THE ROLE OF ADJUSTMENT IN ACCURATE INTERPERSONAL IMPRESSIONS

by

JACQUELINE LAUREN HUMAN

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ABSTRACT

Accurate understanding between individuals is assumed to be associated with enhanced personal and interpersonal adjustment. Across a series of studies, we utilized the social accuracy model (Biesanz, 2007, 2009) to examine the relationship between perceiver and target adjustment with (a) impressionistic accuracy, the formation of accurate personality impressions across a wide range of attributes and (b) two Cronbachian-like (1955) components of accuracy – distinctive and normative accuracy. Across three round-robin studies, involving new acquaintances (Studies 1 and 2) and close peers (Study 3), diverse measures of adjustment were associated with components of perceptive accuracy (the good judge) and expressive accuracy (the good target). Specifically, perceiver adjustment was linked to normative accuracy, while target adjustment was linked to distinctive accuracy. Study 4 found that satisfaction with one's romantic partner was associated with being viewed more distinctively by observers. Thus, across different social contexts and measures of adjustment, including behavioural and informant-reported indices, elements of perceptive and expressive accuracy were strongly and consistently linked to adjustment. In sum, well-adjusted individuals tend to view others normatively and in turn are viewed distinctively.

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INTRODUCTION

Given the ubiquity of social interactions in daily life, accurately understanding others and being understood by others is essential for successful individual and group functioning. Indeed, the ecological approach to social perception argues that accurate interpersonal impressions have adaptive value (Gibson, 1979; Hasleton & Funder, 2006; Schaller, 2008; Zebrowitz & Collins, 1997; Zebrowitz & Montepare, 2006). For instance, adequately expressing and understanding cues in social interactions can alert one to imminent threats (Öhman & Mineka, 2001), enable one to effectively navigate social hierarchies (Anderson, Srivastava, Beer, Spataro, & Chatman, 2006), and can foster a sense of belonging (Pickett, Gardner, & Knowles, 2004). Perhaps it is not surprising then that people on average are very successful at rapidly emitting and perceiving a wide range of information (e.g., Ambady, Hallahan, & Rosenthal, 1995; Ambady & Skowronski, 2008; Ekman & Friesen, 1971; Kenny, 1994).

Interestingly, despite a general tendency for impressions to be accurate, some seem to be particularly skilled at forming accurate impressions, being high in *perceptive accuracy* or being a *good judge* (Funder, 1999; Hall & Bernieri, 2001; Ickes, 1997), while others seem to be especially skilled at effectively and clearly expressing themselves, being high in *expressive accuracy*, also termed the *good target* (Funder, 1999), *judgablility* (Colvin, 1993a, 1993b*), expressiveness* (Riggio & Friedman, 1986*), legibility* (Ambady et al., 1995), and *readability* (Thomas & Maio, 2008). What attributes might characterize particularly expressive and perceptive individuals? If accurate impressions are necessary for social functioning, perhaps such individuals would experience even greater interpersonal and personal adjustment. Despite the fact that perceptive accuracy has a long history in personality psychology (Adams, 1927; Allport 1937; Taft, 1956; Vernon, 1933), and that expressive accuracy has been argued to be the most important component in interpersonal impressions (Allport, 1961), there is still much to be learned about the role adjustment plays in the accuracy of interpersonal impressions.

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Adjustment is broadly defined here as positive intrapersonal functioning, such as high self-esteem and satisfaction with life, as well as positive interpersonal experiences, evidenced by satisfying relationships and interactions with others (cf. Kurt & Paulhus, 2008). The relationship between accuracy and adjustment is likely complex and bi-directional, with accuracy potentially improving interpersonal relationships, and in turn, personal functioning (Bernieri, 2001), and adjustment itself likely enabling effective perception of others and expression of the self (e.g., Colvin, 1993a; Letzring, 2008). These two perspectives provide theoretical support for the general hypothesis that perceptive and expressive accuracy are associated with both personal and interpersonal aspects of adjustment.

Interpersonal impressions have been conceptualized in many ways, ranging from the perception and expression of immediate states, such as emotions and current thoughts, to the formation of broader impressions of another's consistent personality traits and behavioural signatures. Examples of impressions of immediate states include nonverbal decoding tasks that assess one's ability at sending or receiving information from cues such as facial expressions or body language (e.g., Costanzo & Archer, 1989; Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979), and empathic accuracy tasks that involve perceiving an interaction partner's current thoughts and feelings (Ickes, 1997). Of note, although such tasks are assumed to assess overall judgmental accuracy, they appear to be assessing different specific abilities (Ambady et al., 1995; Colvin & Bundick, 2001; Hall, 2001). Personality perception, however, has been described as a more general inferential task, involving skill in basic expression and detection as well as more complex and general abilities, such as integration and interpretation (Colvin & Bundick, 2001). These two broad categories map on quite nicely with two forms of accuracy highlighted by other researchers: global and circumscribed accuracy (Swann, 1984), termed generalized and dyadic accuracy by Kenny et al. (2007). Circumscribed accuracy refers to knowing what an individual is like in a given situation, with the perceiver as the interaction

partner, which can be linked to understanding immediate, state-like responses such as emotions and thoughts. Meanwhile, global accuracy refers to understanding what a person is like across situations and interaction partners. This latter conception very much captures the process of interest here, the ability to form an accurate impression of another's stable profile of traits, which we term *impressionistic accuracy*. Circumscribed accuracy has been argued to be more relevant to serving the immediate social goals of perceivers and targets (Swann, 1984), yet we argue that global impressionistic accuracy is also relevant to social functioning and adjustment.

Defining Accuracy

A crucial issue for any person perception task, however, is how to define an "accurate" impression. Some tasks, such as nonverbal decoding tasks, have an objectively pre-determined correct answer (e.g., anger), making it quite straightforward to establish whether the judge was accurate or inaccurate. The task of establishing the accuracy of a judge's perception or a target's expression becomes more difficult when the qualities being judged are less apparent, such as personality traits. Nonetheless, rather than give up hope in ever really knowing the "truth", researchers have developed methods for establishing the accuracy of an impression (Funder, 1999; Kruglanski, 1989). Following Funder's Realistic Accuracy Model (RAM; 1995, 1999), multiple different sources of information on a target are used to validate a given perceiver's impressions, such as a target's self- and informant-reports, expert ratings, and/or behavioural measures. For example, if a perceiver's ratings converge with the target's self-report and a close peer's report, the observer can be said to be accurate, realistically speaking.

In defining accuracy one must also consider what sources of information underlie accurate impressions. Simple single summary scores indexing impressionistic accuracy mask multiple different underlying components (e.g., see Cronbach, 1955). Cronbach's influential critique argued for examining these multiple different components that comprise the relationship between interpersonal perceptions and validation measures such as self-reports (see also Biesanz,

West, & Millevoi, 2007; Furr, 2008a; Kenny, West, Malloy, & Albright, 2006). The two components of particular interest here are Cronbach's stereotype accuracy and differential accuracy, which, broadly in line with Furr (2008a), we refer to as normative and distinctive accuracy, respectively. Normative accuracy refers to accurately perceiving what people in general are like, across a series of traits, while distinctive accuracy refers to accurately understanding the unique characteristics or profile of traits for a given individual. It is often assumed that an accurate judgment is the result of a perceiver's insight into the unique characteristics of a specific target, or distinctive accuracy. Normative accuracy is often viewed as an artifact, inflating true accuracy scores, and thus, if acknowledged at all, is generally controlled for, rather than examined separately. Yet, understanding what most people are like can be particularly useful when information quality or quantity is low, and thus could be viewed as a meaningful source of accuracy and perhaps even a skill, if utilized appropriately (e.g., Kenny, 2004; Vogt & Colvin, 2003). Indeed, separating out these components when investigating impressionistic accuracy is critical, as they appear to act independently of one another and failure to isolate them can mask important underlying processes (Biesanz et al., 2007; Biesanz & Human, 2009). Thus, the present studies will individually examine these components to further our understanding the relationship between accuracy and adjustment.

RAM (Funder, 1999) further provides a theoretical framework for how impressionistic accuracy is achieved. According to this model, an accurate judgment depends on four components. A target person's behaviour must be *relevant* to the judgment and *available* to the judge, and then *detected* and *utilized* appropriately by the judge. RAM thus enables one to make predictions about the characteristics of good judges and targets (Funder, 1999). Specifically, the degree to which a person makes *relevant* cues *available* to others relates to expressive accuracy, while the ability to *detect* and appropriately *utilize* such cues refers to perceptive accuracy. How adjustment might facilitate each of these stages will be considered below.

Adjustment and Accurate Impressions

Underlying research investigating person perception is the assumption that impressionistic accuracy should improve social interactions, and in turn lead to greater functioning (Bernieri, 2001), but is there evidence to support such an assumption? Indeed, a comprehensive meta-analysis (Davis & Kraus, 1996) and a recent review (Hall & Andrzejewski, 2008) demonstrate that good judges do indeed experience greater psychological adjustment (e.g., self-esteem, positive personality traits) as well as greater social functioning. Although promising, the majority of the studies included in these reviews were nonverbal decoding tasks, presumably more related to the skill of perceiving immediate states rather than global impressionistic accuracy. Although it has been demonstrated that skill in these different interpersonal perception tasks are not necessarily correlated with one another (Ambady et al., 1995; Hall, 2001), research on the broader task of personality perception is consistent with these findings, as good judges of personality also tend to exhibit characteristics associated with social skills and personal well-being (Letzring, 2008; Vogt & Colvin, 2003). On the other hand, Ambady et al. (1995) found that accurate personality perception based on zero-acquaintance was negatively related to sociability, inconsistent with the notion that accuracy is linked to greater interpersonal adjustment.

Generally, much less research has focused on good targets, but nonverbal communication studies do support the general hypothesis, finding that expressive individuals tend to be high in extraversion and low in neuroticism (Riggio & Riggio, 2002), and are viewed by others as more likable and attractive (Friedman, Riggio, & Casella, 1988; Larrance & Zuckerman, 1981; Riggio & Friedman, 1986). Once again, personality perception research is consistent, linking judgability to good psychological adjustment and a favourable personality profile (Colvin, 1993a, 1993b). Similarly, Ambady et al. (1995) found that sociability and lower scores on shyness were related to the judgability of particular traits, such as agreeableness and

extraversion. Thus, research suggests that judgable individuals do indeed experience higher personal adjustment and may be well placed for positive social relationships.

Researchers in this area tend to argue that adjustment facilitates accurate impressions. For instance, Letzring (2008) suggested that well-adjusted individuals make others more comfortable in social interactions, who in turn reveal more relevant information, thereby improving impressionistic accuracy. Similarly, Vogt and Colvin (2003) argue that the interpersonal orientation good judges exhibit may lead to a better understanding of the relationship between behavioural cues and personality traits, leading to more accurate perceptions of others. Thus, the adjustment of judges may influence the availability, relevance, and utilization phases of Funder's RAM model, improving the overall accuracy of impressions.

The adjustment of targets has also been considered a characteristic that could foster accuracy. For instance, Colvin (1993b) demonstrated longitudinally that psychological adjustment was a precursor to later judgability, suggesting that adjustment leads one to be better understood. Indeed, good targets tend to be more stable over time (Biesanz, West, & Graziano, 1997; Biesanz & West, 2000), a characteristic linked with adjustment (Campbell, 1990) that could certainly enable others to perceive such individuals more easily. It is also plausible that well-adjusted individuals are more likely to express themselves openly and honestly, allowing others to more accurately perceive their unique traits (much like individuals higher in social status and/or power; e.g., see Anderson & Berdahl, 2002; Keltner, Gruenfeld, & Anderson, 2003). Thus, well-adjusted individuals are more likely to make relevant cues available to others, thereby enhancing expressive accuracy.

Much of this research, however, has not examined the actual relationship quality of good judges and targets, but, rather, assesses constructs such as social skills and interpersonal motivation, which may be more suggestive of a propensity for relationship adjustment, as opposed to actual adjustment. If accurate impressions are primarily thought to be relevant to

adjustment via social functioning, it is crucial to examine whether there is a direct link between accuracy and relationship adjustment. One promising finding is that skill in nonverbal decoding was associated with higher relationship well-being (Carton, Kessler, & Pape, 2003), but once again this accuracy measure is more related to perceptions of immediate states rather than general traits, so clearly it is important to examine this association with impressionistic accuracy specifically. Further, most previous research assumes distinctive accuracy is responsible for the associations between adjustment and accuracy, yet rarely is normative accuracy specifically examined or controlled for, with a few exceptions (e.g., Colvin, 1993a, 1993b; Vogt & Colvin, 2003). Overall, person perception research provides support and potential theory for the assumption that impressionistic accuracy is linked to greater adjustment, yet further research on the experienced relationship quality of good judges and targets and the underlying components of accuracy scores would greatly enhance our understanding of this process.

Adjustment and Accurate Impressions within Intimate Relationships

To better understand how impressionistic accuracy is related to interpersonal adjustment, we can turn to the substantial body of work on perceptions and satisfaction within intimate relationships. Is there evidence that accurate perceptions are associated with relationship adjustment? A popular viewpoint, coming out of the positive illusions framework (Taylor and Brown, 1988), suggests otherwise, generally finding that viewing one's partner in overly positive terms is associated with enhanced relationship satisfaction and longer lasting relationships (Murray & Holmes, 1997; Murray, Holmes, & Griffen, 1996a; Murray, Holmes, & Griffen, 1996b). Thus, to view a partner in overly positive, and potentially inaccurate, terms appears to benefit romantic relationships.

Overall, a strong case can be made that positive illusions are linked to personal and interpersonal well-being, although the theory does have its critics (see Colvin & Block, 1994; Colvin, Block & Funder, 1995; Robins & Beer, 2001). Yet, even if positive illusions are

associated with adjustment, it does not necessarily follow that accuracy is negatively or is not related to adjustment. Indeed, researchers have discussed accuracy and bias as being independent of one another (Fletcher, 2002; Funder & Colvin, 1997; Gagne & Lydon, 2004; Kenny et al., 2007) and have shown that bias and accuracy can operate simultaneously (e.g., Kenny & Acitelli, 2001; Murray, Holmes & Griffen, 1996a). For example, Neff and Karney (2005) argue that enhancement and accuracy may operate at different levels of abstraction, finding that while newlyweds tended to view one another with global positivity, accuracy regarding specific attributes was still achieved, which, for wives, predicted greater supportive behaviours, a sense of marital control, and a lower likelihood of divorce. Therefore, despite the substantial evidence that biased perceptions in relationships are associated with satisfaction, it is still possible for accuracy to be an important predictor of interpersonal adjustment.

In fact, there is a long history of evidence demonstrating that understanding the attitudes, role expectations, and self-perceptions of one's spouse are indeed associated with relationship well-being (see Sillars & Scott, 1983, for review). Research on this general question has continued in the study of empathic accuracy, the ability to accurately understand a close other's thoughts and feelings (Ickes, 1997). Of note, empathic accuracy has been linked to greater relationship satisfaction in both married (Kilpatrick, Bissonnette, & Rusbult, 2002) and long-term dating couples (Thomas & Fletcher, 2003). Kilpatrick et al. (2002) also provided preliminary support for the argument that empathic accuracy enhances relationship satisfaction via accommodative behavior, which is likely to improve communication and conflict resolution. Overall, Ickes and Simpson (1997; 2004) argue that, as a rule, accurate understanding of one's partner is associated with adjustment, yet use the phrasing "managing" empathic accuracy to highlight the need for balance between accurate and perhaps more biased perceptions of a partners thoughts and feelings.

Importantly, this body of research focuses on impressions of momentary thoughts and feelings, not necessarily on the consistent, stable characteristics of the target. There is, however, another area of research focused directly on the agreement between intimates about one's stable self-perceptions of traits, arguing that individuals enjoy subjectively accurate, or self-verifying, feedback, even if such feedback is negative (Swann, 1987; Swann, Pelham, & Krull, 1989). These researchers have demonstrated that individuals tend to be more intimate with spouses who verify their self-views, even when negative, although, as with empathic accuracy, this effect seems to be stronger for more committed, long-term partners (Campbell, Lackenbauer, & Muise, 2006; De La Ronde & Swann, 1998; Swann, De La Ronde & Hixon, 1994) and may also only hold for low-visibility, rather than high-visibility, important traits (Campbell, 2005). Of note, Katz & Joiner (2002) have demonstrated that self-verification is also associated with greater liking in roommate dyads, indicating that the benefits of impressionistic accuracy may extend beyond romantic couples.

Self-verification is generally focused on the experience of the target – how it feels to be perceived accurately. Yet De La Ronde & Swann (1998) also demonstrate that individuals seek out information that verifies views about one's partner, termed partner-verification, and that individuals actively refute inconsistent information, whether positive or negative. Thus, partner verification refers more to the experience of the judge and the desire to have an accurate view of one's partner. Both self- and partner-verification are posited to enhance relationship well-being via one's sense of prediction and control over the world (e.g., Kelly, 1955), the pragmatic utility of being able to predict and understand a partner's behaviour, and shared reality theory, which posits that people maintain relationships to the extent that partners achieve consensus in their beliefs about the relationship, including beliefs about one another (Hardin & Higgins, 1996). Similarly, Neff and Karney (2005) argued that greater specific accuracy about one's husband's traits enabled wives to feel greater marital control and provide greater social support, likely

playing a role in the success of these marriages, which were less likely to end in divorce. Thus, it is plausible that relationships involving good judges and/or targets are likely to involve more instances of self- and partner-verification, potentially leading to more stable, intimate, and supportive relationships.

Overall, in line with earlier work, empathic accuracy and self-verification research continue to provide evidence for a link between accuracy and relationship well-being. However, these lines of research rarely disentangle the roles of perceiver and target in the association between accurate impressions and relationship quality. Is it the particularly perceptive judges or expressive targets who are responsible for improving a relationship's quality? Furthermore, this work has naturally focused on the role of accuracy within a specific dyad, usually a romantic couple, telling us little about how impressionistic accuracy, as a general skill, is related to adjustment across relationship partners. Lastly, as with the personality perception literature, the unique roles that distinctive and normative accuracy may play are not examined. This latter issue is often ignored in large part because current methods are inadequate in enabling investigators to parse out and explore individual differences associated with these potential sources of accuracy. However, the newly formulated social accuracy model of interpersonal perception (SAM; Biesanz, 2007, 2009) allows us to explore these questions by examining how both perceiver and target adjustment is linked to each of these forms of accuracy. Thus, the following section provides an in depth explanation of SAM.

Assessing Accuracy: The Social Accuracy Model of Interpersonal Perception

The social accuracy model is an integration and extension of Cronbach's (1955) framework and Kenny's social relations model (SRM; 1994). Accuracy, following Funder (1995, 1999), is defined in terms of the agreement reached between a judge and different validation measures for accuracy, such as a self- or informant-report of the target's personality (Biesanz, 2007, 2009; see also Biesanz & Human, 2009, for an empirical example). The social

accuracy model is a general framework for examining individual differences among perceivers and targets in impressionistic accuracy and its components. To what extent are there individual differences in perceptive accuracy – the extent to which one is able to distinguish the characteristics of others, or is a good judge? To what extent are there individual differences in expressive accuracy – the extent to which an individual is accurately perceived, or is a good target? This framework then provides the ability to determine the characteristics of perceivers and targets that are related to degrees of perceptive and expressive accuracy, respectively.

The social accuracy model further examines different components underlying perceptive and expressive accuracy. Recall that normative accuracy refers to accurately perceiving what people are like in general, across a series of traits, while distinctive accuracy refers to accurately understanding the unique characteristics or profile of traits for a given individual. In brief, the social accuracy model examines normative and distinctive accuracy for both perceivers and targets. These four individual differences assessed under SAM are (1) perceiver distinctive accuracy – the extent to which a perceiver sees the unique characteristics of others, (2) perceiver normative accuracy – the extent to which a perceiver sees others as similar to the average person, (3) target distinctive accuracy – the extent to which a person's unique characteristics are perceived by others, and (4) target normative accuracy – the extent to which a person is seen as similar to the average person. Thus, SAM will allow us to investigate how adjustment is linked to each of these forms of accuracy, furthering our understanding of the broader association between accurate interpersonal impressions and adjustment. The precise analytic methods used are detailed in the methods section.

Summary

Overall, by integrating the person perception and relationship literatures we see support for the notion that impressionistic accuracy is associated with enhanced personal and interpersonal adjustment. We also see preliminary theory for where this association comes from,

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with personality researchers arguing that adjustment leads to accuracy and relationship theorists outlining pathways through which accuracy may enhance relationship well-being. Although it will take further empirical research to disentangle these pathways, taken together these two fields support the hypothesis that good judges and targets will experience higher personal and interpersonal adjustment.

Yet, there are gaps in each of these fields that need to be filled so that we can better understand how impressionistic accuracy, as a global ability across relationships, is related to adjustment. Personality perception research has consistently linked psychological adjustment with enhanced accuracy, but has not directly examined the role of relationship well-being; this is crucial considering the interpersonal nature of person perception. Meanwhile, the relationship literature, though providing support for an association between relationship satisfaction and accuracy, has been largely limited to romantic relationships and highlights certain limitations, such as relationship length, that make it difficult to predict how impressionistic accuracy will be associated with adjustment in other contexts or across different relationships. Additionally, this literature does not disentangle the roles of judges and targets, so it is difficult to know whether perceptive or expressive accuracy, or both, are associated with enhanced relationship well-being. Finally, neither the person perception or relationship literature has systematically investigated how the underlying components of accuracy scores, distinctive and normative accuracy, are associated with adjustment, making it unclear whether unique, differentiated impressions or a generalized understanding of others, or both, are relevant to personal and interpersonal functioning.

To address each of the above issues, we examined a) the extent to which perceiver adjustment is linked to perceptive accuracy, b) the extent to which target adjustment is linked to expressive accuracy, c) the nature of the association across various social contexts, including new acquaintances, close friends, and romantic relationships, d) the role of various measures of

adjustment, including generalized personal and relationship well-being, as well as relationship-specific self-reports, informant-reports, and behavioural indices of interpersonal adjustment, and e) the underlying roles of distinctive and normative accuracy across each of these contexts and measures. Prior research has assumed that distinctive accuracy should be responsible for the associations between accuracy and enhanced adjustment but it seems plausible that normative accuracy may also, or instead, be linked to personal and interpersonal functioning. That is, perhaps well-adjusted individuals simply have a better grasp of normative information, enabling more accurate understanding of others on average, and are themselves more normative, thus being more easily understood by others. Thus, taking a componential approach, the current research bridges the fields of person perception and romantic relationships by investigating the association of impressionistic accuracy with multiple indices of adjustment, across different interpersonal contexts.

The Current Studies

Across four studies we investigated the role of intra- and interpersonal adjustment in perceptive and expressive accuracy. Studies 1 - 3 all utilized round-robin designs, Studies 1 and 2 with new acquaintances and Study 3 with close-knit peer groups. Study 4 investigated how one's relationship satisfaction with a romantic partner is associated with expressive accuracy when interacting with that partner. Across these different social contexts and different assessments of adjustment, including informant-reported and behavioural measures, we examined how impressionistic accuracy was linked to personal and relationship well-being. Although there is empirical and theoretical support for the supposition that perceptive and expressive accuracy are associated with enhanced personal and interpersonal adjustment, to our knowledge, this is the first componential investigation to simultaneously examine perceiver and target accuracy and adjustment across different social contexts.

STUDY 1

Overview

Participants in small groups engaged in a round-robin "getting-acquainted" procedure. After self-assessments of their own personalities, participants paired up and met with another group member for 2.5 minutes in an unstructured interaction before separating to provide their impressions of the other participant's personality. This process was repeated until all participants had met and provided impressions of every other participant. After the round-robin procedure was completed, participants filled out measures of adjustment and provided contact information for a parent or guardian.

Participants

185 University of Wisconsin undergraduates participated in the study in a total of 30 groups, ranging in size from 4 – 9 (Median = 7). A total of 43 males and 142 females with a mean age of 19.20 (*SD* = 1.32) participated in exchange for partial course credit.

Measures and Methods

Personality Measures

Personality was assessed using an abbreviated 21-item version of the Big Five Inventory (BFI; Benet-Martínez & John, 1998).[1] Participants rated themselves and the other participants in their round-robin group on these items, using a scale from 1 (*disagree strongly*) to 9 (*agree strongly*).

Parent Personality Reports

Questionnaires were also mailed to a parent or guardian of each participant, asking each parent to rate the participant on the same abbreviated version of the BFI. The questionnaire packet included a hand-written note from the participant explaining the request as well as an addressed and stamped envelope for returning the questionnaire. Questionnaires were mailed out

multiple times when responses were not received within several weeks. A total of 121 parental

questionnaires were returned yielding a 65% response rate.

Personal Adjustment

Participants completed Rosenberg's (1965) Self-Esteem scale using the same $1-9$

rating scale as above.

Data Analytic Procedure

To examine the accuracy of impressions and its different components, we examined

several multilevel regression models (for more examples and details on the social accuracy

model see Biesanz, 2009, as well as Biesanz & Human, 2009, and Chan & Biesanz, 2009).

Since all four studies use the same basic data analytic procedure, we provide substantial details

on the analytical models and the interpretation of their coefficients. Model 1 first examines

impressionistic accuracy, operationally defined for the present study as the raw profile agreement

across the 21 personality items for a specific perceiver-target dyad. Impressionistic accuracy

may vary randomly across perceivers and targets as follows:

$$Y_{ijk} = \beta_{0ij} + \beta_{1ij}V_{jk} + \varepsilon_{ijk} \tag{1.1}$$

$$\begin{aligned}\beta_{0ij} &= \beta_{00} + \beta_{01}M_j + u_{0i} + u_{0j} \\ \beta_{1ij} &= \beta_{10} + \beta_{11}M_j + u_{1i} + u_{1j}\end{aligned}. \tag{1.2}$$

Here Y_{ijk} is Perceiver i's rating of Target j on item k and V_{jk} is the measure used to

validate the perceiver's impression – for instance, Target j's self-report on item k. In this case

β_{1ij} represents the unstandardized self-other profile agreement for Perceiver i with Target j.

Potential moderators of impressionistic accuracy are introduced as predictors of the

random regression coefficients in (1.2). Here M_j is a potential moderating variable assessed on

the target (e.g., the target's self-esteem). Alternatively the moderator variable in (1.2) may be

instead a characteristic of the perceiver (e.g., perceiver's self-esteem denoted as M_i). As denoted

in (1.2) the coefficient β_{11} represents the interaction between the target's moderator variable and

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impressionistic accuracy – a positive value for both β_{11} would indicate that targets with higher

levels of the moderator (e.g., self-esteem) have higher levels of impressionistic accuracy (raw

self-other profile agreement). The random intercepts (u_{0i}, u_{0j}) and slopes (u_{1i}, u_{1j}) denote the

specific Perceiver and Target effects, respectively. These represent the difference in the

intercept and slope for a specific Perceiver or Target from the average regression line given a

specified value on the moderating variable (M_j). Specific values on the random effects are not

uniquely defined and the variances of the random effects instead are estimated.

Following the social accuracy model, Model 2 decomposes the raw profile agreement in

(1.1) to provide estimates of distinctive accuracy and normative accuracy. By introducing an

additional predictor – an estimate of the expected value of V_k for each item ($Mean_k$) across

targets – raw profile agreement is separated into its constituent components of distinctive and

normative agreement. Specifically, the model is as follows:

$$Y_{ijk} = \beta_{0ij} + \beta_{1ij}V_{jk} + \beta_{2ij}Mean_k + \varepsilon_{ijk} \tag{2.1}$$

$$\begin{aligned}
\beta_{0ij} &= \beta_{00} + \beta_{01}M_j + u_{0i} + u_{0j} \\
\beta_{1ij} &= \beta_{10} + \beta_{11}M_j + u_{1i} + u_{1j} \quad . \\
\beta_{2ij} &= \beta_{20} + \beta_{21}M_j + u_{2i} + u_{2j}
\end{aligned} \tag{2.2}$$

Equation (2.1) incorporates $Mean_k$ – an estimate of the mean value of V_{jk} on item k across

targets (e.g., $\overline{V}_k$) – into the regression equation. This is the average self-reported response profile

in the present example. By partialling out the item means on the validation measure (the

normative profile), β_{1ij} now represents the distinctive accuracy relationship for Perceiver i on

Target j. Distinctive accuracy is the partial or distinctive relationship between the criterion and

the perceiver's ratings after adjusting for the normative profile. Thus, a strong positive

relationship would indicate that perceivers are, on average, seeing the unique characteristics of

the targets. Similarly, β_{2ij} represents the normative accuracy for Perceiver i on Target j. This

reflects the relationship between the perceiver's impressions and what the normative or average

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person reports on the validation measure.[2] A strong positive relationship here would indicate that perceivers are rating participants, on average, as similar to what people are like in general. Note that the items are not reverse coded, resulting in a very strong relationship between the normative report and social desirability such that higher levels of normative accuracy are associated with more positive impressions (see Borkenau & Zaltauskas, 2009; Wood, Gosling, & Potter, 2007). Given the round-robin design, assessments of distinctive and normative accuracy in (2.1 and 2.2) represent measures that are *averaged* across perceivers and targets (i.e., main effects). Thus, for instance, a perceiver with a high level of distinctive accuracy has high levels of distinctive self-other agreement on average across the different targets he or she met. Similarly, a target with a high level of distinctive agreement is seen more distinctively on average by the different perceivers that he or she met.

Potential moderators of distinctive and normative accuracy are introduced as predictors of the random regression coefficients in (2.2). Here M_j is a potential moderating variable assessed on the target (e.g., the target's self-esteem). The coefficients β_{11} and β_{21} represent the interaction between the moderator variable and distinctive and normative accuracy, respectively. Specifically, positive values for both β_{11} and β_{21} would indicate in this example that targets with higher levels of the moderator (e.g., self-esteem) have higher levels of distinctive as well as normative accuracy.

In sum, the social accuracy model outlined in Model 2 provides estimates of perceptive accuracy for each perceiver (i.e., who is the good judge?) as well as estimates of expressive accuracy (who is the good target?). Each of these types of accuracy is partitioned into distinctive and normative accuracy components resulting in four measures of accuracy – perceiver distinctive and normative accuracy and target distinctive and normative accuracy. Potential moderators are then introduced to determine characteristics of perceivers and targets that are associated with each of these four components of impressionistic accuracy.[3]

We organize the results sections as follows: First we examine levels of impressionistic accuracy and distinctive and normative accuracy without moderators. Then we examine characteristics of the perceiver that are associated with perceptive accuracy followed by characteristics of the target that are associated with expressive accuracy.

Results

Levels of Profile Agreement

We first examined the base model of impressionistic accuracy with no moderators in order to determine the average levels of profile agreement and its components. Consistent with previous research, judges and targets achieved significant raw self-other agreement, $b = .39$, $z = 22.76$, $p < .0001$. Further, participants achieved significant levels of distinctive agreement, $b = .09$, $z = 5.86$, $p < .0001$, and normative agreement, $b = .76$, $z = 21.43$, p $< .0001$ (see Table 1, column 1 for the full multilevel model).[4]

Using targets' parental-reports as the validation measure, participants demonstrated comparable levels of parent-other agreement, $b = .36$, $z = 21.80$, $p < .0001$. Similarly, participants achieved significant levels of distinctive parent-other agreement, $b = .12$, $z = 7.49$, $p < .0001$, and normative parent-other agreement, $b = .67$, $z = 16.38$, $p < .0001$.

Perceiver Adjustment as a Moderator of Profile Agreement (Perceptive Accuracy)

To examine the association between perceiver adjustment and accuracy, self-esteem was introduced as a moderator of each form of agreement. Perceiver self-esteem significantly interacted with raw self-other agreement, $b = .03$, $\beta = .29$, $z = 3.23$, $p = .001$, indicating that those with higher levels of self-esteem achieved greater self-other agreement. Investigating the underlying components revealed that perceiver self-esteem was significantly associated with normative agreement, $b = .05$, $\beta = .17$, $z = 2.11$, $p = .04$, while the association with distinctive agreement did not reach significance, $b = .01$, $\beta = .27$, $z = 1.58$, $p = .11$ (see Table 2, column 1 for all multilevel model fixed effects; see Table 3a for moderated effects only).

Using the target's parent report as the validation measure, perceiver self-esteem again moderated raw agreement, $b = .03$, $\beta = .31$, $z = 3.46$, $p = .0005$ (see Table 4a). In this case, however, the association seemed to be driven more by distinctive, $b = .03$, $\beta = .50$, $z = 3.93$, $p = .0001$, than by normative agreement, $b = .02$, $\beta = .06$, $z = 0.73$, ns.

Given the parent report response rate (65%), we utilized whether or not a participant's parent returned the questionnaire as a behavioural indicator of relationship adjustment. If participants were unwilling or unable to ask a parent to fill out the questionnaire, or the parent was unwilling to fill out and return the questionnaire even after repeated contacts, this could be considered as indirect evidence that the participant's social network is not particularly strong. Thus, whether or not a response was received from a parent was considered a behavioural indicator of interpersonal adjustment, and so was included as a moderator of agreement. Consistent with self-report measures of adjustment, perceivers whose parents returned questionnaires appeared to demonstrate higher normative agreement, although this effect did not reach conventional levels of significance, $b = .10$, $d = .29$, $z = 1.74$, $p = .08$. Overall, higher perceiver adjustment was associated with greater perceptive accuracy, as defined by self- and parent-other agreement, yet whether this was driven with distinctive or normative agreement was dependent on the type of validation measure.

Target Adjustment as a Moderator of Profile Agreement (Expressive Accuracy)

To explore the associations between target adjustment and accuracy, parallel analyses as above were conducted with target self-esteem included as the moderator variable. Target self-esteem was associated with higher raw self-other agreement, $b = .06$, $\beta = .41$, $z = 5.17$, $p < .0001$, demonstrating that individuals with high self-esteem were viewed more in line with their own self-reports than those with lower self-esteem. Componential analyses revealed that target self-esteem was significantly associated with distinctive agreement, $b = .04$, $\beta = .25$, $z = 3.06$, p

= .002, but was not related to normative agreement, $b = -.01$, $\beta = -.05$, $z = -.60$, *ns* (see Table 2, column 1 for fixed effects; see Table 3b for moderated effects only).

A similar pattern was found using parent reports as the validation measure, with target self-esteem significantly moderating raw agreement, $b = .04$, $\beta = .40$, $z = 3.63$, $p = .0003$ (see Table 4b). As with self-reports, this association was driven by parent-other distinctive agreement, $b = .03$, $\beta = .25$, $z = 2.24$, $p = .03$, while target adjustment showed no association with normative agreement, $b = -.01$, $\beta = -.04$, $z = -.37$, *ns*. Using the presence or absence of a parent-report as a behavioural indicator of interpersonal adjustment was not related to expressive accuracy. In sum, individuals reporting higher levels of personal adjustment were more easily understood than those with lower self-esteem, particularly in terms of their unique characteristics.

Discussion

Supporting the hypotheses, Study 1 demonstrated that both perceiver and target personal adjustment were associated with impressionistic accuracy such that greater adjustment was related to higher self- and parent-other agreement. Componential analyses, however, revealed a slightly more complex story underlying these results. Generally, well-adjusted individuals tended to view others with greater normative accuracy and were viewed with greater distinctive accuracy. Perceiver adjustment was, however, also related to viewing others in line with how one's parent uniquely views the target, indicating adjustment may also be linked to some forms of distinctive perceptive accuracy. Overall, counter to assumptions made in the literature, adjustment was not necessarily linked with seeing the unique characteristics of others, but was more strongly linked to understanding what people are like on average. In contrast, well-adjusted individuals were more easily understood in terms of their unique characteristics, rather than simply viewed as normative. To further investigate these effects, Study 2 was conducted to replicate and extend Study 1 with a larger sample by utilizing self-, parent-, and peer-reports as

validation measures, as well as including additional measures of adjustment assessing both personal and interpersonal well-being.

STUDY 2

Overview

The general procedure in Study 2 paralleled that of Study 1. Once again, participants in groups engaged in a standard round-robin procedure, interacting with every other participant in the group for 3 minutes and then rating the other group member's personality. As above, participants provided personality self-reports and provided contact information for a parent or guardian, and we also requested contact information for two peers to serve as an additional validation measure. Study 2 further expanded on Study 1 by including two additional measures of personal adjustment along with a self-reported interpersonal adjustment measure to complement our indirect measure.

Participants

273 undergraduates at the University of British Columbia participated in a total of 44 groups, ranging in size from 3 – 12 (Median = 6). 74 males and 199 females, with a mean age of 20.90 (SD = 4.15), participated in exchange for $20 or 2 extra course credits.

Measures and Methods

Personality Measures

Personality was assessed using the same 21-item abbreviated version of the Big Five Inventory (BFI; John & Benet-Martínez, 1998) as in Study 1, with the inclusion of three additional items to assess intelligence, "*Is intelligent*", "*Is bright*", and "*Receives good grades*". This scale was used for both self- and other-ratings, all on a 1 (*disagree strongly*) to 7 (*agree strongly*) rating scale.

Parent and Peer Personality Reports

Questionnaires were mailed or emailed to a parent or guardian and two peers of each participant, asking parents and peers to rate the personality of their child or friend on the same abbreviated version of the BFI that participants filled out. As with Study 1, the mailed

questionnaire packets included a hand-written note from the participant and an addressed and stamped envelope, and multiple mailings and emails were sent where responses were not received with the expected timeframe. Overall, 161 complete parental reports (59%) were returned, while 178 (65%) of participants had at least one peer report. For participants with two returned peer reports, the peer nominated as "friend 1" was used.

Personal Adjustment

Participants completed multiple measures of personal adjustment, including Rosenberg's (1965) Self-Esteem scale (as in Study 1), along with the Satisfaction with Life Scale to assess subjective well-being (SWLS; Diener, Emmons, Larsen, & Griffen, 1985), both measured using the same $1 - 7$ rating scale as above. A subset of participants ($n = 156$) also completed the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) to assess depression, measured on a 1 (not at all) – 4 (very often) scale, with higher scores indicating higher levels of depression.

Interpersonal Adjustment

The same subset who completed the CES-D also completed a measure relationship well-being (RWB) using the Positive Relations with Others subscale of the Psychological Well-Being scale (Ryff, 1989), on the same $1 - 7$ rating scale as above. Both the CES-D and RWB measures were added to the study approximately halfway through data collection. Once again, we also utilized informant report response rates as an indirect measure of interpersonal adjustment.

Data Analytic Procedure

Data was analyzed following the same general pattern as in Studies 1.

Results

Levels of Profile Agreement

As in Study 1, we first examined the base model without moderators to determine the average levels of raw, distinctive and normative agreement, using self-, parent-, and peer-reports

as validation measures. Participants again achieved significant levels of raw self-other agreement, $b = .30$, $z = 19.94$, $p < .0001$, distinctive agreement, $b = .08$, $z = 6.03$, $p < .0001$, and normative agreement, $b = .87$, $z = 27.52$, $p < .0001$ (see Table 1, column 2 for full multilevel model). Using parents as the validation measure, we again observed significant levels of raw agreement, $b = .35$, $z = 21.81$, $p < .0001$, distinctive agreement, $b = .13$, $z = 9.00$, $p < .0001$, and normative agreement, $b = .78$, $z = 23.75$, $p < .0001$. A very similar pattern was found with peer-reports as the validation measure, where average levels of raw peer-other agreement, $b = .33$, $z = 22.63$, $p < .0001$, distinctive agreement, $b = .13$, $z = 9.14$, $p < .0001$, and normative agreement, $b = .78$, $z = 22.70$, $p < .0001$, were all substantial.

Perceiver Adjustment as Moderators of Profile Agreement (Perceptive Accuracy)

To examine the associations between perceiver adjustment and impressionistic accuracy, each adjustment measure was individually added to the initial model as a moderator of each form of agreement (see Table 2 for multilevel model fixed effects with self-esteem; see Table 3a for all moderating relationships and descriptive information). Raw self-other agreement was significantly moderated by perceiver self-esteem, $b = .02$, $\beta = .28$, $z = 3.28$, $p = .001$, subjective well-being, $b = .02$, $\beta = .32$, $z = 3.71$, $p = .0002$, and relationship well-being, $\beta = .32$, $b = .03$, $z = 2.63$, $p = .009$, and marginally associated with lower levels of depression, $b = -. 03$, $\beta = -.21$, $z = -1.72$, $p = .09$. Examining the componential underpinnings of these effects, it became evident that normative agreement was responsible for these associations, being significantly associated with higher levels of perceiver self-esteem, $b = .11$, $\beta = .29$, $z = 4.54$, $p < .0001$, well-being, $b = .08$, $\beta = .26$, $z = 3.92$, $p = .0001$, relationship well-being, $b = .11$, $\beta = .24$, $z = 2.83$, $p = .005$, and lower levels of depression, $b = -.16$, $\beta = -.23$, $z = -2.70$, $p = .007$ (see Figure 1 for a graphical depiction of this key effect).[5] None of these indices of perceiver adjustment were significantly associated with distinctive agreement, all $|z|$'s $< .74$.

Using parent-reports as the validation measure, perceiver self-esteem, $b = .02$, $\beta = .20$, $z = 2.54$, p $= .01$, subjective well-being, $b = .03$, $\beta = .25$, $z = 3.24$, $p = .001$, and relationship well-being, $b = .04$, $\beta = .30$, $z = 2.90$, $p = .004$, were once again associated with raw agreement, while depression showed a marginal association, $b = -.04$, $z = -1.74$, $p = .08$, $\beta = -.18$ (see Table 4a). Similar to the findings with self-reports as the criterion, both perceiver self-esteem, $b = .08$, $\beta = .25$, $z = 3.40$, $p = .0007$, and well-being, $b = .05$, $\beta = .19$, $z = 2.51$, $p = .01$, were significantly associated with normative agreement. Interestingly, and in line with Study 1, distinctive agreement was significantly associated with perceiver relationship well-being, $b = .04$, $\beta = .35$, $z = 2.59$, $p = .01$, and was also marginally associated with perceiver well-being, $b = .01$, $\beta = .18$, $z = 1.85$, $p = .06$.

Consistent with the above findings, perceiver self-esteem, $b = .02$, $\beta = .18$, $z = 2.29$, $p = .02$, well-being, $b = .02$, $\beta = .25$, $z = 3.25$, $p = .001$, relationship well-being, $b = .03$, $\beta = .21$, $z = 1.95$, $p = .05$, significantly moderated raw peer-other agreement, while perceiver depression, $b = -.04$, $\beta = -.18$, $z = -1.68$, $p = .09$, was approaching significance (see Table 5b). As with self-reports as the validation measure, the associations with perceiver self-esteem, $b = .08$, $\beta = .26$, $z = 3.55$, $p = .0004$, and well-being, $b = .06$, $\beta = .22$, $z = 3.03$, $p = .002$, were driven by peer normative agreement, while perceiver relationship well-being and depression were again trending in this manner, all $|z|$'s > 1.46. None of the adjustment measures were significantly associated with distinctive agreement, all $|z|$'s < 1.25.

As with Study 1, informant reports were used as a behavioural index of relationship adjustment, given that informant reports were received for only $\sim 60\%$ of the sample. Consistent with self-report measures of adjustment, perceivers tended to view others more normatively if their parent, $b = .17$, $d = .47$, $z = 3.45$, $p = .0006$, or a peer, $b = .13$, $d = .36$, $z = 2.55$, $p = .01$, returned a questionnaire. Having a parental report was only moderately related to having a peer report, $r(271) = .24$, $p < .0001$. Parallel significant results were obtained for parental-other and

peer-other normative agreement. This finding demonstrates that not only is self-reported

relationship well-being associated with interpersonal perceptions, but behavioural measures also

reflect this association. At the same time, however, this demonstrates that we must interpret the

results with parent- and peer- reports as validation measures with caution, since participants who

received responses were meaningfully different from those who did not, insofar as their tendency

to view others as normative. Further, these findings may also help explain why the peer and

parent results, though consistent, are also somewhat less robust, as the sub-sample in these

analyses tend to include those who view others with greater normative accuracy.

Target Adjustment as Moderators of Profile Agreement (Expressive Accuracy)

Once again, to examine whether target adjustment is associated with accuracy, each

target adjustment measure was added to the initial model as moderators of each form of

agreement. Raw self-other agreement was significantly moderated by target self-esteem, $b = .09$,

$\beta = .43$, $z = 7.21$, $p < .0001$, subjective well-being, $b = .05$, $\beta = .31$, $z = 4.86$, $p < .0001$,

depression, $b = -.16$, $\beta = -.40$, $z = -5.50$, $p < .0001$ (see Table 3b), as well as relationship well-

being, $b = .06$, $\beta = .24$, $z = 3.03$, $p < .01$ (see Table 3c). Consistent with Study 1, componential

analyses revealed that each of these measures of adjustment were significantly associated with

distinctive agreement, all $|z|$'s > 2.08 (see Figure 2 for a graphical depiction of this key effect).

Generally, adjustment was not associated with normative agreement, although lower levels of

self-esteem were significantly associated with higher normative agreement, $b = -.05$, $\beta = -.16$, $z =$

-2.32, $p < .05$. This latter association can be viewed as a function of the partialling in (2.1).

Targets who are better adjusted have self-reports that are more consistent with the normative

profile, $\beta = .39$, $z = 6.00$, $p < .0001$. Thus targets who are better adjusted are more similar to the

normative profile (e.g., see Wood et al., 2007) and, after partialling target self-reports, the

relationship between perceivers' impressions and the normative profile is reduced slightly. The

net effect of these two elements is that the normative componential part of perceiver's

impressions is relatively unaffected, or even slightly enhanced, for better adjusted targets (see Biesanz & Human, 2009; Biesanz, 2009, for more detailed discussions and examples).

Using parent reports as the criterion for accuracy, we once again see significant associations between raw agreement and target self-esteem, $b = .05$, $\beta = .34$, $z = 4.24$, $p < .0001$, well-being, $b = .03$, $\beta = .22$, $z = 2.59$, $p = .01$, depression, $b = -.06$, $\beta = -.35$, $z = -3.57$, $p = .0004$, although relationship well-being was not significantly associated with agreement (see Table 4b). Mapping on with the analyses using self-reports as the validation measure, all measures of personal adjustment were associated with higher distinctive agreement, all $|z|$'s > 2.12, although again, relationship well-being did not significantly moderate agreement.

Results with peer-reports as the validation measure were consistent with the above analyses, with both target self-esteem, $b = .03$, $\beta = .20$, $z = 2.60$, $p = .009$, and depression, $b = -.06$, $\beta = -.19$, $z = -2.07$, $p = .04$, being significantly associated with raw agreement, and well-being, $b = .03$, $\beta = .15$, $z = 1.72$, $p = .09$, and relationship well-being, $b = .03$, $\beta = .18$, $z = 1.83$, $p < .07$, both being marginally so (see Table 5b). Although none of the componential analyses reached conventional levels of significance, the results were consistent, with both self-esteem and depression being marginally associated with distinctive agreement (all $|z|$'s > 1.71), while none of the adjustment measures evidenced associations with normative accuracy.

Of note, our behavioural measure of relationship adjustment (having a peer or parent response) was again not significantly associated with expressive distinctive agreement. Overall, psychologically well-adjusted individuals demonstrated higher levels of distinctive expressive accuracy, while relationship well-being was also, but less consistently, associated with expressive accuracy.

Discussion

In line with Study 1, Study 2 further demonstrated that both good judges and good targets exhibit higher levels of personal and interpersonal adjustment. In particular, the association

between adjustment and perceptive accuracy was in large part driven by a tendency to view others as normative, but was also linked to insights into the unique characteristics that the target's parents described. As for expressive accuracy, adjustment was clearly linked to being viewed more accurately in terms of one's unique traits, whether described by parents, peers, or the targets themselves. All these results replicate those of Study 1 and extend upon them by replicating the effects with multiple measures of personal adjustment and both a self-report and behavioural index of relationship adjustment, as well as the inclusion of peer-reports as an additional validation measure. Study 3 extends these findings to a new interpersonal context – close peer groups. Once again, the personal adjustment of perceivers and targets was explored, but the nature of the groups also allowed us to investigate a more specific form of relationship well-being: how well liked an individual was within their peer group.

STUDY 3

Overview

  Study 3 is a re-analysis of a previous dataset investigating cultural differences in interjudge agreement (see Heine & Renshaw, 2002, for details). This study also involved a round-robin design, where members of small groups each rated one's own and every other group members' personality. Measures of personal adjustment and relationship satisfaction were again collected. There are, however, several important differences to highlight between Studies 1 and 2 compared to Study 3. First, the nature of the groups is quite different. In Studies 1 and 2, the vast majority of the participants in each round-robin group were strangers and their ratings were based on very brief interactions, while in Study 3, each group was comprised of tightly knit existing acquaintances. Second, building on the use of self-reported and behavioural measures of relationship well-being in Study 2, Study 3 utilized a peer-reported index of relationship satisfaction. Third, Study 3 is cross-cultural in nature, utilizing both American students at the University of Pennsylvania and Japanese students at Kyoto University.

Participants

  Each participant was a member of a university-based organization, which met weekly. Each group was composed of mostly same-sex individuals who had been members of the respective organization for at least 1 year. A total of 108 individuals participated in the study in groups of 5, with the exception of one group of 3 from the American sample. 50 participants (12 female and 38 male) were Japanese students from Kyoto University, consisting of members from six sports clubs, two international interest groups, and two arts clubs. An additional 58 participants (32 female and 26 male) were students at the University of Pennsylvania, with the participating groups including four performing arts groups, two sports teams, one fraternity, two sororities, two other organizations and one group that was not associated through any particular activity.

Measures and Methods

Personality Measures

Personality was assessed using 30 traits from Anderson's (1968) list of personality traits. Participants rated themselves and the other members of the peer group on the same list of traits, using a scale ranging from 1 (extremely inaccurate) to 15 (extremely accurate). In line with Paulhus (1998), participants were instructed to provide a unique score to each individual for a given trait. That is, for a given perceiver, no two members of the group, including oneself, could receive the same score on the same item.

Personal Adjustment

Personal adjustment was assessed with Rosenberg's (1965) Self-esteem Scale, using a 5-point likert-type scale.

Interpersonal Adjustment

Each member of the group also rated how well they liked every other member of the group on a scale ranging from 1 (*dislike intensely*) to 5 (*like a lot*). Each participant's average score of how well he or she was liked by the other members of the group was calculated to serve as an index of relationship well-being within the group. Thus, interpersonal adjustment was measured by how well liked a participant was by the other members of the social group.

Data Analytic Procedure

Data was analyzed following the same general pattern as in Studies 1 and 2.

Results

Levels of Profile Agreement

As above, we first ran the initial model without moderators (or country) in the model, to establish average levels of agreement across cultures. Participants once again achieved highly significant self-other agreement, $b = .40$, $z = 13.68$, $p < .0001$. Overall levels of distinctive accuracy, $b = .26$, $z = 10.05$, $p < .0001$, and normative accuracy, $b = .43$, $z = 7.25$, $p < .0001$,

were also highly significant (see Table 1, column 3 for full multilevel model). Due to the cross-cultural nature of this data, the same model was also run with culture included as a moderating variable (US = -1, Japan = 1). This revealed a significant interaction effect of culture with raw self-other agreement, $b = -.16$, $z = -6.06$, $p < .0001$, and distinctive agreement, $b = -.05$, $z = -2.00$, $p = .05$, indicating that participants from the US exhibited higher self-other agreement and distinctive accuracy (see Sarracino, Biesanz, & Heine, 2009). Consequently, country was included as a covariate in all moderating analyses.

Perceiver Adjustment as Moderators of Profile Agreement (Perceptive Accuracy)

To examine how perceiver adjustment was associated with accuracy within peer groups, perceiver self-esteem and relationship well-being were included as moderators of each form of agreement. In contrast to Studies 1 and 2, perceiver self-esteem was not significantly associated with self-other agreement, $b = -.02$, $\beta = -.17$, $z = -1.24$, $p = .12$, or normative agreement, $b = .02$, $\beta = .05$, $z = .37$, *ns*, yet it was marginally negatively associated with distinctive agreement, $b = -.03$, $\beta = -.33$, $z = -1.70$, $p = .09$ (see Tables 2 and 3a). Our peer-reported measure of interpersonal adjustment was, however, significantly associated with raw self-other agreement, $b = .08$, $\beta = .40$, $z = 2.92$, $p = .004$. Parallel to adjustment measures in Studies 1 and 2, componential analyses revealed that this was driven by a significant association with normative agreement, $b = .19$, $\beta = .56$, $z = 2.70$, $p = .007$. Thus, individuals who were well liked within their social group perceived their peers as more normative.[6]

Target Adjustment as Moderators of Profile Agreement (Expressive Accuracy)

Next we included target adjustment measures as moderators of each form of agreement. Target self-esteem was trending towards significance with raw self-other agreement, $b = .05$, $\beta = .17$, $z = 1.58$, $p = .11$, but showed significant, opposing, associations with distinctive $b = .09$, $\beta = .31$, $z = 2.86$, $p = .004$, and normative agreement, $b = -.18$, $\beta = -.35$, $z = -2.46$, $p = .01$, (see Table 3b). As in Study 2, this latter finding is likely best interpreted as a result of the statistical model

rather than substantively. Target relationship well-being was significantly associated with self-other agreement, $b = .10$, $\beta = .26$, $z = 2.51$, $p = .01$, and strongly so with normative agreement, $b = .53$, $\beta = .79$, $z = 6.65$, $p < .0001$ (see Table 3c). Thus, targets who were well liked tended to be perceived by their peers as normative.

Discussion

Consistent with the studies involving new acquaintances, those exhibiting higher relationship well-being, measured here by peer-rated likeability, tended to view one's peers more normatively, while high self-esteem was associated with being viewed distinctively by one's peers. Unlike Studies 1 and 2, Study 3 did not find that personal adjustment was associated with perceiving others accurately, either normatively or distinctively, within a given social group. Further, for the first time we found a positive association between target adjustment and normative agreement, as being well liked was associated with being viewed normatively rather than uniquely. Although this is not in line with our other expressive accuracy results, considering that the normative profile is quite a desirable profile (Borkenau & Zaltauskas, 2009; Wood et al., 2007), it is perhaps not surprising that individuals rated in such positive terms by the group would be also well-liked by the group. It is plausible this potential indicator of relationship well-being is more akin to a social evaluation measure, thus linking up well with the normative profile which in part reflects social desirability. Whether these minor departures from the broader pattern are indicative of meaningful differences that emerge when examining close peer groups as opposed to new acquaintances remains to be seen. Study 4 further examines the association between target adjustment and accuracy when viewed within a new context: romantic relationships.

STUDY 4

Overview

In Study 4, outside observers formed impressions of romantic couples engaging in a casual conversation after viewing a brief video. The videos of the romantic couples were compiled in Dunn, Biesanz, Human, & Finn (2007; Study 2b), which examined the impact of self-presentation on mood. Although the experimental manipulation, to engage in self-presentation or not, varied across two conditions, the measures and general procedures were the same for all participants. The participants, each a member of a romantic couple, rated their own personalities, personal adjustment, and relationship satisfaction with their romantic partner. Research assistants served as judges, viewing the 5-minute interactions and rating the personalities of each member of each couple. Each member of the romantic couple was compensated with either $10 or 1 extra course credit.

Participants

Targets

23 heterosexual, romantic couples, dating for at least 3 months, $M = 16.9$ months, participated in this study (mean age = 19.26, $SD = 1.60$). At least one member of each couple was an undergraduate at the University of British Columbia. Three couples declined to have their videotapes viewed by research assistants, leading to a total of 20 videotaped interactions available to be coded.

Judges

14 research assistants, 13 female, served as judges in the current study. Each judge watched and evaluated all 40 targets. All judges were blind to the experimental condition in the original study and the purpose of the present study.

Measures and Methods

Personality Measures

Personality was assessed using the full 44-item BFI (Benet-Martínez & John, 1998) on a 1 (*strongly disagree*) – 7 (*strongly agree*) rating scale. Targets rated themselves on this scale, while judges, after viewing each video once, rated both the male and female target on the same items.

Personal Adjustment

Targets completed Rosenberg's (1965) Self-esteem Scale and the Satisfaction with Life Scale (Diener et al., 1985), both on the same 1 – 7 point scale as above.

Interpersonal Adjustment

Targets also filled out multiple relationship satisfaction scales designed for use with romantic couples. These scales, each using the same 1 – 7 point scale as above, included the Relationship Assessment Scale (RAS; Hendrick, Hendrick, & Adler, 1988), the Dyadic Satisfaction Subscale of the Dyadic Adjustment Scale (Spanier, 1976), the Commitment Scale (Lund, 1985), Edmonds' (1967) Marital Conventionalization/Idealistic Distortion Scale, and the Passionate Love Scale (Hatfield & Sprecher, 1986).

Data Analytic Procedure

The data analysis paralleled that presented in Study 1 with the exception that we focus solely on the Target effects given the relatively small number of perceivers (judges).

Results

Levels of Profile Agreement

Before including target adjustment moderators in the model, we explored average levels of raw, distinctive, and normative agreement. Judges achieved significantly high levels of agreement with target's self-reports, $b = .19$, $z = 8.05$, $p < .0001$. As with Studies 1 – 3, there were also significant levels of distinctive agreement, $b = .06$, $z = 3.50$, $p < .001$, and normative agreement, $b = .49$, $z = 9.68$, $p < .0001$ (see Table 1, column 4). There were no significant self-presentation condition by accuracy interactions, all z's $< .47$, thus condition was not included as

an additional moderator when examining the interactions between target adjustment and accuracy.

Target Adjustment Moderators (Expressive Accuracy)

To examine how target adjustment was associated with expressive accuracy, each of the self-reported measures of personal and relationship adjustment were included as moderators of each form of agreement. Raw self-other agreement was marginally associated with target well-being, $b = .04$, $\beta = .30$, $z = 1.87$, $p = .06$, but showed no associations with target self-esteem, $b = .03$, $\beta = .16$, $z = .97$, *ns*. Neither well-being or self-esteem were significantly associated with normative or distinctive agreement, all $|z|$'s < 1.59 (see Tables 2 and 3b).

Only Idealistic Distortion, $b = .05$, $\beta = .35$, $z = 2.28$, $p = .02$, was significantly associated with raw self-other agreement, while RAS, $b = .06$, $\beta = 29$, $z = 1.80$, $p = .07$, was marginally associated (see Table 3c). Both Idealistic Distortion and RAS, along with Dyadic Adjustment were, however, significantly associated with distinctive agreement, all z's > 2.07. None of the relationship satisfaction measures were significantly associated with normative agreement. Thus, targets that reported higher relationship satisfaction with their romantic partner were more easily understood, in terms of their unique profile of traits, by outside observers when viewed interacting with this romantic partner.

Discussion

In line with the above studies, we again saw that distinctive agreement was associated with target adjustment, particularly interpersonal adjustment here. That is, targets in more satisfying romantic relationships were viewed with more distinctive accuracy by outside observers. These effects may be due in part to the nature of the interaction: perhaps interacting with a satisfying romantic partner allows individuals to behave consistently with their self-views, providing a window by which outside observers can view the unique characteristics of the target. On the other hand, relationship satisfaction with one's romantic partner may simply reflect a

more general pattern of adjustment, supporting the broad hypothesis that good adjustment enables more expressive accuracy. Indeed, the findings here parallel those above where multiple forms of target adjustment were consistently linked to higher distinctive agreement. Regardless, the present study emphasizes the importance of assessing both personal and interpersonal adjustment, as it appears that the form of adjustment relevant to accuracy is likely dependent upon the context within which one is viewed.

GENERAL DISCUSSION

Across these four studies we were able to address each of the five issues noted in the introduction. First, we found consistent support that perceiver adjustment is linked to perceptive accuracy; that is, well-adjusted individuals tend to understand others more accurately than less adjusted individuals. Second, target adjustment is related to expressive accuracy such that well-adjusted individuals tend to be more easily understood by others. Thus, the adjustment of both the target and perceiver is relevant to forming accurate interpersonal impressions. Third, these associations hold whether impressions are based on interactions with new acquaintances, close friends, or a romantic partner, indicating that this is a broad pattern that cuts across relationship partners and social contexts. Fourth, in general, these associations applied to a variety of adjustment measures, including self-rated personal adjustment, general relationship well-being, and romantic relationship satisfaction, as well as peer-rated likeability and an objective indicator of the strength of one's social network. This indicates that both personal and interpersonal aspects of adjustment are indeed associated with accurate impressions, but depending on context, one form of adjustment may be more strongly related to accuracy than another (e.g., Study 4). Lastly, with few exceptions, the association between impressionistic accuracy and adjustment was driven by normative accuracy for perceivers and distinctive accuracy for targets. That is, well-adjusted individuals tend to see others normatively, and in turn are seen distinctively. Studies 1 and 2 further strengthen these findings by demonstrating that these general associations hold for validation measures other than self-reports, specifically, parent- and peer-reports.

Perceptive Accuracy

Well-adjusted individuals tend to view others as normative, reflecting a good understanding of what others are like in general, but, contrary to what past research has assumed, do not necessarily demonstrate unique insight into the characteristics of others. Does higher normative accuracy actually reflect more accurate impressions of others? It is possible that

viewing others as normative is one route to achieving accuracy, given that most people are indeed normative. Thus, normative accuracy may enable judges to provide verifying information to targets and allow enhanced communication, improving interpersonal adjustment. Additionally, it may be that well-being leads one to view others more normatively, as well-adjusted individuals may have a clearer understanding of what others are like in general, and use this information to their advantage when forming impressions. If so, this suggests that conceptualizations of accuracy, following the suggestion of Vogt and Colvin (2003), should incorporate the appropriate use of normative information as an important aspect of Funder's (1999) cue utilization stage of RAM (see also Kenny, 1994, 2004). Although we cannot disentangle the cause – effect relationship here, good judges, when defined as normatively accurate, do indeed experience enhanced adjustment.

There is, however, a possible alternative explanation here. The normative profile is generally very positive in nature (Wood et al., 2007), and certainly was in the studies above, with the exception of the Japanese sub-sample in Study 3. Thus, it is unclear whether normative accuracy reflects a good judge or a positive judge. The latter possibility is consistent with the positive illusions framework that positively biased views of the world and others is linked to good adjustment (Taylor & Brown, 1988); perhaps it is this rosy view that fosters well-being, rather than accuracy. Nonetheless, the desirability of the normative profile does not take away from the fact that it is derived from the targets own self-reports, indicating that this positivity should not be viewed as completely illusory. That is, even if the association with well-being is a by-product of a perceptual positivity effect, accuracy is nonetheless achieved by these individuals, as they are tapping into how most individuals view themselves. Further, if this effect is driven by positive bias, this indicates an extension from the current theory that positively biased views of one's romantic partner are associated with enhanced adjustment to a variation where positive bias about others in general, even those just met, is linked to adjustment.

An additional possibility is that well-adjusted individuals, who tend to be normative themselves (e.g., Wood et al., 2007), are engaging in assumed similarity or projection when viewing others, seeing in others the positive traits they themselves possess. Clearly, whether the association between adjustment and normative accuracy for perceivers is a function of positivity, accuracy, or assumed similarity deserves further attention.

Perceiver adjustment was associated with distinctive agreement in one particular case, when parent-reports were used as the accuracy criterion instead of the target self-report (Studies 1 and 2). Thus, judges who reported higher adjustment understood the unique personality profile of targets, as described by their parents. Although this effect must be treated with caution, given that we know the participants who had parent reports were meaningfully different from those who did not, this can be considered preliminary evidence that perceiver adjustment can be associated with greater distinctive accuracy, fitting a more traditional conceptualization of accuracy. Thus, the elusive good judge may indeed experience higher adjustment but detecting this effect may require specific validation measures. In particular, self-other distinctive agreement may be too high a bar, while other-other distinctive agreement, or consensus, may be more attainable, consistent with the finding that levels of consensus are generally higher than levels of self-other agreement (Kenny, 1994).

Expressive Accuracy

Well-adjusted individuals consistently demonstrated higher levels of distinctive expressive accuracy. That is, individuals with higher levels of personal and interpersonal well-being tend to be more easily understood in terms of their unique profile of traits. These findings are more easily interpretable than the perceiver effects, as distinctive accuracy is more in line with our intuitive definition of accuracy. Adjustment may lead one to be a better target due to more accurate self-knowledge (e.g., Colvin, 1993a; 1993b), greater stability over time (Biesanz et al., 1998; Biesanz & West, 2000), or comfort with open expression of the self (Anderson &

Berdahl, 2002; Keltner et al., 2003). Meanwhile, being accurately perceived may facilitate adjustment, perhaps through self-verification (Swann, 1989) and smoother interactions with others (Kilpatrick et al., 2002). These perspectives are not incompatible as both processes may operate simultaneously.

The Importance of a Componential Approach

Taken together, the current findings highlight the importance of taking a componential approach and considering the roles of both the perceiver and target in impression formation. In line with recommendations by Kenny et al. (2006) and prior empirical evidence (Biesanz et al., 2007; Biesanz & Human, 2009; Furr, 2008b), the current research emphasizes that it is important to consider and separately examine the potentially differing roles of the underlying components of agreement scores, particularly normative and distinctive accuracy. We encourage others to examine each of these forms of accuracy, as even normative accuracy, traditionally viewed as an artifact, appears to be substantively important insofar as it is related to meaningful constructs, such as relationship and personal well-being. Further, the differing associations between adjustment and the components of accuracy across perceivers and targets underscores the need to investigate the roles of each of these individuals in the impression formation process. To conclude simply that accuracy is relevant to both perceiver and target adjustment is inadequate since this association is clearly dependent on the form of accuracy considered.

Bias and Accuracy in Impression Formation

Instead, we must form the more nuanced conclusion that well-adjusted individuals achieve perceptive accuracy via the use of normative information, while exhibiting expressive accuracy through the successful communication of unique personality traits. Considering that seeing others normatively inherently involves seeing others positively, at least in North American cultures, this finding may have interesting implications for our understanding of the simultaneous roles of bias and accuracy in interpersonal perception. Specifically, if the

association between adjustment and normative accuracy is in fact a perceptual positivity effect, this suggests that while both accuracy and bias are beneficial, the positive bias component is beneficial to the perceiver, while accuracy is beneficial to the target. This is particularly interesting considering the relationship literature, which suggests that the impressions themselves have a causal impact on well-being. If so, in a given dyad, to benefit the target, the perceiver would need to form a distinctively accurate impression, yet also maintain a normative or positive impression to benefit him or herself. As such, not only can accuracy and bias operate simultaneously, achieving both may in fact be necessary in order to maximize each relationship partner's well-being.

Conclusion

As hypothesized, being particularly skilled at accurately forming and conveying broad personality impressions was linked to higher personal and interpersonal adjustment. Specifically, it seems important to be perceived distinctively and accurately, yet, in viewing others, it is more important to understand what people are like in general. Seeing others as similar to the average person may not only lead to greater accuracy, but also allows for a rather positive view of others. Overall, this suggests that a potentially optimal strategy in impression formation lies in seeing others normatively and being seen distinctively.

Table 1: Initial Multilevel Model of Distinctive and Normative Agreement without Moderators

Model Parameters	Study 1	Study 2	Study 3	Study 4
Fixed effects (unstandardized)				
Intercept	-.00 (.026)	-.00 (.017)	.01 (.071)	.01 (.046)
Distinctive	.09** (.015)	.08** (.014)	.26** (.026)	.06** (.018)
Normative	.76** (.035)	.87** (.032)	.43** (.060)	.49** (.050)
Random effects (standard deviations)				
Perceiver				
Intercept	.30	.22	.55	.16
Distinctive	.04	.04	.07	——
Normative	.34	.37	.35	——
Target				
Intercept	.12	.13	.37	.11
Distinctive	.18	.20	.23	.10
Normative	.30	.33	.45	.31
Residual	1.49	1.18	3.27	1.35

Note. Units vary across studies. Specifically, all measures in Study 1 were on a $1 - 9$ scale, measures in Studies 2 and 4 were on $1 - 7$ scales, and Study 3 trait ratings were on a $1 - 15$ scale. Studies $1 - 3$ were all round-robin designs, while Study 4 was a half-block design and perceiver differential and normative random effects for were not estimated. All variables were grand-mean centered. Standard errors for fixed effects are presented in parentheses. $* p < .05$. $** p < .001$.

Table 2: Full Multilevel Models with Perceiver and Target Self-Esteem Moderating Distinctive and Normative Agreement

Fixed Effects	Study 1		Study 2		Study 3		Study 4	
Perceiver Self-Esteem								
Intercept	-.00	(.026)	-.00	(.017)	.00	(.071)	——	
Distinctive (D)	.09**	(.015)	.08**	(.014)	.25**	(.024)	——	
Normative (N)	.76**	(.035)	.87**	(.031)	.41**	(.060)	——	
Self-esteem (SE)	-.01	(.020)	-.01	(.015)	-.17*	(.084)	——	
D*SE	.01	(.006)	-.00	(.005)	-.03	(.016)	——	
N*SE	.05*	(.022)	.11**	(.024)	.02	(.058)	——	
Target Self-Esteem								
Intercept	-.00	(.026)	-.00	(.017)	.01	(.071)	.01	(.046)
D	.09*	(.015)	.08**	(.013)	.26**	(.024)	.06**	(.017)
N	.75**	(.035)	.86**	(.031)	.40**	(.061)	.48**	(.050)
SE	.01	(.012)	.00	(.011)	.00	(.068)	-.01	(.023)
D*SE	.04**	(.012)	.07**	(.013)	.09*	(.032)	.03	(.021)
N*SE	-.01	(.021)	-.05	(.023)	-.17*	(.072)	-.06	(.060)

Note. Units vary across studies. Specifically, all measures in Study 1 were on a 1 – 9 scale, measures in Studies 2 and 4 were on 1 – 7 scales, and Study 3 trait ratings were on a 1 – 15 scale and self-esteem was on a 1 – 5 scale. Studies 1 – 3 were all round-robin designs, while Study 4 was a half-block design and thus only moderators of perceptive accuracy were not measured. All variables were grand-mean centered. Study included country as a moderator, effect coded such that values reported here reflect mean of countries. Standard errors for fixed effects are presented in parentheses. * $p < .05$. ** $p < .001$.

Table 3a: Perceiver Adjustment Moderating Self-Other Profile Agreement

	Study 1	Study 2	Study 3	Study 2	Study 2	Study 2	Study 3
Perceiver Moderator	Self-esteem	Self-esteem	Self-esteem	Well-being	Depression	Relationship Well-Being	Liked
Raw							
b (*SE*)	.03* (.009)	.02* (.007)	-.02 (.020)	.02* (.006)	-.03† (.019)	.03* (.012)	.08* (.026)
β	.29*	.28*	-.17	.32*	-.21†	.32*	.40*
Distinctive							
b (*SE*)	.01 (.006)	-.00 (.005)	-.03† (.016)	.00 (.004)	.01 (.015)	.00 (.010)	.02 (.024)
β	.27	-.06	-.33†	.10	.11	.05	.17
Normative							
b (*SE*)	.05* (.022)	.11**(.024)	.02 (.058)	.08**(.019)	-.16* (.060)	.11* (.038)	.19* (.072)
β	.17*	.29**	.05	.26**	-.23*	.24*	.56*
Moderator Mean (*SD*)	6.86 (1.25)	5.33 (1.00)	3.75 (.87)	4.78 (1.25)	1.77 (.52)	5.31 (.83)	4.13 (.66)

Note. Units vary across studies. Specifically, all measures in Study 1 were on a 1 – 9 scale, measures in Study 2 were on 1 – 7 scales, and Study 3 trait ratings were on a 1 – 15 scale and adjustment measures were on 1 – 5 scales. All variables were grand-mean centered. † $p < .10$. * $p < .05$. ** $p < .001$.

Table 3b: Target Personal Adjustment Moderating Self-Other Agreement

Target Moderator	Study 1 Self-esteem	Study 2 Self-esteem	Study 3 Self-esteem	Study 4 Self-esteem	Study 2 Well-being	Study 4 Well-being	Study 2 Depression
Raw							
b (SE)	.06**(.011)	.09* (.013)	.05 (.031)	.03 (.028)	.05* (.011)	.04† (.020)	-.16* (.030)
β	.41**	.43*	.17	.16	.31*	.30†	-.40*
Distinctive							
b (SE)	.04* (.012)	.07* (.013)	.09* (.032)	.03 (.021)	.04**(.011)	.02 (.015)	-.12**(.030)
β	.25*	.33*	.31*	.27	.23**	.20	-.31**
Normative							
b (SE)	-.01 (.021)	-.05* (.023)	-.18* (.072)	-.06 (.060)	-.02 (.018)	.03 (.045)	.11† (.059)
β	-.05	-.16*	-.35*	-.17	-.09	.10	.17†
Moderator Mean (SD)	6.86 (1.25)	5.33 (1.00)	3.75 (.87)	5.47 (.83)	4.78 (1.25)	5.09 (1.12)	1.77 (.52)

Note. Units vary across studies. Specifically, all measures in Study 1 were on a $1-9$ scale, measures in Study 2 were on $1-7$ scales, and Study 3 trait ratings were on a $1-15$ scale and adjustment measures were on $1-5$ scales. All variables were grand-mean centered. † $p < .10$. * $p < .05$. ** $p < .001$.

Table 3c: Target Relationship Adjustment Moderating Self-Other Agreement

Target Moderator	Study 2 Relationship Well-being	Study 3 Liked	Study 4 Dyadic Adjustment	Study 4 Idealistic Distortion	Study 4 RAS	Study 4 Commitment	Study 4 Passion
Raw							
b (SE)	.06* (.020)	.10* (.041)	.07 (.048)	.05* (.024)	.06† (.034)	.04 (.037)	.04 (.036)
B	.24*	.26*	.24	.35*	.29†	.19	.19
Distinctive							
b (SE)	.04* (.020)	-.05 (.044)	.09* (.032)	.05* (.017)	.05* (.025)	.02 (.027)	.02 (.027)
B	.17*	-.14	.45*	.43*	.34*	.12	.16
Normative							
b (SE)	-.01 (.038)	.53** (.080)	-.14 (.101)	-.02 (.054)	-.06 (.075)	.08 (.079)	.07 (.076)
B	-.01	.79**	-.23	-.06	-.12	.17	.14
Moderator Mean (SD)	5.31 (.83)	4.13 (.66)	5.86 (.50)	4.40 (.95)	5.84 (.67)	5.38 (.64)	5.79 (.66)

Note. Units vary across studies. Specifically, measures in Study 2 and 4 were on $1 - 7$ scales, while Study 3 trait ratings were on a $1 - 15$ scale and adjustment measures were on $1 - 5$ scales. All variables were grand-mean centered. † $p < .10$. * $p < .05$. ** $p < .001$.

Table 4a: Perceiver Adjustment Moderating Parent-Other Agreement

	Study 1	Study 2	Study 2	Study 2	Study 2
Perceiver Moderator	Self-esteem	Self-esteem	Well-being	Depression	Relationship Well-being
Raw					
b (SE)	.03* (.009)	.02* (.010)	.03* (.008)	-.04† (.024)	.04* (.015)
β	.31*	.20*	.25*	-.18†	.30*
Distinctive					
b (SE)	.03* (.007)	.00 (.008)	.01† (.007)	-.02 (.022)	.04* (.014)
β	.50*	.02	.18†	-.10	.35*
Normative					
b (SE)	.02 (.024)	.08**(.024)	.05* (.020)	-.09 (.061)	.03 (.039)
β	.06	.25**	.19*	-.14	.07

Note. Units vary across studies. Specifically, measures in Study 1 were on a $1-9$ scale, while measures in Study 2 were on $1-7$ scales. All variables were grand-mean centered. † $p < .10$. * $p < .05$. ** $p < .001$.

Table 4b: Target Adjustment Moderating Parent-Other Agreement

	Study 1	Study 2	Study 2	Study 2	Study 2
Target Moderator	Self-esteem	Self-esteem	Well-being	Depression	Relationship Well-being
Raw					
b (SE)	.04**(.011)	.05**(.013)	.03* (.011)	-.11**(.030)	.03 (.022)
β	.40**	.34**	.22*	-.35**	.13
Distinctive					
b (SE)	.03* (.013)	.05**(.013)	.02* (.011)	-.09* (.029)	.02 (.021)
β	.25*	.29**	.19*	-.30*	.09
Normative					
b (SE)	-.01 (.029)	-.02 (.026)	-.02 (.021)	.09 (.062)	.02 (.043)
β	-.04	-.08	-.08	.17	.07

Note. Units vary across studies. Specifically, measures in Study 1 were on a $1-9$ scale, while measures in Study 2 were on $1-7$ scales. All variables were grand-mean centered. † $p < .10$. * $p < .05$. ** $p < .001$.

Table 5a: Perceiver Adjustment Moderating Peer-Other Agreement

Perceiver Moderator	Self-esteem	Well-being	Depression	Relationship Well-being
Raw				
b (SE)	.02* (.009)	.02* (.007)	-.04† (.023)	.03† (.014)
β	.18*	.25*	-.18†	.21†
Distinctive				
b (SE)	-.00 (.007)	.01 (.006)	-.01 (.019)	.01 (.012)
β	-.05	.13	-.09	.10
Normative				
b (SE)	.08** (.024)	.06* (.019)	-.09 (.061)	.06 (.038)
β	.26**	.22*	-.14	.14

Note. All results from Study 2, measured on a 1 – 7 scale. All variables were grand-mean centered. † $p < .10$. * $p < .05$. ** $p <.001$.

Table 5b: Target Adjustment Moderating Peer-Other Agreement

Target Moderator	Self-esteem	Well-being	Depression	Relationship Well-being
Raw				
b (SE)	.03* (.012)	.02† (.011)	-.06* (.028)	.03† (.018)
β	.20*	.15†	-.19*	.18†
Distinctive				
b (SE)	.02† (.013)	.01 (.011)	-.05† (.030)	.02 (.019)
β	.15†	.07	-.16†	.12
Normative				
b (SE)	-.01 (.026)	-.01 (.023)	.06 (.072)	-.03 (.047)
β	-.02	-.04	.09	-.07

Note. All results from Study 2, measured on a 1 – 7 scale. All variables were grand-mean centered. † $p < .10$. * $p < .05$. ** $p <.001$.
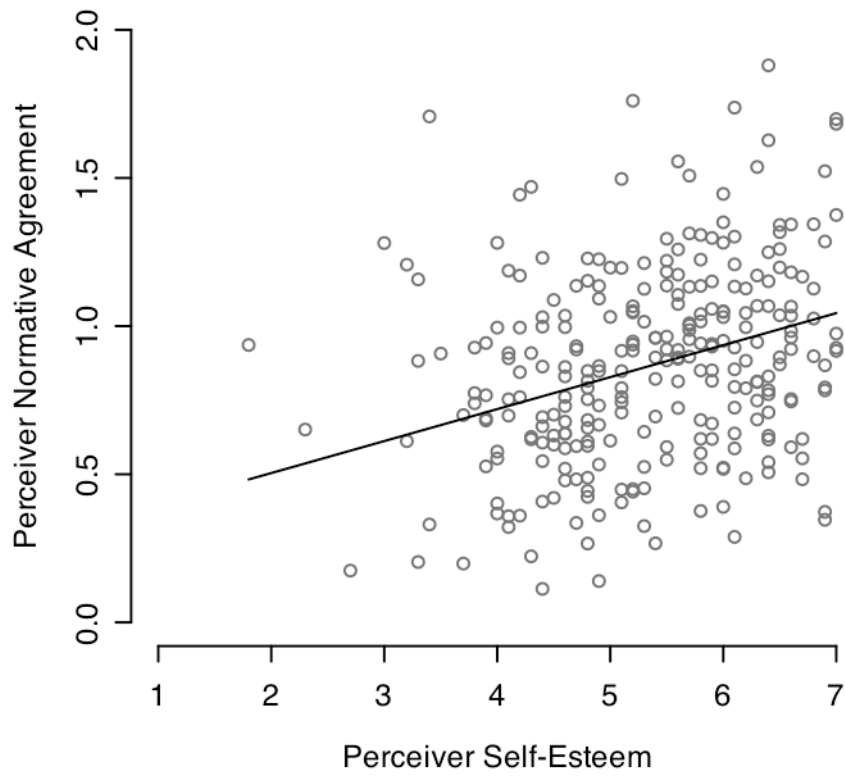
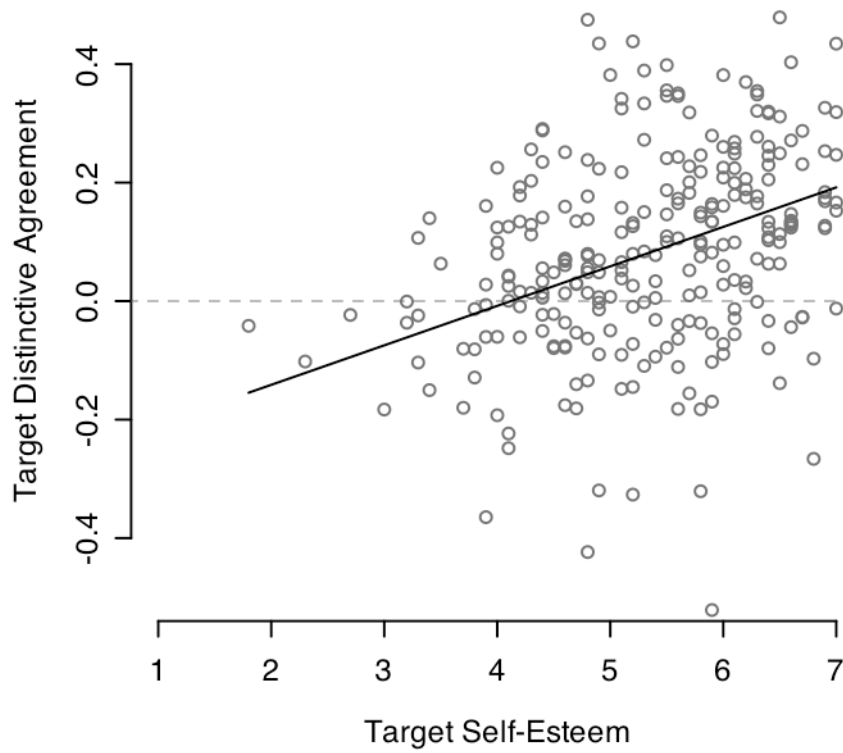**Figure 1: Perceiver Self-Esteem Moderating Perceiver Normative Agreement Slopes.**

Figure 2: Target Self-Esteem Moderating Target Distinctive Agreement Slopes.

FOOTNOTES

[1] The 21 items correspond to items 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 14, 15, 16, 17, 21, 26, 31, 34, 36, and 38 of the original 44-item BFI (Benet-Martínez & John, 1998).

[2] We follow Furr's (2008a) general terminology relabeling Cronbach's (1955) stereotype (accuracy) as normative. Note, however, that the social accuracy model examines the relationship between the target's normative validiation measure profile with the perceiver's impressions. In contrast, Furr (2008a; see page 1277) defines profile normativeness within reporting source – i.e., perceiver normativeness is the association between a perceiver's response profile with the average perceiver response profile.

[3] Estimation of all models was conducted using R's lme4 package (R Development Core Team, 2006; Bates & Sarkar, 2007). All perceiver and target random effects were estimated in both models and dyadic and group random effects were examined and included when needed. Standardized regression coefficients (β) and standardized mean differences (d) are computed using the standard deviation of their respective random effects (e.g., the standard deviation of the random distinctive accuracy slopes across perceivers) and the standard deviation of the moderator variable or the median standard deviation of the predictor, where appropriate. Tables present unstandardized parameter estimates (b's) and normal theory standard errors. For inferences we present the asymptotic z-test (parameter estimate divided by normal theory standard errors).

[4] The model was also run with gender included as a moderator of each form of agreement. Although there were significant gender differences (see Chan & Biesanz, 2009), these gender effects had no impact on the associations between accuracy and adjustment, and thus are not reported here.

[5] Since normative and distinctive accuracy slopes are modeled as random effects they are not actually directly observed. Figures 1 and 2 present empirical Bayes estimates of the random perceiver normative agreement slope and target distinctive agreement slopes with perceiver and target self-esteem, respectively.

[6] Due to the significant culture by agreement interactions, moderator analyses were also conducted within each sub-sample. Overall, results were generally consistent within each of the countries. Full results available upon request.

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APPENDICES

Appendix A: Study 2

UBC

The University of British Columbia
Office of Research Services
Behavioural Research Ethics Board
Suite 102, 6190 Agronomy Road, Vancouver, B.C. V6T 1Z3

CERTIFICATE OF APPROVAL - MINIMAL RISK

PRINCIPAL INVESTIGATOR:	INSTITUTION / DEPARTMENT:	UBC BREB NUMBER:
Jeremy Biesanz	UBC/Arts/Psychology, Department of	H06-03996

INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT:	
Institution	Site
UBC	Point Grey Site
Other locations where the research will be conducted: N/A	

CO-INVESTIGATOR(S):
Damian Murray
Lauren Human

SPONSORING AGENCIES:
Social Sciences & Humanities Research Council - "Personality Over Time"

PROJECT TITLE:
Accuracy in Personality Perception

CERTIFICATE EXPIRY DATE: February 5, 2008

DOCUMENTS INCLUDED IN THIS APPROVAL:	DATE APPROVED: February 5, 2007		
Document Name		Version	Date
Consent Forms:			
Paid Participant Consent		N/A	December 19, 2006
Subject Pool Participant Consent		N/A	December 19, 2006
Parent Consent		N/A	December 19, 2006
Friend Consent		N/A	December 19, 2006
Advertisements:			
Subject Pool Posting		N/A	December 19, 2006
Paid Poster		N/A	December 19, 2006
Questionnaire, Questionnaire Cover Letter, Tests:			
Friend Questionnaire		N/A	December 19, 2006
Parent Questionnaire		N/A	December 19, 2006
Round-Robin Questionnaire		N/A	December 19, 2006
Self-Report Questionnaire		N/A	December 19, 2006
Other Documents:			
Debriefing Form		N/A	December 19, 2006

The application for ethical review and the document(s) listed above have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human subjects.

Approval is issued on behalf of the Behavioural Research Ethics Board and signed electronically by one of the following:

Dr. Peter Suedfeld, Chair
Dr. Jim Rupert, Associate Chair
Dr. Arminee Kazanjian, Associate Chair
Dr. M. Judith Lynam, Associate Chair

Appendix B: Study 4

The University of British Columbia
Office of Research Services
Behavioural Research Ethics Board
Suite 102, 6190 Agronomy Road, Vancouver, B.C. V6T 1Z3

CERTIFICATE OF APPROVAL - MINIMAL RISK AMENDMENT

PRINCIPAL INVESTIGATOR: Elizabeth Dunn	DEPARTMENT: Psychology	UBC BREB NUMBER: H06-80633

INSTITUTION(S) WHERE RESEARCH WILL BE CARRIED OUT:	
Institution	Site
UBC	Point Grey Site
Other locations where the research will be conducted: N/A	

CO-INVESTIGATOR(S):
Jeremy Biesanz
Lauren Human

SPONSORING AGENCIES:
Social Sciences & Humanities Research Council - "Interactions between Romantic Partners Study"
UBC Start-up Funds - "Interactions between Romantic Partners Study"

PROJECT TITLE:
Interactions between Romantic Partners Study

Expiry Date - Approval of an amendment does not change the expiry date on the current UBC BREB approval of this study. An application for renewal is required on or before: August 24, 2007

AMENDMENT(S):		AMENDMENT APPROVAL DATE: December 15, 2006	
Document Name		Version	Date
Consent Forms:			
Field Study Consent Form		N/A	November 8, 2006
Questionnaire, Questionnaire Cover Letter, Tests:			
Field Forecasting Questionnaire		1	November 8, 2006

The amendment(s) and the document(s) listed above have been reviewed and the procedures were found to be acceptable on ethical grounds for research involving human subjects.

Approval is issued on behalf of the Behavioural Research Ethics Board
and signed electronically by one of the following:

Dr. Peter Suedfeld, Chair
Dr. Jim Rupert, Associate Chair
Dr. Arminee Kazanjian, Associate Chair
Dr. M. Judith Lynam, Associate Chair