section reviews the literature on personality characteristics associated with IP accuracy.

Characterizing Accurate Interpersonal Perception

There are several aspects that are considered when characterizing an individual who is accurate at making IPs. The first discussed is the personality of the perceiver. This is followed by a brief note on the importance of characteristics of the perceived. There is also mixed evidence that the gender of the perceiver is an important factor. Finally, I present evidence that the nature of the situation influences IPs.

Personality characteristics of the perceiver. Chance and Meaders (1960) asked 96 men to fill out the Edward's Personal Preference Schedule. Those who scored high or low on the autonomy and succorance scales were used as subjects in an interview. Four of the high and four of the low scorers were asked various questions and videotaped. The remaining subjects viewed the videotapes and were asked to predict how the targets

responded on the schedule. The number of correct predictions represented accuracy. Then the 18 most accurate judges were compared to the 18 least accurate judges. They found that an accurate judge is more likely to be "active and outgoing in social relationships, [someone] who likes other people but is not markedly dependent upon them" (Chance & Meaders, 1960, p. 204).

Similarly, Dymond (1950) asked 80 students to interact with one another and then rate each other on a number of personality descriptors. Accurate judges tended to be more socially outgoing than inaccurate judges. Funder and Harris (1986) found that extraversion, as measured by a subscale of the self-monitoring scale, positively correlated with IP acuity as measured by the profile of nonverbal sensitivity test (this is a test in which subjects view and rate an array of silent video clips of dyads interacting). Akert and Panter (1988) found a positive correlation between extraversion as measured by the Eysenck personality inventory and accuracy in determining a dyad's topic of conversation in silent video footage.

However, Ambady, Hallahan, and Rosenthal (1995) asked 90 female and male university students to interact in small groups and to rate one another's personality on an assortment of adjectives (i.e., anxious, attractive, cheerful, confident, conscientious, depressed, dominant, expressive, likable, observant, outgoing, shy, sociable, tense and thoughtful). Participants also completed a barrage of self-report measures of personality (i.e., the Affective Communication Test, the Self-Monitoring Scale, the Shyness and Sociability Scale, and the State Self-Esteem Scale). Ambady et al. found that a good judge of character was female, introverted, with somewhat low self-esteem.

Ambady et al's (1995) research confirms earlier studies that found introverts make better IP judgments than their more social counterparts (cf. Adams, 1927; Vernon, 1933; for a review, see Allport, 1937). For example, Taft (1956) found significant positive correlations between introversion, emotionally stability, and accuracy (for a review, see Cook, 1971). Similarly, DePaulo, Kenny, Hoover, Webb, and Oliver (1987) found that extraversion, as measured on a subscale of the self-monitoring scale, was negatively correlated with accuracy.

In a meta-analysis, Davis and Kraus (1997) found that a good judge of others is intelligent, sees the world in a cognitively complex way, and is socially well adjusted. Davis and Kraus determined that measuring positive aspects of adjustment, such as "scales tapping socialization, maturity, and interpersonal adequacy" (p. 158) produced a reliable average effect size of .24. Negative aspects of adjustment, such as neuroticism, had unreliable and negligible effect sizes. According to Davis and Kraus, "measures of adjustment are reliably and meaningfully related to greater interpersonal accuracy" (p. 159).

Adding to the complexity is evidence that traits other than extraversion and neuroticism are associated with accuracy. For example, Lippa and Dietz (2000) did not find that qualities associated with extraversion or neuroticism as measured by the Big Five predicted accuracy in rating video footage of others on dimensions of masculinity/femininity, extraversion/introversion, and anxiousness/calmness. Rather, Lippa and Dietz found that openness to new experiences negatively correlated with overall accuracy. In contrast, Vogt and Colvin (2003) found that communion (concern and interest in others, which, conceptually, can be linked with agreeableness in the Big

Five) as measured by the California Adult Q-sort and Riverside Behavioral Q-sort predicted accuracy at rating others on those scales.

Personality characteristics of the perceived. On a related note, IP research has found that extraverts are legible targets (Borkenau & Liebler, 1995; Colvin, 1993; Funder & Dobroth, 1988; Funder & Sneed, 1993; Gifford, 1994; Gifford & Hine, 1994; Malloy, Albright, Diaz-Loving, Dong, & Lee, 2004). That is, they are easy to spot. This makes intuitive sense. In contrast, in unacquainted groups neurotics are typically less legible targets (Colvin, 1993; Funder & Dobroth, 1987; Funder & Sneed, 1993). That is, neurotics are hard to spot. Agreeableness and conscientiousness, like extraversion, are visible traits, whereas, openness is like neuroticism, it is less visible, that is, harder to spot (Russell & Zickar, 2005).

Perceiver gender. Gender appears to be associated with IP accuracy, but, as with the research on neuroticism and extraversion, the evidence is mixed. For example, there is some indication that women are slightly more accurate at IP than men (e.g., Ambady et al., 1995; Murphy, Hall, & Colvin, 2003). Murphy et al. (2003) videotaped male and female university students while they socialized in dyads. Another set of participants rated the intelligence of those in the videotapes. Females more accurately rated the intelligence of those videotaped than did men. Ambady et al. (1995) asked students to interact in small groups and to rate one another's personality. Once again, females were more accurate in rating another's personality than males.

However, Mast and Hall (2004) were unable to find gender differences in participants' ability to accurately judge targets' status. That is, men and women were equally skilled in judging the status of men and women in photographs of dyads talking

in a workplace environment. Interestingly, Klein and Hodges (2001) found that when they paid some of their participants $2 every time they accurately inferred what another was thinking or feeling, $1 for partial accuracy, and nothing for inaccuracy, which was in addition to the course credit they received for participating in the study, gender differences disappeared. Klein and Hodges argue that without any added incentive, women are more motivated to be better at IP than men because of gender role stereotypes (cf. Graham & Ickes, 1997; Ickes, Gesn & Graham, 2000).

Related research suggests these differences have less to do with motivation and more to do with other characteristics associated with gender. For example, Funder (1995) argues that females share more information with one another than males and consequently might be expected to be more accurate than males. Funder also found that females are more accurate than males at rating nonverbal behaviour when measured with the profile of nonverbal sensitivity test (Funder & Harris, 1986). Harackiewicz and DePaulo (1982) and Card, Jackson, Stollak, and Ialongo (1986) suggest accuracy may have more to do with sex/gender role orientation than with a person's biological sex. Gangestad, DiGeronimo, Simpson, and Biek (1992) reported that men are more accurate than women at rating other's socio-sexuality, that is, the number of one-night stands, multiple partners, fidelity, desire for one partner, and so forth, another may have.

Whether gender differences in IP are a matter of socio-sexuality, gender role orientation, disclosure, or motivation, they are not robust. Many studies have found no gender differences in IP (e.g., Ambady & Rosenthal, 1992; Borkenau, Mauer, Riemann, Spinath, & Angleitner, 2004; Horn, Collier, Oxford, Bond, & Dansereau, 1998; Lippa & Dietz, 2000; Taft, 1955). An anonymous reviewer criticized Park and Flink (1989) for not

testing for gender differences in their research on IP. In a subsequent replication that did test for gender differences, none were found (Park & Flink, 1989).

The influence of the situation. Kenny, Mohr, and Levesque (2001) assert that research on IP should vary the context of the social interaction (also see Shrauger & Altrocchi, 1964). Perceptions of others can differ depending on the social context. For example, Funder and Colvin (1991) found that some behaviours, such as expressed hostility, were not consistent across unstructured (get to know one another) and debate situations. Participants who competitively debated against one another evinced higher hostility ratings than participants who spent time getting to know one another in unstructured situations (Funder & Colvin, 1991).

The evidence seems to suggest this may be so, but it is not straight forward. For example, when subjects believe descriptions of behaviours in different social situations are from the same person, agreement in ratings of that person are higher than when they think they are from a different person (Park, DeKay, Kraus, 1994). This suggests that we believe others act in a consistent manner regardless of the situation. That is, we expect behaviour to be consistent when we think we are reading descriptions of the same person. If we think we are reading descriptions of different people, then we are less inclined to see consistency (cf. Cook, 1979).

Research also suggests that consensus can be reached on certain traits even though the raters know the targets from different social situations. For example, Malloy, Albright, Kenny, Agatstein and Winquist (1997) found cross-group agreement about a target's personality. Friends and coworkers agreed on traits associated with extraversion. Friends and coworkers similarly rated people as outgoing and cheerful. Furthermore,

family and friends agreed on traits associated with emotional stability. Family and friends similarly rated people who were neurotic or emotionally stable as neurotic and emotionally stable. In other words, there was agreement that targets have some enduring characteristics, even though the impressions of the targets were drawn from different social contexts. Notably, however, Malloy et al. (1997) report that this consensus was weak, suggesting that although there may be some elements of personality that are consistently rated from one situation to the next, there is generally more consensus regarding what a person is like when everyone is considering the person in the same context (cf. Kammrath, Mendoza-Denton & Mischel, 2005; Mischel & Shoda, 1995).

In relation to this point, Gill and Swann Jr. (2004) found that IP accuracy increases when subjects are asked to predict how an acquaintance will respond in situations that are familiar. Their research indicates that participants are better at judging how a target will behave when they know more about the situation. Put another way, behaviour is not sufficiently consistent to afford friends and family the ability to accurately predict a target's behaviour in unfamiliar situations.

Finally, Furr and Funder (2004) analyzed videotaped interactions between dyads of strangers or friends in similar or dissimilar situations at two points in time. Trained raters ranked person-centered behaviours (i.e., behaviours that are consistent across two situations) using the Behavioural Q-sort. Furr and Funder found that person-centered behaviours were more consistent across similar than dissimilar situations, that is across situations that shared common elements.

In light of this research, it is easy to appreciate how a variety of different social situations can influence IP, especially in the case of first impressions between

unacquainted individuals. For example, Person A may behave and consequently seem like a different person when meeting her new boss for the first time than when meeting a friend of a friend for the first time.

Among these situation types, Funder (1995) speculated that competition impairs IP accuracy, because it interferes with cue utilization. That is, participants are so busy attending to the nature of the competitive task that they neglect to attend to others. As a consequence, they fail to accurately judge what others are like. This position has found some empirical support. For example, Kenny, Kieffer, Smith, Ceplenski and Kulo (1996) found only generalized and not circumscribed (dyadic) accuracy, when acquainted men competed against one another in building block structures. Acquainted participants were able to judge how their associates behaved in general (e.g., how competitive they were), but not specifically how they behaved with each other (e.g., whether they uttered more or fewer competitive remarks to one another).

As noted above, expectations about the situation require consideration. For example, Kenny et al. (1996) state, "How a perceiver views a target relationally may reflect the needs and wishes of the perceiver more than the behavior of the target" (p. 10). In other words, different situations can create different anticipations or expectations. This is consistent with Battistich and Aronoff's (1985) finding that dominant individuals are more interested in detecting assertiveness qualities in others when they anticipate competing against them. Thus, in a competitive task, the need to win may bias an individual's perceptions of others. That is, we may see others differentially depending on whether we are competing or cooperating.

It will be recalled that Funder and Colvin (1991) found that individuals were rated as more hostile when they debated than when they casually chatted. This evidence is consistent with Bonta's (1997) general conclusion that competition promotes aggression and violence. Whether individuals compete against, or cooperate with one another, has been associated with negative and positive attitudes towards out-group members (Duckitt & Parra, 2004).

Furthermore, losing at a competitive task may induce a negative mood, and consequently impair IP accuracy. Ambady and Gray (2002) found that subjects who watched sad film clips were less accurate at rating teaching effectiveness or defining the nature of videotaped couples' relationships than participants who watched neutral film clips (e.g., documentaries) or happy film clips (e.g., comedies). In addition, negativity may also inhibit liking, which in turn can have a negative influence on consensus and accuracy (cf. Park, Kraus, & Ryan, 1997).

In contrast, some evidence suggests that IPs may be more focused when participants expect to compete against others. For example, Ruscher and Fiske (1990) found that attention to individuating attributes was heightened when participants anticipated competing against others. Ruscher and Fiske asked participants to read descriptions of a person they either anticipated competing against or not. Participants who expected to compete against the target spent more time analyzing descriptive information about that target than participants who did not expect to compete. Similarly, Vonk (1998) told participants to anticipate cooperating or competing in a question-and-answer task. Before each task, participants had an opportunity to read descriptive information about their potential partner or opponent. Participants who anticipated

competing against the target spent more time reading descriptive information about the target than a control group in study 1, and more time than the cooperative and control group in studies 2 and 3.

Notably, the evidence on cooperation also leads to conflicting conclusions. For example, Tauer and Harackiewicz (2004) found that cooperation, either in purely cooperative tasks or in intra-group cooperation experienced through inter-group competition, contributed to high levels of interpersonal enthusiasm. Specifically, cooperative situations have a positive influence on affect (Tauer & Harackiewicz, 2004). Therefore, enthusiasm may distort IPs by creating a Pollyanna effect. That is, participants may see others in a positive light because they are feeling positive. Furthermore, subjects may look for affiliative qualities (i.e., that a person will be friendly) when they anticipate cooperating with another, especially if the other tends to be dependent (Battistich & Aronoff, 1985). These influences may impair or bias IP accuracy.

On the other hand, anticipating that another person will be friendly and feeling enthusiastic when cooperating with another are ingredients for genuine liking. Liking is associated with consensus in personality judgments (Park, Kraus, & Ryan, 1997). That is, if individuals generally like one another, their IPs generally agree. This means that cooperative situations can trigger liking, which in turn can increase IP accuracy, or self-other agreement.

In conclusion, IP appears to vary depending on the situation. There is generally more consensus between and accuracy in judgments when ratings are based on similar or familiar situations. The evidence on the influence of competitive and cooperative

situations on IP accuracy is mixed: In some cases accuracy is impeded, and in other cases accuracy is facilitated.

Summary

Accurate IP can be reached within five seconds of social interactions between strangers, which suggests the skill might be evolved. Psychological research on IP dates back to the early part of this century. Researchers attempted to characterize the accurate IP judge. This line of investigation virtually halted in the mid-fifties when Cronbach (1955) recommended a comprehensive method to calculate accuracy. More current research characterizing individuals who make accurate judgments is mixed. Some research indicates that extraversion is associated with IP accuracy (e.g., Akert & Panter, 1988). Other research indicates that introversion is associated with IP accuracy (e.g., Ambady et al., 1995). A meta-analysis by Davis and Kraus (1997) suggests that positive adjustment is associated with IP accuracy. Furthermore, evidence is mixed on whether gender, and the cooperativeness or competitiveness of the social context, is associated with IP accuracy. The discussion now shifts its focus to measuring IP.

Measuring Interpersonal Perception

In this section I discuss topics related to the measurement of IP. Foremost is the issue of defining and measuring accuracy. Two models are reviewed, Funder's (1995) realistic accuracy model and Kenny's (1994) social relations model. This is followed by a brief review of some of the scales used to measure personality in IP research.

Defining and Measuring Accuracy

There are a variety of definitions of accuracy (Kenny, 1994; Kruglanski, 1989). In the present study, IP accuracy is defined as the level of agreement between ratings by self

and other on a particular scale (cf. Gifford & Hine, 1994). In this context, the criterion is the self-rating and the judgment is the other rating. This definition is drawn from two traditions in IP research; one founded by Funder (1995) called the realistic accuracy model and the other by Kenny (1994), in response to Cronbach's (1955) criticisms, called the social relations model.

The realistic accuracy model. According to Funder's (1995) realistic accuracy model (RAM) four moderators of accuracy should be measured to obtain an accuracy rating. Judgment ability is a participant's skill at rating another's personality on the Behavioural Q-Sort (BQS). Target judgability is the legibility of the target. For example, some individuals are more demonstrative than other individuals. Trait visibility refers to whether a personality characteristic is easy to identify, for example, extraversion, or difficult to identity, for example, neuroticism. Finally Funder also considers the quality and quantity of available information. Funder measures these moderating factors by videotaping social interactions. These interactions are then rated using the BQS.

The BQS is a 100-item inventory of personality descriptions. Each personality description is placed on a card and a rater is required to rank order the 100 statements on a 9-point scale ranging from "highly characteristic" to "not at all characteristic." For example, a rater reads a personality description such as "talks a lot" on an index card. The rater then places the card onto one of 9 piles labeled along a continuum of characteristic of behaviour to uncharacteristic of behaviour. Self, target, family, and friends' ratings of the targets on the Q-Sort are compared with the trained observers' BQS scores.

The social relations model. The social relations model (SRM; Kenny & La Voie, 1984; Mallow & Kenny, 1986; Kenny, 1994, 1996) is a methodological and statistical

model that tests IP accuracy. Kenny's model is designed to measure and partial components similar to those outlined by Cronbach (1955).

SRM is a nomothetic, componential, statistical model for analyzing non-independent correlations, variances and covariances found in IP data. It is nomothetic because it generalizes across targets and judges on traits within and between small interactive groups. It is componential because it compares the means, variances and covariances between targets, perceivers and relationships within and between those groups. Finally, it is statistical in that it applies a random effects ANOVA using perceiver and target effects as the main effects and the relationship effect as the interaction term.

Accuracy is measured as perceiver, target and relationship correlations between the criterion and the judgment. Perceiver variance in the judgment accounts for how a person perceives others, that is, whether a participant sees others as certain types of persons, and this differs from one judge to another. For example, does participant A typically see others as mentors, students, or extraverts and another judge does not? Perceiver variance in the criterion accounts for how an individual perceives him or herself with others, that is, whether an individual feels like a certain type of person with others, and this differs from one judge to another. For example, does participant A generally feel like a mentor, student, or extravert and participant B does not?

Target variance in the judgment is how others are typically seen. This is referred to as consensus. For example, is the target typically rated as a mentor or a student and this differs from one target to another? Target variance in the criterion is how others typically feel. For example, does the target typically feel like a mentor or a student with others and does this differ across targets?

Finally, relationship variance in the judgment is what is left over when both the perceiver and target effects are removed. For example, how does A rate B when one controls for the perceiver effect of how A typically rates others and for the target effect of how B is typically rated by others? The interaction effect for the criterion is similar. For example, how does A feel with B when one controls for how A typically feels with others and how others typically feel with A?

There are three types of accuracy: perceiver, general and dyadic (Kenny & Albright, 1987; Kenny, 1994; Levesque & Kenny, 1993). Perceiver accuracy is measured by correlating the perceiver effect in the judgment with the target effect in the criterion. If person A typically sees others as mentors, do others typically feel like mentors with person A?

General accuracy is gauged by the correlation between the target effect in the judgment and the perceiver effect in the criterion. This is a correlation between how others typically rate a person (e.g., as a mentor, or student) and how a person typically feels with others (e.g., as a mentor or a student). It can be said that a participant is generally accurate if she or he perceives person A as a student and person A typically feels like a student with her or him.

Dyadic accuracy is the correlation between the relationship effect in the judgment with the relationship effect in the criterion. For example, this is the extent to which A rates B as a mentor, controlling for how A typical rates others and how B is typically rated by others, correlated with how B feels with A, controlling for how B typically feels with others and how others typically feel with A.

These components and their associated variances and correlations can be calculated with a program designed by Kenny called SOREMO (Kenny, 2005). It produces significance tests for perceiver and partner variance, as well as covariance, correlation matrixes. Relationship, target and perceiver variances can be placed in data files to facilitate testing more complicated hypotheses. For example, Kenny (2005) points out that researchers can determine whether mean levels of perceiver variance differ from mean levels of target variance. The program requires participants to rate one another in a round-robin design with a minimum of four persons per group to measure dyadic reciprocity (i.e., accuracy).

Measuring Personality

A variety of personality inventories have been used in IP research. For example, Shevlin, Walker, Davies, Banyard, and Lewis (2003) used three of Eysenck's scales (Neuroticism, Extraversion and Psychoticism) to determine whether people can judge character by looking at photographs. Schimmack, Oishi, Furr, and Funder (2004) tested Costa and McCrae's Neo-Personality Inventory, Goldberg's (1992) NEO-IPIP scales, along with John's Big Five Inventory (John & Srivastava, 1999).

Although these scales reliably measure domains of the Big Five, such as neuroticism and extraversion, they are not suitable for round-robin research designs, that is, designs whereby each participant evaluates every other participant in the group. This is because they require participants to respond to approximately 20 to 45 items per domain. This number is tripled when a participant is asked to profile the other three group members in a round-robin. That is, each participant would respond to 40 items (20 for neuroticism and 20 for extraversion alone) in relation to themselves and 120 in relation to

the three other group members. This renders a total of 160 items required to measure neuroticism and extraversion alone, not including openness, conscientiousness and agreeableness. In short, responding to this many items places an unreasonable burden on participants.

Other IP researchers have employed practical alternatives to using full scales. Some have collected data over a number of experimental sessions. For example, Borkenau et al. (2004) used data from a continuing study, augmenting it with additional questionnaires. Paulhus tested students in a classroom throughout the term as part of a class project (Paulhus & Bruce, 1992; Paulhus & Reynolds, 1995).

Aside from extending the testing time, other researchers have used shorter related versions of the Big Five. For example, Kwan, John, Kenny, Bond, and Robins (2004) asked subjects to respond to 32 bipolar traits, such as kind versus unkind, that were intended to capture the gist of the central items from the Big Five. Malloy et al. (2004) shortened their version even more, employing just 5 bipolar statements. Saucier (2002) reliably reduced the number of Big Five items to 8 per domain for a total of 40 items.

Along these lines, Gosling, Rentfrow and Swann Jr. (2003) designed a ten-item personality inventory of the Big Five, which they call the Ten-Item Personality Inventory or TIPI. It boasts a six-week test-retest correlation of .72, and comparative correlations with the 44-item Big Five Inventory by John and Srivastava (1999) of .87, .70, .75, .81, and .65 for extraversion, agreeableness, conscientiousness, emotional stability and openness, respectively. Although their Cronbach alphas were low (.68, .40, .50, .73 and .45, respectively), this is to be expected because the TIPI was designed with only two

items per domain for researchers in need a short inventory. Consequently, this test affords a quick and simple measurement of all five domains of the Big Five.

Summary

Accuracy is defined in the present study as self-other agreement. According to RAM there are four moderators of accuracy that require comparisons between trained raters, family, friends, and self-reports (Funder, 1995). The SRM analyzes the variances between perceiver and target judgments of one another within small interactive groups. Three kinds of accuracy (i.e., perceiver, general, and dyadic) are established by correlating perceiver, target, and relationship effects with one another. The domains of the Big Five (i.e., extraversion, neuroticism, agreeableness, conscientiousness and openness) are typically measured in IP research. Shorter scales, such as the TIPI, are practical to use when individuals rate one another in small groups.

CHAPTER III

THE PRESENT STUDY

The present study takes its direction from two sources. One source is the IP literature, as outlined above. The second source is a theory of interpersonal perception proposed by Gifford (2004) called social evaluation theory. A brief review of the theory follows.

Gifford's Social Evaluation Theory

Gifford (2004) proposes that individuals make assessments of others to determine the potential usefulness of others to us. Being able to determine who will or will not best help us in various situations requires an evaluation. These evaluations are made in terms of perceiving others as certain types of persons. That is, we evaluate others in terms of what Gifford (2004) refers to as prototypical need satisfiers. This is done in all social situations by and with everyone. The theory proposes that we engage in such evaluations when we first meet someone, and that we continue to do so as we spend time with them. For example, those we encounter briefly may be evaluated as strangers or non-persons, while those we encounter repeatedly may be evaluated as friends or allies. In SET terms, if someone is able to accurately select between person X and person Y which will better meet one's specific needs, then that person will be at an evolutionary/social/personal advantage over another who is not so able (Gifford, 2004).

To date, Gifford has identified nine prototypical need satisfiers. He has labeled these *Boss, Employee, Friend, Enemy, Mentor, Student, Ally, Challenger,* and *Stranger*. Boss and employee form the dominance axis of a circumplex, and friend and enemy form the affiliation axis which is orthogonal to the dominance axis. The other axes fall

between these two primary axes. Need satisfiers are defined as experiential, not actual. That is, participants rate whether others **feel** like a boss, a mentor, a friend, and so forth. In addition, participants rate how they themselves feel in social evaluation theory (SET) terms when interacting with other group members. The following are two relevant SET predictions based on the theory.

SET predictions. SET advances several hypotheses about social evaluations, two of which are the main focus of this dissertation. The first hypothesis is that social situations can and will influence social evaluations. The second hypothesis is that socially successful people will make more accurate social evaluations than less socially successful people.

In relation to situational influences on social evaluations, Gifford states: "When the physical environment is non-optimal (noise, threat of disaster, depleted resources, etc.), social evaluations of others will 'rotate' toward the opponent octant, with the appropriate (but unfortunate) behavioral consequences" (2004, p. 19). The opponent octant includes ratings of others as enemies or challengers (opponents). The present studies used zero-sum competition to create a "non-optimal/depleted resources" social environment. This was contrasted with a cooperative task to generate an optimal/abundant resources social environment. Thus, Gifford's first hypothesis was tested by comparing social evaluations made after engaging in a competitive task with those made after engaging in a cooperative task. We turn now to consider Gifford's (2004) second hypothesis.

To quote Gifford (2004): "Those who are known to be less successful in interpersonal relations will be shown to have consistently mis-evaluated others in SET

terms; conversely, socially successful persons will be especially accurate in their SET assessments" (p. 19). It is acknowledged that social success has been defined in various ways. For example, Baum and Nowicki (1998) used assessments of popularity to gauge social success. Gottman and Porterfield (1981) used a more common measure. They had couples report their levels of marital satisfaction. In the present study, social success is defined as subjective well-being. Subjective well-being is assessed with a sub-scale measuring satisfaction with social life taken from the Extended Satisfaction with Life Scale (Alfonso, Allison, Rader, & Gorman, 1996), which is a modification of the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). This measurement is referred to in this paper as satisfaction with social life (SWSL; see Appendix A).

Accuracy is defined as the level of agreement between the types of persons a participant rates his or her partner (i.e., fellow participant) as, and how that partner rates him or herself. In the context of this study, it is the assessment of another's character and/or role potential by rating such statements as "This person feels like a mentor to me," and the partner rating such statements as "I feel like a mentor with Person A." Simply put, it is self-other agreement but adjusted for four sources of error (cf. Cronbach, 1955, 1958; Kenny, 1994). Thus, it was anticipated that those with higher self-ratings of SWSL would make more accurate social evaluations than those with lower self-ratings of SWSL.

The present study's intent is not to test subjects' knowledge of people's actual roles in life, that is, whether someone is a teacher, a student, and so forth, nor is it a test of how long someone has known another. Therefore, the present study focuses on the IPs

of unacquainted participants. Using unacquainted participants also acts as a control. Everyone is equally acquainted. Alternatively, if time is used as a measure of acquaintanceship, problems may arise. For example, although two couples may have known one another for the same length of time, couple A may be better acquainted because they disclose more to one another than couple B(Starzyk, Holden, Fabrigar, & MacDonald, 2006). Ensuring that everyone is unacquainted creates a level playing field for comparison.

Given that social success is defined in the present investigation as satisfaction with one's social life or, in other words, as subjective well-being, it is important to briefly review the literature on its relation with two domains from the Big Five, extraversion and neuroticism.

Extraversion, Neuroticism and Subjective Well-being

Simply put, extraverts are cheerful, social, and outgoing. Neurotics, or at least those participants who score relatively high on neuroticism scales, are depressive, anxious, and sometimes withdrawn. Yet neuroticism is not the opposite of extraversion (McCrae & Costa, 1989). Introversion is the opposite of extraversion, and emotional stability is the opposite of neuroticism (McCrae & Costa, 1989; Goldberg, 1992). A lack of extraversion does not necessarily lead to more neuroticism, or vice versa. One can be extraverted and neurotic or introverted and not the least bit neurotic.

Eaton and Funder (2003) found that extraverts act in a positive social manner that reinforces their extraversion and creates a positive social situation that further heightens the positive feedback. Similarly, Thorne (1987) found that extraverts act in a friendly, outgoing way that creates a positive friendly situation that, in turn, makes it easier to

continue being friendly and outgoing. Extraverts may also have higher baseline levels of subjective well-being (Lucas & Baird, 2004) and/or are more responsive to positive stimuli than to negative stimuli (Larsen & Ketelaar, 1991).

On the other hand, neurotics are generally unhappy people. Larsen and Ketelaar (1991) found that neurotics could easily be induced into a bad mood by asking them to imagine a negative or embarrassing situation, but it was more difficult to get them into a good mood by having them think of something cheerful or positive. Furr and Funder (1998) found that participants who score high on negativity measures also display negative social behaviours and were rated as more negative by their friends and family, that is, as more neurotic. Similarly, Seligman (2002) documents that depressed (neurotic) persons' negative attitudes and behaviours promote negative situations that reinforce further depressed thoughts and social marginalization. In other words, neurotics feel blue and withdrawn, creating a negative social situation that further reinforces feelings of sadness and isolation.

In essence, extraverts are generally happy (Diener, Suh, Luckas, & Smith, 1999). Happiness is defined as subjective well-being (SWB; Diener et al., 1999; Ryan & Deci, 2001; Seligman, 2002). Costa, McCrae, and Zonderman, (1987) assert that happiness is trait-like. It is enduring and resilient. General levels of happiness or SWB do not vary much from one social situation to the next. For example, Costa and McCrae (1980) were able to accurately predict levels of happiness based on personality measures taken 10 years earlier. Specifically, positive affect and extraversion and negative affect and neuroticism have significant positive correlations (Diener et al., 1999; and Watson, Wiese, Vaidya, & Tellegen, 1999).

Extraversion is positively correlated, and neuroticism is negatively correlated with SWB scores (Costa & McCrae, 1980; Diener et al., 1999). Moreover, extraverts tend to have higher SWB scores than all the other personality traits (Diener, Sandvik, Pavot, & Fujita, 1992). Schimmack et al. (2004) found that extraversion and neuroticism, and more specifically, positive emotions and depression, are good predictors of satisfaction with life in general (accounting for 45% to 60% of the variance in their data, respectively). Similar correlations have been found with friends' and families' assessments of targets' personalities and happiness (Pavot, Diener, Colvin, & Sandvik, 1991). Overall, extraverts are happy, cheerful people (Lucas & Baird, 2004), and neurotics are unhappy, typically sad people. In sum, extraverts generally score higher, and neurotics generally score lower on measures of subjective well-being than do others.

In light of this literature, the present study hypothesizes that participants with high extraversion scores will have higher SWSL scores than those with low extraversion scores. In addition, participants with high neuroticism scores will have lower SWSL scores than those with low neuroticism scores. Furthermore, because it is anticipated that those with higher SWSL scores will be better at social evaluations, participants with high extraversion scores (who are also anticipated to have higher SWSL scores) should make more accurate social evaluations and character judgments than those with high neuroticism scores (who are also anticipated to have lower SWB scores; cf. Dymond, 1950; Taft, 1956). In other words, subjective well-being is anticipated to mediate the relation between extraversion, neuroticism and IP accuracy.

Social Evaluations and Gender

In light of the mixed reports on gender and IP accuracy, the present study does not

anticipate finding gender differences in the accuracy of social evaluations. However, based on some of the evidence, it is recognized that gender should be monitored (cf. Shrauger & Altrocchi, 1964). Thus, although no gender differences are anticipated, they will be measured.

Social Evaluations and Situational Influences

Unfortunately, analyzing the gamut of different social situations and their effects on IP is beyond the scope of the present study. To narrow the focus, this research will only analyze the effects of competitive and cooperative situations on IP. According to Furr and Funder (1998), unstructured, cooperative and competitive tasks represent a good sampling of social situations. However, it is recognized that this is a contentious point. Status and attraction are clearly absent and are important elements of any social dynamic (Gifford, personal communication, November, 2004). Consider also that status (dominance) is the main axis in Wiggins' (1979) circumplex and affiliation is the other. Nevertheless, the present study will limit its focus to cooperative and competitive tasks.

Foremost, I hypothesize finding more ratings of others as opponents and enemies when participants compete than when they cooperate, as Gifford (2004) proposed. Furthermore, the present study will test the relation between the nature of the situation, personality traits, and IP accuracy. It is expected that zero-sum (win/lose) competitive tasks might create a sourpuss effect and impair IP accuracy (cf. Ambady & Gray, 2002; Funder, 1995). In contrast, according to conflicting evidence (e.g., Ruscher & Fiske, 1990; Vonk, 1998), participants in the present study might be more attentive to others and, as a consequence, might have heightened, rather than impaired, IP accuracy in the competitive condition. If neurotics are more responsive to negative than positive affect,

then in a competitive situation they should react in a sourpuss manner and evaluate everything as overly negative, including their partners. Therefore, I hypothesize that higher scores on neuroticism scales will be associated with poorer target accuracy in a competitive than in a cooperative context.

In contrast, if extraverts are more responsive to positive than negative affect, then in a cooperative situation they should react in a Pollyanna manner and evaluate everything as overly positive, including their partner. Because Park et al. (1997) were unable to establish a causal direction between liking and consensus, their findings cannot help current predictions. That is, one cannot assume that the increased positive affect created by a cooperative situation will or will not enhance liking, which in turn may or may not enhance agreement and thus accuracy. Consequently, I hypothesize that those with high scores on extraversion scales will have poorer target accuracy in cooperative than in competitive tasks. However, this effect may not be large, mitigated somewhat by liking.

Furthermore, in zero-sum competitive tasks, some participants might win more games than their opponents, triggering the Pollyanna effect in extraverts, and inhibiting the sourpuss effect in neurotics. If participants lose more games than their opponents, the opposite effect may occur. That is, extraverts who lose more than they win may not experience a Pollyanna effect. In addition, neurotics who lose more than they win may be more sour than normal. In contrast, the cooperative task is not anticipated to induce this differential effect because cooperative outcomes are win/win (Deutsch, 2001). To test for this, the number of wins and losses in the competitive condition will be tallied. Neurotics

with more losses than wins should have poor accuracy scores than neurotics with more wins than losses. To clarify, a review of the predictions tested in Experiment 1 follows.

Hypotheses

Based on the foregoing review, Experiment 1 tested the following hypotheses:

1. Participants who make accurate social evaluations and character judgments will have higher satisfaction with social life scores than those who make less accurate social evaluations and character judgments.

2. Participants who make accurate social evaluations and character judgments will have higher extraversion scores than participants who do not make accurate social evaluations and character judgments.

3. Participants who make inaccurate social evaluations and character judgments will have higher neuroticism scores than participants who make accurate social evaluations and character judgments.

4. Participants with high extraversion scores will make less accurate social evaluations and character judgments after they cooperate than after they compete.

5. Participants with high neuroticism scores will make less accurate social evaluations and character judgments after they compete than after they cooperate.

6. Participants who win more games than they lose will be more accurate than those who lose more than they win.

7. Overall, participants who compete will more often rate others as enemies than friends and allies, whereas participants who cooperate will more often rate others as friends and allies than enemies.

8. There will be no gender differences in the accuracy of social evaluations and character judgments.

CHAPTER IV

EXPERIMENT 1

Methods

Participants and procedure. University undergraduate psychology students worked in 62 groups of four. One hundred and eighty-three females and 65 males participated. Two groups of four were dropped from the analysis. Group number one was dropped because Person A from that group chose not to respond to half the questions. Kenny (2005) recommends two approaches to missing data. One is replacing missing data with means, which was done in Experiment 1. If too much data is missing so that means cannot be calculated, as was the case with group number 1, then the entire group's data must be discarded. Group number 10 was dropped because of a misunderstanding; one of the participants failed to report that she knew another person in the group prior to the study. Data from the resulting 64 males and 176 females were used in the analysis.

Groups of five students met at a designated room. Before participating they were asked whether they were acquainted. If two people knew one another, then one of the two was randomly selected to receive credit and leave. In one instance a participant was automatically given credit and left because she knew two other people in the group who were unacquainted with each other. If none of the students were acquainted, then one student was randomly excluded from the study and given full credit. An exception to this rule was made halfway through the study, when it became apparent that there were more females than males. Consequently, males were automatically included in the study, provided they did not know another male. Those students who did not participate in the study were asked if they would be willing to fill out a brief questionnaire asking them to

rate the two tasks used in the experiment (see Appendix A). All agreed, and filled out the questionnaires in a separate room.

The remaining four participants were asked to read a description of the experiment and sign a consent form. After signing, they were given nametags labeled A, B, C, or D and asked to list their gender, and respond to two questionnaires, the satisfaction with social life scale (SWSL; Alfonso et al., 1996; see Appendix A), and the Ten-Item Personality Inventory (TIPI; Gosling et al., 2003; see Appendix A). The SWSL scale asked participants to respond to five questions such as "In most ways my social life is close to my ideal" on a 7-point scale ranging from 0 "Strongly disagree" to 6 "Strongly agree." The TIPI instructed participants to rate on a similar scale whether a list of 10 pairs of adjectives, such as "extraverted, enthusiastic," characterized their personality. Participants placed their responses on bubble sheets.

Once these questionnaires were completed, participants assigned to the cooperative condition were asked to work cooperatively with a partner to build a Lego ® or Mega Block ® toy, rotating partners every 10 minutes, in a round-robin fashion. Participants assigned to the competitive condition were asked to compete against an opponent in a memory game called Simon ® (see Appendix A for a description of the game in the survey asking participants to rate each task), rotating opponents every 10 minutes, in a round-robin fashion, keeping track of their wins and losses on a piece of paper provided. The experimenter remained in the room to time the beginning and end of the interactions.

After the social interactions, participants were asked to respond to four questionnaires in a round-robin fashion for each group member. The questionnaires

included two versions of the types of person inventory, self and other (see Appendix A; Gifford, 2004, 33 items), the TIPI (Gosling et al., 2003; see Appendix A) and a manipulation checklist measuring subjects' rating of the task as either cooperative or competitive, and a rating of their experience with their respective partners as cooperative, competitive, positive or negative. The positive and negative evaluations were defined by several terms taken from the positive and negative affect schedule (Watson, Clark & Tellegen, 1988). The terms "scared, afraid, upset, distressed" were listed together to measure negative affect and the terms "enthusiastic, interested, determined, excited," were listed together to measure positive affect.

The round-robin proceeded as follows: Person A was asked to rate person B, person C and then person D on each questionnaire. At the same time person B, person C, and person D rated their respective partners. Participants were asked not to show others their evaluations. Upon completion of all these tasks, the participants were debriefed.

The data were analyzed in two stages. The first stage employed Kenny's (1994) social relations model (SRM). In the second stage, differential accuracy (DA) scores were calculated with Cronbach's (1955) formulae for those variables that had significant dyadic reciprocity. It should be noted that Kenny's statistical program, SOREMO controls for non-independence. Non-independence between scores is a violation of one of the requirements for running an ANOVA. Intra-class correlations, which can occur when participants are nested within dyads which are nested within groups, can distort F and p values (Kenny & Judd, 1996; Kenny, Kashy, & Bolger, 1998). In Experiment 1, DA scores were tested for only those domains that had significant dyadic accuracy indicated by SOREMO's interpersonal correlations and t-tests because of concerns over non-

independence. However, analyses did not reveal any significant intra-class correlations between accuracy scores, Person (i.e., whether participants were labeled Person A, B, C, or D) and Group number. Albeit, in Experiment 1, only the DA scores for the variables that had significant dyad relationship variances were used as primary dependent variables in a multivariate analysis of variance (MANOVA) with personality scores as fixed variables.

Results and Discussion

The results and related discussions will be presented in six sections: (a) a manipulation check; (b) a description of the reliability scores for the measures of types of persons and personality ratings; (c) a description of the SOREMO results; (d) post hoc MANOVA tests of the relations between the differential accuracy (DA) scores and the categorical and continuous personality variables as predicted; (e) tests of whether SWSL mediates the relation between neuroticism, extraversion, and accuracy; and (f) MANOVA tests of the relations between the DA scores and the remaining three domains of the Big Five; agreeableness, conscientiousness and openness.

Manipulation check. An independent manipulation check was run to determine whether the cooperative and competitive tasks were seen as cooperative and competitive. Sixteen participants who were randomly excluded from the main study (see Methods section) rated written descriptions of the two tasks (see Appendix A). An ANOVA with ratings of the descriptions as a within-subjects measure indicated that participants rated the description of the competitive task as more competitive ($M = 5.38$, $SD = .81$) than cooperative ($M = 1.75$, $SD = 1.48$) and the description of the cooperative task as more

cooperative (M = 5.59, SD = .60) than competitive (M = .94, SD = 1.3), $F(1, 15) = 14.31$, $p < .01$, partial $\eta^2 = .49$.

In addition, participants who engaged in the study made ratings of the tasks. An ANOVA with rating of competitiveness and cooperativeness as a within-subject measure and task as a between-subject measure revealed a significant effect for ratings $F(1, 237) = 71.17$, $p < .01$, partial $\eta^2 = .23$, and ratings by task $F(1, 237) = 248.74$, $p < .01$, partial $\eta^2 = .51$. Participants who cooperated rated their task as more cooperative (M = 6.39, SD = .67) than competitive (M = 4.38, SD = 1.7), whereas participants who competed rated their task as more competitive (M = 5.43, SD = 1.7) than cooperative (M = 2.93, SD = 1.3).

Reliability scores. The ratings of others and self as types of persons and personality dimensions were first subjected to reliability tests (see Table 1). The average Cronbach alpha across the four subjects per group for rating others as certain types of persons was .87, .83, .91, .79, .88, .80, .67, and .78 for boss, employee, mentor, student, friend, stranger, ally and enemy, respectively. The average alpha across the four subjects per group for rating feeling like a certain type of person with others was .90, .85, .90, .81, .91, .81, .72, and .76 for boss, employee, mentor, student, friend, stranger, ally and enemy, respectively. The average Cronbach alpha across the four subjects per group for rating others on the Big Five was .74, .55, .53, .52, and .60, for extraversion, agreeableness, conscientiousness, neuroticism and openness, respectively. The adjusted reliability scores based on the Spearman-Brown formula (Guilford & Fruchter, 1973, p. 415) to provide estimated reliabilities had 5 items per domain been used are .93, .86, .85,

Table 1

Cronbach Alphas for Ratings of Self and Others on All Variables.

Variables	Number of Items	Alpha Self-rating	Alpha Rating A	Alpha Rating B	Alpha Rating C	Alpha Rating D
SWSL	5	.92				
Extraversion	5	.68	.71	.74	.75	.76
Agreeableness	2	.38	.46	.58	.56	.60
Conscientiousness	2	.52	.41	.55	.65	.53
Neuroticism	2	.52	.39	.59	.55	.57
Openness	2	.48	.59	.61	.59	.62

Variables	Number of Items	Alpha Person A	Alpha Person B	Alpha Person C	Alpha Person D
Rating others:					
Boss	4	.82	.87	.90	.89
Employee	4	.79	.83	.87	.82
Mentor	4	.84	.89	.91	.88
Student	5	.72	.80	.83	.84
Friend	4	.90	.92	.91	.92
Enemy	4	.72	.79	.83	.83
Ally	4	.70	.80	.81	.81
Stranger	4	.62	.61	.70	.75
Rating self with others:					
Boss	4	.88	.91	.91	.90
Employee	4	.85	.83	.87	.86
Mentor	4	.89	.92	.92	.92
Student	5	.79	.79	.83	.82
Friend	4	.88	.89	.92	.90
Enemy	4	.78	.78	.83	.85
Ally	4	.76	.75	.75	.78
Stranger	4	.71	.71	.74	.71

.84, and .88, respectively. Self-rating alphas on the Big Five were .68, .38, .52, .52 and .48, respectively. Adjusted reliabilities are, .91, .75, .84, .84, and .82. The Cronbach alpha for satisfaction with social life was .92, which is close to the .96 alpha reported by Alfonso et al. (1996).

Perceiver, target and relationship variance. Mean scores across the domains for types of persons and all ten Big Five scores based on the TIPI were analyzed for relative variance partitioning with Kenny's (2005) social relations model program SOREMO. As can be seen in Table 2, across the 60 groups, significant actor, partner or relationship variance was found for all the variables considered.

Notably, there was significant dyadic accuracy for the variables boss, mentor, and enemy as determined by the relationship interpersonal *t*-tests and correlations (Boss-O and Boss-S, $t(59) = 2.15$, $p < .05$, $r = .13$; Mentor-O and Mentor-S, $t(59) = 2.97$, $p < .01$, $r = .21$; and Enemy-O and Enemy-S, $t(59) = 2.92$, $p < .01$, $r = .20$), as well as for extraversion, as determined by the *t*-tests and correlations between self-measures and consensus scores (extraverted/enthusiastic and reserved/quiet, $r = .37$, $p < .05$, and $r = .33$, $p < .05$, respectively).[1]

Kenny (1994) states that within his social relations model, approximately 20% of the variance typically is accounted for by the perceiver effect, 15% by the target effect and 20% by the relationship effect, leaving 45% unaccounted for as error. The present SOREMO analysis indicated that perceiver variance was highest for rating others as types of persons or self as feeling like types of persons with others. Variances for these ratings ranged from a low of 33% for rating others as allies, to a high of 67% for rating others as

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[1] SOREMO does not list *t* values for perceiver and partner variances; it flags those that are significant at $p < .05$.

Table 2

SOREMO Relative Variance Partitioning for the 16 Types of Persons and Big Five Variables

Variable	Perceiver Variance	Target Variance	Relationship Variance	Error
Boss-O	.47*	.09*	.25*	.19
Employee-O	.67*	.02	.13*	.17
Mentor-O	.32*	.15*	.23*	.29
Student-O	.44*	.12*	.11	.18
Friend-O	48*	.12*	.40*	.00
Stranger-O	.61*	.03	.12*	.24
Ally-O	.33*	.07	.24*	.35
Enemy-O	.44*	.09*	.21*	.26
Boss-S	.65*	.07*	.17*	.11
Employee-S	.48*	.00	.29*	.23
Mentor-S	.34*	.07	.28*	.31
Student-S	.46*	.07*	.16*	.32
Friend-S	.47*	.10*	.40*	.03
Stranger-S	.57*	.06*	.18*	.19
Ally-S	.48*	.08*	.14	.30
Enemy-S	.45*	.08*	.23*	.24
Extraversion	.00	.38*	.33*	.29
Neuroticism	.14*	.07	.34*	.44
Agreeableness	.02	.10	.35*	.53
Conscientious	.13*	.24*	.20*	.43
Openness	.17*	.11*	.32*	.40

Note. Separate analyses were run for each construct and their corresponding indicators. For example, the indicators for rating others as a chief, ruler, director, and boss were used to form the construct boss, with "O" representing ratings of others and "S" representing ratings of how participants felt with others, self. These separate ratings made it possible to partial relationship variance from error variance, and generate a variance data file that was then tested with SPSS (Kenny, 2005). Perceiver and target variance estimates were calculated with average scores across the 4 or 5 indicators and run in separate SOREMO analyses. * $p < .05$

employees. The average perceiver variance for ratings of persons was 48%, which is considerably higher than the 20% figure indicated by Kenny (1994).

Kenny (1994) refers to perceiver variance as assimilation, defined as the tendency to make similar ratings across different people. He argues that perceiver variance is best explained by three processes. The first process is the least psychologically meaningful: It simply reflects the use of response sets. For example, one judge may consistently use the low end of a scale when making ratings across targets, while another judge uses the high end. The second process represents how unacquainted others are viewed in general. For example, one judge may believe that people are generally friendly, and consistently rate others as friends, while another judge may believe that people are generally strangers, and consistently rate others as strangers. Finally, perceiver variance can represent how the typical person in a particular group is perceived, not how people in general are perceived. For example, a perceiver may view people in a cooperative group as friendly and consequently rate everyone as friends. This rating does not reflect how a person sees others in general. Rather, it is a stereotype of what individuals are like in particular groups, that is, friendly in cooperative groups and domineering in competitive groups.

One can easily imagine how this latter process might readily explain the present data. For example, it is conceivable that participants may have adopted stereotypic views of others depending on the nature of the task. That is, the high level of perceiver variance in rating others as friends might have occurred because the overall variance represents judgments made by people who engaged in different tasks, one competitive and one cooperative. In other words, the variance may have come from group differences, and the stereotypic perception participants formed in those different groups. However, if this

were the case, then perceiver variance for rating others as friends in the competitive should be low if participants stereotypically perceived others as unfriendly in a competitive setting. It should also be low in the cooperative group if participants stereotypically perceived others as friendly in a cooperative setting. The data do not support this conclusion. Perceiver variance for rating others as friends in the cooperative group was 42.5% and 52.5% in the competitive group. For that matter, perceiver variances were similar, significant, and high when the cooperative and competitive data were analyzed separately by SOREMO.

A more convincing argument, at least one that is consistent with SET, is that the mindset adopted by judges was not so much a stereotype as an expression of particular needs. Certainly the present design placed unique demands on participants to consider others as potential need satisfiers, for example, as bosses, mentors, friends, and so forth. That participants saw one another in different ways very much fits with Gifford's (2004) theory of need assessments in making social evaluations.

Individuals have unique needs that may colour perceptions of others. For example, Wright and Dawson (1988) discussed the influence of bounded rationality on interpersonal perception. According to these researchers, some behaviours (e.g., aggression) are socially more important than other behaviours (e.g., withdrawal), and consequently are more significant to observers. To test this theory they asked camp counselors to rate children's behaviour across a number of situations. Behaviours associated with aggression (e.g., pushing) were more accurately and consistently rated by judges than behaviours associated with withdrawal (e.g., sitting by oneself). Wright and Dawson argued that monitoring aggression in others is socially more important than

monitoring withdrawal behaviours (i.e., an aggressive person is more of a threat than a withdrawing person). A similar process might occur with social evaluations of need satisfiers. If one has a need for a mentor, one may tend to see others as potential mentors at the expense of recognizing they may also be friends, or bosses. That is, the need to find a mentor is more important than the need to find a friend and so the observer attends more to those characteristics associated with mentoring than friendliness. The observer's perceptions are bounded by her or his needs.

Another possible explanation for the high perceiver variance, given the number of ratings participants were asked to make, is that the former process outlined by Kenny (1994) explains the data's constellation. That is, some participants may have used the low end of the scale to rate others, while others used the high end of the scale. However, had subjects settled into different response sets because of the scale or the demands of responding to the volume of questions, perceiver variance should have been equally high for personality ratings. This was not the case. Perceiver variance for rating personalities was lower than the 15% that Kenny's (1994) review anticipates, and significantly lower than the average for types of persons (48%; $F(1,20) = 57.57, p < .01$).

One could argue that the lower perceiver variance for rating personalities is an artifact of the personality inventory's poor reliability. Certainly there was significantly more error variance for the personality ratings ($M = 42.3\%$) than for the types of persons ratings ($M = 21.7\%$; $F(1, 20) = 17.17, p < .01$). Future studies with personality inventories boasting better reliabilities should help resolve this issue. Nevertheless, if this effect was simply a matter of unreliability and error, low target and relationship variances should have been found. This was not the case.

Some of the target variance or consensus ratings of persons were more in line with Kenny's (1994) figure of 15%. For example, comparable consensus was found in rating others as mentors (15%), students (12%) and friends (12%). However, the remainder of the ratings ranged from 0% for rating self as an employee to 10% for rating self as a friend. The average across ratings of types of persons was 8%, which is lower than Kenny's (1994) expected 15%. Consensus was considerably higher for rating others as extraverts (38%), and conscientious (24%), but relatively lower for rating others as neurotic (7%), agreeable (10%) and open to new experiences (11%). On average, consensus for rating personality was 18%, which is in line with Kenny's (1994) figure. In short, there was significantly less consensus in rating NSAs than personality, $F(1, 20) = 8.5, p < .01$.

The relatively low degree of consensus in rating self and others as certain types of persons is once again consistent with Gifford's (2004) theory of social evaluation. Individuals with different needs will evaluate one another differently. That is, participants would not be expected to agree about the ratings of self and others as certain types of persons because these evaluations are believed to be based on different needs. In relation to SET, having different needs is expected to influence what people look for and see in others. Conceptually, this should limit consensus. Thus, perceiver and relationship variance, rather than consensus, would be expected to be the major source of variance in social evaluations.

Overall, relationship variance was significant and relatively large. The highest proportion was found in rating others and self as friends (40%). This is twice the amount of variance (20%) anticipated by Kenny (1994). However, the average amount of

relationship variance across all the types of person ratings was 22%, which is slightly higher than Kenny's (1994) estimation of 20%, but was not significantly lower than the average across ratings of personality (30%; $F < 4.04, p > .05$).

Participants' unique ratings of self and others as certain types of persons are consistent with Kenny's (1994) figures and the present personality ratings. These findings can be interpreted as support for the social evaluation theory premise that individuals rate others and self in unique ways because evaluations are very much dependent on the dynamics of the dyad. That is, person A's rating of person B, partialling out how person A typically rates others, and person B's rating, partialling out how person B is rated by others, should be unique if social evaluations are driven by the needs of the evaluator, which differ from person to person, and the potential of the evaluated to fulfill those needs, which also differ from person to person.

Notably, the unique ratings of personality were high. That is, relationship variances for personality were significant and relatively large. This finding lends support to Swann's (1984) theory of circumscribed accuracy. According to Swann (1984), individuals will perceive others uniquely. It also supports the notion that personality is an expression of situations (Kammrath, Mendoza-Denton, & Mischel, 2005). However, in light of some of the low reliability measures of personality, these comparisons would be better served through replication.

In conclusion, there was considerable perceiver variance in ratings of types of persons and comparably less consensus, which is consistent with SET expectations of how individuals evaluate others. Specifically, these variances differ from those found for ratings of personality. This suggests that these two kinds of ratings are distinct. That is,

participants rate self and others differently when considering domains of needs than when considering domains of personality. Relationship variance was on par with variances found in related studies (Kenny, 1994).

Personality differences in accuracy. Based on these results, differential accuracy (DA) scores for variables that exhibited significant dyadic accuracy in the SOREMO analysis were calculated (e.g., DA scores for boss, mentor, enemy and extraversion; see Table 3 for the means and standard deviations of the main variables). An Excel ® spreadsheet was designed using Cronbach's (1955) formulae to calculate DA scores for each domain of the types of persons and Big Five. The DA scores for boss, mentor, enemy and extraversion were then used as dependent variables in a general linear model multivariate analysis of variance (MANOVA). The independent variables included the nature of the task (cooperative and competitive) and gender (male and female), which were treated as categorical variables, and SWSL, extraversion and neuroticism, which were centered to reduce multicollinearity (Jaccard, Wan, & Turrisi, 1990) and treated as continuous variables. The model included only predicted interactions and significant gender interactions (e.g., Task x Neuroticism, Task x Extraversion, and Gender x SWSL).[2] These results and related discussions are presented below, according to the hypotheses they tested.

Social success and accuracy.. Hypothesis one stated that participants who make accurate social evaluations and character judgments will have higher satisfaction with social life scores than those who make less accurate social evaluations and character judgments. A parameter estimate of the multivariate analysis of variance, that is, the beta

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[2] Non-significant gender interactions were dropped from the model.

Table 3

Descriptive Statistics for all the Main Variables in Experiment 1.

Continuous Variables (Self-report)	N	Minimum	Maximum	Mean	Std. Deviation
Satisfaction with social life (SWSL)	240	1.6	7	5.44	1.08
Extraversion	240	1	7	4.64	1.30
Neuroticism	240	1	7	3.08	1.26
Agreeableness	240	1.5	7	5.06	1.09
Conscientiousness	240	1.5	7	5.51	1.14
Openness	240	2	7	5.45	1.01
Dependent Variables (Differential accuracy scores)	N	Minimum	Maximum	Mean	Std. Deviation
Boss	240	.03	.56	.21	.08
Employee	240	.03	.58	.21	.09
Mentor	240	.05	.51	.24	.08
Student	240	.05	.47	.25	.08
Friend	240	.05	.56	.19	.08
Stranger	240	.04	.49	.26	.09
Ally	240	.07	.62	.27	.10
Enemy	240	.00	.60	.22	.10
Average DA accuracy across all variables	240	.15	.46	.27	.05
Agreeableness	240	.05	1.10	.34	.17
Conscientiousness	240	.02	.98	.34	.17
Extraversion	240	.04	.85	.38	.16
Neuroticism	240	.06	1.00	.35	.16
Openness	240	.08	.83	.31	.14
Average DA accuracy Across all 8 types of persons	240	.13	.39	.23	.04
Average DA accuracy across The Big Five	240	.12	.64	.33	.09
Average DA accuracy across boss, mentor, enemy & extraversion	240	.11	.44	.25	.06

weight of the relationship between the independent and dependent variable, with all other variables held constant, indicated that participants with higher SWSL scores were more accurate at rating others as an enemy than those with lower SWSL scores,[3] $B^4 = -.03$, $t(231) = -3.62$, $p < .01$, partial $\eta^2 = .05$.[5]

As predicted, higher SWSL scores were associated with more accurate evaluations of others as an enemy than lower SWSL scores. This finding lends support to Gifford's (2004) hypothesis that those who are socially successful will be more accurate at making social evaluations than those who are less socially successful.

Notably, this finding was one of only 8 significant findings in a total of 48 comparisons. The number of comparisons analyzed (20 main effects and 28 interactions) suggests that some of these results may be due to chance (cf., DePaulo et al. 1987).

To explore the extent to which random data could generate significant results in such an analysis, 10 separate MANOVAs were run with 10 different sets of DA scores randomly generated by SPSS with a normal distribution and similar means and standard deviations to the DA scores for boss, mentor, enemy and extraversion. These results indicated that, on average, there were at least 3.4 instances of $p < .05$ from the total 20 main effects and 28 interactions tested using the random data for the dependent variables. Thus, it is fair to assume that at least half of the significant findings in the present data may be Type I errors.

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[3] Cronbach's (1955) differential accuracy scores are difference scores. Thus, higher DA scores mean less accuracy. Negative beta weights mean that accuracy increases with each incremental increase in the associated factor.

[4] This is the non-standardized coefficient estimated for the model.

[5] Because the accuracy score is not a correlation but a calculation based on differences (see Cronbach, 1955), correction for attenuation cannot be performed (cf. Charles, 2005; Muchinsky, 1996).

Additional analyses were conducted to verify the relation between SWSL and accuracy. Specifically, a MANOVA with the average accuracy rating[6] across all 13 DA scores (types of persons and Big Five) by SWL, task, gender and the Big Five revealed a significant main effect for SWSL, $F(1, 230) = 5.97, p < .05, .03, B = -.008$. Similarly, a significant main effect was found for SWSL and the average DA score across the four variables with significant dyadic accuracy (e.g., boss, mentor, enemy and extraversion), $F(1, 230) = 8.4, p < .01$, partial $\eta^2 = .04, B = -.01$. These findings are consistent with the initial finding between SWSL and the DA score for rating others as an enemy.

Extraversion and accuracy. Hypothesis two stated that participants who make accurate social evaluations and character judgments will have higher extraversion scores than participants who do not make accurate social evaluations and character judgments. A parameter estimate indicated that participants with higher extraversion scores were more accurate at rating others as an extravert than those with lower extraversion scores ($B = -.02, t(231) = -2.09, p < .05$, partial $\eta^2 = .02$). This finding is consistent with reports by Akert and Panter (1988) and Funder and Harris (1986), and inconsistent with reports by Ambady et al. (1995), DePaulo et al. (1987), Taft (1956), and Vernon (1933).

One could argue that, in the present case, apples are being compared to oranges. Ambady et al. (1995) correlated their criterion with their judgment. This was how Richards and Cline (1963) calculated their accuracy scores after abandoning Cronbach's (1955) formulae (Cline, 1964; Cline & Richards, 1960). It is a correlation between the

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[6] Accuracy researchers appear to be divided whether to use a composite or average accuracy score (e.g., Ambady et al., 1995; Cronbach, 1958; Lippa & Dietz, 2000; Vogt & Colvin, 2003) or an accuracy score for each specific characteristic rated (e.g., Cronbach, 1955; DePaulo et al. 1987; Funder, 1995; Kenny, 1994). I chose the latter but included the former to assist with some comparisons across research findings.

judgments and the criteria. Thus, a fairer comparison in the present analysis might be to correlate the criteria with the predictors.

A similar argument can be applied to the comparison with DePaulo et al.'s (1987) analysis, which used a differential accuracy correlation score rather than a differential accuracy score, which is a difference score. Furthermore, DePaulo et al.'s (1987) differential accuracy correlation formulae differed from Cronbach's (1955). DePaulo et al. (1987) correlated residuals by first subtracting the means across others, the means across items and the grand mean. In contrast, Cronbach (1955) instructs his readers to add the grand mean.

Furthermore, DePaulo et al. (1987) used all the difference scores in their correlations. To explain, in a round-robin of four people, three people are evaluated by each person, so there are three scores per item. Because there were four items per construct in DePaulo et al.'s study, they correlated all 12 difference scores (three rows by four columns) from the criterion with all 12 difference scores from the predictor. Cronbach (1955) recommended correlating the three difference scores from each rating and criterion of the three others and then averaging these correlations across items. The merits of DePaulo et al.'s approach became obvious in the present investigation. It introduces more variance. A lack of variance is problematic when a judge rates all others similarly on one item (recall the high levels of perceiver variance). It leads to a constant score that cannot be correlated.

Thus, to make appropriate comparisons with Ambady et al. (1995) and DePaulo et al. (1987), accuracy scores were calculated using their formulas. As can be seen in

Table 4, extraversion was associated with lower differential accuracy correlations for judging someone as a mentor across the 1955, 1963 and 1987 calculations, judged by their negative coefficients. That is, participants who scored higher on extraversion were less accurate than those who scored lower. This is in contrast to the present finding that extraversion was associated with increased accuracy for rating others as extraverted[7].

A significant interaction between task and extraversion was also found on the 1987 calculation. Using DePaulo et al.'s (1987) formulae, extraverts were less accurate at rating others as extraverted after they cooperated than after they competed. No significant association was found between differential accuracy correlations and neuroticism. Nor was the interaction between task and neuroticism significant.

Interestingly, calculations based on Ambady et al. (1995) and DePaulo et al.'s (1987) analyses indicated that satisfaction with social life was associated with increased differential correlation accuracy as well as differential accuracy for rating others as a mentor, enemy and extravert. That is, all three analyses consistently found a significant relation between SWSL and person perception accuracy.

Thus, it would appear that the method of calculating an accuracy score influences some of the findings and hence, the conclusions. Differential accuracy correlations for the variable mentor were significantly related to extraversion scores. This suggests that the more extraverted an individual is, the less accurate she or he is in rating others as a mentor. This conclusion is consistent with Ambady et al.'s (1995) conclusion that accurate person perception is associated with introversion. However, these findings are

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[7] Because the 1955, 1963 and 1987 accuracy scores are correlations between adjusted judgments and criterions, higher scores indicate higher accuracy, whereas lower differential accuracy scores indicate higher accuracy.

Table 4

DA Correlation Scores Calculated According to Three Different Papers: Cronbach (1955), Richards & Cline (1963) and DePaulo et al. (1987) Compared with Differential Accuracy Scores in the Present Study.

Variable	Cronbach 1955	Richards & Cline 1963	DePaulo et al. 1987	Present study
Task	NS	Enemy $p < .01$ Coop > Comp	NS	Enemy $p < .01$ Coop > Comp
Gender	NS	NS	Mentor $F(1, 152) = 6.7$, $p < .05$ B = .06, males>females	NS
SWSL	NS	Extraversion $F(1, 114) = 4.7$, $p < .05$, B = .08 High > Low	Mentor $F(1, 152) = 7.3$, $p < .01$, B = .03 High > Low.	Enemy $F(1, 231) = 6.8$, $p < .05$, B = -.03 High>Low
Extraversion	Mentor $F(1, 147) = 6.7$, $p < .05$, B = -.07	Mentor $F(1, 114) = 4.9$, $p < .05$, B = -.03	Mentor $F(1, 152) = 8.5$, $p < .01$, B = -.04	Extraversion $F(1, 231) = 5.65$, $p < .05$, B = -.02
Neuroticism	NS	NS	NS	Boss $F(1, 231) = 9.2$, $p < .01$, $B = .02$
Task * Gender	NS	NS	NS	NS
Task * Extraversion	NS	NS	Extraversion $F(1, 152) = 4.38$, $p < .05$, B = -.04 task 1	NS
Task * Neuroticism	NS	NS	NS	Boss $F(1, 231) = 6.9$, $p < .01$, $B = -.02$
Gender * SWSL	NS	NS	NS	SWSL $F(1, 231) = 4.95$, $p < .05$, $B = .02$, males

Note. Analyses were limited to 5 main effects (Task, Gender, SWSL, Extraversion and Neuroticism) and 3 interactions (Task X Extraversion, Task X Neuroticism and Gender X SWL) for each of the four dependent variables to curtail the number of spurious findings. NS = no significant differences, *F*, *p* and *B* values are included; the "greater than" sign refers to accuracy.

fickle in that they were not apparent when accuracy was calculated as a difference score according to Cronbach's (1955) formulae.[8] Rather, the differential accuracy difference score indicated that participants who scored high on the extraversion scales were more accurate at rating others as extraverts than participants who scored low. The relation between extraversion and rating others as mentors merely approached significance. In light of this evidence, conflicting evidence in the literature on the relation between extraversion and accuracy may hinge on how accuracy is operationally defined.

Notably, using the differential correlation calculations meant some data were lost because of invariance, that is, participants rated others similarly across the factor items. An inspection of the degrees of freedom for the various results reported in Table 2 indicates a drop from 231 when using the differential accuracy calculation to 152 when using DePaulo et al.'s (1987) formulae, to 147 when using Cronbach's (1955) differential correlation, and then to 114 when using Cline and Richards' (1963) correlation. Lost data may well have contributed to the different results.

To address this concern, separate analyses were run matching the data lost in each year with the 2005 analysis. The relation between extraversion and rating others as extraverts did not change in the 2005 analysis when comparable cases were dropped to match lost data in the 1955, 1987 calculations. However, the 2005 analysis did change when cases were dropped to match the 1963 calculations. The relation between extraversion and rating others as extraverts was no longer significant, but neither was the relation between extraversion and rating others as a mentor.

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[8] Using Cronbach's (1955) recommendation to subtract the grand mean from the adjusted raw scores, instead of adding it as suggested by DePaulo et al. (1987), produced a result that differed from the differential accuracy calculation.

Importantly, the relation between SWSL and rating others as an enemy did not change across the comparisons, regardless of the dropped data or the formulae used to calculate accuracy. The robustness of this effect across the different analyses suggests that the relation between SWSL and accuracy is substantive, rather than random as cautioned earlier. Less can be said about the effect of extraversion on accuracy.

For example, a MANOVA with extraversion by the average DA score for all 13 variables, and the average DA score for all four variables that had significant dyadic accuracy did not reveal significant results (Fs < 1.4, p > .23). In contrast, extraversion was associated with poor accuracy in rating others as employees ($F = 4.9, p < .05, B =$ .01), strangers ($F = 12.3, p < .01, B = .02$), and allies ($F = 7.48, p < .01, B = .01$). Taken together, these results suggest that the positive association between extraversion and accuracy in rating others as an extravert may be unique (cf. DePaulo et al., 1987). Additional tests of this association are required.

Neuroticism and accuracy. Hypothesis three stated that participants who make inaccurate social evaluations and character judgments will have higher neuroticism scores than participants who make accurate social evaluations and character judgments. A parameter estimate indicated that participants with higher neuroticism scores were less accurate at rating others as a boss than those with lower neuroticism scores ($B = .024$, $t(231) = 3.97, p < .001$, partial $\eta 2 = .06$). This finding is consistent with previous literature documenting the relation between adjustment and person perception accuracy (Davis & Kraus, 1997; Dymond, 1950; Taft, 1956).

Extraversion, the nature of the task, and accuracy. Hypothesis four predicted that participants with high extraversion scores would make less accurate social evaluations

and character judgments when they cooperate than when they compete. A MANOVA did not reveal a significant interaction between the nature of the task and self-ratings of extraversion for DA scores for rating others as a boss, a mentor, an enemy, or an extravert. However, the interaction between task and extraversion approached significance for rating others as an enemy $F(1, 231) = 2.73, p = .1$, partial $\eta^2 = .01$. A parameter estimate indicated that the slope of the relationship was in the anticipated direction. Participants scoring higher on extraversion scales were less accurate at rating others as an enemy in the cooperative group than participants scoring lower on extraversion scales ($B = .014$, $t(119) = 1.65, p = .1$, partial $\eta^2 = .01$).

Earlier, extraverts were expected to experience a Pollyanna effect in the cooperative condition that would impair their accuracy. Liking increases accuracy (Park & Flink, 1989), which may have moderated the Pollyanna effect, thus explaining the null results. Although liking was not directly tested in the present study, average ratings of self and others as feeling like a friend were used as an indirect measure of the construct. Unfortunately, both tests of mediation and moderation of liking on extraversion and accuracy in the cooperative condition were not significant. However, the interaction of liking, extraversion and accuracy of rating others as a mentor approached significance, $F(1, 221) = 2.96, p = .09, B = -.01$. This finding is in the anticipated direction, suggesting that extraverts who like the person they are rating are more accurate than extraverts who do not like the person they are rating: This relation merits further testing.

The interactions between wins and losses, positive and negative affect, personality characteristics, and accuracy were not significant and subsequently dropped from further

analyses (all Fs were < 2.6, and all ps were > .11).[9]

Neuroticism, the nature of the task, and accuracy. Hypothesis five proposed that participants with high neuroticism scores would make less accurate social evaluations and personality judgments after they compete than after they cooperate. A parameter estimate indicated that participants with higher neuroticism scores in the cooperative group were more accurate at rating others as a boss than those with lower neuroticism scores (B = -.021, $t(119) = 2.64$, $p < .01$, partial $\eta^2 = .03$). This finding is consistent with the reasoning that a competitive context would induce a sourpuss effect, impairing neurotics' ability to accurately judge others. However, additional support for this interpretation was not found in an analysis of the number of wins and losses, neuroticism and the nature of the task. Neurotics who lost more than they won were no less accurate than those who won more than they lost, which one would expect if a negative event like losing induced a negative state (cf. Ambady & Gray, 2002; Larsen & Ketelaar, 1991).

Ambady and Gray (2002) found that raters who were induced into a sad mood took longer to make ratings and were less accurate. Granted, people who rate themselves as relatively neurotic are not necessarily sad. However, the literature does suggest that depression, a form of sadness, is an important component of neuroticism (Lucas & Baird, 2004). Possibly the factor that should be considered in relation to neuroticism is not wins or losses but latency in completing the ratings. Future testing of rater latency along with a better index of neuroticism is merited.

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[9] Interestingly, the total number of wins minus losses significantly predicted participants' ability to judge others as bosses in the competitive condition, $F(1, 110) = 6.38$, $p < .01$, partial $\eta^2 = .06$, B = -.002. If one considers winning more games of Simon than losing a relative index of intelligence, then this finding is consistent with reports that intelligence is associated with person perception accuracy (e.g. Davis & Kraus, 1997; Harris, Vernon, & Jang, 1999).

Task dependent ratings of others as friends and enemies. Hypothesis seven proposed that participants who compete would more often rate others as enemies than as friends and allies, whereas, participants who cooperate would more often rate others as friends and allies than enemies. Mean scores for the variables across person A, B, C, and D in rating others as friends, enemies and allies, as well as mean scores for rating oneself as feeling like a friend, enemy or ally with others were analyzed by a MANOVA with mean ratings across persons as the dependent variables and task as the between-group variable.

Participants in the cooperative group rated others as feeling more like a friend ($M = 4.26$, $SD = .87$) than participants in the competitive group ($M = 4.07$, $SD = .93$; $F(1, 236) = 4.62$, $p < .05$, partial $\eta^2 = .02$). Participants in the cooperative group rated feeling more like a friend with others ($M = 4.2$, $SD = .81$) than participants in the competitive group ($M = 3.97$, $SD = .92$; $F(1, 236) = 12.13$, $p < .01$, partial $\eta^2 = .05$). Participants in the cooperative group rated others as feeling less like an enemy ($M = 1.79$, $SD = .79$) than participants in the competitive group ($M = 2.98$, $SD = 1.06$; $F(1, 236) = 72.25$, $p < .01$, partial $\eta^2 = .23$). Participants in the cooperative group rated feeling less like an enemy with others ($M = 1.69$, $SD = .77$) than participants in the competitive group ($M = 3.00$, $SD = 1.05$; $F(1, 236) = 95.93$, $p < .01$, partial $\eta^2 = .29$). Participants in the cooperative group rated others as feeling more like an ally ($M = 4.92$, $SD = .8$) than participants in the competitive group ($M = 3.91$, $SD = 1.09$; $F(1, 236) = 74.49$, $p < .01$, partial $\eta^2 = .24$). Participants in the cooperative group rated feeling more like an ally with others ($M = 4.9$, $SD = .86$) than participants in the competitive group ($M = 3.8$, $SD = 1.1$; $F(1, 236) = 91.25$, $p < .01$, partial $\eta^2 = .28$).

Participants felt more like a friend and ally and rated others more often as a friend and ally in the cooperative condition than in the competitive condition. Participants also felt more like an enemy and rated others as feeling more like an enemy in the competitive condition than in the cooperative condition. Of interest for future research was the finding that participants were more accurate at rating others as enemies in the cooperative than in the competitive condition (B = -.068, $t(231)$ = -5.61, $p < .001$, partial η^2 =.12).

Gender differences. Finally, hypothesis eight stated there would be no gender differences in the accuracy of social evaluations and personality judgments. There was no significant main effect for gender. However, there was a significant interaction between gender, self-ratings of SWSL and DA scores for rating others as a boss ($F(1, 231) = 4.95$, $p < .05$, partial $\eta^2 = .02$). A parameter estimate indicated that women with higher SWSL scores were more accurate at rating others as a boss than men with higher SWSL scores (B = -.023, t (64) = -2.23, $p < .05$, partial $\eta^2 = .02$). Given this finding was unexpected, it merits further testing.

Tests of mediation. Regression analyses and structural equation models were used to test whether extraversion and neuroticism scores and their relations to accuracy might be mediated by satisfaction with social life scores. Baron and Kenny (1986) recommend running three separate regression analyses as one test of the possibility of mediation (cf. MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002).

A regression of extraversion on SWSL revealed a significant coefficient of $\beta = .4$, $t(239) = 6.79$, $p < .01$. Higher SWSL scores were associated with higher extraversion scores. A regression of extraversion on the DA score for extraversion also revealed a significant coefficient β = -.21, $t(239)$ = -3.27, $p < .01$. Participants with higher

extraversion scores were more accurate at ratings others as extraverts than participants with lower extraversion scores, as noted above. Finally, a regression of both the independent variable (extraversion) and the mediator (SWSL) on the dependent variable (the DA score for extraversion) revealed a significant coefficient for extraversion (β = -.15, $t(239)$ = -2.23, p = .03).

According to Baron and Kenny (1986), partial mediation exists when the first two regression coefficients are significant and the coefficient for the dependent variable in the third analysis is less than in the second analysis, which is true in the present case. Extraverts' accuracy at rating others as extraverts is partially mediated by their satisfaction with their social life. This mediation may explain why some researchers found extraversion associated with accuracy (e.g., Harris & Funder, 1986), whereas others did not (e.g., Ambady et al., 1995). Some measures of extraversion may have been tapping factors related to satisfaction with social life.

Similar tests were run with neuroticism, accuracy and SWSL. A regression of neuroticism on SWSL revealed a significant coefficient, β = -.25, $t(239)$ = -3.97, $p < .01$, indicating that the higher a participant's score is on the SWSL scale, the lower his or her score is on the neuroticism scale. A regression of neuroticism on the DA score for boss revealed a significant coefficient, β = .20, $t(239)$ = 3.15, $p < .01$, indicating that higher neuroticism scores are associated with lower accuracy in rating others as a boss. This latter coefficient increased[10] when both neuroticism and SWSL were regressed on boss

[10] Baron and Kenny (1986) noted that the coefficient must decrease in the final regression analysis. Although the beta is higher, it represents less accuracy, which represents a decrease.

(neuroticism $\beta = .21$, $t(239) = 3.18$, $p < .01$), indicating that neuroticism's relation to accuracy is partially mediated by SWSL.

Additional tests of mediation were run for each condition of the task. Neuroticism[11] significantly regressed on SWSL in the data for the cooperative group ($\beta = -.33$, $t(119) = -3.74$, $p < .001$), and marginally in the competitive group ($\beta = -.17$, $t(119) = -1.92$, $p = .057$). Neuroticism significantly regressed on the DA score for boss in the competitive group ($\beta = .33$, $t(119) = 3.79$, $p < .001$) but not in the cooperative group ($\beta = .04$, $t(119) = .38$, $p = .71$). The coefficient for neuroticism on rating others as a boss was not significant in the cooperative group ($\beta = .03$, $t(119) = .34$, $p = .73$), and increased in the competitive group ($\beta = .34$, $t(119) = 3.79$, $p < .001$). Thus, neuroticism was mediated by SWSL when rating others as a boss in the competitive condition.

To test the relation between all three variables (extraversion, neuroticism and SWSL) and accuracy, structural equation models were analyzed. The resulting parameter estimates for extravert and enemy using AMOS 5 (Arbuckle, 2003) are shown in Figure 1. Each model was tested in a separate analysis. Both models[12] had a good fit χ^2 (1, N = 240) = .63, $p = .43$, Comparative Fit Index = 1.0, root mean square error of approximation < .001, probability of close fit = .55. A model that describes SWSL as partially mediating extraversion with accuracy in rating others as an extravert best fit the data (χ^2 (1, N = 240) = 4.91, $p < .05$). However, dropping the relation between neuroticism and accuracy in rating others from both models did not change the fit for the

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[11] Tests were not run with extraversion because there were no significant extraversion x task interactions.

[12] A total of five models were tested in separate analyses, one for each accuracy variable (e.g., boss, mentor, enemy, extraversion, and general accuracy). All models had similar fits.

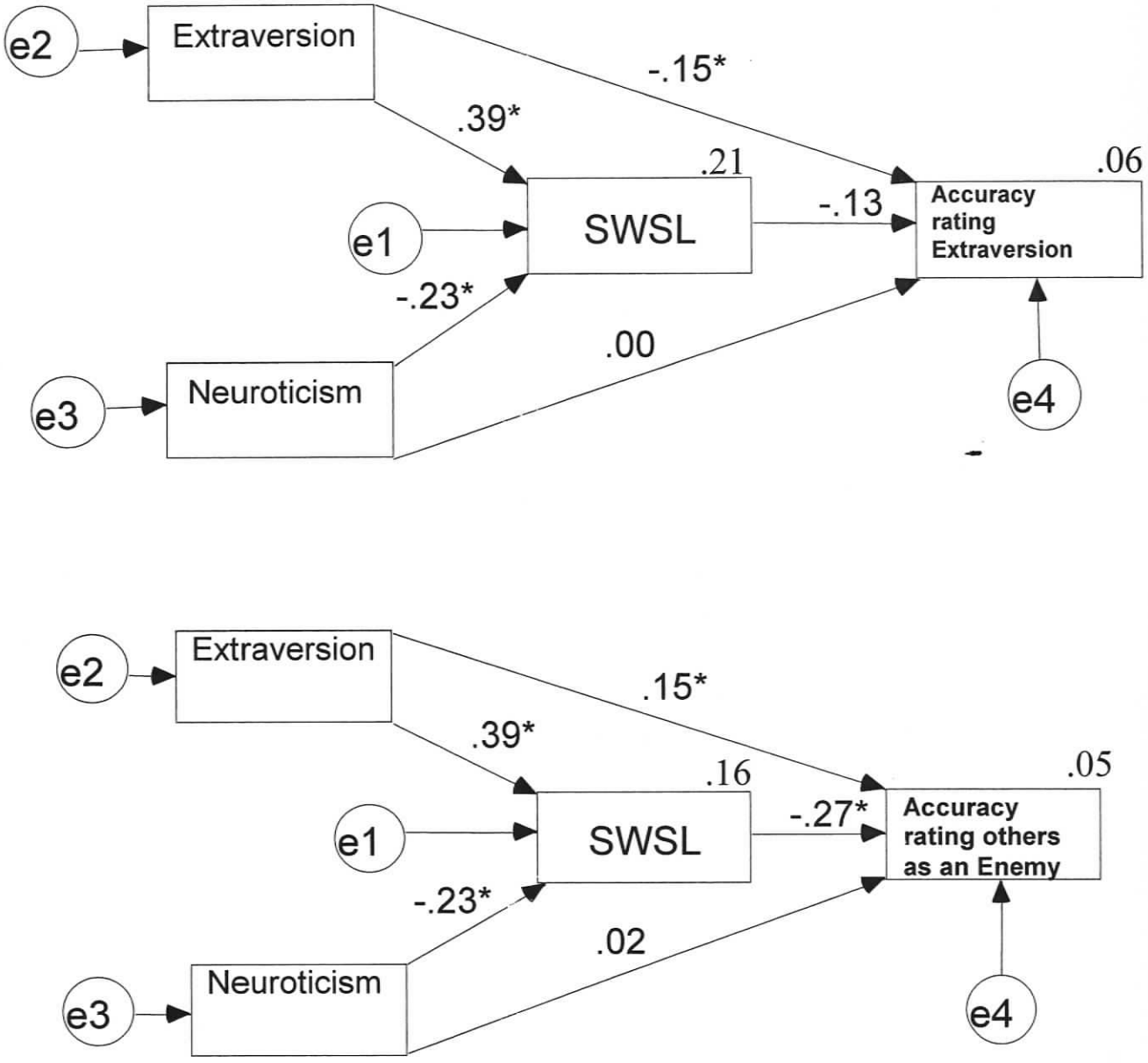


Figure 1. Accuracy of rating others as an extravert and as an enemy as a function of extraversion, neuroticism, and satisfaction with social life (SWSL).

Note. The square boxes represent the measured variables, and the circles marked e1 to e4 represent unexplained variance. The numbers adjacent to the boxes represent R^2 values. The numbers adjacent to the lines represent standardized estimates (betas). A low accuracy score indicates greater accuracy. * $p < .05$

first model (χ^2 (1, N = 240) = .44, p = .505) but did for the second model (χ^2 (1, N = 1 240) = 15.55, p < .001). This suggests that when rating others as enemies, neuroticism is best conceptualized as fully, rather than partially, mediated by SWSL.

Importantly, the relation between neuroticism, which is defined by the TIPI (Gosling et al., 2003) as being anxious and easily upset, not calm or emotionally stable, and interpersonal perception accuracy is, as yet, unclear. That is, neurotics' dissatisfaction with their social life significantly accounted for variances in interpersonal perception accuracy when it came to rating others as enemies, but not as extraverts. Future exploration with a scale measuring more aspects of neuroticism and social success may be helpful in clarifying this association.

Openness, conscientiousness, and agreeableness. A separate MANOVA testing the Big Five revealed that participants with higher openness scores were less accurate at rating others as a mentor than those with lower openness scores (B =.015, t(230) = 2.77, p < .01, partial η^2 = .03). In contrast, a parameter estimate indicated that participants with higher conscientiousness scores were more accurate at rating others as mentors than those with lower conscientiousness scores (B = -.009, t(230) = -2.0, p = .04, partial η^2 = .02). All other Fs were < 1.7, ps > .19.

These findings provide mixed support for research suggesting that openness to new experiences is associated with person perception inaccuracy (Lippa & Dietz, 2000). Present analyses indicated that those who were more open to new experiences as measured by the TIPI were less accurate at rating others as mentors. This supports a report by Lippa and Dietz, (2000) wherein participants with high openness scores were less accurate than those with low openness scores. However, Lippa and Dietz (2000) used

a composite measure of accuracy. Further exploration of the relation between openness and accuracy using the present data determined that there was a significant association with overall accuracy[13] ($F(1, 230) = 3.98$, $p = .048$, $B = -.01$). That is, participants with higher openness scores were more accurate at rating others than participants with lower openness scores when accuracy was defined as an average score across all the traits (a composite accuracy score).

These mixed findings may be related to different conceptualizations of openness. That is, although this dimension is sometimes referred to as open to new experiences, it is also referred to as culture, intellect, or both (cf. IPIP, 2005; Funder & Sneed, 1993; John & Sirvastava, 1999). Additional measures that tap aspects of openness may shed more light on these findings. Notably, research that asked undergraduates to respond to the 18-item need for cognition scale (Caccioppo, Petty, & Kao, 1984), and an early version of the NEO Five-Factor Inventory (McCrae & Costa, 2004) found a positive correlation ($r = .46$) between openness and need for cognition (Sadwoski & Cogburn, 1997). More recent research suggests there is a connection between the need to evaluate, which is associated with need for cognition (Jarvis & Petty, 1996) and person perception (Tormala & Petty, 2001). Although there is no direct evidence linking need to evaluate and openness, a test of this association may prove useful in the present line of investigation. That is, there may be a connection between the need to evaluate, openness, and interpersonal perception accuracy in making social evaluations. Conceptually, individuals who spend more time evaluating things and people may be better skilled at making interpersonal evaluations than those who do not.

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[13] This is the average of DA scores for rating all 8 types of persons and five personality domains.

Agreeableness was not associated with any of the four variables that evidenced significant dyadic accuracy. However, agreeableness scores were associated with accuracy in rating others as employees (F (1, 230) = 6.6, p = .01, B = -.016), friends (F (1, 230) = 4.1, p = .04, B = -.01), overall accuracy (F (1, 230) = 4.5, p = .04, B = -.007), and mean accuracy of rating the Big Five (F (1, 230) = 7.0, p = .008, B = -.015). This finding is consistent with reports from the literature (e.g., Vogt & Colvin, 2003). Interestingly, all these associations were mediated by SWSL, as tested by the method outlined in Baron and Kenny (1986).

Conclusions

Significant dyadic accuracy was found for rating others as bosses, mentors, enemies and extraverts. This dyadic accuracy was related to satisfaction with social life, extraversion, and neuroticism scores. Participants with higher SWSL scores were more accurate at rating others as enemies than participants with lower SWSL scores. Extraverts were more accurate at rating others as extraverts, mediated by their SWSL scores. Neurotics typically were less accurate at rating others as bosses, mediated by their SWSL scores.

The nature of the task influenced these perceptions. Participants tended to perceive others as friends and allies in the cooperative task and enemies in the competitive task. Extraverts were marginally less accurate in the cooperative task and neurotics less so in the competitive task. Overall, gender did not moderate person perception accuracy.

These conclusions must be qualified by several factors: The low reliability of TIPI, relatively small effect sizes which are sensitive to any source of error, and the

narrow definition of social success. A second study was designed to address these concerns by: (a) employing personality measures with 4-5 indicators per domain; (b) determining whether the findings will replicate with different cooperative and competitive tasks; (c) setting more stringent criteria for dealing with missing data, (d) employing additional measures of social success, (e) measuring participants' need to evaluate, and (f) measuring participants' latency in making evaluations. Specifically, Experiment 2 was undertaken to further test the theory that social success mediates the relationship between personality characteristics of the judge and interpersonal perception accuracy, and that the nature of the task influences perceptions and accuracy in rating others.

CHAPTER V

EXPERIMENT 2

Predictions for Experiment 2

Based on Experiment 1, Experiment 2 tested the following hypotheses:

1. Perceiver variance will account for the majority of NSA variance, and consensus or partner variance will account for the minority of NSA variance.

2. The nature of the task will influence interpersonal perception, such that those who cooperate will be more accurate in their ratings of NSAs on the affiliation axis than those who compete.

3. Gender will not account for differences in interpersonal perception accuracy; however, there will be an interaction between gender and SWSL such that women with higher SWSL scores will be more accurate than men with higher SWSL scores at rating others on the status and dominance dimension.

4. Extraversion will be associated with interpersonal perception inaccuracy.

5. Neuroticism will be associated with interpersonal perception inaccuracy, especially on the dominance axis, and this relation will be mediated by rating latency.

6. Agreeableness will be associated with accuracy at rating NSAs on the affiliation axis.

7. Conscientiousness will be associated with accuracy at rating NSAs on the dominance axis.

8. Openness will correlate with participants' need to evaluate and both will be associated with overall accuracy.

9. Participants who make accurate social evaluations and character judgments will have higher indicators of social success than those who make less accurate social evaluations and character judgments.

10. Participants in the cooperative condition will more often rate others as friends and allies than enemies and challengers.

11. Social success will mediate the relation between extraversion and interpersonal perception accuracy.

Methods

Participants and procedure. University undergraduate psychology students worked in 71 groups of four. Two hundred and eight females and 76 males participated. Because of missing data, 11 groups of four were dropped.[14] Data from the resulting 69 males and 171 females were used in the analysis.

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[14] A more stringent criterion for working with missing data was set in the present study in comparison to the criterion set in the first study. In Experiment 1, subjects, and consequently, groups, were dropped only in one instance. That was when one quarter of the entire questionnaire was left blank and in another case when participants reported that they knew one another after, rather than before, the study. Otherwise, single missing data points were replaced with averages. In light of the small effect sizes found in Experiment 1, a more stringent guideline for missing data was set in Experiment 2. Even though in all but one case were only one or two questions found blank for only one person from each group of four, the researcher could not determine whether the blank responses were missed and/or subsequent questions were responses to miss matched questions or not. For example, when question 14 on one bubble sheet was found blank after the participant had left the study, the researcher could not surmise if the participant had answered question 14 in bubble sheet number 15's space or had neglected to answer question 14. Consequently, efforts were made to review responses before participants departed. When blanks were detected, participants were asked to determine whether they simply missed a question, choose not to answer it, or misaligned an entire series of questions, which required participants to double check their responses after the blank. Unfortunately, not all blanks were detected until after descriptive analyses were run, as was apparent in 11 cases.

Measures. The Big Five was measured using items adapted from the IPIP Big Five (IPIP, 2005). Specifically, 5 items per domain, instead of 10, were selected in the interests of brevity. For example, items for extraversion, rated by participants on a 7-point scale ranging from 0 (strongly disagree) to 6 (strongly agree), included: "I feel comfortable around people," "I keep in the background," "I do not mind being the centre of attention," "I am quiet around strangers," (reverse coded), and "I do not talk a lot" (reverse coded; see Appendix B for a copy of the full scale).

Social success was measured with three different scales, satisfaction with social life (SWSL; Alfonso et al., 1995; see above), positive relations with others scale (Ryff & Keyes, 1995), and Lyubomirsky and Lepper's (1999) measure of subjective happiness. Ryff's and Keyes measure of positive relations with others (PRS) is one of six scales used to measure psychological well-being. The PRS requires participants to rate their level of agreement with 14 statements on a 7-point scale ranging from 0 (strongly disagree) to 6 (strongly agree; see Appendix B for a list of all the items). Examples of statements include; "Most people see me as loving and affectionate" and "Maintaining close relationships has been difficult and frustrating for me" (reverse coded). The subjective happiness scale asked participants to respond to four statements on a 7-point rating scale, anchored with such statements as "In general, I consider myself: 0 (not a very happy person), to 6 (a very happy person)."

An additional 16-item measure of personality, the need to evaluate (NTE; Jarvis & Petty, 1996) was assessed. Participants responded on a 7-point scale ranging from 0 (strongly disagree) to 6 (strongly agree) to such statements as: "I form opinions about

everything," "If something does not affect me, I do not usually determine if it is good or bad" (reverse coded), and "I have many more opinions than the average person."

The procedure for Experiment 2 followed the procedure for Experiment 1 with the following exceptions and additions. Participants responded to five self-report scales instead of two: The SWSL scale (5 items), PRS (14 items), subjective happiness scale (Happiness; 4 items), NTE (16 items) and the IPIP (25 items). Once these questionnaires were completed, participants assigned to the cooperative condition were asked to cooperate with their partner in building as many different play-dough figurines as they could in 10 minutes, switching partners every 10 minutes in a round-robin fashion until everyone had an opportunity to cooperate with everyone else.

Participants assigned to the competitive condition were asked to compete against each other to see who could make as many different play-dough figurines in 10 minutes, switching opponents every 10 minutes in a round-robin fashion, until everyone had an opportunity to compete against everyone else. Only one person from each dyad was declared the winner (participants were warned that unrecognizable figurines would be disqualified from the count in the event of an apparent tie).

After the social interactions, participants were asked to respond to two questionnaires in a round-robin fashion for each group member. The questionnaires included two versions of the types of person inventory, self and other (see Appendix B; Gifford, 2004, 37 items), [15] along with a manipulation checklist measuring subjects' rating of the task as either cooperative or competitive. The round-robin rating procedure employed in Experiment 1 was replicated. The time it took participants to complete these

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[15] The dimension "challenger" represented by four items was added to complement "ally," bringing the total number of NSAs items up to 37 from 33.

ratings was recorded with a stop watch. Upon completion of all these tasks, the participants were debriefed.

The data were analyzed in two stages as outlined above. The first stage employed Kenny's (1994) social relations model (SRM). The second stage employed Cronbach's (1955) differential accuracy calculations for all 9 NSAs. As in Experiment 1, these scores were used as dependent variables in a multivariate analysis of variance (MANOVA) with personality scores as fixed variables.

Results and Discussion

As in the previous study, the results and related discussions will be presented in several sections: (a) results of the manipulation check, (b) a description of the reliability scores for the measures of types of persons and personality ratings; (c) a description of the SOREMO results; (d) MANOVA tests of the relations between the differential accuracy (DA) scores and the categorical and continuous personality variables as predicted; and (e) tests of whether SWSL mediates the relation between neuroticism, extraversion, and accuracy.

Manipulation check. An independent manipulation check was run to determine whether the cooperative and competitive tasks were perceived as cooperative and competitive. Participants who did not participate in the main study ($N = 28$) rated written descriptions of the two tasks (see Appendix B). An ANOVA with ratings of the descriptions as a within-subjects measure indicated that participants rated a description of the competitive task as more competitive ($M = 5.39$, $SD = .92$) than cooperative ($M = 0.93$, $SD = 1.33$), and a description of the cooperative task as more cooperative (M =

5.71, SD = .46) than competitive ($M = 1.71$, $SD = 1.7$), $F(3, 81) = 113.08$, $p < .001$, partial $\eta^2 = .81$.

In addition, participants who engaged in the study also made ratings of the task. An ANOVA with rating of competitiveness and cooperativeness as a within-subject measure and task as a between-subject measure revealed a significant effect for ratings by task $F(1, 237) = 297.39$, $p < .001$, partial $\eta^2 = .557$. Participants who cooperated rated their task as more cooperative ($M = 5.45$, $SD = .9$) than competitive ($M = 2.17$, $SD = 1.97$), whereas participants who competed rated their task as more competitive ($M = 4.63$, $SD = 1.44$) than cooperative ($M = 2.28$, $SD = 1.84$).

Reliabilities. The ratings of others and self as types of persons, along with self ratings of personality were subjected to reliability tests (see Table 5). The average Cronbach alpha across the four subjects per group for rating others as certain types of persons (or needs satisfier assessments: NSAs) was .85, .77, .86, .78, .90, .82, .85, .91, and .60 for boss, employee, mentor, student, friend, enemy, ally, challenger, and stranger, respectively. The average Cronbach alpha across the four subjects per group for rating feeling like a certain type of person with others was .87, .74, .90, .78, .92, .82, .83, .92, and .70 for boss, employee, mentor, student, friend, enemy, ally, challenger, and stranger, respectively. Cronbach alphas for the Big Five were .82, .73, .70, .70 and .61, for extraversion, neuroticism, agreeableness, conscientiousness, and openness, respectively. The Cronbach alpha for PRS was .84, slightly less than .88 reported by Ryff and Keyes (1995). The Cronbach alpha for the subjective happiness scale was .82, which is slightly less than the mean of .86, but certainly within the range of .79 to .94 reported by

Table 5

Cronbach Alphas for Ratings of Self and Others on All Main Variables.

Variables	Number of Items	Alpha Self-rating	Alpha Rating A	Alpha Rating B	Alpha Rating C	Alpha Rating D
SWSL	5	.92				
PRS	14	.84				
Happiness	4	.82				
Need to evaluate	16	.83				
Extraversion	5	.82				
Agreeableness	5	.70				
Conscientiousness	5	.70				
Neuroticism	5	.73				
Openness	5	.61				

Variables	Number of Items	Alpha Person A	Alpha Person B	Alpha Person C	Alpha Person D
Rating others:					
Boss	4	.82	.85	.87	.88
Employee	4	.75	.75	.80	.78
Mentor	4	.82	.85	.87	.90
Student	5	.75	.80	.78	.79
Friend	4	.90	.91	.87	.93
Enemy	4	.79	.84	.79	.86
Ally	4	.86	.84	.83	.88
Challenger	4	.91	.91	.91	.91
Stranger	4	.64	.66	.58	.54
Rating self with others:					
Boss	4	.85	.88	.85	.90
Employee	4	.75	.72	.73	.77
Mentor	4	.88	.90	.90	.90
Student	5	.78	.80	.80	.77
Friend	4	.93	.93	.90	.93
Enemy	4	.81	.81	.81	.84
Ally	4	.82	.84	.83	.85
Challenger	4	.90	.92	.93	.92
Stranger	4	.72	.69	.68	.70

Lyubomirsky and Lepper (1999). The Cronbach alpha for SWSL was .92, similar to the alpha found in Experiment 1 and close to the alpha of .96 alpha reported by Alfonso et al. (1996). The Cronbach alpha for NTE was .83, somewhat less than the alpha reported by Jarvis and Petty (1996) of .87.

Perceiver, target, and relationship variance. As in Experiment I, scores across the two sets of nine domains for types of persons were analyzed for relative variance partitioning with Kenny's (2005) social relations model program (SOREMO). Table 6 lists the actor, partner, and relationship variances for all 60 groups across all the variables considered. Significant dyadic accuracy was found for the variables employee, friend, stranger, and ally as determined by the relationship-interpersonal one-tailed *t*-tests and correlations (Employee, $t(59) = 1.77, p < .05, r = .10$; Friend, $t(59) = 2.47, p < .05, r = .16$; Stranger, $t(59) = 2.19, p < .05, r = .12$; and Ally, $t(59) = 2.54, p < .05, r = .18$).

As noted earlier, Kenny's (1994) social relations model typically finds 20% of the variance is accounted for by the perceiver effect, 15% by the target effect and 20% by the relationship effect, leaving 45% unaccounted for as error. As predicted in hypothesis one, the present SOREMO analysis indicated that perceiver variance was highest for rating others as types of persons or self as feeling like types of persons with others. Variances for these ratings ranged from a low of 33% for rating others as strangers, to a high of 77% for rating feeling like a student with others. The average perceiver variance for ratings of persons was 55%, which is slightly higher than the 48% found in Experiment 1, and considerably higher than the 20% figure indicated by Kenny (1994).

Unfortunately, Experiment 2 did not include personality ratings given the extra burden that would have placed on participants (e.g., it would have added an extra 75

Table 6

SOREMO Relative Variance Partitioning for the 16 Types of Persons Variables.

Variable	Perceiver Variance	Target Variance	Relationship Variance	Error
Boss-O	.48*	.09*	.22*	.21
Employee-O	.61*	.02	.14*	.23
Friend-O	.45*	.07*	.29*	.19
Stranger-O	.33*	.11*	.08*	.48
Mentor-O	.60*	.05*	.17*	.18
Student-O	.73*	.04*	.07*	.16
Ally-O	.48*	.06*	.17*	.27
Challenger-O	.42*	.13*	.24*	.22
Boss-S	.72*	.05*	.10*	.13
Employee-S	.68*	.002	.08*	.23
Friend-S	.26*	.40*	.28*	.06
Stranger-S	.54*	.01	.11*	.34
Mentor-S	.69*	.04*	.15*	.13
Student-S	.77*	.01	.06*	.16
Ally-S	.59*	.08*	.09*	.24
Enemy-S	.56*	.03	.17*	.24
Challenger-S	.58*	.04	.19*	.18

Note. Separate analyses were run for each construct and their corresponding indicators. For example, the indicators for rating others as a chief, ruler, director, and boss were used to form the construct boss, with "O" representing ratings of others and "S" representing ratings of how participants felt with others, self. These separate ratings made it possible to partial relationship variance from error variance, and generate a variance data file that was then tested with SPSS (Kenny, 2005). Perceiver and target variance estimates were calculated with average scores across the 4 or 5 indicators and run in separate SOREMO analyses. * $p < .05$

ratings per person), so a comparison between the perceiver variance for rating others on NSAs and on personality traits cannot be made and, consequently, the argument that participants responded in set ways cannot be ruled out with the present data. However, it is telling that the high level of perceiver variance persisted from one study to the next. This suggests that its presence was not a mere artifact in the first study. As stated above, that people saw one another in different ways very much fits with Gifford's (2004) theory of needs assessments in making social evaluations. Participants had unique needs that afforded different perceptions, and hence, the large perceiver variance.

Another consideration related to the high levels of perceiver variance found in the present series of studies relates to social comparison research. Specifically, Stapel and Koomen (2005) note that social comparisons are easily primed by mentioning terms related to competition and cooperation, which then induces participants to make assimilating or contrasting comparisons between self and others. They state that "cooperating individuals will—due to assimilation—perceive each other as more similar, whereas competing individuals will—due to contrast—perceive more differences between each other" (Stapel & Koomen, 2005, p. 1037). Conceivably, asking participants to cooperate with one another in Experiments 1 and 2 induced a mindset of assimilation that could explain the high level of perceiver variance. If the same assimilating and contrasting effects found with social comparisons influences social evaluations, then the cooperative group should have higher levels of perceiver variance than the competitive group.

To test this argument, an ANOVA of task (cooperative by competitive) by perceiver variance was run on the data from Experiment 2. In contrast to expectations,

there was more perceiver variance in the competitive condition ($M = .63$, $SD = .11$) than in the cooperative condition ($M = .50$, $SD = .50$), $F(1, 35) = 9.4$, $p < .01$. No difference was found in perceiver variance in Experiment 1 between the cooperative and competitive groups ($F = 2.78$, $p = .106$). These findings suggest that the social evaluations participants were making in the present study were not the same as the social comparisons Stapel and Koomen's (2005) participants were making in their study. These findings do not suggest, as Stapel and Koomen state, that "cooperating individuals will—due to assimilation—perceive each other as more similar, whereas competing individuals will—due to contrast—perceive more differences between each other" (2005, p. 1037). Apparently, the nature of the judgment, whether it is a social evaluation or a social comparison, influences the assimilation process.

Returning to the social relations model, the relatively low amount of consensus in rating self and others as certain types of persons is consistent with Gifford's (2004) theory of social evaluations. It predicts that individuals with different needs will see one another differentially. This argument is consistent with the findings on target variance or consensus ratings of persons. Specifically, Kenny (1994) notes that consensus typically accounts for 15% of the variance in interpersonal perceptions. As predicted, consensus in rating others on NSAs in Experiment 2 averaged half that variance, at 7.3%. For example, the only comparable consensus variance was in rating others as challengers (12.9%). In contrast, considerable consensus was found that participants felt like friends with one another (40%). The remaining constructs accounted for relatively little of the consensus. For example, there was only 1% to 2% consensus that participants felt like students with others, or saw others as employees.

The average relationship variance (21.8%) found in the present experiment is in line with the 20% anticipated by Kenny (1994), and almost identical to the average of 22% found in Experiment 1. That participants' unique ratings of selves and others as certain types of persons is consistent with Kenny's (1994) figures once again supports social evaluation's premise that individuals rate others and self in unique ways because their evaluations depend on the dynamics of the dyad. That is, person A's rating of person B, partialling out how person A typically rates others, and person B's rating, partialling out how person B is rated by others, should be unique if social evaluations are driven by the needs of the evaluator and the potential of the evaluated to fulfill those needs. Furthermore, this finding again supports Swann's (1984) theory of circumscribed accuracy that interpersonal perceptions are unique.

In short, the SOREMO results from Experiment 2 are similar to those from Experiment 1. Considerable perceiver variance was found in ratings of types of persons and comparably less consensus, which is consistent with SET. Relationship variance was on par with variances found in studies that have measured other aspects of personality and persons (Kenny, 1994). These figures further support Gifford's (2004) theory of social evaluation in that considerable variance is found in how others are perceived, relatively little consensus, and typical amounts of relationship variance.

Personality differences in accuracy. Based on these results, differential accuracy (DA) scores for all the variables were calculated in the same manner as in Experiment 1 (e.g., DA scores for boss, employee, mentor, etc.; see Table 7 for descriptive statistics of all the main variables). All the DA scores were then used as dependent variables in a

Table 7

Descriptive Statistics for all the Main Variables in Experiment 2.

Continuous Variables (Self-report)	N	Minimum	Maximum	Mean	Std. Deviation
Time in seconds to rate others and self with others	240	577.70	2758.30	1421.33	307.69
Satisfaction with social life (SWSL)	240	.80	6.00	4.40	1.16
Positive relations with others (PRS)	240	1.29	6.00	4.53	.84
Need to evaluate	240	1.19	5.81	3.30	.82
Happiness	240	.50	6.00	4.13	1.02
Extraversion	240	.40	6.00	3.67	1.27
Neuroticism	240	.20	6.00	3.23	1.12
Agreeableness	240	1.20	6.00	4.70	.82
Conscientiousness	240	.20	6.00	3.37	1.18
Openness	240	1.40	6.00	4.28	.91
Dependent Variables (Differential accuracy scores)	N	Minimum	Maximum	Mean	Std. Deviation
Boss	240	.00	.51	.23	.09
Employee	240	.00	.63	.22	.10
Mentor	240	.00	.48	.24	.09
Student	240	.06	.47	.24	.08
Friend	240	.05	.50	.19	.08
Enemy	240	.00	.53	.23	.10
Ally	240	.07	.57	.27	.10
Challenger	240	.00	.59	.25	.10
Stranger	240	.06	.54	.27	.10
Average DA accuracy across all dependent variables	240	.11	.38	.24	.05

general linear model multivariate analysis of variance (MANOVA). The independent variables included the nature of the task (cooperative and competitive) and gender (male and female), which were treated as categorical variables, and SWSL (satisfaction with social life), PRS (positive relations with others), time to rate others (Time), happiness, NTE (need to evaluate), and the Big Five domains, extraversion, neuroticism, agreeableness, conscientiousness and open to new experiences (or openness), which were centered and treated as continuous variables. To approximate the model in Study 1, the present analysis excluded all insignificant interactions found in preliminary analyses. The significant findings are reported and discussed sequentially by independent and blocking variables, beginning with the nature of the task.

The nature of the task and accuracy. As predicted in hypothesis two, the nature of the task was significantly related to accuracy or inaccuracy in rating a number of NSAs. For example, in rating others as friends, enemies, strangers and challengers, participants in the cooperative condition were more accurate than participants in the competitive condition (B = -0.04, $t(203)$ = -3. 39, $p < 0.01$, partial $\eta 2 = 0.05$; B = -0.05, $t(203)$ = -4.05, $p < 0.01$, partial $\eta^2 = 0.08$; B = -0.04, $t(203)$ = -2.93, $p < 0.01$, partial $\eta^2 = 0.04$, and B = -0.03, $t(203)$ = -2.12, $p < 0.05$, partial $\eta^2 = 0.02$, respectively). In contrast, participants in the competitive condition were more accurate than participants in the cooperative condition at rating others as bosses and mentors (B = -0.03, $t(203)$ = -2. 17, $p < 0.05$, partial $\eta^2 = 0.02$; and B = -0.03, $t(203)$ = -2.93, $p < 0.01$, partial $\eta^2 = 0.04$, respectively).

These are interesting replications of the results found in Experiment 1, in which participants who cooperated in building a Lego or Mega Block toy were more accurate at

rating others as enemies than participants who competed at a game of Simon. These findings do not support Funder's (1995) theory that competitive tasks distract participants from focusing on interpersonal perception cues. Rather than impairing accuracy, the competitive task heightened participants' accuracy in rating others on the status and dominance dimension (i.e., as bosses and mentors). As Ruscher and Fiske (1990) and Vonk (1998) report, competition appears to heighten attention to relevant characteristics associated with the expected competition. In the present context, evidence indicates that individuals respond differentially to interpersonal cues depending on the nature of the task (cf. Kenny et al., 1996).

Specifically, a cooperative task appears to heighten interpersonal perception acuity along an affiliation dimension, and a competitive task appears to heighten interpersonal perception acuity along a dominance dimension. That is, participants were more accurate at rating others as friends, enemies, strangers, and challengers when they cooperated, and as bosses and mentors when they competed. Rating others as friends, enemies and strangers falls along Gifford's (2004) affiliation axis and rating others as bosses and mentors falls along Gifford's (2004) status and dominance axis.

Interestingly, Deutsch (2001) noted that cooperation enhances a friendly atmosphere or, in SET terms, orients needs assessments along the affiliation axis. Bonta (1997) argues that competition enhances an aggressive atmosphere. In light of arguments supporting a connection between aggression and dominance (Ardrey, 1961; Eibl-Eibesfeldt, 1970/1971; Fromm, 1973; Lorenz, 1963/1967; Manson & Wrangham, 1991), that participants' interpersonal perception acuity was stronger for evaluating whether they and others felt like bosses and mentors (i.e., status and dominance evaluations) after

competing than after cooperating is not surprising. That is, competition enhances an aggressive atmosphere that, in SET terms, orients need assessments along the dominance axis. Cooperation heightened perception of affiliative needs and competition heightened perception of dominance needs because the nature of the social tasks afforded the relevance of those qualities (cf., Beauvois & Dubois, 2000; Ruscher & Fiske, 1990; Vonk, 1998; Wright & Dawson, 1988).

In addition, personality traits were related to IP acuity across the different tasks. For example, participants who rated themselves as neurotic were more accurate at rating others in general, as employees and mentors in the cooperative than in the competitive condition (B = -0.017, $t(203)$ = -2.64, p = 0.009, partial η^2 = 0.03; B = -0.03, $t(203)$ = -2.273, p = 0.024, partial $\eta 2$ = 0.03; and B = -0.024, $t(203)$ = -2.064, p = 0.04, partial η^2 = 0.02). This replicates the results from Experiment 1 that showed those who scored higher on neuroticism scales were more accurate in the cooperative condition at rating others as bosses than in the competitive condition. As in Experiment 1, no significant interaction in Experiment 2 between number of wins, neuroticism and accuracy was found, suggesting that this finding is not a matter of the sourpuss effect when losing at a game.

However, there are two ways to think about this finding. First, something about the cooperative condition may enhance interpersonal perception accuracy in neurotic participants. Second, something about the competitive condition may impair interpersonal perception accuracy in neurotic participants. In light of Larsen and Ketelaar's (1991) report that neurotics are sensitive to negative cues and Ambady and Gray's (2002) finding that sadness is associated with impaired accuracy, one may assume that competition induces neurotics into a sad or depressed mood that impairs their

interpersonal perception accuracy. Perhaps the affective influence of winning or losing is not enough to overshadow the affective influence of competing in general. Certainly this is an area of research that requires further scrutiny.

Gender differences. As in Experiment 1, and as predicted in hypothesis three, no main effects were found for gender. However, as anticipated, women with higher SWSL scores were significantly more accurate than men with higher SWSL scores at rating others on average, as mentors, and as employees (B = -0.02, $t(203)$ = -2.40, $p < 0.05$, partial $\eta 2 = 0.03$; B = -0.04, $t(203)$ = -3.48, $p < 0.01$, partial $\eta^2 = 0.06$; and B = -0.04, $t(203)$ = -2.9, $p < 0.01$, partial $\eta^2 = 0.04$, respectively). This finding replicates the unexpected finding in Experiment 1 that women with higher SWSL scores were more accurate at rating others as bosses than men with higher SWSL scores. That is, both studies found that women who indicated they were satisfied with their social life were more accurate at rating others on the status and dominance dimension than men who were similarly satisfied with their social life.

Agreeableness also interacted with gender and accuracy. For example, women who rated themselves as agreeable were more accurate than men who rated themselves as agreeable when evaluating others as strangers, mentors and students (B = -0.05, $t(203)$ = -2.61, $p < 0.05$, partial $\eta^2 = 0.03$; B = -0.04, $t(203)$ = -2.22, $p < 0.05$, partial $\eta^2 = 0.02$; and B = -0.04, $t(203)$ = -2.12, $p < 0.05$, partial $\eta^2 = 0.02$, respectively).

Taken as a whole, these findings do not unequivocally support the contention that women are more accurate at judging others than men (e.g., Ambady et al., 1995; Murphy, Hall, & Colvin, 2003). However, they do suggest that interactions between gender and personality characteristics are associated with interpersonal perception accuracy.

Interestingly, agreeableness, which is believed to be associated with interpersonal perception accuracy (e.g., Vogt & Colvin, 2003) and SWSL, which was found in Experiment 1 to be associated with higher accuracy scores, interacted with gender in relation to predict interpersonal perception accuracy at rating others' status and dominance. These findings qualify Mast and Hall's (2004) assertion that gender is not associated with increased accuracy in rating status. The present findings suggest that gender alone does not differentiate accuracy at rating others on the status and dominance dimension; researchers must also consider the interactive effects of social success and agreeableness. Tests that these characteristics mediate, either fully or partially, the relation between gender and accuracy unfortunately were not substantiated. We turn now to survey personality characteristics associated with interpersonal perception accuracy.

Extraversion and accuracy. As predicted by hypothesis four, a lack of success in rating others in general, as students, and employees was associated with self-reports of extraversion[16] ($B = 0.01$, $t(203) = 2.54$, $p < 0.05$, partial $\eta^2 = 0.03$; $B = 0.02$, $t(203) = 2.2$, $p < 0.05$, partial $\eta^2 = 0.02$; and $B = 0.03$, $t(203) = 2.65$, $p < 0.01$, partial $\eta^2 = 0.03$, respectively). Once again, this finding is inconsistent with reports by Akert and Panter (1988) and Funder and Harris (1986), and consistent with reports by Ambady et al. (1995), DePaulo et al. (1987), Taft (1956), and Vernon (1933). Furthermore, this finding is inconsistent with some results from Experiment 1, in which extraversion was associated with accuracy in rating others as extraverts, but consistent with results that

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[16] No significant interactions were found between liking, extraversion and interpersonal perception accuracy. One interaction approached significance ($F = 3.43$, $p = .065$), whereby increased liking was associated with decreased accuracy in extraverts ability to rate others as strangers. All other Fs > 1.44, ps > .230.

extraversion was associated with inaccuracy at rating others as employees, strangers and allies.

Neuroticism and accuracy. As predicted in hypothesis five, neuroticism was associated with inaccuracy in rating others in general, as bosses, employees, mentors, allies, and strangers ($B = 0.02$, $t(203) = 3.48$, $p < 0.01$, partial $\eta^2 = 0.06$; $B = 0.02$, $t(203) = 2.13$, $p < 0.05$, partial $\eta^2 = 0.02$; $B = 0.02$, $t(203) = 2.42$, $p < 0.05$, partial $\eta^2 = 0.03$; $B = 0.02$, $t(203) = 2.63$, $p < 0.01$, partial $\eta^2 = 0.03$; $B = 0.02$, $t(203) = 2.37$, $p < 0.05$, partial $\eta^2 = 0.03$; and $B = 0.02$, $t(203) = 2.11$, $p < 0.05$, partial $\eta^2 = 0.02$, respectively). This finding is consistent with previous literature documenting that well adjusted individuals are better at interpersonal perception than poorly adjusted individuals (e.g., Davis & Kraus, 1997; Dymond, 1950; Taft, 1956). In addition, the present findings replicate the results from Experiment 1 that neuroticism is associated with inaccuracy at rating others as bosses. However, there was not a significant interaction between time (latency in rating others) and neuroticism (Fs < 2.7, ps > .08).

Agreeableness and accuracy. As predicted in hypothesis six, participants who rated themselves as agreeable tended to be accurate at rating others as friends ($B = -0.031$, $t(203) = -2.663$, $p = 0.008$, partial $\eta^2 = 0.03$). This finding supports reports from Vogt and Colvin (2003) and results from Experiment 1 that agreeableness is associated with increased accuracy at rating others in general, as employees, and friends.

Conscientiousness and accuracy. Hypothesis seven was not supported by the data. Specifically, conscientiousness was not associated with accuracy or inaccuracy (Fs < 2.16, ps > .143), as found in Experiment 1.

Openness and accuracy. Hypothesis eight received limited support. Openness was not associated with interpersonal perception inaccuracy (Fs < 3.39, ps > .067), as found in Experiment 1, or as expected from Lippa and Dietz's (2000) report. However, openness did interact with NTE. Specifically, need to evaluate scores and self-reports of openness were associated with inaccuracy at rating others in general, as mentors, students, enemies, and challengers (B = 0.01, $t(203)$ = 3.44, p < 0.01, partial η^2 = 0.06; B = 0.02, $t(203)$ = 2.26, p < 0.05, partial η^2 = 0.02; B = 0.02, $t(203)$ = 2.57, p < 0.05, partial η^2 = 0.03; B = 0.02, $t(203)$ = 2.1, p < 0.05, partial η^2 = 0.02; and B = 0.03, $t(203)$ = 3.06, p < 0.01, partial η^2 = 0.04, respectively). This finding appears to qualify Lippa and Dietz's (2000) report that openness is associated with interpersonal perception inaccuracy. In the present data, openness was associated with inaccuracy only in relation to a rater's need to evaluate score.

Social success and accuracy. As predicted in hypothesis nine, social success was associated with interpersonal perception accuracy. Specifically, SWSL was associated with increased accuracy in rating others overall and as challengers (B = -0.01, $t(203)$ = -2.414, p = 0.017, partial η^2 = 0.03; and B = -0.022, $t(203)$ = -2.449, p = 0.015, partial η^2 = 0.03, respectively). This finding replicates the results from Experiment 1 and once again supports Gifford's (2004) hypothesis that those who are socially successful will be more accurate at making social evaluations than those who are less socially successful. Positive relations with others and happiness were not associated with interpersonal perception accuracy (Fs < 1.70, ps >.19).

Task dependent ratings of others as friends and enemies. Hypothesis 10, a replication of hypothesis six in Experiment 1 was tested next. The proposal was that

participants who compete would more often rate others as enemies and challengers,[17] than friends and allies, and that participants who cooperate would more often rate others as friends and allies than enemies and challengers. Mean scores for the variables across person A, B, C, and D in rating others as friends, enemies, allies, and challengers, as well as mean scores for rating oneself as feeling like a friend, enemy, ally, or challenger with others were analyzed by a MANOVA with mean ratings across persons as the dependent variables and task as the between-group variable.

As predicted in hypothesis ten, participants in the cooperative group rated others as feeling more like a friend ($M = 3.91$, $SD = .91$), and reported feeling more like a friend with others ($M = 3.9$, SD = .88) than participants in the competitive group ($M = 2.88$, $SD = 1.18$, $F(1, 236) = 47.77$, $p < .01$, partial $\eta^2 = .168$; and $M = 2.65$, $SD = 1.39$, $F(1, 236) = 64.97$, $p < .01$, partial $\eta^2 = .22$, respectively). Participants in the cooperative group rated others as feeling less like an enemy ($M = 0.81$, $SD = .71$) and rated feeling less like an enemy with others ($M = 0.72$, $SD = .72$) than participants in the competitive group ($M = 2.16$, $SD = 1.09$; $F(1, 236) = 120.51$, $p < .01$, partial $\eta^2 = .34$; and $M = 2.04$, $SD = 1.26$; $F(1, 236) = 99.06$, $p < .01$, partial $\eta^2 = .3$, respectively).

Participants in the cooperative group rated others as feeling more like an ally ($M = 4.31$, $SD = .78$) and rated feeling more like an ally with others ($M = 4.06$, $SD = .84$) than participants in the competitive group ($M = 2.61$, $SD = 1.17$; $F(1, 236) = 150.367$, $p < .01$, partial $\eta^2 = .4$; and $M = 2.24$, $SD = 1.25$; $F(1, 236) = 164.10$, $p < .01$, partial $\eta^2 = .41$, respectively). Participants in the cooperative group rated others as feeling less like a challenger ($M = 1.31$, $SD = 1.02$) and rated feeling less like a challenger with others ($M =$

[17] Recall that the dimension challenger was added to the NSA circumplex in the present study to complement ally.

1.21, $SD = 1.09$) than participants in the competitive group ($M = 3.72$, $SD = 1.12$; $F(1, 236) = 247.12$, $p < .01$, partial $\eta^2 = .51$; and $M = 3.75$, $SD = 1.26$; $F(1, 236) = 221.55$, $p < .01$, partial $\eta^2 = .48$, respectively).

These findings support the results from Experiment 1, and add to the evidence in favour of Gifford's (2004, p. 19) proposal that social evaluations swing towards the enemy/opponent quadrant in a "non-optimal" context. Moreover, the evidence supports the complement as well, that in an optimal setting social evaluations swing towards the friend/ally quadrant. Notably, interpersonal accuracy is influenced by these orientations. Participants were more accurate at rating others as friends, enemies, strangers and challengers in the cooperative condition and more accurate at rating others as bosses and mentors in the competitive condition. In a non-optimal, zero-sum competitive condition, although participants rated others more often as enemies and challengers, and more often rated feeling like enemies and challengers, a mismatch generally occurred between these assessments of others and how others felt. That is, the differential accuracy scores were adjusted to eliminate stereotype accuracy, or how one typically saw others by removing the mean rating across persons. Although others were more often rated as enemies in the competitive than in the cooperative condition, and others more often felt like enemies in the competitive than in the cooperative condition, these perceptions were mismatched. That is, participants' ratings of how they felt did not match how they were judged. Perceptions that people were enemies and challengers in the competitive condition were inaccurate.

A similar argument holds for perceiving and rating others as bosses and mentors in the cooperative condition. Although there were no significant differences between

rating others as bosses and mentors from one task to another (rating others as mentors approached significance, $F(1, 236) = 3.801$, $p = .052$), significant differences in how participants felt with others were found. For example, participants more often felt like bosses and mentors in the cooperative condition (M = 1.54, SD = 1.28, and M = 2.22, SD = 1.33) than in the competitive condition ($M = 1.25$, $SD = 1.23$, and $M = 1.52$, $SD = 1.34$; $F(1, 236) = 6.03$, $p < .01$, partial $\eta^2 = .02$; $F(1, 236) = 18.72$, $p < .01$, partial $\eta^2 = .07$, respectively). People in the cooperative condition more often felt like mentors with others, but were not accurately perceived as such. This finding supports the theory that a cooperative condition affords the accurate evaluation of affiliation qualities, rather than status and dominance qualities. In contrast, a competitive condition affords the accurate evaluation of status and dominance qualities, rather than affiliation qualities.

Tests of mediation. Structural equation modelling with AMOS (Arbuckle, 2003) was used to determine whether the mediation model for extraversion, neuroticism, and SWSL that fit the data in Experiment 1, also fit the data in Experiment 2 (see Figure 1). The data from Experiment 2 did not fit the model from study 1 (χ^2 (1, N = 240) = 20.53, $p < .01$). A revised model, with several nested models that assessed the mediating effects of social success on extraversion and accuracy in rating others, was tested (see Figure 2).

In the first nested model the path from extraversion to enemy was set to 0. In the second nested model the path from extraversion to positive relations with others (PRS) was set to 0. The model in Figure 2, where no paths were set to 0, represented the best fit, χ^2 (5, N = 240) = 7.46, $p = .19$, Comparative Fit Index = 0.97, root mean square error

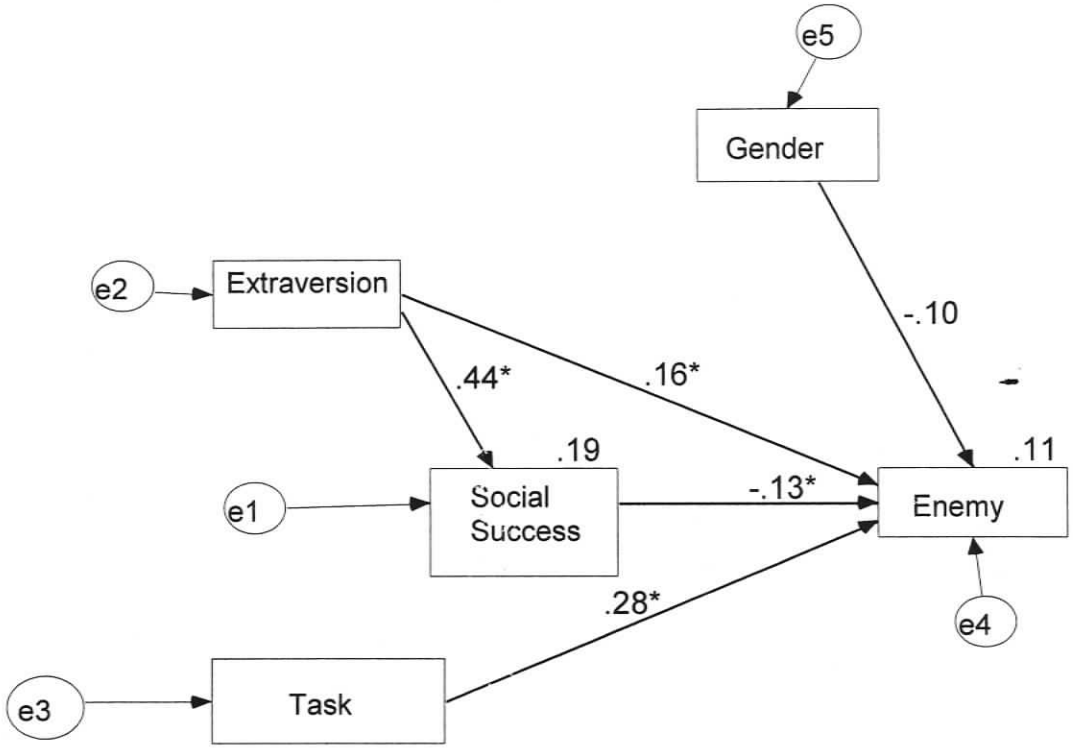


Figure 2. Accuracy of rating others as an enemy as a function of extraversion, and social success as measured with PRS (positive relations with others scale).

Notes. The square boxes represent the measured variables, and the circles marked e1 to e4 represent unexplained variance. The numbers adjacent to Social Success and Enemy represent R^2 values. The numbers adjacent to the lines represent standardized estimates (betas). A low accuracy score indicates greater accuracy. * $p < .05$

of approximation = .05, probability of close fit = .47, and was significantly different from the two other models, χ^2 (1, N = 240) = 5.14, $p < .05$; and χ^2 (1, N = 240) = 50.56, $p < .01$, respectively. This suggests that the relation between extraversion and interpersonal perception accuracy is partially mediated by social success, as measured by self-reports of positive relations with others.

To determine whether this model's fitness was unique to the data from Experiment 2, it was tested with the data from Experiment 1. The model in Figure 2 also fit the data from Experiment 1 (see Figure 3; χ^2 (5, N = 240) = 0.96, $p = .97$, Comparative Fit Index = 1, root mean square error of approximation < .01, probability of close fit = .99). However, a partial mediation of social success with extraversion did not exhibit a significantly better fit than a full mediational model with the path from extraversion to enemy removed, χ^2 (1, N = 240) = 0.16, $p = .16$. The full mediation model had a comparable fit, χ^2 (9, N = 240) = 2.96, $p = .81$, Comparative Fit Index = 1, root mean square error of approximation < .01, probability of close fit = .99.

Taken together, these series of tests indicate that the relation between extraversion and interpersonal perception accuracy is mediated, in some cases partially, and in other cases fully, by social success as measured by satisfaction with social life and positive relations with others. Although a model with SWSL also fit the data from Experiment 2, the beta weight between SWSL and accuracy in rating others as enemies, in contrast to PRS, was not significant. That the model in Experiment 1 was not fully replicated with the data from Experiment 2 may be an indication that a better measure of social success is warranted.

Be that as it may, these findings offer a more comprehensive explanation of why

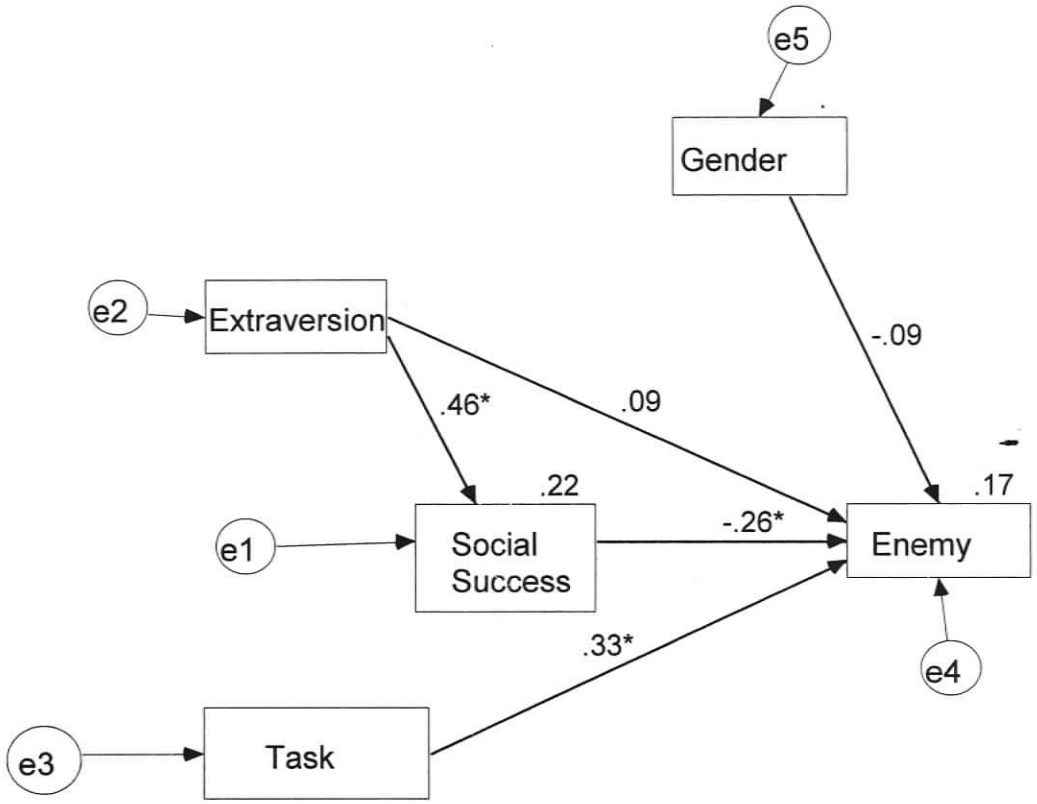


Figure 3. Accuracy of rating others as an enemy as a function of extraversion, and social success as measured with SWSL (satisfaction with social life scale).

Notes. The square boxes represent the measured variables, and the circles marked e1 to e4 represent unexplained variance. The numbers adjacent to Social Success and Enemy represent R^2 values. The numbers adjacent to the lines represent standardized estimates (betas). A low accuracy score indicates greater accuracy. * $p < .05$

extraversion is sometimes associated with interpersonal perception accuracy (e.g., Experiment 1; Akert & Panter, 1988; and Funder & Harris, 1986) and other times not (e.g., Experiment 1 & 2; Ambady et al., 1995; DePaulo et al., 1987: Taft, 1956; Vernon, 1933). If extraversion scales inadvertently measure elements of social success, then scores on such scales may be associated with interpersonal perception accuracy.

In accordance with hypothesis 5 a test was also made of a mediational model of the relation between neuroticism, time (the time it took participants to complete their ratings), and accuracy as seen in Figure 4. The model in Figure 4 did not fit the data, χ^2 (5, N = 240) = 15.06, $p < .01$. No significant relation was found between time and accuracy, or between neuroticism and time. In light of this evidence, it would appear that the relation between neuroticism and interpersonal perception accuracy demands further scrutiny.[18]

Finally, hypothesis 8 was tested with a mediational model of the relation between openness, need to evaluate, and accuracy (see Figure 5). In the first nested model, the path from openness to mentor was set to 0, did not have a good fit, and was rejected, χ^2 (6, N = 240) = 15.04, $p < .05$, Comparative Fit Index = 0.58, root mean square error of approximation = .08, probability of close fit = .14. In the second nested model the path from openness to need to evaluate was set to 0. The second nested model had a good fit, χ^2 (6, N = 240) = 4.77, $p = .57$, Comparative Fit Index = 1, root mean square error of

[18] Social success exhibited the same mediational effects on neuroticism as it did on extraversion, but the beta weights between neuroticism and accuracy and social success and accuracy were not significant.

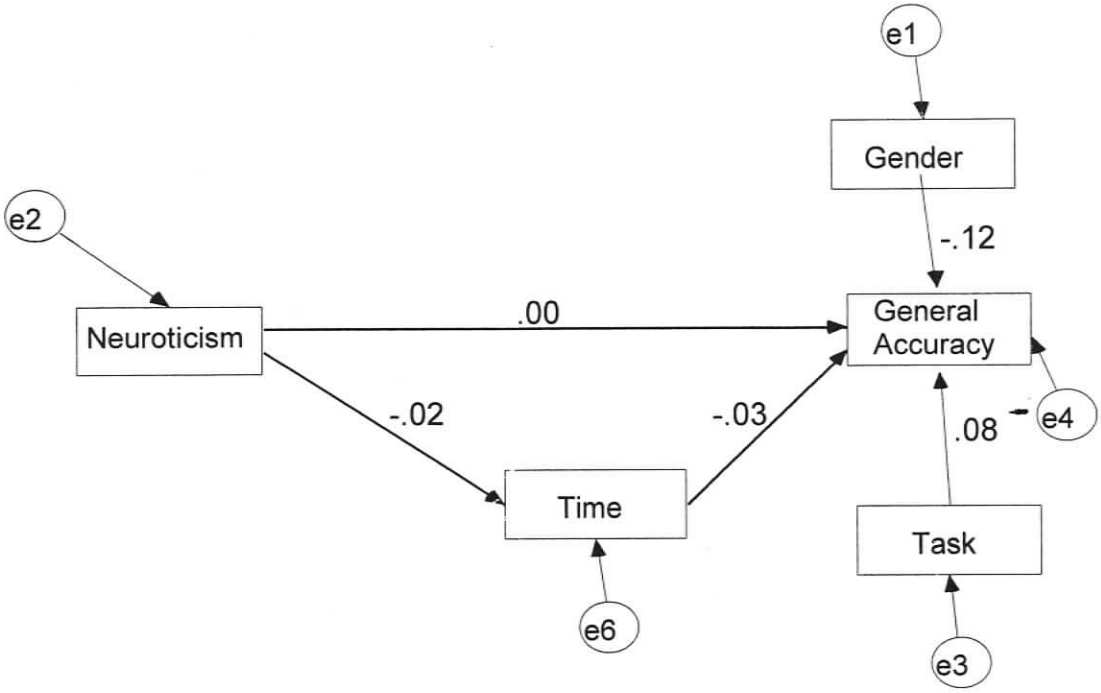


Figure 4. Accuracy of rating others in general as a function of neuroticism and time.

Notes. The square boxes represent the measured variables, and the circles marked e1 to e6 represent unexplained variance. The numbers adjacent to the lines represent standardized estimates (betas). A low accuracy score indicates greater accuracy. None of the paths were significant, *ps* > .05.

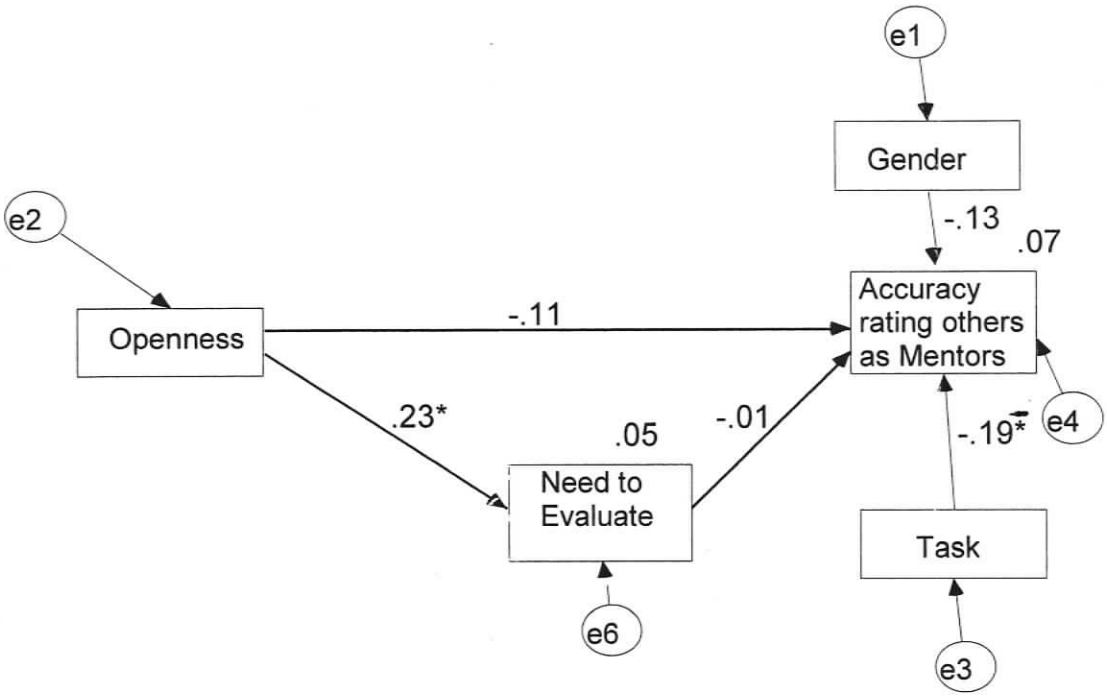


Figure 5. Accuracy of rating others as mentors as a function of openness, and need to evaluate.

Notes. The square boxes represent the measured variables, and the circles marked e1 to e6 represent unexplained variance. The numbers adjacent to Need to Evaluate and Accuracy represent R^2 values. The numbers adjacent to the lines represent standardized estimates (betas). A low accuracy score indicates greater accuracy. * $p < .05$

approximation < .01, probability of close fit = .83). The model in Figure 5, in which no paths were set to 0, represented the best fit, χ^2 (5, N = 240) = 1.92, p = .86, Comparative Fit Index = 1, root mean square error of approximation < .01, probability of close fit = .96), and was only significantly different from the first nested model, χ^2 (1, N = 240) = 13.12, p < .01, but not the second, χ^2 (1, N = 240) = 2.85, p = .09.

The evidence partially supports hypothesis eight. For example, the significant beta weight of .23 between openness and need to evaluate, and the non-significant difference between a model in which need to evaluate partially mediated openness and accuracy, and a model that had openness and need to evaluate independently related to accuracy suggests that these two constructs may be tapping similar personality domains. Neither construct was associated with interpersonal perception accuracy on its own, but they did interact. When a person's need to evaluate was held constant (set to zero which represents an average), openness was associated with inaccuracy in evaluating a number of NSAs. In light of these findings, a better measurement of openness is warranted.

Conclusions

In summary, although most of the constructs demonstrated good reliability as indicated in their Cronbach alphas, some could have been stronger. For example, rating others as strangers had an alpha of .60. In addition, openness to new experiences was difficult to reliably measure, and hence the alpha of .61. A more reliable, yet brief, measure of these dimensions is warranted.

As predicted, the nature of the task was associated with the nature of NSA ratings. Specifically, participants who cooperated rated others more often as friends and allies, and less often as enemies and competitors. In addition, participants who cooperated were

more accurate at rating others as friends, enemies, strangers and challengers than participants who competed. However, participants who competed were more accurate than participants who cooperated at rating others as bosses and mentors, that is, at rating others on the status and dominance axis of Gifford's (2004) circumplex. As predicted, SWSL (satisfaction with social life) was associated with interpersonal perception accuracy at rating others in general (an average of all the differential accuracy NSAs rating scores), and as challengers.

Only some of the predictions involving the Big Five were confirmed. For example, extraversion was associated with inaccuracy at rating others in general, as students, and as employees. Neuroticism was associated with inaccuracy at rating others in general, as bosses, employees, mentors, allies, and strangers. Notably, rating latencies (time) did not mediate neuroticism's association with accuracy or inaccuracy as considered in light of Ambady and Gray's (2002) research. Yet there was a neuroticism-by-task interaction such that neurotics were less accurate at rating others as employees and mentors (NSAs on the status axis) in the competitive condition. Participants who rated themselves as agreeable tended to accurately rate others as friends, lending support to work by Vogt and Colvin (2003) and to the results from Experiment 1. Conscientiousness was not associated with accuracy or inaccuracy. Openness did correlate with NTE but was associated with inaccuracy at rating others in general, as mentors, students, enemies and challengers only when participants' NTE was held constant.

Finally, the relative variance partitioning generated by SOREMO confirmed predictions of high perceiver variance and low consensus, which is consistent with

Gifford's (2004) SET. The average relationship variance was consistent with reports by Kenny (1994). However, because of the added and expanded measures, comparisons between ratings of NSAs and personality were not made in Experiment 2.

CHAPTER V1

EXPERIMENT 3

To address some of the limitations in Experiment 2, a third study was conducted.[19] Experiment 3 was designed to reduce the number of evaluations each participant was asked to make by restricting the group size to three. This redesign afforded a test of both types of ratings (i.e., NSA and the Big Five), to further explore the different SOREMO variances found in Experiment 1, and to measure intelligence in addition to self-reports of openness and participants' need to evaluate.

Predictions for Experiment 3

Based on the results of Experiment 1 and the literature, Experiment 3 tested the following hypotheses:

1. Perceiver variance will account for the majority of variance when rating NSAs as opposed to the Big Five.

2. Greater consensus in rating others on the Big Five and comparably less consensus on rating others on NSAs will occur.

3. Relationship variance for both the NSAs and Big Five ratings will match the 20% predicted by Kenny (1994).

4. Participants who make accurate social evaluations and character judgments will have higher indicators of social success than those who make less accurate social evaluations and character judgments.

5. Extraversion will be associated with interpersonal perception inaccuracy.

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[19] Experiment 3 was conducted simultaneously with Experiment 2, which explains why a new measure of the Big Five was not adopted when one should have been.

6. Neuroticism will be associated with interpersonal perception inaccuracy, especially on the dominance axis, and this relation will be mediated by rating latency.

7. Agreeableness will be associated with accuracy at rating NSAs on the affiliation axis.

8. No specific predictions will be made regarding conscientiousness.

9. There will be no main effect for gender, however, it is anticipated there will be an interaction between gender, SWSL and accuracy at rating others on the status and dominance dimension.

10. Need to evaluate, and intelligence (IQ), as measured by the Wonderlic Personnel Test (Wonderlic, 1992), will be associated with interpersonal perception accuracy, and mediate the relation between openness and accuracy.

11. Social success will mediate the relation between extraversion and interpersonal perception accuracy.

Methods

Participants and procedure. University undergraduate psychology students worked in 33 groups of three. Twenty-eight males and 71 females participated. Because of missing data, a total of five groups of three were dropped from the analysis.[20] Data from the resulting 23 males and 61 females were used in the analysis. Participants only engaged in the cooperative task, working in dyads, making as many different play-dough figures as they could within 10 minutes. While the dyad worked cooperatively, the third person engaged in a filler task[21] which is described below. After 10 minutes, the

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[20] The guidelines used in Experiment 2 were applied in Experiment 3.

[21] In light of Kenny's (2004) comments about acts and acquaintance, participants were given a task that focused their attention away from the other two participants who were

participants changed places so that each had an opportunity to cooperate with everyone else in the group, as well as work on the filler task.

Measures. All the measures in Experiment 3 were used in Experiment 2, with the addition of one and the modification of another. The Big Five was modified from Experiment 2 to be grammatically consistent when used to rate others. For example, the statement "I am relaxed most of the time" was modified to read "Person A (B, or C)…is relaxed most of the time" when subjects were asked to rate others (see Appendix B for the complete scale).

The Wonderlic Personnel Test (WPT), a 50-question, timed, general intelligence test (Wonderlic, 1992) was added as an activity to engage the third person in each group while the other two participants worked at the cooperative task. However, it was more than just a filler task in light of research indicating a moderate ($r = .27$), but significant correlation between the WPT and knowledge about non-verbal cues in interpersonal perception (Rosip & Hall, 2004).

Results and Discussion

As in the previous studies, the results and related discussions will be presented in several sections: (a) a description of the reliability scores for the measures of types of persons and personality ratings; (b) a description of the SOREMO results and discussions; (c) MANOVA tests of the relations between the differential accuracy (DA) scores and the categorical and continuous personality variables; and (d) tests of mediation.

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working together. Had no task been given, participants might have monitored the other participants differentially, some perceiving more and consequently, learning more about some than others.

Reliabilities. The ratings of others and self as types of persons and personality dimensions were subjected to reliability tests (see Table 8). The average Cronbach alpha across the three subjects per group for rating others as certain types of persons (or NSAs) was .82, .80, .83, .68, .82, .75, .65, .89, and .56 for boss, employee, mentor, student, friend, enemy, ally, challenger, and stranger, respectively. The average Cronbach alpha across the three subjects per group for rating feeling like a certain type of person with others was .86, .77, .88, .72, .87, .69, .61, .85, and .68 for boss, employee, mentor, student, friend, enemy, ally, challenger, and stranger, respectively. Cronbach alphas for the Big Five were .82, .68, .68, .84, and .73, for extraversion, agreeableness, conscientiousness, neuroticism and openness, respectively. Average Cronbach alphas for rating others on the Big Five were .86, .75, .72, .57 and .66, for extraversion, agreeableness, conscientiousness, neuroticism and openness, respectively. The Cronbach alpha for PRS (positive relations with others) was .83, slightly less than .84 in Experiment 2, and .88 reported by Ryff and Keyes (1995). The Cronbach alpha for the subjective happiness scale was .85 (happiness), which is higher than the alpha reported in Experiment 2, and close to the mean of .86 reported by Lyubomirsky and Lepper (1999). The Cronbach alpha for SWSL (satisfaction with social life) was .90, down from the .92 found in Experiment 1, 2, and the .96 alpha reported by Alfonso et al. (1996). The Cronbach alpha for NTE (need to evaluate) was .87, which is higher than the alpha reported in Experiment 2 and similar to the alpha reported by Jarvis and Petty (1996).

Perceiver, target and relationship variance. Mean scores across the 9 domains for types of persons were analyzed for relative variance partitioning with Kenny's (2005) social relations model program (SOREMO). As may be seen in Table 9, all 28 groups

Table 8

Cronbach Alphas for Ratings of Self and Others on all the Main Variables in Experiment 3.

Variables	Number of Items	Alpha Self-rating	Alpha Rating A	Alpha Rating B	Alpha Rating C
SWSL	5	.90			
PRS	14	.83			
Happiness	4	.85			
Need to evaluate	16	.87			
Extraversion	5	.82	.84	.89	.83
Agreeableness	5	.67	.75	.76	.74
Conscientiousness	5	.68	.75	.72	.69
Neuroticism	5	.84	.40	.54	.77
Openness	5	.73	.74	.66	.57

Variables	Number of Items	Alpha Person A	Alpha Person B	Alpha Person C
Rating others:				
Boss	4	.81	.82	.84
Employee	4	.81	.78	.81
Mentor	4	.82	.83	.82
Student	5	.63	.68	.73
Friend	4	.89	.77	.80
Enemy	4	.74	.73	.80
Ally	4	.64	.66	.66
Challenger	4	.86	.91	.90
Stranger	4	.62	.57	.50
Rating self with others:				
Boss	4	.87	.85	.88
Employee	4	.82	.77	.72
Mentor	4	.86	.88	.89
Student	5	.68	.74	.73
Friend	4	.90	.84	.87
Enemy	4	.76	.68	.64
Ally	4	.53	.67	.63
Challenger	4	.88	.89	.79
Stranger	4	.69	.70	.65

Table 9

SOREMO Relative Variance Partitioning for the 16 Types of Persons Variables.

Variable	Perceiver Variance	Target Variance	Relationship Variance	Error
Boss-O	.36*	.11	.24*	.30
Employee-O	.69*	.00	.12*	.20
Friend-O	.48*	.17	.17*	.17
Stranger-O	.42*	.06	.11*	.41
Mentor-O	.48*	.00	.25*	.27
Student-O	.66*	.01	.08*	.25
Ally-O	.51*	.22	.04	.23
Enemy-O	.45*	.06	.16*	.33
Challenger-0	.33*	.14	.31*	.22
Boss-S	.62*	.00	.20*	.18
Employee-S	.63*	.03	.12*	.22
Friend-S	.40*	.03	.35*	.23
Stranger-S	.64*	.00	.09*	.27
Mentor-S	.47*	.00	.29*	.23
Student-S	.70*	.00	.08*	.22
Ally-S	.63*	.09	.00	.28
Enemy-S	.76*	.04	.01	.20
Challenger-S	.67*	.13*	.07*	.14
Extraversion	.01	.53*	.25*	.22
Neuroticism	.42*	.13	.04*	.40
Agreeableness	.05	.27	.25*	.43
Conscientious	.00	.22	.30*	.48
Openness	.15	.19	.19*	.47

Note. Separate analyses were run for each construct and their corresponding indicators. For example, the indicators for rating others as a chief, ruler, director, and boss were used to form the construct boss. "O" represents ratings of others and "Boss-S" represents ratings of how participants felt with others, self. These separate ratings made it possible to partial relationship variance from error variance, and generate a variance data file that was then tested with SPSS (Kenny, 2005). Perceiver and target variance estimates were calculated with average scores across the 4 or 5 indicators and examined in separate SOREMO analyses. * $p < .05$, one-tailed.

demonstrated significant actor, partner, or relationship variance across some of the variables considered.

As predicted in hypothesis 1, the SOREMO analysis indicated that perceiver variance was highest for rating others as types of persons or self as feeling like types of persons with others. Variances for these ratings ranged from a low of 33% for rating others as challengers, to a high of 75% for rating feeling like an enemy with others. The average perceiver variance for ratings of persons was 55%, which is similar to the average variance found in Experiment 2, slightly higher than the 48% found in Experiment 1, and higher than the 20% figure indicated by Kenny (1994). In comparison, the average perceiver variance for rating others on the Big Five was 13% which is slightly higher than the 9% found in Experiment 1, but considerably lower than Kenny's (1994) 20%, and significantly lower than the amount of perceiver variance for rating NSAs, $F(1, 21) = 36.26$, $p < .01$. Perceiver variance for personality ranged from 0% for conscientiousness to 42% for neuroticism. This change in perceiver variance from rating others on the NSAs to rating others on the Big Five lends little support to the argument that the present perceiver variance, along with the perceiver variance found in Experiment 1 and 2, is mere response set.

Admittedly, the large perceiver variance could be a manifestation of guessing. This line of reasoning extends from the high neuroticism perceiver variance in relation to the other 4 domains of the Big Five. General consensus exists in the literature that neuroticism is a difficult characteristic to accurately rate in unacquainted others (e.g., Colvin, 1993; Funder, 1995; Jussim, 2005; and Kenny, 1994; hence its low reliability alpha). If it is conceivable that people differentially guess whether others are neurotic or

not, then it is conceivable that they may be guessing about whether others feel like bosses, employees, mentors, and so forth.

One problem with this line of reasoning is that the average percentage of error variance associated with making NSA evaluations is 24%, half of the expected value generally found in personality ratings (Kenny, 1994), and significantly smaller than the error variance associated with rating others on the Big Five ($M = 40\%$; $F(1, 21) = 18.21$, $p < .001$). Interestingly, 40% of the variance in rating others as neurotic is accounted for by error, which fits Kenny's (1994) figure perfectly. If the participants were guessing for NSAs, then the error variances should be similar to the error variance for neuroticism. The only NSA that had a similar error variance was strangers, which was 41%. Participants may have been differentially guessing about whether others felt like strangers or not, but the error variances indicated that participants were not differentially guessing about the other NSAs.

Apart from the issue of guessing, and as predicted in hypothesis 2, generally little target variance or consensus in ratings of persons was found. The average consensus across all 9 NSAs was 6%, less than half the 15% typically found in ratings of personality (Kenny, 1994). However, some of the NSAs did match this figure more closely. For example, there was comparable consensus in rating others as friends (17%), allies (22%) and challengers (14%) and feeling like a challenger (13%). However, the remainder of the ratings ranged from 0% for rating others as employees to 11% for rating others as bosses. Notably, only the consensus for rating feeling like a challenger with others was statistically significant.

In comparison, significantly more consensus was found among raters in judgments of personality ($M = 26.8\%$) than in judgments of NSAs ($M = 6\%$), $F(1, 21) = 20.59$, $p < .01$. For example, the average across ratings of the Big Five was 27%, which is higher than Kenny's (1994) expected 15%, and higher than the 18% found in Experiment 1. Consensus was considerably higher for rating others as extraverts (53%, up from 38% in Experiment 1, which was the only statistically significant amount of variance), as was rating agreeableness (27%, up from 10% in Experiment 1). Rating conscientiousness was down from 24% in Experiment 1 to 22%. Ratings of others as neurotic (13%, up from the 7% in Experiment 1), and open to new experiences (19%, up from 11% in Experiment 1) were more in line with Experiment 1 results.

The relatively low amount of consensus in rating self and others as certain types of persons is once again consistent with Gifford's (2004) theory of social evaluations. People with different needs will perceive others differentially. That is, individuals would not be expected to agree about the ratings of self and others as certain types of persons because these evaluations are believed to be based on needs. In relation to SET, having different needs is expected to influence what individuals seek and see in others. Conceptually, this should limit consensus. Thus, perceiver and relationship variance, rather than consensus, are important sources of variance in social evaluations.

Overall, relationship variances were significant and, on average, in line with expectations. The highest proportion was found in rating feeling like a friend (35% compared to 40% in Experiment 1) and a mentor (29%), and rating others as bosses (24%), mentors (25%), and challengers (31%). The average relationship variance across all domains was 15%, which was not significantly different from the average across

personality ratings (21%; $F(1, 21) = 1.19, p = .287$). These data further substantiate the explanation advanced in Experiment 1and 2 that participants evaluate others differentially, as bosses, mentors, friends, and so forth. Specifically, participants' unique needs, and potential to fulfill needs, afford different evaluations.

In conclusion, the results from Experiment 3 are similar to those from Experiments 1 and 2; considerable more perceiver than target variance exists in ratings of types of persons, which is consistent with SET expectations of how people see others. Furthermore, these variances differ from those found for ratings of personality, as was found in Experiment 1, but not measured in Experiment 2. Relationship variance was comparable to variances found in related studies (Kenny, 1994), and similar across ratings of NSAs and personality.

Personality differences in accuracy. Differential accuracy (DA) scores for all the variables were calculated in the same manner as in Experiment 1 and 2 (e.g., DA scores for boss, employee, mentor, etc., see Table 10 for the descriptive statistics of all the main variables). These DA scores were then used as dependent variables in a general linear model multivariate analysis of variance (MANOVA). Gender (male and female) was treated as a categorical variable, and SWSL, PRS, time to rate others (Time), happiness, NTE, IQ (Wonderlic Personnel Test scores), and the Big Five domains, extraversion, neuroticism, agreeableness, conscientiousness and openness were centered and treated as continuous variables. The results are reported sequentially by variable, starting with measures of social success.

Social success. As predicted in hypothesis 4, social success, as measured by satisfaction with social life was associated with accuracy in rating others as mentors

Table 10

Descriptive Statistics for all the Main Variables in Experiment 3.

Continuous Variables (Self-report)	N	Minimum	Maximum	Mean	Std. Deviation
Time in seconds to rate others and self with others	84	890.64	2271.20	1449.89	297.68
Wonderlic Test Scores	84	12	34	23.19	4.54
Satisfaction with social life (SWSL)	84	.80	6.00	4.38	1.16
Positive relations with others (PRS)	84	2.43	6.00	4.52	.82
Need to evaluate	84	1.38	5.56	3.14	.91
Happiness	84	1.00	6.00	4.11	1.08
Extraversion	84	.40	6.00	3.78	1.28
Neuroticism	84	.60	5.60	3.43	1.35
Agreeableness	84	2.00	6.00	4.61	.83
Conscientiousness	84	1.20	6.00	3.23	1.13
Openness	84	.60	6.00	4.24	.99
Dependent Variables (Differential accuracy – DA)	N	Minimum	Maximum	Mean	Std. Deviation
Boss	84	.00	.52	.24	.11
Employee	84	.05	.50	.24	.11
Mentor	84	.06	.56	.26	.10
Student	84	.09	.47	.28	.09
Friend	84	.05	.47	.19	.10
Enemy	84	.00	.75	.20	.14
Ally	84	.08	.68	.27	.12
Challenger	84	.00	.59	.22	.11
Stranger	84	.05	.71	.27	.13
Extraversion	84	.06	.46	.19	.09
Neuroticism	84	.00	.51	.19	.11
Agreeableness	84	.00	.50	.18	.11
Conscientiousness	84	.00	.51	.19	.10
Openness	84	.00	.46	.20	.10
Average DA accuracy across all dependent variables	84	.13	.34	.22	.05
Average DA accuracy across all the need satisfier assessments	84	.14	.37	.24	.06
Average DA accuracy across all domains of the Big Five	84	.03	.39	.19	.07

(B = -0.08, $t(19)$ = -2.19, $p < 0.05$, partial $\eta^2 = 0.20$). Furthermore, happiness was associated with accuracy in rating others as enemies (B = -0.09, $t(19)$ = -2.13, $p < 0.05$, partial $\eta^2 = 0.19$). These findings replicate the results from Experiment 1 and further support Gifford's (2004) hypothesis that those who are socially successful will be more accurate at making social evaluations than those who are less socially successful.

Extraversion, neuroticism and agreeableness. Hypotheses 5, 6, and 7 were not supported by the data. Extraversion,[22] neuroticism, and agreeableness[23] were not associated with accuracy or inaccuracy in rating others on NSAs (Fs < 2.7, ps > .10). However, agreeableness was associated with inaccuracy at rating others as agreeable, $B = 0.118$, $t(19) = 2.19$, $p < 0.05$, partial $\eta^2 = 0.2$. These findings are inconsistent with those of Experiment 1 and 2, and with those from related studies. For example, Vogt and Colvin (2003) found that participants who indicated that they typically show warmth to others, seek closeness, and are sociable were more accurate in judging the personality traits of 4 targets. Differences between these results may be accounted for by differences between the Big Five, as used in the present study, and the California Adult Q-sort, as used in Vogt and Colvin's study. However, the present findings are consistent with a report by Lippa and Dietz (2000) that did not report significant associations between Big Five measures of extraversion, neuroticism, agreeableness and interpersonal perception accuracy.

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[22] Although a between-subjects effect was significant between extraversion and rating others as neurotic, $F(1, 84) = 5.4$, $p = .031$, partial $\eta 2 = .22$, the parameter estimate was not significant, B = -.004, $t(19)$ = -0.19 $p = .86$, partial $\eta 2 < .01$. All other Fs < 2.7 and ps > .1

[23] Although a between-subjects effect was significant for rating others as an enemy, $F(1, 84) = 7.6$, $p < .05$, partial $\eta 2 = .29$, the corresponding parameter estimate was not significant, $B = .028$, $t(19) = 0.58$, $p = .57$, partial $\eta 2 = .02$. All other Fs < 1.45, ps > .25

Conscientiousness. Hypothesis 8 made no predictions about conscientiousness. Participants who rated themselves as conscientious were accurate at rating others as allies and bosses (B = -0.07, $t(19)$ = -3.26, $p < 0.01$, partial $\eta^2 = 0.36$; and B = -0.05 $t(19)$ = -2.35, $p = 0.03$, partial $\eta^2 = 0.23$, respectively). This finding is surprising on three counts. First, the literature does not link conscientiousness with interpersonal perception accuracy. Second, this finding is not consistent with the results from Experiment 2, but is with results from experiment 1 (conscientiousness was associated with accuracy in rating others as mentors). Third, the effect size is considerably larger than any of the effect sizes found in the present series of studies. Future research is required to explore the relation between conscientiousness and interpersonal perception.

Gender differences.. As predicted in hypothesis 9, and consistent with data from Experiment 1 and 2, women with higher SWSL scores were more accurate at rating others on the status and dominance dimension (e.g., as mentors as in Experiment 2 and bosses in Experiment 1) than men with higher SWSL scores (B = -0.341, $t(19)$ = -2.147, $p = 0.045$, partial $\eta^2 = 0.20$). This is an intriguing finding. Foremost, it has been replicated twice since it was unexpectedly discovered in Experiment 1. This finding is also compelling because it was significant even though fewer participants were tested, yielding less statistical power in this study than in the first two.

As noted in Experiment 2, this finding qualifies those of Mast and Hall (2004), who did not find gender differences in the accuracy of status judgments. However, Mast and Hall did not measure social success, or specifically, participants' level of social satisfaction. Thus, within their design, this interaction was undetectable. In turn, the current persistence of this unique finding in relation to other research is perplexing. As

noted above, the evidence on gender differences is mixed. Some research reports that women are typically better at judging personality and emotions than men (e.g., Ambady et al., 1995; Murphy, Hall, & Colvin, 2003). In contrast, other research reports no gender differences (e.g., Ambady & Rosenthal, 1992; Borkenau, Mauer, Riemann, Spinath, & Angleitner, 2004; Horn, Collier, Oxford, Bond, & Dansereau, 1998; Lippa & Dietz, 2000; Taft, 1955). Concerning gender differences, Yoder and Kahn (2003) challenge social scientists to look beyond the descriptive elements by exploring how behaviour is influenced by the social context. To this end, a more elaborate examination of this finding in relation to social context will be raised in the general discussion.

Need to evaluate, openness, and intelligence. Hypothesis 10 received mixed support. For example, need to evaluate was associated with inaccuracy rather than accuracy in rating others on the status and dominance axis (as mentors; $B = 0.105$, $t(19) = 2.529$, $p = 0.02$, partial $\eta 2 = 0.25$). However, intelligence (IQ), as measured with the Wonderlic Personnel Test (Wonderlic, 1992), was associated with accuracy in rating others in general, on the NSAs in general, as enemies and as strangers ($B = -0.007$, $t(19) = -2.093$, $p = 0.05$, partial $\eta^2 = 0.187$; $B = -0.01$, $t(19) = -2.798$, $p = 0.011$, partial $\eta^2 = 0.292$; $B = -0.022$, $t(19) = -3.148$, $p = 0.005$, partial $\eta^2 = 0.343$; and $B = -0.022$, $t(19) = -2.236$, $p = 0.038$, partial $\eta^2 = 0.208$, respectively). Yet, there were no significant interactions between NTE and IQ, IQ and openness, and NTE and openness ($Fs < 4.5$, $ps > .05$). Moreover, neither intelligence nor NTE mediated the relation between openness and interpersonal perception accuracy. Finally, openness was not associated with interpersonal perception ($Fs < 3.0$, $ps > .1$).

These findings about judges' intelligence are consistent with various reports in the literature linking the concept with interpersonal perception accuracy (e.g., Borkenau & Liebler, 1993; Davis & Kraus, 1997; Harris, Vernon & Jang, 1999; Rosip & Hall, 2004; Vernon, 1933). Interestingly, however, openness was not associated with accuracy or inaccuracy, as Lippa and Dietz's (2000) findings suggest, nor was there an interaction between NTE and openness as reported in Experiment 2.

One interpretation of these results is that measures of openness and intelligence are not tapping the same construct.[24] To highlight this point let us conceptualize these measures in terms of Higgins' (1987) distinction between actual and ideal notions of self. For example, self-reports of openness may reflect notions of the ideal self. That is, participants may like to think they are full of ideas, spend time reflecting on things, like difficult reading material, and have a vivid imagination. In contrast, the results of the Wonderlic may best be conceptualized in terms of the actual self. That is, participants exhibit objective levels of cognitive ability. The actual self (i.e., specific cognitive ability) was associated with interpersonal perception accuracy whereas the ideal self (i.e., self-reports of openness) was not.

Tests of mediation. Structural equation modeling with AMOS (Arbuckle, 2003) was used to determine whether the mediation model for extraversion and social success that fit the data in Experiment 2, and then tested with the data from Experiment 1, also fit the data in Experiment 3. As predicted in hypothesis 11 and as seen in Figure 6, the data from Experiment 3 fit the model from Experiment 2 and 1, $\chi 2$ (2, $N = 84$) = 2.05, $p = .36$, comparative fit index = 0.995, root mean square error of approximation = .018,

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[24] The correlation between the two constructs was not significant ($r = .10$, $p = .34$).

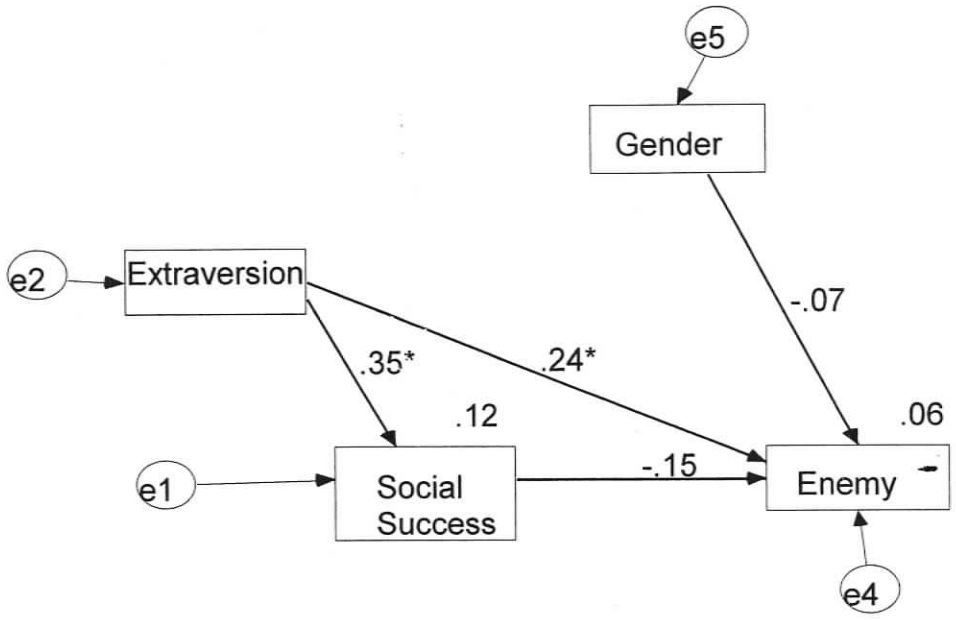


Figure 6. Accuracy of rating others as an enemy as a function of extraversion, and social success as measured with PRS (positive relations with others).

Notes. The square boxes represent the measured variables, and the circles marked e1 to e5 represent unexplained variance. The numbers adjacent to Social Success and Enemy R^2 values. The numbers adjacent to the lines represent standardized estimates (betas). A low accuracy score indicates greater accuracy. * $p < .05$

probability of close fit = .431. Interestingly, a full mediation of social success with extraversion also fit the data, $\chi 2$ (1, N = 84) = 6.473, p = .091, comparative fit index = 0.71, root mean square error of approximation = .118, probability of close fit = .146. However, in comparison, the partial mediation model fit better than the full-mediation model ($\chi 2$ (1, N = 84) = 4.42, p < .05) and the no-mediation model ($\chi 2$ (1, N = 84) = 10.56, p < .01).

A more complex model with all three measures of social success and accuracy in rating others on Gifford's (2004) affiliation dimension also fit the data (see Figure 7; $\chi 2$ (7, N = 84) = 6.14, p = .52, Comparative Fit Index = 1.0, root mean square error of approximation < .001, probability of close fit = .654). This partial mediation model fit better than a full-mediation model ($\chi 2$ (1, N = 84) = 6.84, p < .01) and no-mediation model ($\chi 2$ (1, N = 84) = 9.58, p < .01). To determine whether this model's fitness was unique to the data from Experiment 3, it was tested with the data from Experiment 2. The model in Figure 7 also fit the data from Experiment 2 (see Figure 8; χ^2 (7, N = 84) = 1.5, p = .982, Comparative Fit Index = 1, root mean square error of approximation < .001, probability of close fit = .997), and had a better fit than a full-mediation model ($\chi 2$ (1, N = 240) = 4.6, p < .05) or no-mediation model ($\chi 2$ (1, N = 240) = 89.2, p < .01).[25]

From this model extraversion is clearly associated with inaccuracy in rating others on the affiliation dimension (represented by a positive standardized beta weight of .39 in Experiment 3 and .30 in Experiment 2). That is, the higher the extraversion scores, the higher the DA scores, which indicates inaccuracy (recall smaller DA scores mean better

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[25] An application of Lee-Herschberger's replacing rules generated two equivalent models that had a similar fit to the partial mediation model (Kline, 2005). In the first equivalent model, the path went from social success to extraversion. In the second equivalent model, extraversion and social success were treated as covariances.

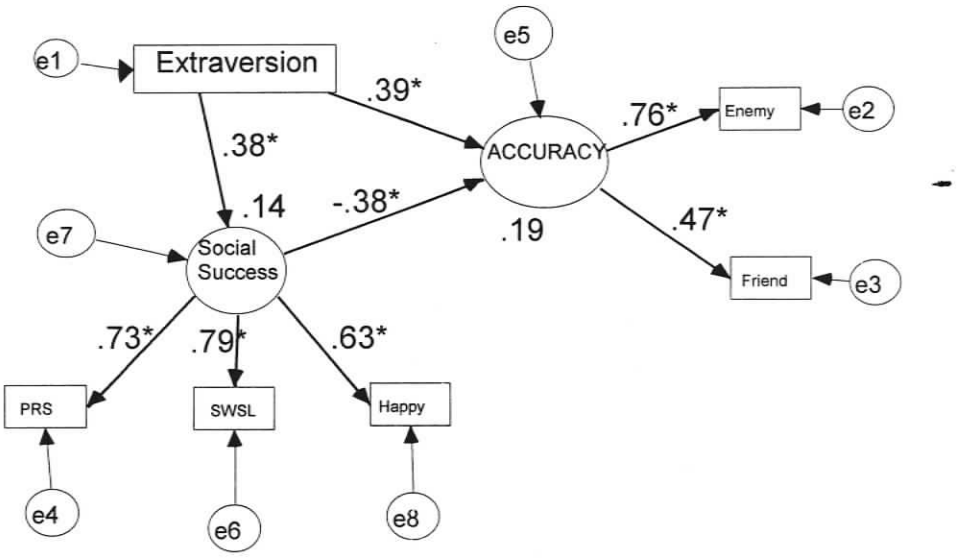


Figure 7. Accuracy of rating others on the affiliation dimension in the ellipse marked accuracy (represented by accuracy ratings of others as friends and enemies) as a function of extraversion, and social success (represented by SWSL - satisfaction with social life, PRS - positive relations with others, & Happiness).

Note. The square boxes represent the measured variables, and the circles marked E1 to E8 represent unexplained variance. The numbers adjacent to Social Success and Accuracy represent R^2 values. The numbers adjacent to the lines represent standardized estimates (betas). A low accuracy score indicates greater accuracy. * $p < .05$.

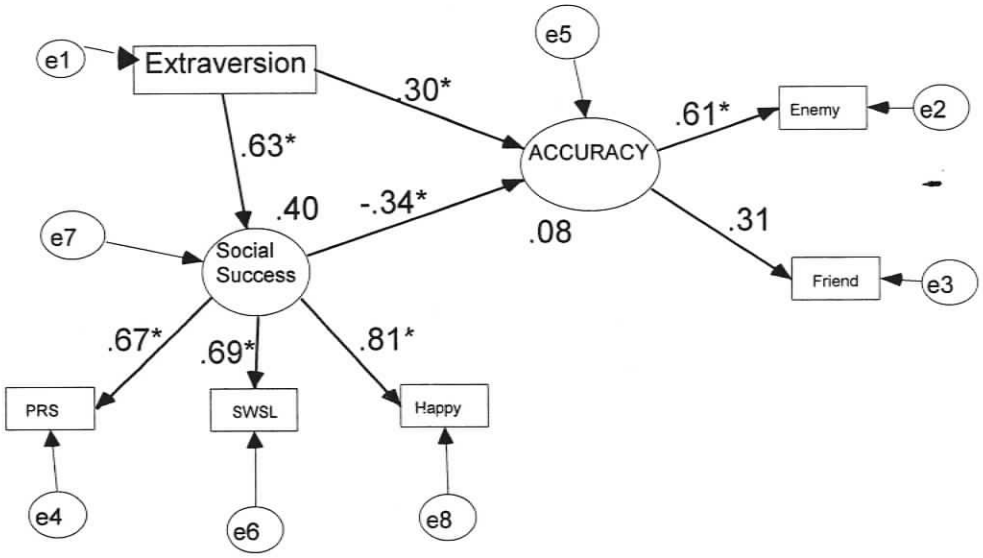


Figure 8. Accuracy of rating others on the affiliation dimension in the ellipse marked accuracy (represented by accuracy ratings of others as friends and enemies) as a function of extraversion, and social success (represented by SWSL - satisfaction with social life, PRS - positive relations with others, & happiness) tested with data from Experiment 2.

Note. The square boxes represent the measured variables, and the circles marked E1 to E8 represent unexplained variance. The numbers adjacent to the lines represent standardized estimates (betas). The numbers adjacent to Social Success and Accuracy represent R^2 values. A low accuracy score indicates greater accuracy.* $p < .05$.

accuracy). This finding is consistent with some research (e.g., Ambady et al., 1995; DePaulo et al., 1987; 1950; Taft, 1956; and Vernon, 1933), but inconsistent with other research (e.g., Akert & Panter, 1988; Dymond, 1950; and Funder & Harris, 1986).

Interestingly, the mediated path through social success indicates that extraversion is associated with accuracy in rating others on the affiliation dimension, represented by the significant negative beta weight from social success to accuracy (-.38 and -.34, for the data from Experiment 3 and 2, respectively), and the significant positive beta weight from extraversion to social success (.38 and .63, respectively). This mediation suggests that previous conflicting findings in the literature may have been caused by different measures of extraversion. That is, the scales used by Akert and Panter (1988) and Funder and Harris (1986) to measure extraversion may have tapped elements of social success more than the scales used by Ambady et al. (1995), for example. These findings lend weight to the merit of differentiating items that gauge social success from items that gauge extraversion.

A test of hypothesis 6 was made by analyzing a mediation model of the relation between neuroticism, time, and accuracy, as seen in Figure 9. The model fit the data poorly, $\chi 2$ (2, $N = 84$) = 2.68, $p = .26$, comparative fit index = 0.94, root mean square error of approximation = .06, probability of close fit = .33. However, a nested model in which neuroticism and time independently predicted accuracy (path n in the model is set to 0) fit the data ($\chi 2$ (3, $N = 84$) = 3.63, $p = .31$, comparative fit index = 0.95, root mean square error of approximation = .05, probability of close fit = .39) and was not significantly different from the partial mediation model, $\chi 2$ (1, $N = 84$) = 0.95, $p = .33$.

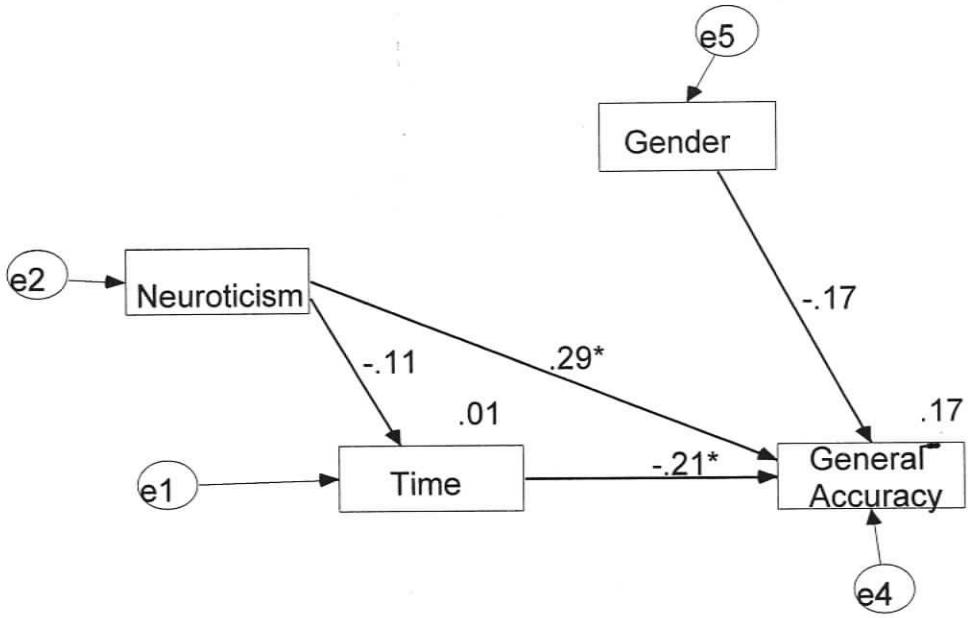


Figure 9. Accuracy of rating others in general as a function of neuroticism and time.

Notes. The square boxes represent the measured variables, and the circles marked e1-e5 represent unexplained variance. The numbers adjacent to the lines represent standardized estimates (betas). The numbers adjacent to Time and General Accuracy represent R^2 values. A low accuracy score indicates greater accuracy. * $p < .05$

Finally, a mediation model of the relation between openness, NTE and accuracy was tested but did not fit the data, $\chi 2$ (2, $N = 84$) > 10.18, $p < .01$. Similarly, a mediation model between openness, IQ, and accuracy did not fit data, χ^2 (2, $N = 84$) > 6.38, $p < .05$.

Conclusions

In summary, although most of the constructs demonstrated good reliability as indicated by their Cronbach alphas, some could have been stronger. For example, rating others as students ($\alpha = .68$), allies ($\alpha = .65$) and strangers ($\alpha = .56$) were relatively low. Similarly, low reliabilities were found in rating feeling like an enemy ($\alpha = .69$), an ally ($\alpha = .61$) and a stranger ($\alpha = .68$). Interestingly, the reliability of the self rating of openness was higher in Experiment 3, up to a respectable ($\alpha = .73$). However, self-ratings of agreeableness and conscientiousness were down to $\alpha = .68$ for both dimensions. Rating others as neurotic was relatively unreliable ($\alpha = .57$) as was rating others as open to new experiences ($\alpha = .66$).

As predicted, SWSL (satisfaction with social life) was associated with interpersonal perception accuracy at rating others as mentors. Happiness was associated with accuracy at rating others as enemies. These findings partially replicate the results from Experiment 1 and 2, lending further support to Gifford's (2004) hypothesis that those who are socially successful will be more accurate when making social evaluations than those who are less socially successful.

Fewer sanguine conclusions can be drawn about the Big Five. Specifically, none of the relations between the Big Five and accuracy found in Experiment 1 and 2 were replicated in the present data. In fact, agreeableness was associated with inaccuracy in rating others as agreeable (a possible projection issue, as noted by Colvin, 1993).

However, conscientiousness was associated with accuracy in rating others as allies and bosses.

As in Experiment 1 and 2, no main effects for gender were found. However, once again there was a significant interaction. Consistent with the two earlier studies, women with high SWSL scores were more accurate at rating others as mentors (on the status and dominance dimension) than men with high SWSL scores.

General intelligence as measured with the Wonderlic Personnel Test was associated with accuracy in rating others in general on all NSAs and Big Five domains, in rating others on NSAs in general, and as enemies and strangers. NTE was associated with inaccuracy at rating others as mentors.

Finally, the relative variance partitioning generated by SOREMO confirmed predictions of high perceiver variance and low consensus for the NSA ratings, and typical perceiver and consensus variance for Big Five ratings. These findings are consistent with Gifford's (2004) SET. The average relationship variances for NSA and Big Five ratings were similar to and consistent with those in Kenny's (1994) review.

CHAPTER VII

GENERAL DISCUSSION

Upon initial introductions or encounters with others, we form impressions. Specifically, we evaluate whether others will be friends, allies, mentors, and so forth. To determine whether the characteristics of the judge and the nature of the social context influence the accuracy of these impressions, the current series of studies examined the interpersonal perception accuracy of unacquainted undergraduate students by asking them to work on a cooperative or competitive task in groups of three or four. Competing participants were expected to evaluate others more often as opponents and enemies than friends and allies. Results from the two studies that manipulated competition confirmed that after competing in a zero-sum game others are generally evaluated as opponents and enemies rather than as friends and allies. As Gifford (2004) states, "when the physical environment is non-optimal (noise, threat of disaster, depleted resources, etc.), social evaluations of others will 'rotate' toward the opponent octant, with the appropriate (but unfortunate) behavioral consequences" (p. 19). A discussion of the behavioral consequences will follow shortly.

Furthermore, results from all three studies confirmed that socially successful participants, that is, participants who indicated that they were satisfied with their social life, had positive relations with others, or were generally happy, were more accurate than participants who indicated less satisfaction, positive relations, or happiness. This finding is consistent with Gifford's (2004) hypothesis based on his social evaluation theory that "those who are known to be less successful in interpersonal relations will be shown to

have consistently mis-evaluated others in SET terms; conversely, socially successful persons will be especially accurate in their SET assessments" (p. 19).

Predictions that involved the Big Five personality characteristics of the judge and interpersonal perception accuracy found mixed support throughout the three studies. Extraversion was associated with accuracy in rating others as extraverts in Experiment 1 and inaccuracy in rating others on various NSA dimensions in Experiment 1 and 2. Extraversion was not associated with accuracy or inaccuracy in Experiment 3. However, extraversion's relation with interpersonal perception accuracy was mediated in all three studies by social success. Specifically, extraversion, which was associated with inaccuracy, positively correlated with social successes, which was associated with accuracy.

Neuroticism was related to inaccuracy in Experiments 1 and 2, but not in Experiment 3. However, neurotics were less accurate when competing than when cooperating. Agreeableness was associated with accuracy in Experiment 1 and 2 and inaccuracy in Experiment 3. Conscientiousness was associated with accuracy in Experiment 1 and 3, but not in Experiment 2. Finally, openness was associated with inaccuracy in Experiment 1, but with neither accuracy nor inaccuracy in experiment 2 and 3. In short, the only consistent finding related to personality characteristics across all three studies was that social success mediates the relation between extraversion and interpersonal perception accuracy.

Gender was not associated with accuracy or inaccuracy across all 3 studies. However, there was a consistent interaction between gender, satisfaction with one's social life, and interpersonal perception accuracy in Experiment 1 and replicated in

Experiment 2 and 3. Specifically, women who were satisfied with their social life were more accurate in rating others along the status and dominance dimension of NSAs than men who were satisfied with their social life.

Finally, the data were analyzed with Kenny's (2004) social relations model and statistical program (SOREMO) to determine whether actor, partner and relationship variances would evince similar distributions to those found for ratings of personality. Social evaluations of need satisfiers, NSAs, did not model the same variance distributions that have typically been found for judgments of personality. In contrast, social evaluations of NSAs demonstrated considerably more perceiver variance than Kenny's (1994) average, and the average for the rating of personality in Experiments 1 and 3. In comparison, less target variance, typically referred to as consensus, was found for rating others on NSAs than Kenny's average and the average found for the rating of personality in Experiments 1 and 3. In contrast, relationship variances were similar to those outlined by Kenny (2004), and similar across all three experiments. More will be said about these findings by addressing them in relation to the social relations model, social identity theory, social success, and characteristics of the perceiver.

The Social Relations Model

As just noted, the bulk of perceiver variance found in the two experiments in which participants rated both NSAs and personality revealed significant differences between NSAs and personality ratings. Specifically, variances were higher for NSAs than for personality. This difference suggests that the perceiver variance found across the three studies is unlikely to be response set. Had participants adopted different response sets,

then perceiver variances would have been equally high across both personality and NSA ratings. This was not the case.

In light of this evidence, and in conjunction with the finding that participants who engaged in the competitive tasks rated others more often as challengers and enemies, and participants who engaged in the cooperative tasks more often rated others as friends and allies, a reasonable assumption is that the bulk of perceiver variance reflects stereotypes based on the competitive and cooperative tasks (cf. Kenny, 1994). Essentially, participants who competed were evaluated one way and participants who cooperated were evaluated another.

This stereotyping is an example of the possible negative behavioural consequences of less-than-optimal social situations. In addition, it explains accuracy differences between the groups. Recall that cooperating participants were more accurate on the affiliation dimension than on the status and dominance dimension. That is, cooperative participants accurately perceived others as friends and allies, but failed to perceive others as bosses and mentors when others felt like bosses and mentors in addition to friends and allies. In contrast, competing participants were more accurate on the status and dominance dimension. That is, they accurately perceived others as bosses and mentors, but failed to perceive others as friends and allies when others felt like friends and allies. Although there was a kernel of truth (Jussim, 2004; Kenny, 2004) to the stereotype that people are friendly and allies in cooperative conditions and opponents and enemies in competitive conditions, participants also felt like friends and allies in the competitive condition and bosses and mentors in the cooperative condition. Thus, it

would appear that the social situation primed stereotypes that contributed to misperceptions.

A related interpretation is that individuals evaluate others differentially because evaluations are contingent on their needs. The high levels of perceiver variance (assimilation), along with the low levels of consensus, are consistent with SET. It is not simply that participants in either the cooperative or competitive condition perceived others only one way. Certainly, the two groups saw others differently, depending on whether they cooperated or competed. However, had there been general consensus that targets were one way in the cooperative condition and another in the competitive condition, then there would have been high levels of target variance. This was not the case.

Target variance, which is essentially consensus, that is, agreement in judgements, was lower than levels of personality ratings found in a variety of studies reviewed by Kenny (1994), and significantly lower than the levels of personality ratings found in Experiments 1 and 3. Granted, consensus about others being friends and competitors existed, which is consistent with how others were differentially perceived, as outlined above. But overall, consensus was low. This is to be expected if social evaluations are contingent on the judges' needs. Different persons have different needs, which should result, according to SET, in different social evaluations.

This is an important characteristic of SET, distinguishing social evaluations from personality judgments. Specifically, consensus in social evaluations is not necessary for judges to be accurate. In contrast, Kruglanski (1989) argues that consensus is a necessary, but not sufficient component of interpersonal perception accuracy. A group of people can

all agree that the new employee is conscientious and be wrong. However, if a group of people do not agree in their assessment of the new employee, then by necessity they cannot all be accurate. In other words, the group must have consensus to be accurate.

This argument does not apply to social evaluations. A group of people can all agree that the new person feels like an employee, and certainly everyone in the group may need an employee, and yet be wrong. The new person feels like a boss with the group and not like an employee. Hence, there is no self-other agreement, no accuracy. However, if the group does not agree in its evaluation of the new employee (some members experience her as a boss, others as a friend, a mentor, and so on), they can all be accurate. The new employee can be experienced as a boss by one person, a friend by another, and so on. It is, as Mischel's work suggests (e.g., Kammrath, Mendoza-Denton & Mischel, 2005; Mischel & Shoda, 1995), that we are different people in different situations because we afford different instrumental possibilities to different people through our dyadic interactions (cf. Beauvois & Dubois, 2000; Wright & Dawson, 1988). In short, when it comes to social evaluations, consensus is not necessary for accuracy.

What is necessary is relationship variance, which is left over when error, perceiver variance, and consensus are removed. In other words, it is how Person A sees Person B, less how Person A typically sees others, how others typically see Person B, and error. The evidence across all three experiments demonstrated levels of NSA relationship variance consistent with levels on judgments of personality reported by Kenny (1994) and levels of relationship variance for rating personalities in Experiments 1 and 3. Taken as a whole, this evidence lends support to Gifford's (2004) theory of social evaluation. On the dyadic level, people do perceive others in unique, circumscribed ways (Swann,

1984), as SET suggests. We turn now to examine these findings in relation to social identity theory.

Social Identity Theory

The differential stereotyping across groups, that is, that cooperative participants accurately perceived others in affiliation terms but not in status and dominance terms, and competitive participants accurately perceived others in status and dominance terms but not in affiliation terms may be a mechanism associated with social identity theory. According to Tajfel (1982), arbitrarily dividing people into different groups can create an in-group/out-group bias. This bias is a favouring of the in-group, the group to which one belongs. Competition and cooperation between groups can increase negative and positive attitudes towards respective out-groups (Duckitt & Parra, 2004). That is, positive attitudes are held towards members of an out-group when groups cooperate and negative attitudes are held towards members of an out-group when groups compete.

The evidence from the present series of studies suggests that interpersonal perceptions may be a mechanism that enhances or facilitates this social bias. Specifically, if differentiation between groups is perceived in competitive terms, that is, that one group or group member must compete, or believes he or she must compete, against another group or its member, then perceptions may shift towards seeing competing members along a status and dominance dimension at the expense of accurately perceiving them along an affiliation dimension. These misperceptions may anchor future evaluations, pre-empting accurate appraisals of affiliation potential in others.

Sherif's (1958) studies on superordinate goals are a classic example of how these misperceptions may play themselves out. In a competitive context, people may only

perceive others as potential bosses or mentors, that is, only along a status and dominance dimension and fail to recognize the potential for friendships. Behaviourally, the misperceptions can fuel misunderstandings and other self-fulfilling prophecies that are associated with a negative feedback cycle or dynamic. For example, Person A from Group A may perceive Person B from Group B only along status and dominance lines, as bossy and controlling, failing, at the same time, to perceive budding gestures of friendship and alliance, and vice versa. The relationship is then cast only in terms of status and dominance. The potential for friendship and alliance is pre-empted. Thus, identities are formed in relation to this status and dominance dimension, as "me against you" or "us against them." Not until a competitive context is transformed into a cooperative context, by altering the demands of the situation as Sherif did with a superordinate goal, such as creating a water and food shortage that required all the boys to help, do perceptions start to shift toward the affiliation dimension and potential friendships and alliances are recognized.

Before leaving the topic of perceptual biases, there are a few ramifications that merit some exploration. For example, the status and dominance blind spot that cooperation induces in interpersonal perception may partially explain why cooperative individuals expect others to be cooperative as well (Van Lange & Kuhlman, 1994). If cooperative individuals misperceive others along the status and dominance dimension, they may fail to recognize when others have no intention to affiliate. If, as some research suggests (e.g., Van Lange, Otten, De Bruin, & Joireman, 1997), some people are inherently more cooperative, and others more competitive, then it would be interesting to determine whether the situational bias unearthed in the present series of studies

characterizes judgments made by these groups. That is, are inherently cooperative participants more accurate at rating others along the affiliation dimension than inherently competitive participants, and is the reverse true for ratings along the status and dominance dimension? In this vein, the same questions can be asked of groups who embrace a collectivist self-construal, are interdependent, and communal.

The affiliation bias in the cooperative context may also be associated with one's need to belong. According to Baumeister and Leary (1995), people have a pervasively strong motivation to be with others, labelled the "need to belong." This motivation influences both perceptions and behaviours. For example, Carvallo and Pelham (2006) found that participants' need to belong was associated with minimized perceptions of personal discrimination, but not with minimized perceptions of group discrimination. When participants' need to belong was sated via a word-search puzzle prime of terms related to acceptance, they perceived more personal discrimination (gave higher ratings of statements about being personally discriminated against) than participants who were not primed. Simply, participants' need to belong altered their perceptions of discrimination. In relation to this dissertation, the need to belong may have heightened the importance of interpersonal perception accuracy on the affiliation dimension in the cooperative context where the need was possibly more salient, and impaired interpersonal perception accuracy on the affiliation dimension in the competitive context where the need was possibly less salient. Future research that measures participants' need to belong, social context, and interpersonal perception accuracy would suitably test this theory.

Moreover, a determination of whether awareness of these biases can reduce their influence on interpersonal perceptions may be useful. The question is: If participants are

informed before a competitive or cooperative task that they may fail to accurately perceive affiliation or dominance qualities in others, then will that awareness pre-empt the blinding of the bias (cf. Langer, 1989)?

Finally, a sampling of related questions include: How might this perceptual bias relate to: (a) Baumeister's (1996) theory of the dark side of self-esteem and aggression? Is the ability to aggress facilitated by a failure to perceive others along the affiliation dimension? (b) How does this bias in social evaluation relate to various conceptualizations of needs, for example, to Deci and Ryan's (2000) self-determination theory? Is the satisfaction of autonomy, relatedness and competence needs associated with interpersonal accuracy and affiliation/dominance bias? And (c) How might the bias be associated with Tesser's (1988) self-evaluation maintenance model of social behaviour? Is the competition between new friends the turning point where perceptions shift to evaluations of dominance and status and misperceptions of affiliation set in? Let us stop here and turn now to discuss social success and interpersonal perception accuracy.

Social Success

Social success is a complex concept that means different things to different people. For this reason, it was defined in the current series of studies by subjective measures of satisfaction, psychological well-being, and happiness. The connection between interpersonal perception and well-being is not new. It dates back to Henry Adams' research in the late 1920s (Adams, 1927, p. 127) wherein he states "the good judge of others tends to be touchy, quick of temper, glum and moody…the good self judge, on the other hand, tends to be happier…."

The current data challenge Adams' (1927) results and interpretations (in addition

to those by Ambady et al., 1995). Sidestepping the issue of whether well-being (hedonic happiness) and relatedness or psychological well-being (eudaimonic happiness) adequately captures the essences of social success, the present evidence links well-being with interpersonal perception accuracy. The more well-being participants reported across all three studies, the more accurate they were at evaluating others. Neuroticism (emotional instability) was associated with inaccuracy in the first two studies. Finally, levels of well-being mediated extraverts' interpersonal perception accuracy throughout all three studies.

These findings make intuitive sense. Individuals who are socially successful should have the skills associated with that success. However, this positive association is not a causal explanation. That is, the relation between social success and interpersonal perception accuracy can be explained in a number of ways. First, interpersonal perception accuracy may lead to social success. That is, those who are good at determining whether others will be friends or enemies are less likely to suffer social disappointments. Accurate social evaluators will successfully identify potential friends and invest their time and energy in developing those friendships, and thus achieve social success. In contrast, inaccurate social evaluators will unsuccessfully identify potential friends and invest time and energy that will not develop into friendships, and thus not achieve social success. In other words, social evaluation accuracy gives rise to social success.

Although less intuitively appealing, the second causal explanation is that social success leads to interpersonal perception accuracy. Possibly, social success facilitates a process of positive and negative feedback regarding social evaluations. Accuracy is achieved through trial and error. Individuals who are socially successful will have learned

to discern important cues that afford accurate interpersonal perceptions. This may explain why intelligence is moderately associated with interpersonal perception accuracy (see Rosip & Hall, 2004; and Experiment 3). It would also explain why Hale (1979) found age significantly related to interpersonal perception accuracy in discriminating between photographs of different emotional expressions. With age comes experience. In short, social success may generate interpersonal perception accuracy.

Third, it is conceivable that one or more unidentified variables influence both social success and interpersonal perception accuracy in making social evaluations. This third variable could be a construct (e.g., charm) best defined as a combination of personality traits, gender, attractiveness, role-models, social experiences, and situational affordances (e.g., being in the right place at the right time) that is causally related to both well-being and social perception acuity.

Finally, any combination of these relations could be at work. For example, social success, interpersonal perception accuracy, and charm could interact in a developmental, causal interaction. For example, charm heightens social success which then increases interpersonal perception accuracy which in turn generates more social success which increases one's charm. In short, the present finding that social success is related to interpersonal perception accuracy is consistent with research linking psychological adjustment with interpersonal perception accuracy (e.g., Davis & Kraus, 1997), but there is no evidence to substantiate the causal nature of this relation.

In light of this shortcoming, a program of research testing the casual relations between social success and interpersonal perception accuracy would do well to conduct longitudinal studies. Certainly some person perception research has addressed the

developmental nature of accuracy. For example, Paunonen (1989) found that acquaintanceship moderated self-other agreement. He divided participants into groups based on self-ratings of how well they knew one another. Participants who were better acquainted were more likely to agree in their personality ratings of each other. Blackman and Funder (1998) asked participants to watch increasing video footage of dyads interacting. The more footage participants watched, the more accurately they rated the targets on the Big Five. Funder and Colvin (1988) video-taped participants interacting and then asked friends and strangers to view the videos and make personality judgments. Friends were more accurate than strangers. Paulhus and Bruce (1992) asked unacquainted participants to interact over a period of 7 weeks. Ratings of the Big Five were made at week 1, 4 and 7. Participants were most accurate in their final ratings.

Overall, this research suggests that acquaintanceship is positively associated with interpersonal perception accuracy. The better one gets to know another, the more accurate one becomes. Unfortunately, no interpersonal perception studies, to the best of this author's knowledge, have measured the relationship between accuracy, social success and acquaintanceship over time. Longitudinal research would best test the mediational path analysis of social success and interpersonal perception accuracy, specifically in relation to personality traits such as extraversion. We turn now to discuss the relation between the Big Five and interpersonal perception accuracy.

Characteristics of the Perceiver

The present series of studies did not consistently find an association between measures of the Big Five and interpersonal perception accuracy. For example, extraversion was associated with accuracy in rating others as extraverts in Experiment 1,

but was not replicated in Experiment 3. In contrast, extraversion was associated with inaccuracy in rating several NSAs in Experiment 1 and 2 but not in Experiment 3. Similarly, neuroticism was associated with inaccuracy in Experiment 1 and 2, but not in Experiment 3. Similar inconsistencies were found for agreeableness, conscientiousness and openness. In short, the relation between personality dimensions of the Big Five and accuracy were not robust or reliable across different measures, and different experiments.

These findings appear to support conclusions advanced by Shrauger and Altrocchi (1964), DePaulo et al. (1987) and Kenny (1994) that although personality traits of the judge may be associated with interpersonal perception accuracy, they are neither reliable nor robust. Admittedly, the relation between extraversion, neuroticism and interpersonal perception accuracy of need satisfiers in Experiment 1 was replicated in Experiment 2, but failed to be replicated in Experiment 3. However, the third study had less power than the first two studies, which is testimony to DePaulo et al.'s (1987) concern that the effects are not robust. For example, significant findings in Experiment 1 and 2 had effects sizes in the 0.01 to 0.1 range. In contrast, significant findings in Experiment 3 had effect sizes in the .2 to .4 range. In other words, testing more participants in Experiment 3 may have helped uncover potential findings revealed in Experiments 1 and 2. In addition, using a more reliable measure of the Big Five than the one employed in the present study might have also increased the power to find significant differences by reducing the error associated with measuring those differences.

In spite of the small effect sizes, which Funder (1995) argues is not sufficient justification for dismissing the importance of accuracy measurements, and the inconsistent findings across all three studies, both extraversion and neuroticism's

significant associations with interpersonal perception inaccuracy in Experiments 1 and 2 are consistent with results from a wide range of studies. For example, Ambady et al. (1995) found introverts were generally more accurate than extraverts, as did DePaulo et al. (1987), Taft (1956), and Vernon (1933). In addition, Davis and Kraus (1997), Taft (1956), Dymond (1950), and Vernon (1933) documented that being socially maladjusted (i.e., neurotic) is associated with impaired judgment of character.

Another important consideration is the Big Five itself. Not all researchers agree that the five domains, extraversion, agreeableness, conscientiousness, neuroticism and openness best represent the factor structure of the items employed to measure those domains. For example, Holden, Wasylkiw, Starzyk, Book and Edwards (2006) asked participants to sort all the items from McCrae and Costa's Big Five (see McCrae & Costa, 2004) into domains of their choosing. That is, participants decided how the items should be categorized. They found participants favoured a four-factor structure, which Holden et al. labeled, conscientiousness, openness, sociability and energetic coping. The conscientiousness dimension was represented by items taken from the openness and conscientiousness domains of Costa and McCrae's model. The new openness domain was composed strictly of items intended to measure openness. The sociability domain included items measuring extraversion, agreeableness and emotional stability. Finally, energetic coping included items measuring extraversion and openness.

Unfortunately, Holden et al. (2006) did not list the specific items participants were asked in the research. Rather the authors used general statements referring to the nature of the personality each item was intended to measure. Consequently, a comprehensive comparison between these categories and the present categories was not

possible. That is, the present items of the Big Five could not be organized according to Holden et al.'s (2006) structure because Holden et al.'s descriptions were vague and did not match the items currently used. For example, in dimension two for openness Holden et al. listed "unaffected by poetry," "uninterested in universe or humanity," "excited by poetry and art," "intrigued by art and nature," "likes theorizing and abstraction," and finally "believes in religious authorities' moral opinions" (p. 28). The IPIP Big Five items for openness currently used included "is full of ideas," "is not interested in abstract ideas," "spends time reflecting on things," "avoids difficult reading material," and "has a vivid imagination." Only two items from the IPIP Big Five (e.g., "spends time reflecting on things" and "is not interested in abstract ideas") fit with Holden et al.'s openness dimension, matching the general statement "likes theorizing and abstraction." However, "spends time reflecting on things" can also be matched with a description Holden et al. gave of an item for dimension 1, conscientiousness "wastes time daydreaming." Future work using McCrae and Costa's (2004) Big Five in either its intended form or as reorganized by Holden et al. (2006) may resolve these outstanding issues helping to clarify the relation between the Big Five and interpersonal perception accuracy.

Be that as it may, and based on the present evidence from the IPIP Big Five, a characterization of an interpersonally perceptive person would acknowledge that she or he is generally satisfied with her or his social life, has positive relations with others, is not extraverted (that is, introverted), is not neurotic (that is, emotionally stable), and intelligent. This profile of the good judge of character fits with general profiles offered in various reviews of the interpersonal perception literature (e.g., Cook, 1971, 1979, 1984; Davis & Kraus, 1997; Funder, 1995; and Kanekar, 1972), with the addition of the

following important contributions. First, social success, as defined by satisfaction with one's social life, positive relations with others, and happiness is positively associated with interpersonal perception accuracy. Second, social success mediates the relation between extraversion/introversion and interpersonal perception accuracy. Third, these character traits are associated with interpersonal perception accuracy in making both character judgments and social evaluations.

Furthermore, the present findings contribute to the literature by documenting that gender interacts with social success in predicting interpersonal perception accuracy in evaluating others along dimensions of status and dominance. Specifically, women are not more accurate than men. Rather, women who are satisfied with their social life are more accurate than men who are satisfied with their social life. Gender differences appear and disappear depending on whether the group is happy with their social life or not.

Let us take a moment to consider this gender difference. One explanation may involve stereotypes about status and dominance. Specifically, Glick et al. (2004) found that men are typically stereotyped as dominant and powerful. Considering the present social context (cf. Yoder & Kahn, 2003) if both men and women believe men are dominant and powerful, men and women will position themselves in relation to this stereotype differently. That is, in a social context in which a man and woman first meet, the reigning stereotype is that the man will be assumed to be the dominant and powerful person. For a woman to successfully navigate that social context, she will have to ascertain the veracity of that stereotype, whereas the man may not (cf. Steele, 1997). The man is already advantaged by the stereotype, whereas the woman, to use Steele's (1997) language, is threatened or disadvantaged. Therefore, for a woman to achieve satisfaction

with her social life, she will have had to achieve success at rating others on the status and dominance dimension.

This gender difference may also be a remnant of evolution. According to the sexual selection strategy theory, women have evolved to select men for their ability to protect and provide for them during pregnancy and when they are caring for their young children (Buss, 1988, 1994, 1996, 2003; Buss, Shackelford, Kirkpatrick, & Larsen, 2001). Accordingly, women may have evolved a keen sense for ascertaining status and dominance qualities in their mate because such qualities were signals of a potentially successful reproductive union. Social success in evolutionary terms may now be manifested in satisfaction with social life and the associated accuracy in rating others on the status and dominance dimension of needs assessments. That is, not all women are more accurate than men at rating others on the status and dominance dimension; only those women are who are satisfied with their social life. Well-being, in this sense, is having the ability to accurately achieve what one has been adapted to achieve. Notably, cross-cultural research would best measure the universality of this finding, or reveal whether it manifests as an extension of social roles (cf. Johannensen-Schimdt & Eagly, 2002). We turn now to discuss the limits of the present research.

Limitations

The results of all three studies are qualified by the following caveats: Interpersonal perception accuracy was defined as self-other agreement, the mathematical and conceptual calculation of accuracy is assumed rather than substantiated, the present research is theoretically lean, and the number of statistical comparisons renders the results vulnerable to Type I errors.

Foremost, interpersonal perception accuracy was simply defined as self-other agreement calculated with a differential accuracy score. The literature is in agreement that self reports of character judgments are not the best criterion, although sometimes they may be the most practical (Funder, 1995; Kenny, 1994). In consideration of this, future research would do well to incorporate judgments made by friends, and associates, to substantiate self-reports.

Granted, self-other agreements were distilled into differential accuracy scores according to Cronbach's (1955) recommendations, which included eliminating three confounding components, elevation, differential elevation, and stereotype accuracy. Notably, Cline (1964) argues that differential accuracy scores misrepresent the measurement of accuracy depending on how the scale is structured. Cline's alternative, to correlate ratings, eliminates elevation, but not Cronbach's (1955) definition of stereotype accuracy. In relation to this issue, the person perception literature has not embraced a unified definition of accuracy (cf. Jussim, 2005). For example, Ambady and colleagues (Ambady et al., 1995) use Cline's correlation approach. Funder and colleagues (Funder, 1995) use a ranking system. Kenny and colleagues use Cronbach's componential model as a general guide, modified to fit their social relations model (Kenny, 1994). As noted in Experiment 1, these different formulations of accuracy do not lead to the same results or interpretations (cf. Christensen, 1967, 1970).

Rather than systematically outline a rational for choosing one approach over another, this researcher simply chose to side with a position. That is, Cronbach's (1955) differential accuracy formula was chosen to calculate differential accuracy scores for each domain because it appeared to be the benchmark (cf. Kenny, 1994). Wittgenstein's

words reminds us that "the existence of the experimental method makes us think we have the means of solving the problems which trouble us; though problem and method pass one another by" (1958, p. 232). The problem in this case may well be how interpersonal perception accuracy was defined.

Another related caveat is the present work's theoretical basis. The premise of this research was to test Gifford's (2004) social evaluation theory, or more specifically, to test hypotheses concerning the character of accurate social evaluators and the situational moderators of such evaluations. However, no theoretical framework was advanced or fundamentally tested in the process. Granted, a methodological framework, Kenny's (1994) social relations model was employed to design and ultimately test these hypotheses. However, no specific theory of interpersonal perception was adopted nor tested. One could blame this oversight on the field itself. Aside from the contributions of a few researchers (e.g., those just mentioned), the field of interpersonal perception accuracy has been lean on theory and heavy on methodology. To its detriment, this dissertation appears to have perpetuated this standard.

Finally, and related to the issues raised above, is concern over Type I errors (i.e., rejecting null hypotheses that are true). Specifically, very few statistically significant differences were found in relation to the total number of statistical comparisons made in the span of the three experiments (cf. DePaulo et al., 1987). A possible solution to reducing the number of comparisons, and thus the number of possible Type I errors, would be to adopt an average score of interpersonal perception accuracy across ratings. This approach has advantages and disadvantages.

One advantage, as just mentioned, is that it reduces the number of comparisons, and therefore the number of Type I errors. This technique has been used in the literature. For example, Vogt and Colvin (2003) employed an average accuracy score. The disadvantage of this approach is that it fails to recognize differences between characteristics judged. In other words, not all domains of personality are equally easy to judge (cf. Funder, 1995). For example, extraversion is easier to spot than neuroticism (Colvin, 1993). Important differences may be lost in the process of averaging.

Evaluations along needs dimensions also appear to have different judgability characteristics depending on the social context. For example, participants were not as accurate at evaluating others as bosses and mentors in a cooperative context as they were in a competitive context. This difference would not have been isolated had an average NSA accuracy score been used.

Another possible solution may be to study fewer evaluations per testing session. The downside to this approach is that it would require testing more participants than the current design.

Conclusion

A person who is intelligent, does not score high on extraversion or neuroticism scales (i.e., does not worry), claims to be satisfied with his or her social life, and has positive relations with others (i.e., is happy), is likely to be better than average at making social evaluations and character judgments. Hence the allusion in the title of this work to Bobby McFerrin's 1988 tune, "Don't Worry, Be Happy."

This profile is qualified by three conditions. Among extraverts, the more socially successful will be more accurate than the less socially successful. In addition, women

who are satisfied with their social life will tend to be more accurate than men who are satisfied with their social life. Finally, the nature of the social situation will influence this accuracy. A competitive context will impair evaluations of others if those evaluations are about affiliative qualities or the person is neurotic. A cooperative context will impair evaluations of others if those evaluations are about status and dominance qualities.

This evidence has a host of applications in an array of social settings. Briefly, in closing, let us consider a few. Specifically, labour mediators might use this awareness to better navigate settlements and resolve conflicts. Rather than allowing conflicts to escalate, mediators may be able to help parties see others along affiliation dimensions by stressing that perceptions can be biased, or by creating a socially neutral context in which to negotiate. Family counselors might apply this knowledge to help couples recognize that competitive dynamics can impair their ability to repair areas of their relationship that require more affiliation and partnership. Finally, clinical and counseling psychologists might work with individuals who have various personality disorders to recognize that the dynamic of competitive and cooperative situations can aggravate dispositions to perceive others in limited ways.

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Appendix A

Scales Used in Experiment 1

Satisfaction with Social Life Questionnaire (Alfonso, Allison, Rader, & Gorman, 1996)

____ In most ways my social life is close to my ideal.
____ The conditions of my social life are excellent.
____ I am satisfied with my social life.
____ So far I have gotten the important things I want from my social life.
____ I am generally pleased with the social life I lead.

The Ten-Item Personality Inventory (Gosling, Rentfrow & Swann Jr., 2003)

_____ Extraverted, enthusiastic.
_____ Critical, quarrelsome.
_____ Dependable, self-disciplined.
_____ Anxious, easily upset.
_____ Open to new experiences, complex.
_____ Reserved, quiet.
_____ Sympathetic, warm.
_____ Disorganized, careless.
_____ Calm, emotionally stable.
_____ Conventional, uncreative.

The Types of Persons Survey (Gifford, 2004)

The wording for rating others: The following questionnaire asks you to describe each person in your group in terms of how much they seem to you to resemble 33 classical types of persons. It uses a 7-point (0-to-6) scale. So, for each person type below, give a rating from 0 to 6 depending on HOW SIMILAR each person in your group is to that person type.

For each person-type below, make your judgment based on your view of the person, regardless of what he or she might think of you. Also, respond to the person types based on how you experience them, not their actual, formal role (if you know this). Thus, for "Assistant," the other person does not have to be your actual assistant; make your rating based on the degree to which he or she feels to you like your assistant. Make your judgment based on the one-to-one relationship between you and that person, not how that person acts toward other people, or on that person's occupation, general reputation, etc.

If you have no idea what a certain person-type below means, leave it blank, but do give a rating if you think you know what it means, even if the meaning is a little vague to you. Some person-types will sound similar, but there are shades of meaning, so consider each one separately. Once again, please leave the answers blank if they do not apply to you, that is, Person A will not answer the Person A part, Person B the Person B part, Person C the Person C part and Person D the Person D part. Thank you!

The wording for rating self with others: This part of the survey asks you to **describe yourself** with the others in your group in terms of how much you resemble 33 classical types of persons. It uses a 7-point (0-to-6) scale. So, for each person type below, give a rating from 0 to 6 depending on HOW SIMILAR that person type was to how you felt when interacting with each person in your group.

For each person-type below, make your judgment based on your experience, regardless of what the other person might think of you. Also, respond to the person types based on your experience with each person, not your actual, formal role (if you know this). Thus, for "Assistant," you need not have been an actual assistant; make your rating based on the degree to which you felt like an assistant. Make your judgment based on the one-to-one relationship between you and each person in your group, not how you act toward other people, or your occupation, general reputation, etc.

If you have no idea what a certain person-type below means, leave it blank, but do give a rating if you think you know what it means, even if the meaning is a little vague to you. Some person-types will sound similar, but there are shades of meaning, so consider each one separately. Once again, please leave the answers blank if they do not apply to you, that is, Person A will not answer the Person A part, Person B the Person B part, Person C the Person C part and Person D the Person D part. Thank you!

Person A, in relation to me, feels like my…

Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
0	1	2	3	4	5	6

_____Guide
_____Pal
_____Stranger
_____Chief
_____Trainee
_____Ruler
_____Helper
_____Non-Person
_____Archenemy
_____Director
_____Friend
_____Anonymous
_____Student
_____Employee
_____Subordinate
_____Partner
_____Hired Hand
_____Rival
_____Boss
_____Ally
_____Coach

_____Servant
_____Disciple
_____Foe
_____Apprentice
_____Supporter
_____Teacher
_____Chum
_____Buddy
_____Instructor
_____Non-Entity
_____Opponent
_____Pupil

Independent Manipulation Check Survey

This survey asks you to rate two activities in terms of how competitive or cooperative they seem to you. It uses a 7-point (0-to-6) scale. So, for each activity described below, give a rating from 0 to 6 depending on how competitive and cooperative that activity seems to you. Please circle your rating.

0 You compete in a game of Simon ® against an opponent. The game requires that each competitor duplicate a random pattern of sounds and lights. Specifically, the device plays a pattern of lights and sounds, playing one sound and lighting up one button at a time. The player then copies this pattern by pressing down on the appropriate colored buttons to make the appropriate sounds. The complexity of the pattern increases with the introduction of each new note into the pattern. The speed of the pattern increases with time. Competitors take turns duplicating the increasingly complex pattern. When a person fails to correctly duplicate the pattern their opponent wins. Whoever wins the most games is the ultimate victor.

This activity is cooperative (please circle the rating that matches your response).

Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
0	1	2	3	4	5	6

This activity is competitive (please circle the rating that matches your response)..

Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
0	1	2	3	4	5	6

0 You build a small Lego ® toy with a partner. You and a partner are required to work together, following specific building instructions and using the pieces included, to build a particular structure or figurine.

This activity is cooperative (please circle the rating that matches your response).

Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
0	1	2	3	4	5	6

This activity is competitive (please circle the rating that matches your response)..

Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
0	1	2	3	4	5	6

Appendix B
Scales Used in Experiments 2 and 3

Positive Relations with Others Scale (Ryff & Keyes, 1995)

1. Most people see me as loving and affectionate.
2. Maintaining close relationships has been difficult and frustrating for me
3. I often feel lonely because I have few close friends with whom to share my concerns.
4. I enjoy personal and mutual conversations with family members or friends.
5. It is important to me to be a good listener when close friends talk to me about their problems.
6. I don't have many people who want to listen when I need to talk.
7. I feel like I get a lot out of my friendships.
8. It seems to me that most other people have more friends than I do.
9. People would describe me as a giving person, willing to share my time with others.
10. I have not experienced many warm and trusting relationships with others.
11. I often feel like I'm on the outside looking in when it comes to friendships.
12. I know that I can trust my friends, and they know they can trust me.
13. I find it difficult to really open up when I talk with others.
14. My friends and I sympathize with each other's problems.

Subjective Happiness Scale (Lyubomirsky & Lepper, 1999)

For each of the following statements and/or questions, please circle the point on the scale that you feel is most appropriate in describing you.

1. In general, I consider myself:

1	2	3	4	5	6	7
not a very happy person						a very happy person

2. Compared to most of my peers, I consider myself:

1	2	3	4	5	6	7
less happy						more happy

3. Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?

1	2	3	4	5	6	7
not at all						a great Deal

4. Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you?

1	2	3	4	5	6	7
not at all						a great deal

Need to Evaluate Survey (Jarvis & Petty, 1996)

1. I form opinions about everything.
2. I prefer to avoid taking extreme positions.
3. It is very important to me to hold strong opinions.
4. I want to know exactly what is good and bad about everything.
5. I often prefer to remain neutral about complex issues.
6. If something does not affect me, I do not usually determine if it is good or bad.
7. I enjoy strongly liking and disliking new things.
8. There are many things for which I do not have a preference.
9. It bothers me to remain neutral.
10. I like to have strong opinions even when I am not personally involved.
11. I have many more opinions than the average person.
12. I would rather have a strong opinion than no opinion at all.
13. I pay a lot of attention to whether things are good or bad.
14. I only form strong opinions when I have to.
15. I like to decide that new things are really good or really bad.
16. I am pretty much indifferent to many important issues.

The Big Five (International Personality Item Pool, 2005)

____Feel comfortable around people
____Often forget to put things back in their proper place
____Change my mood a lot
____Am not really interested in others
____Am full of ideas
____Keep in the background
____Get chores done right away
____Seldom feel blue
____Am not interested in abstract ideas
____Make people feel at ease
____Am relaxed most of the time
____Spend time reflecting on things
____Am not interested in other people's problems
____Don't mind being the center of attention
____Leave my belongings around
____Get stressed out easily
____Am exacting in my work
____Have a soft heart

____Am quiet around strangers
____Avoid difficult reading material
____Don't talk a lot
____Take time out for others
____Follow a schedule
____Worry about things
____Have a vivid imagination

Types of Persons Survey (Gifford, 2005)

The wording for rating others: The following questionnaire asks you to describe each person in your group in terms of how much they seem to you to resemble 37 classical types of persons. It uses a 7-point (0-to-6) scale. So, for each person type below, give a rating from 0 to 6 depending on HOW SIMILAR each person in your group is to that person type.

For each person-type below, make your judgment based on your view of the person, regardless of what he or she might think of you. Also, respond to the person types based on how you experience them, not their actual, formal role (if you know this). Thus, for "Assistant," the other person does not have to be your actual assistant; make your rating based on the degree to which he or she feels to you like your assistant. Make your judgment based on the one-to-one relationship between you and that person, not how that person acts toward other people, or on that person's occupation, general reputation, etc.

If you have no idea what a certain person-type below means, please ask the researcher and a formal definition will be provided, but do give a rating if you think you know what it means, even if the meaning is a little vague to you. Some person-types will sound similar, but there are shades of meaning, so consider each one separately. Once again, please leave the answers blank if they do not apply to you, that is, Person A will not answer the Person A part, Person B the Person B part, Person C the Person C part and Person D the Person D part. Thank you!

The wording for rating self with others: This part of the survey asks you to **describe yourself** with the others in your group in terms of how much you resemble 37 classical types of persons. It uses a 7-point (0-to-6) scale. So, for each person type below, give a rating from 0 to 6 depending on HOW SIMILAR that person type was to how you felt when interacting with each person in your group.

For each person-type below, make your judgment based on your experience, regardless of what the other person might think of you. Also, respond to the person types based on your experience with each person, not your actual, formal role (if you know this). Thus, for "Assistant," you need not have been an actual assistant; make your rating based on the degree to which you felt like an assistant. Make your judgment based on the one-to-one relationship between you and each person in your group, not how you act toward other people, or your occupation, general reputation, etc.

If you have no idea what a certain person-type below means, please ask the researcher and a formal definition will be provided, but do give a rating if you think you know what it means, even if the meaning is a little vague to you. Some person-types will sound similar, but there are shades of meaning, so consider each one separately. Once

again, please leave the answers blank if they do not apply to you, that is, Person A will not answer the Person A part, Person B the Person B part, Person C the Person C part and Person D the Person D part. Thank you!

Person A, in relation to me, feels like a/an …

	Disagree strongly 0	Disagree moderately 1	Disagree a little 2	Neither agree nor disagree 3	Agree a little 4	Agree moderately 5	Agree strongly 6
Adversary							
Ally							
Anonymous							
Antagonist							
Apprentice							
Enemy							
Boss							
Buddy							
Challenger							
Chief							
Chum							
Coach							
Competitor							
Director							
Disciple							
Employee							
Foe							
Friend							
Guide							
Helper							
Hired Hand							
Instructor							
Non-Entity							
Non-Person							
Opponent							
Pal							
Partner							
Pupil							
Rival							
Ruler							
Servant							
Stranger							
Student							
Subordinate							
Supporter							
Teacher							

Trainee

Independent Manipulation Check Survey

This survey asks you to rate two activities in terms of how competitive or cooperative they seem to you. It uses a 7-point (0-to-6) scale. So, for each activity described below, give a rating from 0 to 6 depending on how competitive and cooperative that activity seems to you. Please circle your rating.

0 Participants work individually tc make as many different play-do figures (animals, modes of transportation, and tools) as they can in 10 minutes. The person who makes the most recognizable figures within 10 minutes is declared the winner.

This is a cooperative activity (please circle the rating that matches your response).

Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
0	1	2	3	4	5	6

This is a competitive activity (please circle the rating that matches your response)..

Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
0	1	2	3	4	5	6

0 Participants work together to make as many different play-do figures (animals, modes of transportation, and tools) as they can in 10 minutes.

This is a cooperative activity (please circle the rating that matches your response).

Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
0	1	2	3	4	5	6

This is a competitive activity (please circle the rating that matches your response)..

Disagree strongly	Disagree moderately	Disagree a little	Neither agree nor disagree	Agree a little	Agree moderately	Agree strongly
0	1	2	3	4	5	6

Appendix C

Raw Data

Table 11

Data of Main Variables from Experiment 1.

V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
2	2	1	1	4.80	5.50	5.00	6.00	3.00	6.50	0.26	0.20
2	2	2	1	5.60	5.50	4.00	6.00	1.50	6.00	0.37	0.20
2	2	3	1	6.80	6.00	3.00	5.50	4.50	7.00	0.19	0.12
2	2	4	1	6.00	4.50	2.00	6.50	5.50	5.50	0.23	0.14
3	1	1	1	5.60	4.50	3.50	5.50	5.00	5.50	0.25	0.04
3	1	2	1	6.40	6.50	5.00	5.50	4.50	7.00	0.19	0.19
3	1	3	-1	7.00	6.00	2.00	6.50	6.00	7.00	0.31	0.19
3	1	4	-1	5.60	6.00	1.50	6.50	4.50	5.50	0.28	0.18
4	2	1	-1	6.00	3.50	2.50	4.50	7.00	6.00	0.05	0.15
4	2	2	1	6.40	4.50	4.00	2.50	5.50	4.50	0.09	0.03
4	2	3	-1	6.60	5.50	2.00	3.00	4.50	4.50	0.15	0.42
4	2	4	-1	5.20	4.00	3.00	5.50	4.50	6.00	0.09	0.17
5	1	1	-1	5.60	4.00	2.00	1.50	6.50	5.50	0.33	0.38
5	1	2	1	6.80	5.50	3.50	4.50	4.00	4.00	0.32	0.36
5	1	3	1	6.00	5.50	3.00	4.50	6.50	5.00	0.09	0.13
5	1	4	1	6.60	6.00	2.00	5.50	4.50	6.50	0.18	0.19
6	2	1	1	5.00	7.00	4.00	5.50	7.00	3.50	0.25	0.33
6	2	2	1	5.80	5.50	4.50	5.00	5.50	5.50	0.24	0.25
6	2	3	-1	6.40	4.50	1.50	6.00	7.00	7.00	0.31	0.41
6	2	4	-1	4.80	3.00	4.00	4.50	6.00	5.50	0.47	0.13
7	1	1	1	5.80	4.50	3.50	5.00	6.50	6.00	0.23	0.17
7	1	2	1	2.20	2.50	5.50	4.50	3.00	6.50	0.16	0.31
7	1	3	1	5.40	4.50	4.00	6.00	5.00	4.00	0.15	0.13
7	1	4	1	5.00	2.50	4.00	3.50	3.50	6.00	0.16	0.10
8	2	1	1	6.20	5.50	2.00	5.50	6.50	5.00	0.09	0.10
8	2	2	1	6.20	3.50	1.00	6.00	4.00	5.00	0.09	0.11
8	2	3	1	5.80	5.00	2.00	5.00	6.00	4.00	0.11	0.16
8	2	4	1	4.40	3.00	4.50	6.50	4.50	5.00	0.17	0.07
9	1	1	1	5.40	4.00	5.50	3.50	4.00	5.00	0.19	0.24
9	1	2	1	5.40	6.00	3.50	5.00	4.00	6.00	0.33	0.21
9	1	3	1	4.40	3.50	2.00	6.50	6.00	5.50	0.34	0.29
9	1	4	1	6.80	4.50	2.00	6.50	5.50	5.00	0.27	0.16
10	2	1	1	5.40	4.50	4.50	5.00	5.50	6.00	0.19	0.10

10	2	2	1	2.40	3.50	3.50	3.00	6.50	4.50	0.21	0.21
10	2	3	-1	5.80	4.00	3.50	6.00	5.50	5.50	0.27	0.20
10	2	4	1	5.80	4.50	3.50	5.50	6.00	5.50	0.34	0.18
12	1	1	1	4.00	3.50	5.50	3.50	6.50	4.50	0.22	0.32
12	1	2	-1	5.40	4.50	2.50	3.50	6.50	6.50	0.22	0.21
12	1	3	1	6.00	6.50	2.00	5.50	6.50	5.00	0.27	0.26
12	1	4	1	3.20	2.00	3.50	5.00	5.50	4.00	0.24	0.23
13	2	1	-1	5.80	3.50	3.50	7.00	7.00	7.00	0.22	0.17
13	2	2	1	5.40	5.00	1.50	5.00	7.00	5.50	0.08	0.26
13	2	3	1	1.60	1.00	2.50	4.50	4.00	5.50	0.23	0.31
13	2	4	1	4.40	5.00	1.50	4.50	5.50	7.00	0.16	0.14
14	1	1	1	5.40	3.50	3.50	6.50	5.00	5.50	0.16	0.09
14	1	2	1	3.40	4.00	6.00	3.00	5.00	3.00	0.28	0.12
14	1	3	1	7.00	6.50	4.50	5.50	4.00	6.50	0.27	0.14
14	1	4	-1	6.00	4.50	3.00	6.00	4.00	4.00	0.28	0.30
15	2	1	1	4.60	5.00	5.50	3.00	6.00	5.00	0.12	0.26
15	2	2	1	6.00	4.00	3.00	6.00	5.50	5.00	0.11	0.04
15	2	3	-1	3.60	4.00	3.50	4.50	5.50	4.50	0.19	0.11
15	2	4	-1	2.80	2.00	2.00	1.50	5.50	3.50	0.03	0.06
16	1	1	1	5.60	5.00	4.50	2.50	5.00	5.00	0.25	0.24
16	1	2	1	6.20	3.50	3.00	4.00	7.00	5.50	0.27	0.29
16	1	3	1	5.80	4.50	3.00	6.00	5.50	4.50	0.21	0.10
16	1	4	-1	3.00	2.50	4.00	3.00	3.00	6.00	0.23	0.18
17	2	1	1	6.00	2.50	3.00	2.00	3.50	4.00	0.22	0.21
17	2	2	1	2.40	2.00	5.00	3.50	6.00	4.00	0.15	0.11
17	2	3	1	6.00	3.00	4.00	6.00	6.50	5.00	0.29	0.21
17	2	4	1	6.00	4.50	3.00	4.00	5.50	5.50	0.20	0.14
18	1	1	1	6.40	6.00	2.50	6.00	5.50	6.00	0.19	0.15
18	1	2	-1	5.80	3.50	2.50	5.00	5.00	3.50	0.10	0.27
18	1	3	1	4.80	3.00	3.50	5.50	7.00	6.50	0.14	0.18
18	1	4	-1	4.00	4.50	2.50	6.00	6.50	6.50	0.33	0.24
19	2	1	1	6.60	5.00	1.00	5.50	6.50	6.50	0.24	0.19
19	2	2	-1	6.00	5.00	3.00	5.00	6.50	6.00	0.24	0.21
19	2	3	1	5.80	4.50	4.00	4.50	5.50	3.00	0.29	0.22
19	2	4	1	6.00	5.50	3.50	5.00	5.00	6.50	0.15	0.25
20	1	1	1	5.60	3.50	2.50	4.50	6.50	6.50	0.20	0.24
20	1	2	1	5.80	3.50	1.00	5.00	4.00	5.50	0.20	0.29
20	1	3	-1	5.20	4.50	2.50	6.00	6.00	6.50	0.21	0.22
20	1	4	1	6.00	6.50	3.00	4.50	6.50	7.00	0.32	0.13
21	2	1	1	5.80	6.00	1.50	7.00	6.50	6.00	0.09	0.14
21	2	2	-1	5.80	4.50	1.00	6.00	5.50	5.00	0.11	0.15
21	2	3	1	6.00	5.00	1.00	6.50	7.00	6.50	0.10	0.17

21	2	4	1	6.60	6.50	2.00	5.50	3.00	5.50	0.10	0.16
22	1	1	1	5.20	2.00	1.00	6.00	5.00	4.50	0.28	0.09
22	1	2	1	6.20	3.50	1.50	6.00	5.50	6.00	0.25	0.12
22	1	3	-1	7.00	5.00	1.00	5.50	5.00	5.00	0.26	0.22
22	1	4	1	5.80	5.50	3.50	5.50	4.50	5.50	0.35	0.28
23	2	1	-1	5.60	2.50	2.00	5.50	4.50	6.00	0.24	0.21
23	2	2	1	6.00	6.00	2.00	4.00	5.50	6.00	0.23	0.33
23	2	3	1	6.20	3.50	2.00	5.00	4.50	5.00	0.16	0.41
23	2	4	1	6.00	6.00	5.50	4.00	5.00	5.50	0.17	0.43
24	1	1	-1	5.60	6.50	4.00	3.50	5.00	5.50	0.39	0.13
24	1	2	-1	4.60	4.50	2.00	6.00	6.50	6.50	0.22	0.16
24	1	3	1	6.00	6.00	3.50	5.00	6.00	5.00	0.22	0.21
24	1	4	1	3.20	5.50	4.50	5.00	4.50	5.50	0.21	0.22
25	2	1	-1	4.60	3.50	3.50	6.50	4.00	6.50	0.17	0.22
25	2	2	1	5.20	5.00	5.00	4.50	5.50	5.00	0.28	0.11
25	2	3	1	5.80	6.00	1.00	6.00	3.00	5.00	0.09	0.24
25	2	4	1	5.60	4.00	4.50	4.50	3.00	4.50	0.24	0.12
26	1	1	1	6.00	4.50	1.50	6.50	5.00	6.50	0.23	0.09
26	1	2	1	5.40	5.00	5.00	5.50	6.00	6.00	0.14	0.18
26	1	3	1	5.80	5.50	3.00	4.50	5.00	6.00	0.15	0.07
26	1	4	-1	6.60	5.00	2.50	4.50	6.50	6.00	0.11	0.29
27	2	1	-1	6.20	5.00	1.00	6.00	5.50	7.00	0.15	0.36
27	2	2	1	5.80	4.50	3.00	5.50	5.50	6.00	0.14	0.29
27	2	3	1	7.00	6.50	1.50	6.50	6.00	7.00	0.11	0.18
27	2	4	1	6.00	5.50	3.00	5.00	6.00	6.00	0.22	0.21
28	1	1	-1	5.40	5.50	4.00	6.00	3.00	6.00	0.44	0.39
28	1	2	-1	6.20	5.50	2.50	4.00	7.00	4.50	0.34	0.58
28	1	3	1	5.80	5.00	2.50	5.00	6.00	6.00	0.17	0.20
28	1	4	1	7.00	4.00	2.00	4.00	5.00	7.00	0.29	0.26
29	2	1	1	5.60	4.00	3.50	5.50	5.00	2.00	0.45	0.25
29	2	2	-1	4.00	5.50	1.00	6.00	6.00	5.50	0.10	0.30
29	2	3	1	6.00	5.00	2.50	5.00	5.50	5.00	0.23	0.26
29	2	4	1	2.40	3.00	2.00	6.50	5.50	3.50	0.32	0.24
30	1	1	1	5.80	4.00	3.00	4.50	6.50	3.50	0.17	0.31
30	1	2	1	3.00	4.00	2.00	6.00	6.50	5.00	0.20	0.26
30	1	3	1	7.00	3.00	2.50	7.00	5.00	3.50	0.11	0.11
30	1	4	1	5.20	7.00	2.50	4.50	3.00	4.50	0.23	0.24
31	2	1	1	5.40	5.50	2.50	7.00	4.50	7.00	0.29	0.25
31	2	2	1	6.00	7.00	3.00	4.50	5.00	4.50	0.26	0.21
31	2	3	1	6.20	3.00	5.00	4.00	6.50	6.00	0.31	0.24
31	2	4	1	5.40	6.00	5.50	4.50	6.00	4.50	0.23	0.32
32	1	1	1	6.40	5.50	5.00	4.50	4.00	7.00	0.26	0.31

32	1	2	-1	5.60	4.50	2.50	5.00	7.00	5.00	0.28	0.34
32	1	3	1	5.60	4.00	2.50	5.00	5.50	5.00	0.21	0.34
32	1	4	1	6.20	7.00	3.00	5.00	6.50	6.00	0.25	0.23
33	2	1	-1	5.60	5.00	1.50	3.50	5.00	5.50	0.22	0.16
33	2	2	1	5.60	7.00	2.00	6.00	7.00	6.00	0.23	0.24
33	2	3	1	5.80	2.50	3.00	6.00	4.50	5.50	0.23	0.24
33	2	4	1	6.20	7.00	6.00	3.00	6.50	6.00	0.56	0.07
34	1	1	1	6.40	7.00	4.00	6.00	7.00	7.00	0.27	0.16
34	1	2	-1	5.60	5.00	5.00	6.00	6.00	6.00	0.19	0.17
34	1	3	-1	5.20	5.00	4.50	2.50	2.50	4.50	0.17	0.22
34	1	4	1	6.00	5.00	2.00	4.50	6.50	6.00	0.15	0.18
35	2	1	1	5.20	4.00	3.50	3.50	6.00	3.50	0.24	0.15
35	2	2	1	6.00	4.00	3.00	5.00	5.50	4.50	0.25	0.20
35	2	3	1	4.40	4.50	3.00	6.00	6.50	6.50	0.28	0.20
35	2	4	1	5.60	5.50	4.00	7.00	6.50	6.00	0.18	0.14
36	1	1	-1	5.80	5.00	2.00	5.00	6.50	6.00	0.27	0.22
36	1	2	1	5.20	6.50	4.00	4.50	5.50	6.50	0.20	0.22
36	1	3	1	6.00	5.50	3.00	5.50	4.50	3.50	0.28	0.17
36	1	4	1	5.40	4.00	3.50	5.50	5.00	3.50	0.14	0.22
37	2	1	1	4.20	4.00	2.00	5.00	4.00	6.00	0.24	0.19
37	2	2	-1	5.80	5.50	3.50	4.50	5.50	5.00	0.11	0.26
37	2	3	1	5.60	4.50	4.50	4.50	7.00	5.50	0.17	0.29
37	2	4	-1	4.80	5.00	3.50	4.50	4.50	4.50	0.19	0.14
38	1	1	-1	3.00	5.00	7.00	2.00	6.00	6.50	0.19	0.16
38	1	2	1	5.80	6.50	3.00	5.50	3.50	4.50	0.15	0.25
38	1	3	1	3.40	6.50	2.00	4.00	4.00	5.50	0.29	0.36
38	1	4	-1	6.00	3.50	2.00	5.00	6.50	6.00	0.19	0.19
39	2	1	1	5.40	6.00	3.00	6.00	6.50	5.50	0.25	0.30
39	2	2	1	3.40	7.00	4.00	6.00	6.50	6.50	0.25	0.25
39	2	3	1	4.20	3.50	2.50	5.00	5.50	3.50	0.21	0.24
39	2	4	1	4.60	4.00	1.50	6.00	4.50	6.50	0.21	0.23
40	1	1	1	5.80	2.50	2.50	4.50	6.00	6.00	0.19	0.16
40	1	2	1	2.20	1.00	5.00	4.50	5.50	4.00	0.24	0.14
40	1	3	-1	5.80	4.50	3.00	4.00	6.00	5.00	0.20	0.24
40	1	4	1	5.80	4.00	4.00	5.50	3.00	5.50	0.15	0.21
41	2	1	1	6.60	6.00	4.00	5.50	5.50	5.00	0.21	0.33
41	2	2	1	6.40	4.00	2.50	6.50	7.00	5.00	0.19	0.21
41	2	3	1	4.80	4.50	4.00	4.50	1.50	7.00	0.11	0.28
41	2	4	1	5.40	3.50	3.00	4.50	5.50	5.50	0.15	0.27
42	1	1	1	5.60	4.00	3.00	5.50	5.00	5.00	0.16	0.12
42	1	2	1	6.80	6.00	2.00	6.00	5.00	6.00	0.13	0.28
42	1	3	1	5.20	4.00	2.50	4.50	7.00	6.00	0.08	0.25

42	1	4	1	5.80	3.00	3.50	4.50	6.50	6.00	0.22	0.15
43	2	1	-1	6.00	5.50	2.00	5.00	4.50	4.50	0.28	0.16
43	2	2	-1	5.80	6.50	2.50	4.50	4.50	4.50	0.19	0.13
43	2	3	1	6.00	4.50	1.00	6.00	6.50	6.00	0.27	0.09
43	2	4	1	5.80	4.00	2.50	5.00	6.00	5.00	0.20	0.22
44	1	1	-1	6.40	5.00	2.00	6.50	6.50	6.00	0.25	0.16
44	1	2	-1	4.60	3.50	4.00	6.00	6.00	4.50	0.20	0.16
44	1	3	1	5.80	5.50	4.50	3.50	7.00	6.00	0.39	0.34
44	1	4	1	4.40	6.00	5.50	4.50	6.50	5.50	0.37	0.42
45	2	1	1	6.60	5.50	2.00	7.00	7.00	7.00	0.17	0.26
45	2	2	-1	4.40	5.50	2.50	6.50	7.00	5.50	0.15	0.04
45	2	3	1	5.40	5.50	2.00	5.50	6.00	5.50	0.14	0.10
45	2	4	1	6.00	6.00	2.50	4.50	7.00	6.50	0.14	0.14
46	1	1	1	5.60	2.50	3.00	6.50	6.50	5.50	0.16	0.14
46	1	2	1	5.80	5.00	3.50	5.50	6.50	5.00	0.14	0.07
46	1	3	1	6.00	4.50	3.00	6.50	6.50	7.00	0.22	0.09
46	1	4	1	5.60	3.00	5.00	6.50	5.00	5.50	0.24	0.17
47	2	1	1	5.20	5.00	4.00	5.00	5.00	6.00	0.30	0.30
47	2	2	-1	5.80	5.00	3.00	3.50	3.50	4.00	0.17	0.31
47	2	3	1	5.60	6.00	2.50	6.00	5.50	5.50	0.20	0.19
47	2	4	1	6.20	5.50	4.00	4.50	5.00	6.50	0.39	0.23
48	1	1	1	6.20	3.50	5.50	6.50	6.50	4.50	0.28	0.04
48	1	2	1	5.60	3.00	1.00	6.50	7.00	5.50	0.27	0.07
48	1	3	-1	5.80	6.00	1.00	5.50	6.00	6.00	0.09	0.22
48	1	4	1	5.60	5.50	3.50	4.50	5.00	6.50	0.20	0.16
49	2	1	1	5.20	4.50	2.00	5.50	6.00	4.00	0.22	0.18
49	2	2	1	5.80	3.50	4.50	6.00	7.00	5.00	0.25	0.14
49	2	3	1	6.20	5.50	3.00	5.50	4.50	5.00	0.19	0.13
49	2	4	1	6.00	6.50	1.50	5.50	6.00	7.00	0.29	0.07
50	1	1	1	5.20	7.00	2.00	4.00	7.00	5.50	0.18	0.15
50	1	2	-1	6.20	2.50	1.50	5.00	6.50	4.50	0.36	0.14
50	1	3	1	5.00	5.50	2.50	6.50	6.50	6.50	0.23	0.24
50	1	4	-1	6.00	6.00	1.50	6.00	5.50	5.00	0.16	0.20
51	2	1	-1	5.80	6.50	3.00	5.00	6.50	6.50	0.12	0.18
51	2	2	-1	2.60	1.50	3.00	5.00	6.00	6.50	0.04	0.21
51	2	3	1	7.00	4.50	2.00	6.00	6.00	5.00	0.16	0.25
51	2	4	1	5.80	2.50	3.00	4.50	6.00	5.00	0.09	0.26
52	1	1	1	6.20	4.00	2.00	5.50	4.00	5.00	0.15	0.18
52	1	2	1	5.80	6.00	1.50	5.50	6.00	6.50	0.25	0.30
52	1	3	-1	6.00	4.50	4.00	4.00	6.50	5.00	0.31	0.19
52	1	4	1	3.60	2.50	3.50	5.00	5.50	5.50	0.23	0.17
53	2	1	-1	6.20	6.00	1.50	3.00	6.00	5.50	0.24	0.20

53	2	2	1	6.20	5.50	3.50	5.00	5.50	5.00	0.29	0.19
53	2	3	-1	3.60	4.50	4.50	4.50	5.50	5.50	0.21	0.18
53	2	4	1	6.20	2.50	2.50	5.00	6.00	3.50	0.19	0.17
54	1	1	1	5.40	3.50	3.50	5.50	5.50	5.00	0.32	0.17
54	1	2	1	6.20	4.50	5.50	5.00	6.00	5.50	0.09	0.11
54	1	3	-1	4.20	4.50	3.00	4.50	5.00	4.50	0.20	0.16
54	1	4	-1	6.40	3.50	1.50	5.00	6.50	5.50	0.09	0.10
55	2	1	1	6.20	4.00	2.00	6.00	7.00	6.00	0.18	0.26
55	2	2	-1	3.80	4.50	2.00	4.00	3.50	7.00	0.26	0.15
55	2	3	-1	5.40	3.00	2.00	5.00	5.50	4.50	0.22	0.28
55	2	4	1	5.00	3.50	5.50	4.00	6.50	5.00	0.15	0.24
56	1	1	1	6.40	3.00	4.50	4.50	6.50	6.50	0.26	0.15
56	1	2	1	6.60	4.50	2.50	4.50	7.00	4.50	0.14	0.27
56	1	3	1	3.80	3.00	5.50	5.00	5.50	4.50	0.29	0.23
56	1	4	-1	1.80	3.50	2.50	2.50	6.50	3.00	0.11	0.36
57	2	1	-1	6.60	5.50	1.00	5.50	5.50	6.50	0.12	0.13
57	2	2	1	2.40	1.50	2.50	5.00	5.50	6.00	0.18	0.19
57	2	3	1	5.80	4.50	5.00	5.00	5.00	5.50	0.15	0.19
57	2	4	-1	6.00	4.50	4.50	5.50	5.50	3.50	0.11	0.11
58	1	1	1	2.60	3.50	4.00	4.50	6.50	5.00	0.32	0.34
58	1	2	1	6.20	5.50	4.00	5.50	3.50	6.50	0.20	0.13
58	1	3	1	5.00	7.00	6.00	3.50	3.50	7.00	0.17	0.31
58	1	4	1	5.40	6.50	4.00	3.50	7.00	3.50	0.20	0.32
59	2	1	1	3.20	3.50	4.50	3.50	7.00	6.50	0.24	0.33
59	2	2	1	6.00	5.00	2.00	7.00	7.00	5.50	0.29	0.25
59	2	3	1	4.60	3.00	5.50	2.50	6.00	6.50	0.40	0.36
59	2	4	1	4.20	4.50	2.50	6.00	4.00	6.50	0.20	0.24
60	1	1	-1	5.20	3.00	3.00	5.00	5.50	5.00	0.12	0.24
60	1	2	1	6.60	5.00	1.50	6.00	4.50	5.00	0.27	0.23
60	1	3	1	5.60	6.00	5.00	5.00	6.50	6.50	0.18	0.36
60	1	4	-1	5.60	7.00	4.00	3.50	3.50	5.50	0.20	0.20
61	2	1	-1	6.20	6.00	2.00	4.50	6.50	7.00	0.11	0.12
61	2	2	1	7.00	5.50	2.00	5.00	6.50	7.00	0.12	0.13
61	2	3	1	7.00	5.50	3.00	6.00	7.00	4.50	0.14	0.06
61	2	4	1	6.00	6.00	2.00	6.00	5.50	7.00	0.18	0.17
62	1	1	1	5.20	4.00	3.50	4.50	5.50	4.50	0.19	0.19
62	1	2	1	5.80	4.50	2.50	6.00	6.00	3.00	0.18	0.15
62	1	3	1	5.80	3.50	5.00	5.50	6.00	5.00	0.22	0.24
62	1	4	1	5.00	5.50	1.50	6.50	4.00	7.00	0.24	0.31

V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24
0.23	0.36	0.21	0.27	0.21	0.15	0.26	0.26	0.57	0.30	0.25	0.17

0.17	0.34	0.21	0.33	0.23	0.35	0.27	0.28	0.43	0.14	0.15	0.27
0.18	0.16	0.19	0.16	0.11	0.23	0.23	0.07	0.52	0.48	0.20	0.37
0.31	0.28	0.14	0.18	0.15	0.20	0.27	0.29	0.62	0.35	0.33	0.22
0.27	0.25	0.19	0.17	0.43	0.13	0.29	0.43	0.51	0.43	0.35	0.33
0.31	0.34	0.17	0.27	0.36	0.33	0.30	0.14	0.19	0.36	0.70	0.39
0.28	0.22	0.20	0.28	0.50	0.36	0.25	0.21	0.21	0.11	0.36	0.08
0.20	0.25	0.22	0.15	0.40	0.22	0.27	0.35	0.41	0.30	0.30	0.27
0.11	0.24	0.16	0.21	0.16	0.14	0.22	0.34	0.21	0.45	0.40	0.27
0.17	0.13	0.21	0.06	0.19	0.19	0.19	0.44	0.24	0.33	0.23	0.21
0.19	0.15	0.12	0.16	0.17	0.20	0.26	0.72	0.31	0.20	0.38	0.22
0.14	0.05	0.15	0.35	0.23	0.24	0.23	0.51	0.26	0.25	0.17	0.43
0.36	0.33	0.25	0.21	0.35	0.27	0.33	0.43	0.38	0.64	0.18	0.22
0.28	0.37	0.56	0.28	0.53	0.38	0.46	0.49	0.43	0.71	0.59	0.64
0.15	0.19	0.23	0.16	0.28	0.20	0.22	0.18	0.23	0.23	0.52	0.28
0.22	0.20	0.35	0.15	0.39	0.33	0.26	0.36	0.21	0.17	0.17	0.43
0.37	0.25	0.26	0.54	0.15	0.39	0.37	0.26	0.55	0.48	0.22	0.74
0.19	0.29	0.19	0.19	0.13	0.22	0.25	0.23	0.24	0.25	0.41	0.40
0.34	0.29	0.32	0.51	0.40	0.30	0.37	0.28	0.68	0.36	0.35	0.26
0.22	0.21	0.14	0.11	0.24	0.10	0.25	0.11	0.55	0.46	0.14	0.41
0.11	0.26	0.29	0.18	0.20	0.17	0.25	0.37	0.62	0.30	0.16	0.18
0.24	0.23	0.21	0.23	0.21	0.21	0.38	0.52	0.41	1.10	0.84	0.32
0.13	0.11	0.15	0.14	0.22	0.43	0.24	0.54	0.29	0.40	0.23	0.22
0.26	0.08	0.32	0.16	0.24	0.46	0.33	0.19	0.46	0.59	0.80	0.46
0.17	0.30	0.19	0.15	0.35	0.19	0.21	0.14	0.35	0.12	0.32	0.21
0.08	0.24	0.16	0.13	0.21	0.10	0.20	0.23	0.18	0.37	0.37	0.36
0.19	0.27	0.12	0.15	0.27	0.21	0.19	0.27	0.18	0.18	0.20	0.21
0.24	0.23	0.19	0.19	0.20	0.46	0.24	0.34	0.30	0.31	0.18	0.21
0.27	0.37	0.16	0.21	0.36	0.12	0.30	0.34	0.34	0.37	0.57	0.41
0.21	0.41	0.16	0.24	0.48	0.31	0.30	0.48	0.22	0.44	0.25	0.21
0.27	0.41	0.08	0.29	0.62	0.13	0.30	0.41	0.23	0.30	0.14	0.37
0.14	0.29	0.22	0.17	0.36	0.24	0.23	0.33	0.15	0.21	0.22	0.18
0.22	0.19	0.18	0.36	0.37	0.24	0.24	0.10	0.27	0.47	0.13	0.26
0.28	0.35	0.12	0.21	0.38	0.23	0.31	0.46	0.19	0.32	0.26	0.83
0.37	0.35	0.17	0.21	0.35	0.19	0.33	0.30	0.68	0.58	0.21	0.45
0.27	0.31	0.07	0.25	0.21	0.28	0.30	0.44	0.51	0.34	0.31	0.42
0.17	0.29	0.22	0.16	0.15	0.24	0.30	0.85	0.15	0.39	0.43	0.25
0.17	0.28	0.13	0.18	0.19	0.30	0.26	0.19	0.44	0.55	0.18	0.36
0.14	0.31	0.12	0.18	0.31	0.23	0.30	0.41	0.64	0.44	0.40	0.18
0.20	0.13	0.23	0.18	0.20	0.17	0.25	0.28	0.52	0.32	0.37	0.17
0.29	0.32	0.24	0.26	0.24	0.14	0.30	0.46	0.45	0.60	0.25	0.28
0.13	0.35	0.09	0.11	0.18	0.23	0.21	0.32	0.17	0.19	0.32	0.29
0.41	0.36	0.33	0.60	0.14	0.18	0.37	0.49	0.60	0.40	0.41	0.38

0.51	0.23	0.12	0.35	0.09	0.31	0.24	0.31	0.16	0.11	0.33	0.24
0.31	0.26	0.32	0.34	0.34	0.15	0.25	0.38	0.17	0.31	0.22	0.22
0.47	0.20	0.23	0.36	0.38	0.22	0.32	0.41	0.36	0.52	0.24	0.39
0.17	0.29	0.09	0.26	0.45	0.27	0.25	0.32	0.36	0.23	0.22	0.19
0.25	0.18	0.23	0.31	0.46	0.30	0.30	0.38	0.31	0.44	0.28	0.22
0.14	0.13	0.15	0.28	0.26	0.22	0.20	0.27	0.06	0.27	0.09	0.31
0.28	0.10	0.21	0.19	0.43	0.24	0.26	0.60	0.31	0.23	0.28	0.35
0.23	0.17	0.37	0.11	0.22	0.36	0.26	0.31	0.40	0.22	0.35	0.34
0.15	0.06	0.28	0.27	0.24	0.44	0.33	0.66	0.39	0.79	0.56	0.31
0.11	0.29	0.24	0.12	0.36	0.14	0.24	0.26	0.28	0.28	0.29	0.19
0.24	0.31	0.25	0.16	0.26	0.23	0.33	0.35	0.52	0.88	0.29	0.19
0.24	0.21	0.21	0.17	0.15	0.36	0.23	0.26	0.26	0.43	0.23	0.17
0.29	0.26	0.40	0.22	0.17	0.28	0.32	0.63	0.13	0.42	0.39	0.54
0.15	0.09	0.23	0.26	0.16	0.41	0.30	0.43	0.24	0.60	0.77	0.16
0.07	0.09	0.17	0.19	0.19	0.15	0.25	0.52	0.32	0.48	0.41	0.38
0.25	0.30	0.21	0.48	0.12	0.42	0.35	0.41	0.37	0.34	0.85	0.25
0.34	0.09	0.13	0.17	0.29	0.33	0.24	0.16	0.35	0.31	0.18	0.40
0.25	0.17	0.07	0.14	0.23	0.48	0.27	0.39	0.30	0.34	0.25	0.52
0.12	0.17	0.12	0.23	0.33	0.19	0.22	0.26	0.25	0.18	0.38	0.25
0.17	0.20	0.09	0.11	0.13	0.26	0.25	0.43	0.66	0.35	0.17	0.31
0.18	0.24	0.13	0.23	0.33	0.40	0.32	0.59	0.60	0.29	0.28	0.31
0.26	0.25	0.19	0.29	0.17	0.22	0.25	0.12	0.40	0.23	0.45	0.30
0.19	0.24	0.15	0.35	0.27	0.25	0.24	0.19	0.46	0.12	0.17	0.26
0.14	0.27	0.21	0.18	0.31	0.22	0.28	0.35	0.45	0.20	0.37	0.37
0.18	0.29	0.20	0.29	0.27	0.39	0.31	0.51	0.25	0.18	0.69	0.31
0.12	0.30	0.22	0.13	0.11	0.18	0.23	0.22	0.30	0.43	0.37	0.24
0.20	0.25	0.15	0.20	0.31	0.24	0.25	0.44	0.07	0.26	0.34	0.24
0.22	0.24	0.20	0.13	0.23	0.16	0.23	0.34	0.24	0.34	0.22	0.27
0.28	0.14	0.22	0.19	0.09	0.26	0.24	0.16	0.32	0.54	0.16	0.31
0.22	0.24	0.30	0.13	0.32	0.29	0.25	0.41	0.12	0.28	0.35	0.41
0.39	0.10	0.18	0.19	0.39	0.34	0.30	0.68	0.23	0.57	0.29	0.25
0.27	0.23	0.09	0.37	0.28	0.26	0.25	0.25	0.39	0.36	0.04	0.47
0.17	0.18	0.24	0.22	0.18	0.20	0.18	0.11	0.28	0.26	0.12	0.14
0.26	0.27	0.11	0.00	0.14	0.21	0.20	0.15	0.24	0.10	0.43	0.27
0.22	0.18	0.13	0.00	0.24	0.11	0.17	0.34	0.21	0.11	0.25	0.11
0.11	0.20	0.15	0.00	0.17	0.22	0.15	0.06	0.20	0.13	0.12	0.08
0.18	0.22	0.12	0.00	0.12	0.07	0.19	0.29	0.23	0.12	0.28	0.23
0.28	0.26	0.10	0.27	0.17	0.45	0.27	0.26	0.20	0.57	0.41	0.11
0.50	0.20	0.25	0.17	0.26	0.31	0.27	0.46	0.19	0.10	0.43	0.13
0.30	0.47	0.15	0.18	0.27	0.24	0.34	0.69	0.31	0.48	0.61	0.17
0.31	0.31	0.36	0.24	0.24	0.40	0.31	0.35	0.21	0.12	0.54	0.29
0.20	0.30	0.26	0.19	0.40	0.36	0.33	0.27	0.28	0.40	0.55	0.51

0.18	0.24	0.19	0.13	0.31	0.29	0.25	0.37	0.26	0.41	0.08	0.36
0.21	0.33	0.17	0.20	0.32	0.47	0.27	0.41	0.39	0.17	0.29	0.15
0.30	0.27	0.25	0.14	0.26	0.34	0.28	0.38	0.45	0.39	0.33	0.13
0.29	0.37	0.13	0.31	0.30	0.17	0.32	0.18	0.69	0.44	0.51	0.37
0.23	0.23	0.23	0.21	0.14	0.17	0.25	0.18	0.43	0.35	0.56	0.11
0.35	0.25	0.22	0.21	0.22	0.21	0.28	0.22	0.40	0.30	0.75	0.24
0.15	0.25	0.18	0.19	0.39	0.18	0.24	0.30	0.31	0.34	0.29	0.22
0.21	0.16	0.10	0.10	0.15	0.26	0.22	0.57	0.35	0.22	0.20	0.19
0.26	0.19	0.23	0.09	0.35	0.13	0.21	0.08	0.38	0.24	0.29	0.15
0.12	0.19	0.17	0.18	0.17	0.23	0.19	0.18	0.29	0.25	0.29	0.18
0.13	0.34	0.39	0.25	0.24	0.38	0.24	0.08	0.19	0.22	0.18	0.28
0.19	0.21	0.15	0.24	0.36	0.18	0.25	0.19	0.33	0.38	0.33	0.21
0.28	0.23	0.17	0.31	0.13	0.15	0.28	0.33	0.53	0.32	0.28	0.46
0.21	0.30	0.20	0.23	0.27	0.10	0.20	0.26	0.16	0.30	0.16	0.17
0.22	0.29	0.20	0.27	0.19	0.15	0.26	0.21	0.32	0.45	0.23	0.42
0.46	0.21	0.30	0.39	0.31	0.23	0.33	0.47	0.26	0.45	0.22	0.21
0.17	0.27	0.41	0.24	0.33	0.04	0.29	0.12	0.44	0.27	0.19	0.40
0.25	0.33	0.25	0.29	0.48	0.09	0.26	0.29	0.23	0.10	0.40	0.35
0.36	0.33	0.24	0.12	0.34	0.19	0.34	0.45	0.17	0.70	0.63	0.33
0.18	0.44	0.19	0.31	0.42	0.25	0.35	0.22	0.74	0.27	0.40	0.45
0.23	0.23	0.31	0.35	0.27	0.10	0.28	0.22	0.32	0.38	0.63	0.18
0.18	0.19	0.14	0.22	0.18	0.27	0.22	0.15	0.33	0.06	0.28	0.37
0.14	0.24	0.15	0.21	0.44	0.21	0.28	0.22	0.34	0.24	0.28	0.66
0.19	0.20	0.17	0.30	0.39	0.18	0.27	0.28	0.06	0.52	0.42	0.38
0.13	0.37	0.13	0.48	0.38	0.30	0.27	0.34	0.27	0.32	0.10	0.18
0.31	0.18	0.14	0.21	0.29	0.24	0.23	0.22	0.19	0.30	0.37	0.29
0.26	0.22	0.29	0.13	0.25	0.49	0.35	0.23	0.27	0.69	0.57	0.61
0.38	0.26	0.39	0.36	0.28	0.18	0.35	0.28	0.42	0.57	0.68	0.27
0.32	0.23	0.27	0.26	0.27	0.22	0.35	0.61	0.50	0.27	0.47	0.63
0.28	0.35	0.21	0.19	0.35	0.33	0.38	0.50	0.61	0.45	0.59	0.52
0.21	0.28	0.28	0.19	0.37	0.44	0.30	0.24	0.19	0.43	0.36	0.32
0.21	0.25	0.35	0.29	0.53	0.41	0.36	0.42	0.13	0.18	0.72	0.58
0.40	0.23	0.20	0.24	0.35	0.38	0.30	0.31	0.22	0.34	0.38	0.25
0.15	0.23	0.14	0.18	0.33	0.25	0.20	0.15	0.19	0.05	0.31	0.11
0.24	0.14	0.09	0.16	0.40	0.24	0.27	0.35	0.53	0.37	0.32	0.24
0.22	0.39	0.21	0.42	0.25	0.34	0.36	0.27	0.28	0.75	0.95	0.28
0.21	0.25	0.12	0.32	0.31	0.41	0.32	0.25	0.40	0.75	0.44	0.16
0.19	0.36	0.10	0.25	0.26	0.24	0.24	0.21	0.33	0.20	0.30	0.20
0.29	0.31	0.13	0.19	0.24	0.32	0.31	0.33	0.56	0.37	0.31	0.34
0.22	0.25	0.16	0.14	0.22	0.41	0.29	0.19	0.50	0.38	0.71	0.20
0.22	0.26	0.21	0.19	0.22	0.12	0.25	0.32	0.72	0.25	0.28	0.13
0.26	0.34	0.23	0.08	0.28	0.30	0.27	0.32	0.48	0.53	0.15	0.21

0.28	0.22	0.23	0.06	0.24	0.24	0.24	0.19	0.21	0.51	0.26	0.32
0.27	0.40	0.08	0.26	0.24	0.14	0.24	0.22	0.28	0.41	0.22	0.24
0.34	0.28	0.13	0.22	0.23	0.12	0.27	0.36	0.15	0.19	0.53	0.47
0.26	0.20	0.11	0.17	0.23	0.17	0.27	0.41	0.39	0.38	0.31	0.38
0.29	0.25	0.13	0.21	0.29	0.22	0.24	0.22	0.26	0.26	0.32	0.31
0.16	0.29	0.19	0.17	0.15	0.15	0.24	0.27	0.19	0.31	0.46	0.29
0.50	0.24	0.10	0.32	0.18	0.18	0.24	0.06	0.29	0.41	0.36	0.12
0.17	0.26	0.17	0.18	0.28	0.29	0.24	0.15	0.19	0.10	0.41	0.45
0.21	0.19	0.15	0.18	0.20	0.17	0.22	0.40	0.08	0.35	0.19	0.41
0.25	0.16	0.19	0.22	0.28	0.23	0.32	0.60	0.80	0.34	0.37	0.32
0.25	0.32	0.34	0.22	0.21	0.32	0.37	0.82	0.60	0.22	0.54	0.55
0.37	0.21	0.32	0.18	0.35	0.43	0.30	0.48	0.34	0.14	0.35	0.28
0.26	0.29	0.25	0.26	0.33	0.16	0.27	0.24	0.51	0.33	0.35	0.16
0.39	0.35	0.25	0.39	0.39	0.39	0.41	0.58	0.25	0.83	0.61	0.51
0.31	0.36	0.35	0.32	0.33	0.33	0.28	0.16	0.20	0.25	0.50	0.15
0.39	0.37	0.19	0.22	0.23	0.45	0.39	0.66	0.49	0.34	0.70	0.44
0.32	0.33	0.28	0.23	0.23	0.33	0.29	0.36	0.32	0.31	0.47	0.25
0.36	0.33	0.13	0.22	0.28	0.32	0.27	0.29	0.21	0.24	0.17	0.45
0.34	0.23	0.18	0.26	0.46	0.34	0.31	0.20	0.68	0.38	0.34	0.18
0.19	0.33	0.13	0.11	0.18	0.18	0.25	0.25	0.37	0.22	0.34	0.44
0.48	0.37	0.18	0.26	0.17	0.22	0.39	0.68	0.43	0.58	0.98	0.29
0.25	0.31	0.16	0.20	0.24	0.22	0.24	0.33	0.22	0.21	0.30	0.28
0.19	0.18	0.11	0.22	0.37	0.20	0.28	0.44	0.27	0.49	0.36	0.41
0.23	0.17	0.14	0.16	0.21	0.29	0.23	0.37	0.30	0.28	0.25	0.17
0.18	0.20	0.19	0.18	0.19	0.22	0.21	0.30	0.22	0.12	0.26	0.29
0.32	0.31	0.12	0.38	0.31	0.23	0.32	0.52	0.38	0.34	0.41	0.26
0.25	0.17	0.17	0.25	0.25	0.15	0.24	0.34	0.20	0.24	0.30	0.36
0.37	0.30	0.12	0.33	0.20	0.20	0.28	0.26	0.44	0.43	0.32	0.32
0.25	0.32	0.10	0.24	0.32	0.22	0.27	0.51	0.10	0.29	0.34	0.37
0.20	0.21	0.21	0.19	0.25	0.12	0.20	0.22	0.31	0.22	0.12	0.29
0.22	0.28	0.20	0.20	0.18	0.26	0.23	0.21	0.28	0.29	0.19	0.26
0.24	0.19	0.22	0.19	0.20	0.17	0.24	0.28	0.30	0.20	0.18	0.63
0.30	0.20	0.20	0.05	0.24	0.20	0.27	0.69	0.68	0.14	0.21	0.26
0.26	0.24	0.22	0.17	0.49	0.32	0.35	0.38	0.32	0.29	0.65	0.76
0.21	0.25	0.15	0.17	0.21	0.27	0.23	0.33	0.16	0.26	0.32	0.33
0.38	0.31	0.20	0.25	0.12	0.35	0.25	0.21	0.11	0.16	0.54	0.27
0.24	0.15	0.17	0.24	0.21	0.31	0.28	0.23	0.30	0.27	0.46	0.61
0.20	0.30	0.22	0.19	0.34	0.40	0.30	0.37	0.33	0.39	0.34	0.41
0.21	0.25	0.17	0.02	0.28	0.24	0.26	0.48	0.69	0.23	0.07	0.40
0.23	0.33	0.28	0.05	0.21	0.34	0.34	0.39	0.86	0.45	0.25	0.28
0.21	0.18	0.25	0.21	0.16	0.18	0.22	0.27	0.14	0.20	0.22	0.10
0.24	0.24	0.20	0.31	0.42	0.30	0.25	0.18	0.31	0.26	0.11	0.25

0.05	0.21	0.09	0.23	0.33	0.22	0.18	0.35	0.29	0.23	0.06	0.11
0.15	0.17	0.08	0.28	0.33	0.25	0.17	0.17	0.16	0.22	0.02	0.13
0.16	0.20	0.05	0.13	0.23	0.13	0.18	0.04	0.22	0.65	0.18	0.08
0.18	0.29	0.11	0.00	0.28	0.14	0.19	0.30	0.21	0.19	0.14	0.32
0.16	0.36	0.15	0.13	0.20	0.26	0.24	0.39	0.28	0.32	0.21	0.44
0.28	0.31	0.22	0.13	0.29	0.27	0.29	0.14	0.25	0.48	0.34	0.79
0.33	0.35	0.15	0.04	0.44	0.23	0.30	0.54	0.21	0.25	0.57	0.37
0.18	0.37	0.20	0.31	0.29	0.31	0.28	0.18	0.28	0.24	0.33	0.29
0.32	0.36	0.29	0.33	0.53	0.33	0.38	0.24	0.58	0.47	0.45	0.54
0.17	0.25	0.17	0.20	0.31	0.36	0.29	0.08	0.36	0.71	0.54	0.18
0.14	0.25	0.36	0.22	0.25	0.31	0.37	0.30	1.00	0.36	0.68	0.29
0.28	0.15	0.20	0.10	0.16	0.27	0.23	0.33	0.29	0.26	0.27	0.36
0.22	0.10	0.17	0.10	0.24	0.12	0.22	0.43	0.39	0.32	0.18	0.28
0.19	0.32	0.10	0.16	0.19	0.18	0.20	0.14	0.15	0.26	0.10	0.47
0.32	0.18	0.21	0.06	0.17	0.21	0.26	0.40	0.35	0.52	0.37	0.22
0.19	0.28	0.17	0.32	0.18	0.18	0.21	0.15	0.32	0.12	0.22	0.19
0.14	0.12	0.23	0.17	0.28	0.13	0.24	0.37	0.36	0.38	0.19	0.38
0.18	0.24	0.08	0.26	0.20	0.43	0.21	0.15	0.24	0.35	0.15	0.15
0.17	0.31	0.18	0.28	0.42	0.26	0.31	0.43	0.68	0.17	0.39	0.38
0.24	0.21	0.20	0.21	0.24	0.25	0.25	0.29	0.23	0.64	0.28	0.16
0.15	0.27	0.26	0.23	0.24	0.23	0.28	0.40	0.20	0.36	0.41	0.39
0.27	0.27	0.33	0.27	0.36	0.33	0.27	0.34	0.17	0.17	0.37	0.13
0.23	0.18	0.26	0.14	0.41	0.25	0.30	0.33	0.45	0.24	0.57	0.51
0.15	0.27	0.08	0.17	0.20	0.25	0.23	0.25	0.54	0.29	0.22	0.28
0.20	0.16	0.12	0.23	0.29	0.16	0.27	0.60	0.26	0.37	0.28	0.61
0.24	0.31	0.17	0.19	0.32	0.33	0.26	0.48	0.26	0.17	0.13	0.41
0.20	0.32	0.08	0.27	0.27	0.30	0.19	0.19	0.19	0.16	0.04	0.09
0.20	0.14	0.20	0.16	0.29	0.25	0.25	0.39	0.29	0.35	0.33	0.31
0.27	0.34	0.17	0.10	0.20	0.29	0.26	0.41	0.47	0.21	0.14	0.18
0.22	0.21	0.16	0.26	0.37	0.25	0.27	0.41	0.31	0.28	0.17	0.34
0.23	0.17	0.14	0.09	0.21	0.23	0.23	0.17	0.35	0.21	0.36	0.42
0.27	0.24	0.13	0.10	0.14	0.43	0.22	0.19	0.30	0.21	0.22	0.22
0.26	0.27	0.11	0.11	0.26	0.26	0.21	0.25	0.32	0.22	0.06	0.10
0.09	0.19	0.19	0.41	0.22	0.25	0.22	0.15	0.17	0.47	0.15	0.18
0.17	0.18	0.25	0.21	0.17	0.20	0.22	0.24	0.24	0.21	0.22	0.41
0.36	0.21	0.11	0.14	0.20	0.21	0.21	0.06	0.26	0.20	0.23	0.28
0.19	0.21	0.07	0.20	0.37	0.14	0.21	0.26	0.19	0.29	0.42	0.16
0.18	0.28	0.07	0.30	0.19	0.39	0.27	0.17	0.66	0.20	0.43	0.33
0.33	0.29	0.13	0.19	0.23	0.26	0.23	0.06	0.25	0.49	0.37	0.16
0.15	0.32	0.21	0.33	0.38	0.23	0.31	0.54	0.54	0.10	0.43	0.30
0.21	0.22	0.15	0.26	0.24	0.36	0.31	0.64	0.34	0.48	0.28	0.43
0.15	0.24	0.24	0.39	0.25	0.35	0.32	0.38	0.32	0.78	0.41	0.14

0.25	0.15	0.25	0.24	0.44	0.35	0.29	0.16	0.35	0.41	0.52	0.21
0.25	0.16	0.12	0.17	0.15	0.23	0.24	0.30	0.58	0.19	0.29	0.26
0.29	0.14	0.14	0.09	0.17	0.19	0.25	0.60	0.31	0.18	0.18	0.56
0.18	0.22	0.14	0.36	0.19	0.21	0.23	0.18	0.34	0.15	0.21	0.32
0.25	0.20	0.12	0.31	0.11	0.44	0.26	0.39	0.58	0.21	0.19	0.12
0.15	0.29	0.19	0.34	0.32	0.28	0.22	0.30	0.33	0.17	0.11	0.19
0.22	0.35	0.13	0.26	0.24	0.26	0.27	0.24	0.27	0.62	0.35	0.16
0.29	0.32	0.12	0.30	0.24	0.27	0.33	0.53	0.34	0.78	0.37	0.33
0.17	0.15	0.15	0.34	0.31	0.45	0.28	0.49	0.71	0.33	0.12	0.24
0.24	0.43	0.33	0.35	0.37	0.32	0.37	0.41	0.54	0.26	0.65	0.23
0.24	0.28	0.29	0.24	0.26	0.37	0.34	0.33	0.75	0.52	0.50	0.31
0.39	0.45	0.30	0.47	0.55	0.37	0.35	0.07	0.35	0.30	0.47	0.30
0.16	0.32	0.19	0.22	0.49	0.26	0.30	0.22	0.39	0.34	0.41	0.42
0.24	0.45	0.14	0.30	0.12	0.20	0.30	0.33	0.39	0.44	0.43	0.22
0.35	0.15	0.16	0.29	0.32	0.24	0.30	0.54	0.61	0.25	0.17	0.30
0.21	0.39	0.35	0.34	0.20	0.16	0.42	0.77	0.64	0.63	0.68	0.37
0.29	0.29	0.10	0.25	0.26	0.22	0.24	0.18	0.32	0.32	0.27	0.20
0.15	0.26	0.13	0.13	0.07	0.24	0.20	0.22	0.34	0.24	0.32	0.21
0.31	0.20	0.18	0.18	0.22	0.15	0.24	0.24	0.39	0.25	0.24	0.30
0.29	0.36	0.19	0.16	0.32	0.29	0.33	0.67	0.53	0.37	0.32	0.20
0.22	0.24	0.14	0.22	0.31	0.33	0.24	0.26	0.27	0.10	0.26	0.39
0.12	0.24	0.31	0.32	0.33	0.16	0.22	0.31	0.10	0.26	0.30	0.19
0.16	0.16	0.14	0.15	0.27	0.23	0.25	0.43	0.49	0.47	0.21	0.23
0.20	0.20	0.23	0.26	0.21	0.23	0.23	0.14	0.38	0.42	0.09	0.37
0.26	0.19	0.11	0.18	0.22	0.26	0.23	0.24	0.31	0.34	0.24	0.26
0.32	0.13	0.16	0.12	0.45	0.16	0.32	0.52	0.61	0.65	0.45	0.17
0.19	0.12	0.16	0.08	0.21	0.13	0.22	0.38	0.35	0.16	0.15	0.54
0.23	0.19	0.18	0.15	0.29	0.35	0.29	0.16	0.44	0.57	0.36	0.34
0.45	0.23	0.12	0.19	0.25	0.28	0.27	0.27	0.39	0.13	0.21	0.40

Note. V1 = group number. V2 = TASK (1 = cooperative, 2 = competitive).
V3 = person in group. V4 = Gender (1 = females, -1 = males). V5 = Time to make ratings in seconds. V6 = satisfaction with social life. V7 = extraversion. V8 = neuroticism. V9 = agreeableness. V10 = conscientiousness. V11 = openness. V12 = accuracy rating others as a boss. V13 = accuracy rating others as an employee. V14 = accuracy rating others as a mentor. V15 = accuracy rating others as a student. V16= accuracy rating others as a friend. V17 = accuracy rating others as an enemy. V18 = accuracy rating others as an ally. V19 = accuracy rating others as a stranger. V20 = accuracy rating others as extraverted. V21 = accuracy rating others as neurotic. V22 = accuracy rating others as agreeable. V23 = accuracy rating others as conscientious. V24 = accuracy rating others as open to new experiences.

Table 12

Data of Main Variables from Experiment 2.

V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
3	1	1	1	1,174.00	2.40	4.21	3.80	3.00	5.40	4.40	5.40
3	1	2	-1	1,174.00	4.80	4.79	3.27	4.75	2.20	3.60	5.20
3	1	3	-1	1,338.33	5.40	4.50	5.27	4.00	4.80	3.60	4.60
3	1	4	1	1,137.27	4.80	4.21	2.00	4.25	4.80	3.00	4.80
4	2	1	1	1,261.76	3.60	5.00	4.13	3.50	4.60	3.80	5.60
4	2	2	-1	1,320.50	3.20	1.29	3.67	2.50	1.20	3.40	1.80
4	2	3	-1	1,079.07	6.00	4.79	4.07	4.75	2.40	2.40	4.40
4	2	4	1	1,224.20	4.80	5.64	3.07	4.75	3.60	4.00	5.00
5	1	1	1	1,300.06	4.00	3.93	4.60	2.25	1.80	5.20	4.80
5	1	2	1	1,443.50	2.00	3.21	3.13	2.75	2.80	4.40	4.60
5	1	3	-1	1,610.73	5.60	5.64	2.80	5.75	4.20	2.00	5.20
5	1	4	-1	1,666.30	5.00	4.79	4.13	4.25	3.60	2.00	5.20
8	2	1	1	1,462.81	5.60	5.57	3.33	4.50	4.40	3.00	5.60
8	2	2	1	1,379.80	5.00	5.00	2.13	5.00	3.00	3.80	5.00
8	2	3	-1	1,562.70	5.40	5.00	4.13	5.25	2.20	3.20	4.80
8	2	4	-1	1,169.79	4.40	4.21	3.27	4.50	4.40	2.80	4.80
9	1	1	1	1,547.83	4.60	4.57	3.27	3.75	2.20	4.60	4.60
9	1	2	-1	1,373.21	5.80	5.36	4.20	4.25	3.80	3.00	4.80
9	1	3	1	1,699.32	5.40	5.86	3.53	5.50	2.60	2.00	5.80
9	1	4	1	1,201.04	4.80	4.29	3.60	4.50	4.20	4.60	5.00
12	2	1	-1	1,453.39	5.40	5.29	3.20	5.25	4.00	3.40	4.60
12	2	2	1	1,106.12	4.60	4.86	3.27	4.50	3.60	3.80	4.60
12	2	3	1	2,076.33	2.20	4.00	3.27	2.00	4.60	4.40	2.40
12	2	4	-1	1,202.39	4.60	5.00	4.47	5.00	4.40	2.00	5.00
13	1	1	1	1,927.21	2.20	4.14	2.20	3.75	3.40	3.80	4.80
13	1	2	1	1,210.31	5.00	5.21	2.33	4.75	5.60	3.20	4.80
13	1	3	1	2,027.52	5.20	5.79	4.20	5.00	4.00	2.60	5.60
13	1	4	-1	1,129.03	5.00	5.07	3.33	4.00	4.80	3.20	5.00
14	2	1	-1	1,304.62	2.80	3.93	1.93	2.75	1.60	3.60	3.60
14	2	2	-1	1,702.64	4.40	3.50	3.87	4.25	2.60	0.60	3.80
14	2	3	1	1,330.76	5.40	5.07	3.40	4.75	4.00	3.00	5.20
14	2	4	1	1,414.87	2.00	3.00	1.80	2.25	1.00	3.80	5.00
15	1	1	1	1,177.33	5.60	4.29	3.93	4.75	5.60	3.60	4.20
15	1	2	1	1,952.39	5.60	4.71	2.33	5.25	5.20	3.00	5.40
15	1	3	1	1,519.11	4.60	4.21	4.73	3.50	5.00	4.00	2.40
15	1	4	-1	1,500.52	4.40	4.71	1.80	4.50	4.20	2.00	4.20
16	1	1	-1	1,160.41	4.80	4.00	2.47	5.25	5.00	3.40	4.60
16	1	2	1	1,360.89	5.00	5.21	3.20	4.50	4.60	2.80	4.20
16	1	3	1	1,768.50	3.00	4.07	2.53	2.25	2.00	3.00	4.80
16	1	4	1	1,730.84	2.40	4.21	3.20	3.25	4.20	4.60	4.60
17	2	1	-1	1,006.52	5.00	4.43	3.67	4.00	3.40	3.40	4.20

17	2	2	-1	1,124.51	4.80	4.07	3.07	4.50	4.60	3.60	5.60
17	2	3	1	1,259.48	2.20	4.36	2.80	4.00	5.00	5.60	5.80
17	2	4	1	1,412.97	2.20	5.43	1.87	3.75	3.60	3.20	5.20
18	1	1	1	1,139.71	4.20	2.57	3.33	4.75	4.40	3.00	3.20
18	1	2	1	1,078.24	3.00	6.00	3.07	5.00	3.20	3.60	4.60
18	1	3	1	2,158.04	4.00	4.93	4.33	5.25	6.00	3.20	5.00
18	1	4	1	1,127.44	2.80	4.50	2.73	3.25	5.00	4.20	5.60
19	2	1	1	1,818.56	4.60	4.64	2.63	4.25	4.00	4.00	4.60
19	2	2	1	1,475.35	5.20	4.57	4.06	3.75	2.60	2.60	4.80
19	2	3	1	1,476.35	5.00	4.50	3.50	3.75	1.60	3.80	5.00
19	2	4	1	1,560.37	3.00	3.50	2.94	4.25	2.20	1.60	3.80
20	1	1	1	1,616.81	4.20	4.86	3.00	3.50	3.40	2.80	5.60
20	1	2	-1	1,558.22	5.00	4.36	4.38	5.00	5.60	1.40	5.00
20	1	3	1	1,763.94	2.80	4.36	3.50	4.25	3.20	4.20	4.80
20	1	4	-1	1,632.84	4.80	3.71	3.13	3.50	3.00	2.60	4.00
22	2	1	-1	1,571.65	5.60	4.57	2.88	4.50	4.20	2.00	4.20
22	2	2	1	1,060.58	4.00	4.57	2.75	3.00	3.40	4.40	4.40
22	2	3	1	1,169.34	4.80	5.79	3.31	5.25	5.00	1.60	5.60
22	2	4	-1	1,483.53	5.00	5.93	3.13	5.75	5.40	2.20	5.20
23	2	1	1	922.70	5.00	3.64	4.44	3.00	5.00	5.60	4.60
23	2	2	1	1,128.60	4.20	4.71	1.88	3.25	1.80	3.20	5.00
23	2	3	1	1,452.65	5.20	5.14	3.19	5.00	4.00	1.80	5.60
23	2	4	1	1,496.25	5.40	5.36	2.38	3.25	3.20	3.80	6.00
25	2	1	-1	1,171.36	4.20	3.50	2.69	2.75	2.00	3.80	4.80
25	2	2	1	1,159.69	3.20	2.93	3.69	2.75	2.40	4.00	3.40
25	2	3	1	959.77	5.00	5.71	4.19	5.50	5.60	4.20	5.40
25	2	4	1	1,030.59	4.40	4.64	4.13	3.50	3.80	2.80	4.00
26	2	1	1	2,087.37	1.00	2.93	2.94	2.50	1.60	3.80	4.40
26	2	2	1	1,383.03	2.80	5.00	4.44	4.75	4.80	4.80	5.80
26	2	3	1	1,102.94	3.60	2.43	2.13	3.00	0.80	5.00	4.60
26	2	4	1	1,852.92	3.20	3.57	1.88	3.25	2.80	2.80	4.60
27	1	1	1	1,669.52	2.20	3.57	4.38	3.00	2.00	5.20	3.80
27	1	2	-1	1,710.22	1.20	2.71	2.75	2.25	0.40	3.20	3.00
27	1	3	1	1,789.52	5.60	5.57	3.94	5.00	3.40	2.40	5.40
27	1	4	-1	1,458.01	4.60	4.07	5.25	3.75	3.60	5.00	4.00
28	1	1	1	1,289.77	4.80	4.43	4.31	3.50	4.80	4.60	5.40
28	1	2	-1	1,265.89	5.20	4.93	4.06	4.50	3.40	2.60	5.20
28	1	3	-1	577.70	3.60	3.57	3.13	2.25	2.40	3.80	3.60
28	1	4	1	1,411.63	4.20	5.00	2.13	3.75	4.80	3.40	4.80
30	1	1	1	1,383.56	6.00	5.43	3.38	5.00	5.40	3.40	5.00
30	1	2	1	1,869.29	5.00	5.93	3.50	5.75	5.80	1.20	6.00
30	1	3	-1	1,215.36	5.00	4.93	3.56	4.75	5.20	1.80	4.60
30	1	4	-1	1,459.42	1.80	2.71	2.56	2.75	2.40	4.40	4.60
31	2	1	1	1,031.16	5.00	4.00	3.13	3.50	4.20	3.40	4.80
31	2	2	1	1,361.07	4.40	3.71	2.56	4.25	1.20	2.60	5.00
31	2	3	1	1,112.10	5.00	5.57	4.63	5.75	6.00	2.60	5.40

31	2	4	1	1,313.78	2.00	4.07	3.13	4.25	4.20	1.00	4.60
32	1	1	1	1,799.77	5.00	4.93	3.88	2.50	3.40	4.00	4.40
32	1	2	1	1,445.86	4.80	4.07	2.38	4.50	2.60	3.80	4.60
32	1	3	-1	1,360.05	4.80	4.29	1.44	5.00	3.00	2.60	5.00
32	1	4	-1	1,091.23	5.40	5.00	1.88	4.25	4.20	3.00	5.40
33	2	1	1	1,316.28	4.80	5.79	2.06	5.75	5.00	2.20	6.00
33	2	2	-1	1,711.83	3.00	4.50	4.25	3.25	3.20	4.40	3.60
33	2	3	1	1,594.86	3.80	4.21	3.00	1.75	2.40	4.60	4.20
33	2	4	1	1,308.39	5.80	5.36	3.38	5.00	4.20	4.60	5.60
34	1	1	1	1,730.21	2.40	2.43	3.31	2.25	2.00	5.20	4.00
34	1	2	1	1,268.84	6.00	6.00	5.81	4.00	5.80	4.00	6.00
34	1	3	-1	2,758.30	4.60	4.86	3.31	3.75	4.20	3.40	4.60
34	1	4	1	1,514.44	4.40	4.86	2.19	4.50	2.60	3.00	4.80
35	2	1	1	1,083.29	5.20	5.79	4.94	5.00	5.00	2.80	5.40
35	2	2	1	1,310.58	2.00	4.79	3.38	4.75	2.60	3.00	4.20
35	2	3	1	1,945.40	2.20	3.00	4.31	2.50	2.60	3.60	5.40
35	2	4	1	1,429.00	5.80	5.79	3.31	5.25	4.80	2.40	5.20
37	2	1	1	1,143.38	4.60	3.93	3.19	3.75	3.80	2.20	3.00
37	2	2	-1	2,531.12	5.80	4.64	3.31	5.00	3.80	2.40	4.80
37	2	3	1	1,319.21	5.40	5.00	3.19	4.25	3.20	4.20	4.80
37	2	4	1	1,076.82	2.00	2.71	2.00	2.75	1.40	2.80	4.20
38	2	1	1	1,304.55	5.20	5.21	3.94	4.50	3.60	3.80	5.20
38	2	2	1	1,621.31	3.20	2.79	4.19	1.75	2.20	5.00	3.80
38	2	3	1	1,814.18	3.80	2.86	4.94	0.75	1.40	5.00	1.20
38	2	4	1	1,546.18	4.40	2.93	3.81	4.75	4.00	3.00	3.60
39	1	1	-1	1,099.35	4.80	3.07	4.38	4.50	3.60	5.20	5.00
39	1	2	1	990.43	4.80	4.71	2.88	4.25	3.60	2.60	4.20
39	1	3	1	1,497.86	4.80	4.93	2.25	4.25	2.60	3.80	5.00
39	1	4	1	1,507.11	5.00	4.86	1.94	3.50	3.00	4.40	4.20
40	1	1	1	1,072.43	4.40	5.14	4.50	3.50	3.80	5.00	4.00
40	1	2	1	1,517.60	4.80	4.21	3.88	4.50	4.20	3.00	3.40
40	1	3	1	1,486.44	5.00	5.00	2.81	4.50	4.20	2.80	4.00
40	1	4	1	1,425.88	4.60	5.00	3.69	5.25	4.40	1.60	4.80
41	2	1	1	1,796.62	3.00	5.57	4.44	4.00	4.80	4.40	5.60
41	2	2	1	1,090.97	5.00	5.36	4.38	4.00	3.20	4.80	4.80
41	2	3	1	1,230.50	4.20	4.79	2.94	4.00	1.40	4.00	4.60
41	2	4	1	1,481.65	4.60	3.21	3.69	2.75	1.40	4.20	4.20
42	2	1	1	1,615.00	4.80	3.93	3.63	4.75	2.80	3.40	4.40
42	2	2	1	1,428.46	4.60	4.93	3.44	5.25	4.40	4.20	5.00
42	2	3	1	1,130.52	3.60	4.86	2.44	4.50	2.40	2.60	5.00
42	2	4	1	1,515.70	4.60	4.86	3.75	5.25	3.40	3.60	5.60
43	1	1	1	1,426.22	3.60	5.43	3.63	5.00	4.40	2.60	5.20
43	1	2	1	1,430.79	5.60	5.57	3.38	5.50	6.00	1.60	5.60
43	1	3	-1	1,058.91	5.80	5.71	4.56	5.00	5.20	1.20	5.40
43	1	4	1	1,284.25	3.80	3.57	3.81	4.75	3.80	1.60	3.00
44	1	1	1	1,656.63	2.00	4.79	3.63	2.75	2.00	4.20	4.00

44	1	2	-1	1,678.08	3.60	4.43	1.81	2.75	3.20	2.80	5.00
44	1	3	1	1,754.84	3.00	3.07	3.13	3.00	3.00	3.40	3.20
44	1	4	-1	1,170.71	4.20	4.86	3.81	3.50	3.20	3.20	5.00
45	2	1	-1	915.27	5.00	4.50	3.25	4.75	4.00	1.40	3.60
45	2	2	1	1,103.62	5.20	4.86	3.13	5.25	3.20	0.40	4.60
45	2	3	1	1,649.89	5.80	5.43	2.25	5.00	4.20	2.40	4.80
45	2	4	-1	1,486.14	4.60	4.43	3.63	4.25	4.00	1.80	3.80
46	1	1	-1	1,565.87	5.40	5.43	3.63	4.75	4.60	2.00	5.60
46	1	2	1	2,176.47	4.80	5.21	2.63	4.50	4.40	2.60	5.20
46	1	3	1	1,148.68	4.40	4.93	2.69	5.00	5.00	2.40	4.60
46	1	4	1	1,282.06	4.80	4.07	1.94	4.75	5.00	3.60	5.40
48	1	1	-1	1,721.29	4.60	4.93	4.81	3.25	5.80	1.60	5.60
48	1	2	-1	1,030.58	5.20	4.36	1.75	4.75	1.00	1.40	3.80
48	1	3	1	1,602.17	5.40	5.43	3.25	4.00	4.00	4.60	4.80
48	1	4	1	1,228.11	2.20	4.50	2.63	4.25	1.80	2.80	5.20
49	2	1	-1	1,338.65	4.80	4.86	3.25	4.50	4.40	2.20	4.60
49	2	2	-1	1,374.24	2.00	4.64	4.44	4.25	2.80	3.40	4.20
49	2	3	1	1,925.20	4.40	3.79	2.94	3.50	2.40	3.40	4.20
49	2	4	-1	1,564.31	4.80	3.57	2.69	3.00	4.80	4.80	5.20
50	1	1	1	1,074.18	4.60	5.29	3.69	3.00	3.40	4.00	5.00
50	1	2	1	1,352.36	5.60	4.79	2.81	4.50	5.80	2.40	5.00
50	1	3	1	1,551.73	5.00	3.50	2.69	4.00	4.60	2.40	4.40
50	1	4	-1	1,337.19	4.60	3.57	3.25	4.00	2.40	2.20	3.40
51	2	1	1	1,326.35	5.00	5.29	3.00	4.25	4.00	1.60	4.40
51	2	2	-1	1,712.94	1.00	3.14	5.44	1.25	0.60	4.40	4.80
51	2	3	-1	1,274.79	4.40	4.00	3.50	6.00	4.60	1.60	5.40
51	2	4	-1	2,142.78	3.20	4.00	2.56	4.50	2.60	3.20	3.00
52	1	1	1	1,212.90	5.20	4.00	1.88	4.25	4.40	2.20	4.60
52	1	2	1	1,766.30	5.00	4.79	3.13	4.25	4.00	4.60	5.00
52	1	3	1	1,271.39	5.00	5.00	3.63	4.00	3.00	3.20	4.40
52	1	4	-1	1,604.77	4.60	5.36	2.94	3.25	4.40	2.80	5.40
53	1	1	1	1,782.36	5.60	5.29	3.38	5.75	5.00	2.40	4.40
53	1	2	1	1,262.33	4.80	5.14	3.19	4.75	5.40	3.40	5.60
53	1	3	1	1,690.80	6.00	6.00	4.25	5.75	5.00	1.40	5.80
53	1	4	1	1,163.74	5.00	4.57	4.06	3.50	3.20	4.60	4.00
54	2	1	1	2,069.75	2.40	3.71	3.56	2.00	1.40	4.60	3.80
54	2	2	1	1,606.32	5.20	4.93	2.13	4.50	1.80	3.00	5.40
54	2	3	1	1,226.86	3.60	4.14	3.50	2.75	4.20	2.00	4.80
54	2	4	-1	782.41	5.00	4.86	4.06	3.50	3.00	2.80	5.00
55	1	1	1	1,719.08	2.00	4.71	3.13	3.75	2.20	3.40	5.40
55	1	2	1	1,171.54	4.40	5.00	3.44	4.25	2.20	4.40	5.60
55	1	3	1	1,283.22	5.20	5.21	3.19	4.50	3.60	4.00	5.80
55	1	4	1	1,647.81	3.40	4.79	2.31	4.00	3.60	2.80	5.40
56	2	1	1	1,634.51	5.60	5.21	3.19	5.50	6.00	2.00	4.40
56	2	2	1	864.87	5.20	5.36	3.94	4.00	6.00	3.20	4.40
56	2	3	1	956.04	4.60	4.79	2.50	3.25	5.00	4.40	5.00

56	2	4	1	1,537.14	5.40	4.86	1.19	4.75	3.40	1.40	3.80
57	2	1	1	1,277.68	2.60	4.57	3.31	4.00	3.00	3.00	4.80
57	2	2	1	1,273.52	4.80	5.50	3.81	5.25	5.40	2.60	5.80
57	2	3	-1	1,520.27	5.60	5.43	4.13	5.00	5.20	4.20	5.20
57	2	4	-1	1,018.30	5.80	5.07	2.25	5.50	4.40	0.20	5.40
58	1	1	-1	2,073.43	5.40	5.00	3.25	4.00	3.60	3.80	5.00
58	1	2	1	1,634.20	5.20	5.21	4.31	4.25	3.20	3.00	5.20
58	1	3	1	1,515.14	5.60	5.07	3.63	4.75	4.00	2.40	5.00
58	1	4	1	1,523.96	5.40	5.79	3.19	5.25	5.40	1.00	5.60
59	2	1	1	1,295.72	5.20	5.21	2.75	3.50	1.80	4.00	5.60
59	2	2	-1	1,499.13	5.00	5.21	3.81	5.00	4.00	2.40	5.40
59	2	3	1	1,422.60	3.20	5.21	2.44	4.75	3.40	2.40	5.60
59	2	4	-1	1,635.54	4.80	5.21	4.19	4.50	2.60	3.60	5.80
60	1	1	-1	1,863.98	5.20	4.50	3.75	4.25	4.80	2.60	4.60
60	1	2	1	2,169.58	5.20	5.50	3.38	5.00	6.00	3.40	4.40
60	1	3	1	1,748.33	5.20	4.54	2.44	3.25	2.40	2.40	5.00
60	1	4	-1	1,405.81	6.00	4.79	4.31	2.50	4.00	3.40	3.40
61	2	1	1	1,392.51	4.80	4.64	3.38	3.00	3.80	4.60	4.00
61	2	2	1	2,202.64	4.00	5.00	3.50	5.75	3.60	2.00	5.60
61	2	3	1	1,681.17	3.80	4.07	3.69	4.75	5.40	1.40	4.60
61	2	4	1	1,386.86	4.80	3.86	2.63	4.00	3.00	3.20	4.00
62	1	1	1	1,151.03	4.60	5.43	3.50	5.00	5.60	2.40	5.20
62	1	2	1	1,065.55	5.60	5.21	4.56	5.50	4.00	1.60	5.40
62	1	3	1	1,122.95	5.80	4.71	3.25	4.75	4.60	3.00	4.80
62	1	4	1	1,634.38	5.40	3.71	3.63	4.25	4.00	4.60	5.20
63	1	1	-1	1,307.57	4.40	4.29	3.69	3.75	4.00	3.00	4.20
63	1	2	-1	1,464.12	4.40	5.21	4.06	5.00	5.00	0.60	5.00
63	1	3	1	1,613.17	5.00	5.07	5.19	5.75	1.60	3.20	5.00
63	1	4	1	1,356.17	4.20	4.64	2.56	3.25	2.80	5.20	5.60
64	2	1	1	1,216.47	5.60	5.21	3.75	3.75	3.20	5.00	3.80
64	2	2	-1	1,589.75	6.00	4.86	3.38	5.75	3.80	1.80	3.40
64	2	3	1	1,186.98	2.80	5.00	3.88	5.25	5.00	3.40	3.20
64	2	4	1	1,126.17	3.00	3.36	2.69	3.00	1.40	4.40	2.20
65	2	1	1	1,645.85	4.60	3.86	3.00	5.50	5.80	0.60	4.60
65	2	2	1	1,519.92	5.60	5.57	2.56	4.50	4.00	2.60	5.60
65	2	3	-1	1,195.68	3.80	5.07	2.25	3.25	2.60	2.40	5.00
65	2	4	1	1,168.93	4.60	4.43	3.88	4.25	2.60	3.00	2.60
66	1	1	1	1,282.66	5.00	5.36	1.50	6.00	1.80	4.80	6.00
66	1	2	-1	1,034.01	5.00	5.64	2.88	5.00	6.00	1.00	4.40
66	1	3	-1	1,159.02	5.20	4.79	3.31	4.75	3.00	3.00	4.60
66	1	4	1	1,178.80	4.80	5.00	3.80	4.25	4.80	4.20	5.00
67	1	1	1	1,745.19	4.00	4.14	3.38	3.75	3.80	4.40	5.40
67	1	2	1	1,395.36	3.20	3.57	4.25	3.75	2.40	4.20	3.80
67	1	3	1	1,337.80	5.80	3.57	3.06	5.25	5.00	4.00	5.60
67	1	4	-1	1,596.27	2.80	3.14	3.06	2.50	3.40	2.80	4.20
68	2	1	-1	1,434.07	1.60	3.64	2.63	2.25	2.80	4.00	3.60

68	2	2	-1	1,447.64	4.20	3.21	2.38	3.25	3.80	4.40	5.60
68	2	3	1	1,480.47	0.80	4.50	3.69	0.50	1.80	6.00	5.20
68	2	4	1	794.70	5.60	3.79	1.56	5.00	5.60	3.60	5.40
69	1	1	1	1,707.40	4.60	3.14	3.13	4.50	5.20	3.80	5.20
69	1	2	1	1,339.89	5.20	3.00	3.25	5.25	3.60	1.80	4.60
69	1	3	1	1,391.99	3.00	3.36	2.38	2.25	2.20	4.20	5.00
69	1	4	1	1,321.46	1.20	4.57	3.38	5.00	3.80	3.60	3.40
70	2	1	1	1,133.20	4.40	4.07	3.44	3.50	4.60	4.60	5.80
70	2	2	1	1,017.74	5.00	3.86	3.56	4.50	3.40	4.40	4.60
70	2	3	-1	1,464.56	6.00	3.79	2.63	4.25	3.60	4.60	4.80
70	2	4	1	1,106.43	4.80	4.07	2.81	4.00	1.80	3.40	4.20
71	1	1	1	1,491.29	5.40	3.29	4.19	5.25	4.00	3.40	5.20
71	1	2	1	1,109.88	5.20	3.21	2.13	4.50	5.40	2.40	5.60
71	1	3	1	1,198.70	5.00	4.07	3.94	4.50	3.00	5.20	4.40
71	1	4	1	1,191.67	5.40	4.71	3.69	4.25	2.60	2.60	2.00

V1	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24
3	5.20	5.20	0.26	0.33	0.22	0.28	0.17	0.23	0.35	0.43	0.39	0.29
3	3.80	5.40	0.44	0.20	0.20	0.24	0.20	0.34	0.20	0.40	0.36	0.29
3	4.20	3.20	0.30	0.17	0.27	0.19	0.11	0.31	0.39	0.42	0.37	0.28
3	5.20	4.00	0.21	0.15	0.18	0.29	0.14	0.37	0.22	0.28	0.24	0.23
4	3.00	5.00	0.16	0.42	0.17	0.23	0.17	0.27	0.27	0.21	0.39	0.25
4	5.20	5.20	0.12	0.36	0.35	0.34	0.18	0.22	0.43	0.36	0.40	0.31
4	5.20	5.00	0.23	0.42	0.23	0.35	0.27	0.24	0.36	0.46	0.38	0.33
4	3.00	4.00	0.12	0.14	0.12	0.18	0.17	0.15	0.48	0.24	0.54	0.24
5	3.20	4.40	0.40	0.15	0.30	0.25	0.21	0.09	0.22	0.31	0.24	0.24
5	1.80	4.40	0.14	0.41	0.23	0.19	0.11	0.14	0.24	0.24	0.24	0.21
5	2.60	5.00	0.23	0.32	0.28	0.37	0.16	0.28	0.26	0.11	0.15	0.24
5	5.00	5.00	0.35	0.21	0.26	0.36	0.21	0.15	0.31	0.31	0.21	0.26
8	4.40	3.00	0.26	0.22	0.19	0.38	0.23	0.34	0.17	0.33	0.30	0.27
8	3.20	3.60	0.24	0.22	0.31	0.36	0.20	0.31	0.33	0.24	0.19	0.27
8	2.40	2.20	0.28	0.29	0.21	0.14	0.12	0.06	0.15	0.35	0.26	0.21
8	1.40	4.20	0.16	0.21	0.17	0.32	0.11	0.24	0.38	0.36	0.23	0.24
9	3.60	3.80	0.31	0.28	0.31	0.25	0.07	0.25	0.18	0.23	0.23	0.23
9	2.40	5.00	0.16	0.33	0.38	0.28	0.08	0.26	0.34	0.29	0.30	0.27
9	3.60	3.80	0.18	0.34	0.32	0.16	0.06	0.23	0.24	0.15	0.29	0.22
9	5.20	3.80	0.22	0.22	0.38	0.35	0.18	0.23	0.15	0.40	0.42	0.28
12	2.00	5.00	0.24	0.37	0.37	0.18	0.24	0.19	0.27	0.27	0.41	0.28
12	2.60	2.60	0.26	0.28	0.32	0.39	0.22	0.25	0.31	0.36	0.39	0.31
12	3.00	4.20	0.20	0.37	0.28	0.26	0.24	0.29	0.39	0.24	0.26	0.28
12	5.60	5.40	0.30	0.27	0.33	0.30	0.19	0.35	0.28	0.42	0.33	0.31
13	3.20	4.00	0.23	0.35	0.32	0.33	0.20	0.13	0.23	0.25	0.24	0.25
13	4.20	4.80	0.24	0.23	0.23	0.21	0.14	0.08	0.35	0.16	0.17	0.20
13	4.40	5.00	0.26	0.33	0.29	0.23	0.21	0.16	0.14	0.35	0.15	0.24
13	4.00	4.00	0.35	0.24	0.15	0.15	0.08	0.42	0.20	0.14	0.28	0.22
14	3.00	4.20	0.21	0.17	0.30	0.22	0.12	0.38	0.27	0.12	0.14	0.21
14	4.00	4.80	0.09	0.27	0.28	0.25	0.21	0.26	0.10	0.39	0.06	0.21

14	4.40	4.20	0.23	0.27	0.28	0.14	0.22	0.40	0.27	0.27	0.18	0.25
14	4.00	4.80	0.23	0.16	0.20	0.19	0.20	0.33	0.26	0.29	0.18	0.23
15	4.20	4.80	0.28	0.28	0.30	0.28	0.18	0.13	0.26	0.27	0.20	0.24
15	2.60	5.00	0.32	0.22	0.30	0.28	0.31	0.27	0.26	0.22	0.26	0.27
15	4.40	5.20	0.34	0.21	0.17	0.21	0.17	0.20	0.25	0.29	0.27	0.24
15	3.60	5.00	0.12	0.29	0.11	0.35	0.21	0.14	0.30	0.29	0.14	0.22
16	1.40	3.80	0.29	0.21	0.20	0.28	0.39	0.21	0.55	0.31	0.21	0.30
16	3.60	4.20	0.17	0.14	0.26	0.28	0.11	0.22	0.31	0.20	0.32	0.22
16	4.80	5.00	0.26	0.14	0.31	0.12	0.15	0.13	0.26	0.35	0.20	0.21
16	3.80	3.80	0.28	0.11	0.27	0.27	0.14	0.19	0.27	0.19	0.23	0.22
17	2.80	5.00	0.13	0.29	0.25	0.22	0.13	0.30	0.27	0.31	0.39	0.26
17	4.80	3.60	0.15	0.43	0.26	0.26	0.23	0.26	0.19	0.28	0.35	0.27
17	3.40	3.20	0.30	0.23	0.26	0.21	0.14	0.30	0.29	0.44	0.32	0.28
17	4.00	4.80	0.13	0.17	0.20	0.21	0.21	0.19	0.13	0.20	0.32	0.20
18	4.40	5.00	0.41	0.47	0.42	0.37	0.25	0.29	0.39	0.38	0.22	0.36
18	4.60	4.40	0.20	0.21	0.19	0.31	0.19	0.17	0.30	0.15	0.33	0.23
18	2.40	4.00	0.37	0.32	0.33	0.22	0.25	0.28	0.43	0.41	0.21	0.31
18	3.40	3.80	0.41	0.35	0.33	0.35	0.21	0.27	0.23	0.33	0.26	0.30
19	1.60	4.60	0.31	0.47	0.20	0.22	0.28	0.28	0.22	0.27	0.18	0.27
19	3.20	3.80	0.13	0.31	0.12	0.27	0.18	0.39	0.22	0.18	0.29	0.23
19	5.20	2.80	0.13	0.19	0.27	0.19	0.20	0.18	0.36	0.23	0.21	0.22
19	4.40	3.60	0.24	0.20	0.17	0.10	0.21	0.21	0.24	0.20	0.19	0.20
20	3.80	4.60	0.24	0.10	0.16	0.19	0.14	0.21	0.28	0.17	0.18	0.19
20	3.00	5.60	0.20	0.09	0.24	0.15	0.11	0.32	0.18	0.21	0.14	0.18
20	3.40	2.80	0.24	0.09	0.12	0.30	0.08	0.20	0.28	0.17	0.23	0.19
20	3.60	4.60	0.26	0.24	0.13	0.19	0.10	0.14	0.19	0.15	0.23	0.18
22	2.80	2.60	0.27	0.30	0.45	0.32	0.17	0.26	0.32	0.30	0.15	0.28
22	3.80	4.40	0.43	0.19	0.21	0.18	0.16	0.26	0.23	0.28	0.20	0.24
22	3.40	4.20	0.37	0.43	0.20	0.33	0.15	0.26	0.25	0.45	0.41	0.32
22	2.00	4.40	0.23	0.23	0.29	0.28	0.14	0.17	0.25	0.21	0.39	0.24
23	1.40	5.80	0.15	0.14	0.19	0.25	0.18	0.29	0.36	0.26	0.36	0.24
23	3.40	3.60	0.28	0.25	0.28	0.29	0.26	0.32	0.27	0.22	0.48	0.29
23	1.80	4.80	0.17	0.22	0.24	0.24	0.24	0.39	0.15	0.20	0.39	0.25
23	4.00	5.00	0.42	0.15	0.31	0.24	0.14	0.29	0.22	0.40	0.31	0.28
25	3.60	2.80	0.27	0.27	0.32	0.21	0.31	0.34	0.23	0.39	0.25	0.29
25	4.60	5.00	0.43	0.14	0.26	0.18	0.19	0.28	0.28	0.40	0.21	0.26
25	3.20	6.00	0.21	0.26	0.18	0.28	0.16	0.24	0.23	0.42	0.34	0.26
25	2.60	4.40	0.21	0.36	0.26	0.28	0.34	0.39	0.20	0.43	0.32	0.31
26	5.40	3.60	0.24	0.13	0.19	0.16	0.16	0.26	0.18	0.28	0.51	0.23
26	4.40	5.60	0.24	0.44	0.26	0.31	0.28	0.23	0.25	0.25	0.44	0.30
26	4.20	2.00	0.09	0.23	0.09	0.18	0.23	0.23	0.30	0.19	0.40	0.21
26	3.00	3.00	0.28	0.23	0.21	0.20	0.18	0.25	0.29	0.36	0.28	0.25
27	4.00	4.40	0.35	0.26	0.20	0.34	0.13	0.27	0.16	0.12	0.25	0.23
27	3.40	5.00	0.16	0.24	0.25	0.32	0.17	0.16	0.26	0.18	0.18	0.21
27	4.00	4.40	0.24	0.17	0.14	0.18	0.08	0.10	0.16	0.11	0.12	0.14
27	5.00	2.60	0.21	0.19	0.24	0.30	0.07	0.07	0.21	0.14	0.23	0.18

28	1.40	3.80	0.17	0.15	0.10	0.24	0.08	0.12	0.26	0.09	0.19	0.16
28	3.20	4.80	0.12	0.15	0.32	0.19	0.09	0.15	0.16	0.13	0.12	0.16
28	3.00	2.40	0.11	0.19	0.17	0.09	0.28	0.06	0.30	0.12	0.33	0.18
28	3.20	3.40	0.23	0.20	0.32	0.22	0.25	0.17	0.34	0.22	0.23	0.24
30	4.80	2.60	0.27	0.63	0.24	0.45	0.33	0.40	0.30	0.37	0.35	0.37
30	4.60	5.00	0.25	0.56	0.26	0.39	0.17	0.25	0.35	0.24	0.36	0.31
30	3.00	4.40	0.20	0.27	0.26	0.24	0.25	0.26	0.20	0.40	0.13	0.25
30	3.40	3.20	0.33	0.31	0.25	0.31	0.24	0.44	0.38	0.17	0.25	0.30
31	3.40	4.00	0.24	0.15	0.22	0.18	0.10	0.33	0.20	0.13	0.22	0.20
31	3.60	5.00	0.17	0.06	0.09	0.08	0.07	0.19	0.18	0.12	0.23	0.13
31	2.00	4.60	0.11	0.10	0.16	0.09	0.12	0.28	0.24	0.20	0.28	0.18
31	4.60	4.20	0.14	0.15	0.17	0.15	0.16	0.21	0.15	0.13	0.20	0.16
32	2.00	4.20	0.10	0.36	0.25	0.37	0.15	0.05	0.41	0.27	0.26	0.25
32	3.40	3.60	0.22	0.23	0.27	0.14	0.08	0.17	0.29	0.32	0.22	0.22
32	3.40	5.40	0.20	0.23	0.40	0.18	0.10	0.10	0.28	0.27	0.19	0.22
32	3.60	2.20	0.22	0.32	0.27	0.24	0.21	0.31	0.15	0.43	0.21	0.26
33	4.20	5.80	0.23	0.20	0.31	0.22	0.17	0.27	0.26	0.34	0.50	0.28
33	5.00	4.20	0.26	0.28	0.22	0.32	0.20	0.25	0.19	0.27	0.36	0.26
33	2.60	2.80	0.39	0.19	0.21	0.34	0.18	0.29	0.19	0.22	0.25	0.25
33	5.40	4.20	0.15	0.11	0.22	0.20	0.13	0.26	0.21	0.21	0.39	0.21
34	0.80	3.80	0.29	0.19	0.22	0.18	0.13	0.16	0.25	0.22	0.37	0.23
34	3.40	6.00	0.22	0.20	0.19	0.11	0.21	0.20	0.42	0.24	0.47	0.25
34	2.40	4.20	0.20	0.17	0.29	0.28	0.16	0.13	0.25	0.15	0.34	0.22
34	4.00	3.80	0.34	0.26	0.11	0.20	0.27	0.22	0.31	0.22	0.43	0.26
35	4.20	5.80	0.12	0.12	0.14	0.13	0.18	0.14	0.28	0.17	0.22	0.17
35	6.00	5.40	0.02	0.16	0.12	0.21	0.11	0.12	0.18	0.23	0.26	0.16
35	1.40	5.40	0.07	0.22	0.20	0.26	0.10	0.18	0.31	0.22	0.31	0.21
35	5.00	4.60	0.28	0.11	0.21	0.22	0.05	0.13	0.19	0.22	0.25	0.18
37	2.60	4.00	0.13	0.27	0.14	0.11	0.22	0.16	0.13	0.22	0.20	0.18
37	4.20	4.00	0.26	0.26	0.36	0.18	0.26	0.27	0.20	0.21	0.29	0.26
37	5.60	4.80	0.26	0.28	0.23	0.18	0.10	0.34	0.31	0.17	0.31	0.24
37	2.40	4.40	0.14	0.26	0.28	0.18	0.23	0.36	0.14	0.17	0.20	0.22
38	2.80	5.20	0.19	0.13	0.29	0.26	0.35	0.15	0.19	0.25	0.23	0.23
38	2.40	3.80	0.15	0.11	0.35	0.17	0.14	0.14	0.17	0.14	0.52	0.21
38	2.00	5.00	0.12	0.22	0.16	0.27	0.17	0.28	0.36	0.25	0.21	0.23
38	4.40	4.80	0.19	0.25	0.14	0.27	0.28	0.25	0.23	0.23	0.32	0.24
39	2.80	2.80	0.23	0.22	0.28	0.16	0.17	0.31	0.25	0.13	0.31	0.23
39	4.80	3.80	0.14	0.07	0.19	0.21	0.18	0.00	0.20	0.00	0.17	0.13
39	4.00	4.00	0.21	0.07	0.23	0.24	0.18	0.06	0.17	0.00	0.29	0.16
39	3.00	4.60	0.19	0.05	0.12	0.13	0.13	0.00	0.09	0.00	0.28	0.11
40	3.20	4.00	0.09	0.02	0.15	0.11	0.14	0.19	0.57	0.19	0.18	0.18
40	2.60	5.00	0.19	0.16	0.28	0.21	0.14	0.19	0.39	0.17	0.14	0.21
40	2.20	4.40	0.00	0.06	0.05	0.09	0.22	0.35	0.34	0.10	0.11	0.15
40	2.20	2.00	0.31	0.07	0.48	0.06	0.11	0.19	0.35	0.00	0.26	0.20
41	5.00	4.20	0.16	0.29	0.15	0.26	0.25	0.37	0.21	0.23	0.23	0.24
41	2.40	4.80	0.25	0.14	0.14	0.12	0.20	0.18	0.35	0.32	0.16	0.21

41	5.00	3.20	0.24	0.13	0.17	0.16	0.16	0.22	0.18	0.21	0.45	0.21
41	3.00	4.40	0.17	0.11	0.21	0.19	0.24	0.29	0.27	0.35	0.28	0.23
42	5.40	4.20	0.29	0.32	0.27	0.40	0.24	0.18	0.33	0.28	0.32	0.29
42	2.20	4.20	0.18	0.32	0.30	0.26	0.15	0.16	0.18	0.23	0.25	0.23
42	3.60	3.20	0.44	0.31	0.27	0.15	0.24	0.20	0.29	0.55	0.39	0.32
42	3.40	4.00	0.23	0.34	0.26	0.22	0.31	0.18	0.38	0.19	0.40	0.28
43	3.80	4.40	0.22	0.24	0.42	0.32	0.10	0.18	0.40	0.26	0.27	0.27
43	4.00	4.20	0.13	0.09	0.27	0.12	0.08	0.07	0.18	0.18	0.38	0.17
43	3.20	5.40	0.12	0.29	0.26	0.39	0.11	0.22	0.33	0.32	0.13	0.24
43	3.40	5.00	0.21	0.38	0.21	0.38	0.28	0.31	0.27	0.39	0.23	0.30
44	2.20	6.00	0.33	0.33	0.14	0.15	0.19	0.27	0.27	0.40	0.33	0.27
44	4.00	3.80	0.31	0.07	0.41	0.19	0.18	0.22	0.27	0.26	0.13	0.23
44	3.60	3.60	0.34	0.16	0.29	0.19	0.22	0.28	0.43	0.26	0.14	0.26
44	1.20	5.00	0.14	0.27	0.17	0.24	0.22	0.14	0.29	0.23	0.19	0.21
45	1.60	2.80	0.28	0.25	0.13	0.15	0.07	0.23	0.10	0.27	0.28	0.20
45	1.40	4.40	0.22	0.21	0.22	0.29	0.07	0.21	0.19	0.10	0.26	0.20
45	1.80	3.40	0.22	0.27	0.21	0.27	0.09	0.16	0.15	0.18	0.26	0.20
45	2.00	3.80	0.18	0.13	0.17	0.24	0.15	0.25	0.16	0.11	0.45	0.20
46	2.00	5.00	0.47	0.40	0.30	0.27	0.11	0.24	0.33	0.10	0.38	0.29
46	2.80	4.00	0.29	0.18	0.21	0.27	0.19	0.53	0.28	0.23	0.21	0.26
46	5.20	3.00	0.16	0.19	0.20	0.16	0.11	0.23	0.26	0.26	0.13	0.19
46	2.80	4.20	0.32	0.18	0.30	0.28	0.12	0.20	0.10	0.18	0.21	0.21
48	4.00	4.00	0.24	0.44	0.11	0.24	0.19	0.23	0.38	0.31	0.23	0.26
48	3.00	5.00	0.20	0.42	0.14	0.19	0.16	0.16	0.23	0.34	0.30	0.24
48	4.00	4.00	0.42	0.25	0.26	0.23	0.24	0.24	0.28	0.32	0.18	0.27
48	0.80	4.40	0.29	0.18	0.30	0.26	0.19	0.27	0.28	0.59	0.50	0.32
49	3.60	3.20	0.10	0.37	0.24	0.34	0.15	0.18	0.39	0.14	0.28	0.24
49	4.00	4.60	0.18	0.12	0.25	0.33	0.20	0.29	0.19	0.27	0.35	0.24
49	2.40	4.20	0.27	0.15	0.17	0.30	0.28	0.26	0.14	0.24	0.31	0.24
49	2.00	3.40	0.28	0.19	0.29	0.29	0.24	0.33	0.41	0.17	0.33	0.28
50	2.00	5.20	0.40	0.23	0.14	0.31	0.26	0.30	0.24	0.33	0.50	0.30
50	4.60	3.80	0.24	0.10	0.34	0.28	0.11	0.07	0.17	0.22	0.28	0.20
50	3.20	1.80	0.15	0.20	0.28	0.36	0.14	0.15	0.22	0.14	0.50	0.24
50	3.80	5.40	0.18	0.14	0.37	0.29	0.10	0.23	0.25	0.22	0.32	0.23
51	1.20	3.80	0.12	0.20	0.13	0.22	0.11	0.17	0.27	0.35	0.27	0.21
51	4.00	5.60	0.31	0.09	0.23	0.07	0.12	0.27	0.26	0.44	0.28	0.23
51	1.20	5.00	0.17	0.29	0.32	0.19	0.14	0.36	0.20	0.31	0.31	0.26
51	3.80	4.00	0.24	0.22	0.10	0.19	0.21	0.31	0.17	0.20	0.26	0.21
52	2.20	4.80	0.28	0.09	0.23	0.17	0.30	0.10	0.22	0.23	0.30	0.21
52	4.20	5.60	0.14	0.16	0.21	0.19	0.23	0.11	0.31	0.10	0.20	0.18
52	1.20	3.80	0.23	0.13	0.20	0.17	0.11	0.06	0.20	0.11	0.23	0.16
52	1.25	5.20	0.22	0.22	0.18	0.21	0.35	0.03	0.22	0.26	0.27	0.22
53	4.40	4.80	0.26	0.15	0.33	0.27	0.25	0.11	0.18	0.21	0.12	0.21
53	4.40	4.60	0.24	0.14	0.28	0.32	0.08	0.17	0.22	0.24	0.23	0.21
53	5.80	5.00	0.13	0.14	0.24	0.21	0.30	0.06	0.18	0.32	0.11	0.19
53	4.60	5.80	0.14	0.12	0.27	0.27	0.36	0.15	0.25	0.25	0.16	0.22

54	3.20	4.80	0.20	0.14	0.23	0.21	0.13	0.20	0.27	0.14	0.08	0.18
54	2.80	3.40	0.13	0.27	0.35	0.24	0.17	0.33	0.32	0.31	0.20	0.26
54	2.80	3.40	0.20	0.24	0.18	0.23	0.26	0.18	0.31	0.15	0.16	0.21
54	3.40	5.60	0.23	0.18	0.21	0.13	0.12	0.17	0.26	0.12	0.13	0.17
55	2.80	5.20	0.27	0.22	0.42	0.24	0.15	0.23	0.17	0.17	0.21	0.23
55	3.00	3.80	0.31	0.22	0.21	0.12	0.14	0.12	0.23	0.28	0.15	0.20
55	1.20	5.20	0.20	0.20	0.24	0.24	0.11	0.03	0.22	0.12	0.20	0.17
55	3.40	4.80	0.12	0.12	0.23	0.32	0.11	0.10	0.09	0.21	0.27	0.17
56	2.60	5.40	0.22	0.25	0.13	0.27	0.18	0.29	0.45	0.36	0.32	0.28
56	4.60	4.00	0.11	0.30	0.12	0.31	0.32	0.33	0.32	0.57	0.20	0.29
56	4.20	4.20	0.28	0.29	0.33	0.22	0.33	0.42	0.20	0.34	0.31	0.30
56	3.00	1.60	0.41	0.22	0.20	0.47	0.16	0.30	0.31	0.36	0.27	0.30
57	2.80	4.40	0.51	0.31	0.32	0.29	0.22	0.29	0.51	0.43	0.37	0.36
57	2.60	5.40	0.37	0.15	0.28	0.23	0.21	0.33	0.37	0.41	0.41	0.31
57	2.00	5.40	0.32	0.25	0.37	0.28	0.37	0.24	0.42	0.35	0.27	0.32
57	4.80	1.80	0.20	0.24	0.35	0.45	0.22	0.33	0.43	0.35	0.22	0.31
58	3.80	4.20	0.23	0.21	0.37	0.25	0.12	0.36	0.33	0.22	0.09	0.24
58	3.80	4.40	0.22	0.24	0.28	0.27	0.13	0.21	0.25	0.14	0.29	0.23
58	4.20	4.00	0.24	0.13	0.23	0.37	0.14	0.28	0.31	0.22	0.23	0.24
58	4.20	4.80	0.25	0.11	0.46	0.32	0.13	0.48	0.48	0.22	0.20	0.30
59	3.40	4.20	0.14	0.19	0.10	0.18	0.21	0.16	0.23	0.16	0.26	0.18
59	3.40	3.60	0.04	0.06	0.10	0.18	0.23	0.12	0.12	0.07	0.21	0.13
59	4.20	4.80	0.21	0.10	0.13	0.23	0.30	0.07	0.20	0.23	0.22	0.19
59	2.40	5.20	0.05	0.08	0.17	0.10	0.43	0.32	0.23	0.11	0.34	0.20
60	1.00	5.00	0.35	0.35	0.45	0.29	0.33	0.18	0.42	0.23	0.27	0.32
60	2.20	5.60	0.28	0.23	0.27	0.23	0.31	0.22	0.23	0.34	0.20	0.26
60	2.80	4.20	0.28	0.23	0.20	0.19	0.09	0.26	0.25	0.34	0.16	0.22
60	4.20	3.20	0.13	0.32	0.47	0.35	0.25	0.27	0.20	0.32	0.25	0.29
61	3.60	4.40	0.13	0.20	0.19	0.15	0.25	0.24	0.25	0.23	0.33	0.22
61	4.40	6.00	0.03	0.06	0.05	0.08	0.26	0.27	0.35	0.10	0.10	0.15
61	3.40	4.60	0.11	0.25	0.23	0.13	0.23	0.20	0.15	0.14	0.12	0.17
61	2.80	4.40	0.09	0.15	0.16	0.10	0.28	0.14	0.20	0.14	0.18	0.16
62	4.20	5.00	0.19	0.18	0.09	0.30	0.10	0.10	0.21	0.16	0.12	0.16
62	5.80	4.60	0.18	0.16	0.22	0.17	0.11	0.21	0.21	0.07	0.22	0.17
62	3.60	4.40	0.21	0.10	0.15	0.24	0.10	0.15	0.26	0.14	0.37	0.19
62	3.60	4.40	0.46	0.09	0.23	0.17	0.11	0.16	0.31	0.06	0.15	0.19
63	3.80	2.60	0.14	0.41	0.18	0.46	0.13	0.12	0.20	0.13	0.41	0.24
63	1.20	5.00	0.07	0.27	0.13	0.30	0.26	0.41	0.39	0.23	0.41	0.27
63	5.60	3.80	0.21	0.35	0.17	0.18	0.22	0.24	0.18	0.09	0.22	0.21
63	3.80	5.00	0.18	0.21	0.22	0.28	0.18	0.05	0.33	0.18	0.28	0.21
64	5.80	4.00	0.19	0.45	0.17	0.32	0.16	0.18	0.40	0.21	0.28	0.26
64	4.00	3.80	0.30	0.35	0.35	0.40	0.37	0.34	0.54	0.11	0.34	0.35
64	5.00	4.60	0.34	0.31	0.25	0.23	0.27	0.33	0.31	0.27	0.36	0.30
64	4.00	1.40	0.32	0.16	0.25	0.31	0.31	0.19	0.23	0.31	0.21	0.25
65	1.60	3.80	0.00	0.02	0.00	0.28	0.29	0.24	0.23	0.09	0.38	0.17
65	0.40	4.40	0.00	0.06	0.02	0.17	0.18	0.18	0.47	0.40	0.18	0.19

65	5.00	5.00	0.18	0.00	0.05	0.14	0.30	0.16	0.14	0.23	0.32	0.17
65	1.80	4.40	0.18	0.05	0.02	0.16	0.41	0.14	0.19	0.20	0.20	0.17
66	4.60	4.60	0.27	0.25	0.29	0.20	0.10	0.09	0.25	0.33	0.09	0.21
66	3.00	4.00	0.34	0.20	0.42	0.43	0.43	0.19	0.21	0.25	0.29	0.31
66	3.60	5.00	0.07	0.12	0.27	0.37	0.20	0.10	0.26	0.20	0.14	0.19
66	2.00	4.40	0.23	0.23	0.19	0.30	0.28	0.16	0.13	0.27	0.24	0.22
67	2.20	2.60	0.41	0.25	0.27	0.18	0.16	0.24	0.19	0.33	0.23	0.25
67	3.60	3.60	0.27	0.31	0.34	0.13	0.26	0.37	0.20	0.24	0.10	0.25
67	1.40	6.00	0.27	0.10	0.18	0.14	0.07	0.19	0.12	0.16	0.10	0.15
67	2.20	4.20	0.14	0.32	0.28	0.16	0.17	0.44	0.16	0.13	0.14	0.22
68	0.20	4.60	0.15	0.23	0.15	0.24	0.50	0.40	0.44	0.36	0.49	0.33
68	2.60	3.60	0.20	0.25	0.18	0.20	0.11	0.22	0.25	0.28	0.25	0.22
68	4.00	4.60	0.21	0.17	0.32	0.21	0.13	0.28	0.16	0.21	0.20	0.21
68	3.40	5.40	0.19	0.20	0.06	0.25	0.10	0.20	0.07	0.22	0.18	0.16
69	2.00	5.40	0.20	0.33	0.24	0.19	0.10	0.15	0.52	0.33	0.34	0.27
69	3.20	3.60	0.15	0.20	0.27	0.25	0.09	0.20	0.38	0.34	0.24	0.24
69	4.20	2.20	0.32	0.07	0.48	0.20	0.38	0.11	0.39	0.21	0.42	0.29
69	5.40	5.00	0.09	0.13	0.27	0.18	0.21	0.13	0.21	0.18	0.35	0.20
70	3.60	3.80	0.27	0.38	0.45	0.34	0.27	0.51	0.57	0.34	0.24	0.38
70	1.80	4.60	0.21	0.15	0.41	0.16	0.20	0.18	0.32	0.27	0.24	0.24
70	2.20	6.00	0.36	0.32	0.27	0.42	0.35	0.27	0.40	0.37	0.29	0.34
70	3.40	3.80	0.34	0.25	0.26	0.35	0.17	0.26	0.43	0.23	0.25	0.28
71	3.80	3.80	0.34	0.26	0.29	0.30	0.19	0.18	0.25	0.27	0.34	0.27
71	2.80	3.80	0.43	0.34	0.29	0.38	0.21	0.26	0.34	0.38	0.25	0.32
71	3.20	5.60	0.32	0.29	0.30	0.37	0.13	0.31	0.34	0.31	0.25	0.29
71	4.60	3.40	0.35	0.29	0.24	0.33	0.40	0.31	0.37	0.31	0.25	0.32

Note. V1 = group number. V2 = TASK (1 = cooperative, 2 = competitive).
V3 = person in group. V4 = Gender (1 = female, -1 = male). V5 = Time in seconds to make ratings. V6 = satisfaction with social life. V7 = positive relations with others. V8 = need to evaluate. V9 = happiness. V10 = extraversion. V11 = neuroticism. V12 = agreeableness. V13 = conscientiousness. V14 = openness. V15 = accuracy rating others as a boss. V16 = accuracy rating others as an employee. V17 = accuracy rating others as a mentor. V18 = accuracy rating others as a student. V19 = accuracy rating others as a friend. V20 = accuracy rating others as an enemy. V21 = accuracy rating others as an ally. V22 = accuracy rating others as a challenger. V23 = accuracy rating others as a stranger. V24 = accuracy rating others on average across 9 types of persons.

Table 13

Data of Main Variables from Experiment 3.

V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13
2	1	1	16	1	1,654.67	2.80	3.71	2.31	4.00	3.00	3.60	3.80
2	1	2	19	1	1,875.47	4.20	5.29	3.69	3.75	3.40	4.20	3.80
2	1	3	24	1	1,061.64	3.20	5.36	3.31	3.25	4.40	5.00	5.20
3	1	1	22	1	1,493.34	4.20	3.57	3.00	3.00	4.20	4.80	3.60
3	1	2	22	1	1,031.55	5.00	5.43	3.19	4.75	4.60	4.40	5.20
3	1	3	24	1	1,311.57	3.40	4.57	3.31	5.75	4.00	2.60	4.80
4	1	1	19	1	1,792.01	5.20	5.36	3.13	4.00	5.40	5.40	4.60
4	1	2	28	1	1,880.16	3.40	4.71	1.56	4.25	1.20	4.00	4.60
4	1	3	23	1	1,763.42	5.80	5.71	2.88	5.00	5.40	3.40	5.20
6	1	1	28	1	1,362.89	5.00	4.93	2.13	5.00	4.00	1.40	3.60
6	1	2	19	-1	1,391.32	5.80	3.71	2.94	4.75	4.00	3.20	5.00
6	1	3	19	1	1,584.76	5.80	4.93	2.63	5.25	5.40	0.60	4.80
7	1	1	22	1	1,204.51	5.00	4.50	4.94	4.75	6.00	4.00	3.80
7	1	2	25	1	1,536.40	6.00	5.64	2.69	4.25	3.00	3.20	5.40
7	1	3	33	1	1,332.03	5.00	4.64	2.25	3.25	3.40	3.80	3.80
8	1	1	30	1	1,382.89	4.20	5.36	2.25	3.25	2.20	4.60	5.40
8	1	2	30	1	1,296.48	5.00	5.07	3.63	5.50	5.20	3.40	4.20
8	1	3	16	1	1,048.43	3.20	3.71	3.25	4.00	4.60	4.80	3.20
9	1	1	22	1	1,687.22	5.60	5.79	4.25	6.00	5.60	0.60	4.60
9	1	2	22	-1	1,730.48	5.00	5.00	3.06	4.75	4.40	2.00	4.80
9	1	3	21	1	1,380.19	4.80	3.57	3.56	5.00	4.00	3.40	3.80
11	1	1	20	1	1,456.64	5.40	5.07	3.88	4.75	3.80	3.00	4.40
11	1	2	30	1	1,102.47	4.20	4.29	3.31	3.50	4.60	1.20	3.20
11	1	3	19	1	1,446.65	3.60	3.64	3.38	4.00	2.40	3.40	3.80
12	1	1	19	-1	2,271.20	5.20	5.21	3.75	5.75	2.20	3.00	5.40
12	1	2	23	-1	1,407.73	4.60	3.29	4.38	5.50	5.20	4.20	4.80
12	1	3	19	1	2,271.20	5.60	4.93	2.75	5.25	2.00	3.80	5.00
13	1	1	22	1	1,337.98	2.00	4.71	3.50	4.00	4.40	4.00	5.00
13	1	2	23	1	1,407.98	4.60	5.86	2.44	5.00	4.40	1.80	5.40
13	1	3	24	1	1,148.79	5.20	3.57	2.88	2.75	2.00	4.40	4.80
14	1	1	21	-1	1,227.43	4.60	5.00	4.00	5.00	5.60	2.60	5.00
14	1	2	23	-1	952.39	3.20	3.14	3.63	3.25	2.60	3.80	2.80
14	1	3	20	-1	1,553.87	2.80	4.00	3.81	3.25	2.60	3.00	4.20
16	1	1	28	-1	1,456.45	5.60	4.43	2.13	4.50	2.60	1.40	4.80
16	1	2	27	1	1,285.70	4.00	4.50	3.00	4.25	2.40	2.20	4.00
16	1	3	23	1	1,449.81	5.00	4.57	1.75	5.00	3.40	3.20	4.80

17	1	1	22	1	1,309.58	5.00	4.29	3.00	3.75	1.80	3.60	3.80
17	1	2	20	-1	1,310.55	4.60	3.50	2.94	3.50	5.00	4.60	4.40
17	1	3	14	-1	1,051.15	4.80	5.57	5.44	4.75	5.40	4.20	6.00
18	1	1	22	1	1,606.42	5.40	4.50	2.69	5.00	4.20	2.00	5.20
18	1	2	24	1	1,263.09	5.20	5.07	4.44	2.75	4.80	2.80	5.80
18	1	3	26	1	1,141.63	5.60	5.36	3.75	5.75	4.20	2.80	4.60
20	1	1	28	1	1,738.80	4.60	4.07	2.00	3.75	2.80	3.80	4.60
20	1	2	23	1	1,503.60	4.80	5.43	3.88	5.25	4.40	5.20	5.80
20	1	3	22	1	1,313.82	5.00	4.71	1.56	4.00	4.80	4.60	5.20
21	1	1	23	-1	1,269.46	3.80	3.43	3.13	2.75	4.00	5.60	4.40
21	1	2	28	-1	1,077.11	5.00	4.00	2.63	3.00	5.40	1.80	5.00
21	1	3	20	1	1,824.55	5.00	5.14	3.88	4.00	5.40	4.60	5.40
22	1	1	26	1	890.64	1.00	3.29	4.19	2.00	5.20	5.60	2.00
22	1	2	29	-1	1,398.06	3.20	3.36	2.75	3.00	2.20	3.20	3.20
22	1	3	23	1	1,593.56	3.00	2.86	1.50	4.00	3.20	1.80	5.00
23	1	1	26	-1	1,642.13	2.60	4.07	3.44	2.25	2.00	5.60	4.60
23	1	2	31	-1	1,182.61	5.20	5.21	4.19	5.75	4.00	0.60	6.00
23	1	3	18	1	1,469.92	4.80	4.50	3.19	4.25	4.80	4.40	4.00
24	1	1	18	-1	1,702.42	5.20	4.14	3.19	3.75	2.00	2.20	3.40
24	1	2	22	1	1,441.45	3.00	3.86	2.38	3.25	3.00	3.80	3.80
24	1	3	16	1	1,981.55	5.20	4.29	2.31	5.50	3.80	3.40	4.60
25	1	1	23	-1	1,758.52	4.80	4.57	3.00	4.00	2.40	2.40	4.80
25	1	2	30	1	1,677.94	5.60	5.71	2.44	5.50	3.60	1.00	4.80
25	1	3	20	1	1,752.64	5.20	5.29	3.44	3.75	4.00	3.60	5.60
26	1	1	30	1	1,425.41	3.80	4.00	1.63	3.25	1.80	2.80	5.20
26	1	2	26	1	1,280.93	2.60	2.93	1.38	2.00	0.40	4.00	3.60
26	1	3	29	1	1,408.27	5.20	5.36	2.50	5.50	3.40	3.60	5.40
27	1	1	18	1	1,304.26	6.00	5.50	2.63	5.00	4.40	2.00	4.80
27	1	2	27	1	1,367.74	5.80	6.00	2.88	5.00	5.60	5.20	5.80
27	1	3	27	-1	1,876.54	5.40	4.93	5.56	2.00	4.40	5.40	4.60
28	1	1	12	1	1,815.12	3.40	3.29	2.88	4.00	2.20	5.40	4.80
28	1	2	20	1	1,652.65	5.20	4.14	2.75	5.00	3.20	2.40	5.40
28	1	3	26	1	1,414.10	0.80	2.43	4.50	2.75	4.80	5.00	2.20
29	1	1	28	-1	1,096.26	5.40	4.29	2.81	5.00	3.80	1.40	5.00
29	1	2	25	1	1,088.39	4.60	5.86	3.50	5.25	4.60	2.60	6.00
29	1	3	34	-1	1,319.52	6.00	5.50	5.25	4.75	5.80	3.60	5.60
30	1	1	23	-1	2,078.49	3.20	3.79	1.38	4.00	3.00	0.60	4.60
30	1	2	22	-1	1,610.22	3.60	5.07	3.63	4.00	4.20	1.60	4.60
30	1	3	30	1	1,226.99	3.60	4.50	3.06	4.25	2.20	4.60	3.80
31	1	1	28	1	959.59	4.80	5.00	3.31	3.00	3.80	5.40	5.40
31	1	2	22	1	1,873.31	4.40	3.50	2.81	3.75	3.00	4.20	5.00

31	1	3	28	-1	1,329.00	2.40	4.50	4.88	2.50	4.20	4.00	4.00
32	1	1	19	1	1,195.16	4.40	4.43	3.31	3.75	5.20	4.20	4.80
32	1	2	15	1	1,826.45	2.80	4.50	1.88	4.50	0.60	3.60	4.80
32	1	3	18	1	1,134.17	3.40	4.29	2.94	5.25	5.20	1.80	5.80
33	1	1	25	1	1,743.70	5.00	5.57	2.88	1.00	4.80	4.20	4.60
33	1	2	18	1	971.92	2.20	4.36	4.75	1.75	4.20	5.60	5.20
33	1	3	19	1	1,313.36	3.00	3.71	2.56	3.25	2.60	4.40	3.80

V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26
2.40	3.40	0.29	0.35	0.20	0.22	0.21	0.15	0.39	0.40	0.18	0.36	0.17
2.40	2.40	0.28	0.26	0.36	0.14	0.22	0.15	0.46	0.33	0.33	0.34	0.15
1.20	5.00	0.48	0.34	0.32	0.23	0.23	0.21	0.25	0.52	0.24	0.15	0.39
3.00	3.80	0.12	0.29	0.26	0.27	0.32	0.20	0.20	0.24	0.12	0.17	0.16
3.40	4.20	0.27	0.09	0.08	0.22	0.05	0.15	0.24	0.17	0.22	0.13	0.21
2.80	3.60	0.14	0.12	0.28	0.21	0.05	0.09	0.37	0.05	0.13	0.06	0.28
4.20	4.60	0.16	0.15	0.26	0.27	0.08	0.05	0.18	0.05	0.09	0.08	0.24
4.00	3.80	0.23	0.11	0.26	0.11	0.19	0.18	0.26	0.15	0.08	0.21	0.18
1.40	5.00	0.22	0.08	0.34	0.37	0.23	0.19	0.31	0.05	0.14	0.08	0.00
1.60	4.00	0.27	0.22	0.12	0.20	0.23	0.00	0.15	0.22	0.14	0.12	0.15
4.00	3.80	0.12	0.08	0.21	0.39	0.15	0.08	0.39	0.36	0.30	0.13	0.21
2.00	3.80	0.13	0.22	0.21	0.32	0.19	0.00	0.26	0.22	0.22	0.16	0.16
2.80	5.00	0.35	0.50	0.31	0.47	0.26	0.44	0.42	0.14	0.38	0.21	0.24
3.40	5.40	0.25	0.26	0.23	0.15	0.21	0.41	0.37	0.12	0.38	0.28	0.21
4.80	4.80	0.26	0.27	0.10	0.30	0.12	0.36	0.44	0.15	0.20	0.33	0.35
4.00	4.40	0.36	0.15	0.37	0.34	0.17	0.24	0.27	0.59	0.45	0.23	0.20
4.60	3.80	0.26	0.24	0.35	0.32	0.17	0.26	0.14	0.49	0.14	0.12	0.08
3.00	3.40	0.32	0.49	0.23	0.38	0.17	0.30	0.49	0.41	0.32	0.15	0.48
1.80	5.40	0.34	0.27	0.25	0.43	0.14	0.16	0.30	0.18	0.17	0.08	0.06
2.60	4.40	0.15	0.36	0.29	0.28	0.14	0.05	0.30	0.10	0.08	0.08	0.08
1.60	3.80	0.27	0.35	0.35	0.19	0.21	0.09	0.19	0.10	0.28	0.16	0.13
3.60	4.60	0.08	0.32	0.34	0.27	0.17	0.14	0.27	0.28	0.21	0.15	0.08
5.40	0.60	0.21	0.25	0.34	0.45	0.05	0.09	0.15	0.12	0.43	0.33	0.38
3.40	3.40	0.12	0.12	0.28	0.24	0.08	0.10	0.17	0.17	0.31	0.12	0.16
2.60	5.80	0.30	0.20	0.08	0.29	0.30	0.15	0.18	0.26	0.18	0.33	0.18
2.20	5.80	0.32	0.19	0.34	0.38	0.28	0.23	0.17	0.26	0.17	0.06	0.25
1.80	5.60	0.37	0.35	0.14	0.34	0.15	0.23	0.34	0.24	0.25	0.13	0.38
3.20	4.80	0.34	0.44	0.54	0.35	0.35	0.23	0.28	0.12	0.47	0.12	0.16
4.20	5.40	0.43	0.27	0.21	0.32	0.15	0.05	0.39	0.17	0.21	0.23	0.10
4.40	5.60	0.26	0.21	0.12	0.32	0.10	0.12	0.35	0.17	0.26	0.15	0.26
3.40	5.80	0.22	0.26	0.27	0.46	0.35	0.24	0.36	0.36	0.25	0.35	0.18
2.40	3.60	0.37	0.20	0.33	0.32	0.35	0.18	0.37	0.32	0.59	0.26	0.34

3.40	5.00	0.14	0.12	0.29	0.30	0.18	0.25	0.43	0.20	0.36	0.06	0.18
2.80	3.20	0.00	0.38	0.13	0.21	0.19	0.23	0.15	0.13	0.20	0.08	0.15
2.40	2.60	0.21	0.23	0.17	0.41	0.14	0.20	0.18	0.22	0.13	0.06	0.16
3.20	4.40	0.49	0.40	0.06	0.42	0.15	0.10	0.11	0.00	0.22	0.13	0.12
1.60	3.60	0.40	0.26	0.33	0.25	0.12	0.17	0.40	0.25	0.48	0.21	0.18
5.40	4.40	0.38	0.36	0.32	0.26	0.10	0.25	0.47	0.41	0.69	0.06	0.51
3.60	5.80	0.18	0.41	0.41	0.23	0.12	0.52	0.68	0.29	0.32	0.30	0.44
1.60	4.20	0.35	0.32	0.10	0.25	0.23	0.19	0.55	0.29	0.25	0.19	0.16
1.20	5.80	0.22	0.09	0.14	0.45	0.21	0.16	0.36	0.06	0.33	0.46	0.48
2.20	3.60	0.05	0.09	0.12	0.17	0.08	0.16	0.25	0.06	0.55	0.20	0.13
3.20	2.80	0.14	0.22	0.17	0.22	0.08	0.00	0.25	0.08	0.30	0.12	0.32
2.80	4.80	0.29	0.05	0.29	0.15	0.13	0.10	0.20	0.14	0.08	0.13	0.12
1.60	2.80	0.16	0.05	0.21	0.13	0.17	0.10	0.16	0.19	0.24	0.16	0.16
1.80	4.20	0.29	0.17	0.33	0.36	0.47	0.75	0.45	0.20	0.36	0.12	0.13
3.80	5.40	0.23	0.26	0.28	0.45	0.36	0.51	0.36	0.20	0.25	0.17	0.31
4.20	4.60	0.33	0.26	0.20	0.37	0.23	0.64	0.24	0.46	0.33	0.13	0.29
5.00	3.80	0.38	0.14	0.42	0.41	0.39	0.54	0.28	0.25	0.17	0.24	0.17
3.60	3.80	0.08	0.30	0.31	0.23	0.20	0.08	0.19	0.35	0.37	0.33	0.24
5.60	3.60	0.05	0.35	0.17	0.25	0.24	0.11	0.14	0.15	0.47	0.06	0.00
3.80	4.00	0.26	0.29	0.20	0.18	0.20	0.11	0.15	0.28	0.39	0.12	0.15
3.00	5.00	0.28	0.24	0.30	0.24	0.09	0.08	0.08	0.14	0.18	0.29	0.44
3.60	3.80	0.30	0.26	0.37	0.25	0.20	0.15	0.14	0.29	0.31	0.13	0.12
3.60	4.00	0.19	0.20	0.32	0.34	0.05	0.15	0.39	0.17	0.30	0.19	0.12
3.80	3.20	0.11	0.28	0.10	0.38	0.15	0.15	0.15	0.20	0.30	0.16	0.13
3.40	2.20	0.06	0.32	0.23	0.34	0.10	0.10	0.20	0.20	0.28	0.39	0.00
3.00	3.40	0.10	0.38	0.48	0.30	0.14	0.15	0.10	0.15	0.20	0.19	0.06
2.60	6.00	0.13	0.22	0.19	0.27	0.08	0.15	0.17	0.17	0.19	0.34	0.12
5.00	4.20	0.42	0.28	0.56	0.29	0.37	0.13	0.13	0.09	0.05	0.06	0.06
1.60	5.00	0.19	0.15	0.27	0.23	0.26	0.23	0.29	0.08	0.21	0.28	0.21
1.80	4.60	0.22	0.12	0.11	0.20	0.15	0.25	0.18	0.10	0.24	0.08	0.08
6.00	3.80	0.08	0.16	0.17	0.31	0.18	0.19	0.17	0.12	0.08	0.12	0.13
3.40	3.60	0.26	0.30	0.28	0.25	0.42	0.23	0.26	0.20	0.71	0.21	0.08
5.00	4.40	0.24	0.13	0.37	0.32	0.20	0.28	0.44	0.21	0.39	0.13	0.21
5.20	5.00	0.20	0.35	0.34	0.30	0.34	0.30	0.15	0.25	0.38	0.27	0.20
2.80	3.80	0.49	0.44	0.33	0.36	0.14	0.14	0.21	0.27	0.36	0.32	0.32
3.40	3.80	0.34	0.15	0.33	0.29	0.22	0.14	0.31	0.29	0.26	0.21	0.16
3.60	2.60	0.52	0.37	0.32	0.26	0.11	0.15	0.13	0.35	0.33	0.12	0.13
3.80	5.40	0.08	0.31	0.26	0.18	0.35	0.15	0.25	0.24	0.12	0.34	0.10
4.20	4.20	0.18	0.17	0.22	0.25	0.09	0.05	0.10	0.26	0.18	0.12	0.31
5.00	6.00	0.22	0.30	0.35	0.21	0.23	0.05	0.14	0.28	0.11	0.13	0.12
4.20	4.20	0.08	0.08	0.15	0.15	0.09	0.14	0.21	0.17	0.15	0.12	0.10

4.60	3.80	0.21	0.08	0.15	0.09	0.20	0.12	0.21	0.15	0.10	0.14	0.17
2.80	5.20	0.21	0.05	0.32	0.17	0.41	0.12	0.30	0.20	0.15	0.29	0.21
4.00	4.00	0.22	0.08	0.34	0.13	0.31	0.08	0.41	0.26	0.22	0.18	0.06
3.40	3.40	0.47	0.29	0.37	0.35	0.30	0.16	0.23	0.24	0.27	0.31	0.18
1.60	5.40	0.26	0.21	0.31	0.22	0.24	0.19	0.51	0.25	0.10	0.24	0.10
2.40	3.40	0.30	0.20	0.23	0.30	0.16	0.50	0.33	0.37	0.27	0.20	0.21
3.80	4.20	0.16	0.19	0.20	0.12	0.15	0.32	0.17	0.33	0.26	0.16	0.14
2.40	4.00	0.15	0.34	0.29	0.26	0.11	0.31	0.27	0.21	0.35	0.15	0.17
3.40	4.00	0.33	0.33	0.36	0.25	0.15	0.20	0.27	0.41	0.23	0.13	0.16
2.40	5.60	0.21	0.35	0.10	0.29	0.06	0.17	0.15	0.27	0.35	0.21	0.15
2.20	3.60	0.21	0.30	0.15	0.24	0.14	0.21	0.15	0.22	0.30	0.18	0.15

V27	V28	V29	V30	V31	V32
0.12	0.08	0.22	0.27	0.24	0.19
0.21	0.14	0.31	0.28	0.26	0.23
0.17	0.17	0.17	0.31	0.28	0.21
0.18	0.12	0.27	0.22	0.21	0.18
0.12	0.13	0.14	0.17	0.16	0.14
0.23	0.29	0.21	0.16	0.18	0.22
0.08	0.16	0.25	0.14	0.15	0.16
0.13	0.24	0.13	0.18	0.18	0.18
0.00	0.13	0.00	0.22	0.15	0.04
0.06	0.16	0.12	0.17	0.15	0.12
0.18	0.06	0.12	0.23	0.20	0.14
0.13	0.16	0.00	0.19	0.17	0.12
0.13	0.15	0.18	0.36	0.30	0.18
0.14	0.24	0.18	0.26	0.24	0.21
0.22	0.36	0.34	0.25	0.27	0.32
0.34	0.21	0.08	0.33	0.29	0.21
0.13	0.08	0.28	0.26	0.22	0.14
0.13	0.51	0.33	0.35	0.34	0.32
0.12	0.26	0.13	0.25	0.21	0.13
0.41	0.21	0.10	0.20	0.19	0.17
0.08	0.16	0.23	0.23	0.20	0.15
0.00	0.08	0.12	0.23	0.18	0.09
0.50	0.34	0.40	0.23	0.29	0.39
0.21	0.17	0.12	0.18	0.17	0.16
0.16	0.06	0.19	0.22	0.20	0.19
0.20	0.13	0.27	0.26	0.23	0.18
0.18	0.28	0.21	0.27	0.26	0.24
0.21	0.23	0.18	0.35	0.29	0.18

0.16	0.13	0.24	0.24	0.22	0.17
0.24	0.37	0.12	0.21	0.22	0.23
0.18	0.13	0.29	0.31	0.28	0.23
0.38	0.38	0.23	0.34	0.33	0.32
0.06	0.16	0.23	0.25	0.21	0.14
0.21	0.45	0.45	0.18	0.21	0.27
0.16	0.15	0.14	0.21	0.18	0.14
0.31	0.21	0.46	0.22	0.23	0.24
0.12	0.08	0.18	0.29	0.24	0.16
0.21	0.28	0.32	0.36	0.33	0.28
0.39	0.31	0.21	0.35	0.34	0.33
0.15	0.29	0.20	0.28	0.25	0.20
0.25	0.10	0.16	0.23	0.25	0.29
0.06	0.00	0.10	0.17	0.14	0.10
0.14	0.08	0.32	0.16	0.17	0.20
0.34	0.06	0.10	0.16	0.16	0.15
0.16	0.16	0.22	0.16	0.16	0.17
0.23	0.18	0.13	0.37	0.30	0.16
0.12	0.26	0.22	0.32	0.29	0.22
0.33	0.14	0.28	0.34	0.30	0.24
0.32	0.31	0.25	0.33	0.31	0.26
0.13	0.15	0.06	0.23	0.22	0.18
0.00	0.00	0.06	0.21	0.15	0.03
0.12	0.21	0.16	0.23	0.20	0.15
0.31	0.08	0.39	0.18	0.22	0.30
0.00	0.12	0.06	0.25	0.19	0.09
0.16	0.31	0.28	0.23	0.23	0.21
0.13	0.06	0.14	0.20	0.18	0.12
0.46	0.17	0.23	0.20	0.22	0.25
0.06	0.13	0.06	0.22	0.18	0.10
0.12	0.27	0.26	0.18	0.19	0.22
0.00	0.15	0.17	0.26	0.20	0.09
0.26	0.16	0.13	0.21	0.21	0.21
0.06	0.30	0.24	0.18	0.17	0.15
0.06	0.15	0.13	0.16	0.15	0.12
0.06	0.17	0.13	0.32	0.25	0.13
0.23	0.31	0.29	0.28	0.27	0.23
0.13	0.19	0.18	0.29	0.26	0.19
0.22	0.28	0.15	0.30	0.29	0.26
0.31	0.21	0.18	0.26	0.24	0.22
0.12	0.29	0.16	0.28	0.24	0.16

0.22	0.12	0.42	0.21	0.22	0.24
0.18	0.18	0.25	0.17	0.18	0.21
0.06	0.21	0.18	0.21	0.19	0.14
0.06	0.19	0.17	0.14	0.13	0.13
0.12	0.12	0.14	0.15	0.14	0.14
0.08	0.19	0.08	0.22	0.20	0.17
0.12	0.06	0.08	0.23	0.18	0.10
0.25	0.17	0.29	0.30	0.28	0.24
0.35	0.13	0.06	0.25	0.23	0.18
0.08	0.16	0.13	0.30	0.25	0.16
0.17	0.13	0.30	0.21	0.20	0.18
0.15	0.23	0.12	0.26	0.22	0.17
0.26	0.24	0.17	0.28	0.25	0.19
0.24	0.18	0.25	0.22	0.21	0.21
0.12	0.06	0.14	0.21	0.19	0.13

Note. V1 = group number. V2 = TASK (1 = cooperative, 2 = competitive).
V3 = person in group. V4 = Wonderlic score. V5 = Gender (1 = females, -1 = males).
V6 = Time in seconds to make ratings. V7 = satisfaction with social life. V8 = positive relations with others. V9 = need to evaluate. V10 = happiness. V11 = extraversion.
V12 = neuroticism. V13 = agreeableness. V14 = conscientiousness. V15 = openness.
V16 = accuracy rating others as a boss. V17 = accuracy rating others as an employee.
V18 = accuracy rating others as a mentor. V19 = accuracy rating others as a student.
V20 = accuracy rating others as a friend. V21 = accuracy rating others as an enemy.
V22 = accuracy rating others as an ally. V23 = accuracy rating others as a challenger.
V24 = accuracy rating others as a stranger. V25 = accuracy rating others as extraverted.
V26 = accuracy rating others as neurotic. V27 = accuracy rating others as agreeable.
V28 = accuracy rating others as conscientious. V29 = accuracy rating others as open to new experiences. V30 = accuracy rating others on average across 9 types of persons.
V31 = accuracy rating others on average across all ratings. V32 = accuracy rating others on average across the Big Five.