Assessment of Accurate Self-Knowledge

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Despite ongoing theoretical interest in the accuracy of self-knowledge and its implications for mental health, few researchers have yet to tackle this topic directly. This may be due, in part, to several factors that make assessing individual differences in accurate self-knowledge especially difficult. In this article, we present a method for the assessment of accurate self-knowledge that relies on information gathered from the self, knowledgeable others, and observations of behavior in the laboratory, and we provide psychometric support for this newly developed assessment procedure. Specifically, we present evidence for internal consistency reliability, convergent and discriminant validity, and criterion-related validity. Other researchers interested in studying the accuracy of self-knowledge might wish to adopt this procedure in their own research endeavors.

The assessment of accurate self-knowledge regarding personality and behavioral tendencies is a tricky business at best. Self-reports of self-knowledge are unlikely to be very informative, as individuals who do not know themselves well probably lack the awareness to acknowledge their own ignorance. Asking a friend or family member to provide ratings of an individual’s self-knowledge is an equally unattractive option, as this would require the rater to accurately know both how an individual sees him or herself and what the individual is actually like. While the former is unlikely, so too is the latter—there is perhaps no one source that is completely accurate regarding any individual’s “true” personality traits (Funder, 1995; Kruglanski, 1989; Robins & John, 1997).

A slightly better option would be to compare self-reports of personality with ratings of personality provided by a knowledgeable source. At least in this case, one could be fairly confident that self-reports reflect how an individual actually perceives him or herself. Yet, this approach still leaves uncertainty with regard to the accuracy of the reports of personality provided by the knowledgeable other. Instead, the assessment of the accuracy of self-knowledge may require a multimethod approach that incorporates multiple indexes of accuracy based on different sources of information. In this article, we present a method for assessing the accuracy of self-knowledge that relies on information gathered from the self, knowledgeable others, and observations of behavior in the laboratory, and we provide evidence for the reliability and validity of this assessment procedure.

SIGNIFICANCE OF ACCURATE SELF-KNOWLEDGE

For centuries, philosophers have described accurate assessments of the self, and more generally, accurate perceptions of the physical and social world, as the “ultimate good” (Copleston, 1957). For example, Sartre (1957/1972) considered the acquisition of self-knowledge to be one of the most critically important philosophical problems confronting humankind, and Socrates (Plato, 1920) argued that the unexamined life is not worth living, presumably because the unexamined life does not allow for the acquisition of accurate self-knowledge.
More recently, psychologists have suggested that accurate self-knowledge is critical not just as an end in and of itself but because of its association with mental health. According to Rogers (1961), the ability to appropriately infer rather than deny or distort the meaning of behavior, especially as it relates to the self, is the hallmark of mental health. Similarly, Jahoda (1958) considered accurate perceptions of the self to be one of the defining features of mental health.

**RESEARCH ON ACCURATE SELF-KNOWLEDGE**

The majority of the literature on self-knowledge has focused on the processes through which people come to know themselves (e.g., Albright & Malloy, 1999; Bem, 1972; Festinger, 1954; Kenny, 1994; Sedikes & Skowronski, 1995; Shrauger & Schoeneman, 1979; Swann, 1987) rather than the accuracy of self-perceptions. A much smaller literature has explored the implications of enhanced self-views for mental health. Findings from this literature have been mixed, with some evidence for negative relationships between self-enhancement and psychological well-being (e.g., Colvin, Block, & Funder, 1995; Gosling, John, Craik, & Robins, 1998; John & Robins, 1994; Robins & John, 1997) and other results suggesting that self-enhancement might actually serve to maintain psychological well-being (e.g., Taylor & Brown, 1988; Taylor, Lerner, Sherman, Sage, & McDowell, 2003).

Although these findings have generally been discussed in the context of the association between accurate self-knowledge and mental health (e.g., Colvin et al., 1995; Taylor & Brown, 1988), research on the avoidance of error, as indicated by the lack of self-enhancement, addresses a different question than research on the achievement of accuracy, as indicated by the presence of accurate self-knowledge. Bias, as operationalized in studies of self-enhancement, assesses the extent to which self-ratings are either higher or lower than criterion ratings and is typically based on difference scores or some variant of them. Accuracy, as operationalized in this study, addresses the correspondence between self-ratings and criterion ratings using profile correlations. A high score on one type of measure does not preclude a low score on the other. One may hold a view of the self that is unbiased but inaccurate. For example, a man may perceive himself about as favorably as he should but do a poor job of differentiating among attributes that are more and less characteristic of his underlying personality structure. In contrast, one may have a relatively accurate view of oneself (based on the current conceptualization) that is biased in either a positive or negative direction. A woman, for example, may be able to differentiate among her more and less characteristic personality attributes but generally elevate or underestimate her ratings.

Several recent studies have distinguished between accuracy and bias in self-ratings. In one study (John & Robins, 1994) comparing self-perceptions of performance with ratings provided by knowledgeable others, self-ratings were correlated with others’ ratings to derive accuracy scores, and differences were computed between the mean of self-rankings and others’ rankings to assess self-enhancement bias. In another study (Gosling et al., 1998) that examined the accuracy of self-ratings of behavior accuracy was operationalized as the correlation between self-reports and observer reports of act frequency, and bias was operationalized by the discrepancy between self-reports and observer ratings, with positive values indicating that participants overreported how frequently they performed an act and negative values indicating that they under-reported how frequently they performed the act. Consistent with recent writings (Funder, 1999; Robins & John, 1997), both of these studies found individual differences in the accuracy of self-knowledge. However, neither study went on to explore accurate self-knowledge as we do in this study.

**METHODOLOGICAL AND CONCEPTUAL CHALLENGES IN ASSESSING ACCURATE SELF-KNOWLEDGE**

In this article, **accurate self-knowledge** is defined as knowledge of one’s personality traits as they are exhibited in behavior. More specifically, accurate self-knowledge involves knowing the traits that are more and less characteristic of one’s underlying personality structure. Despite the theoretical significance of this topic and research on other types of accurate self-knowledge (e.g., knowledge of one’s competence; Kruger & Dunning, 1999; knowledge of one’s nonverbal communication skills; Riggio & Riggio, 2001), several factors have made the study of individual differences in accurate self-knowledge, and judgmental accuracy more generally, especially difficult (Davis & Kraus, 1997; Funder, 1999). In the following section, we describe problems associated with the methods used to compute accuracy scores and concerns about confounding factors as well as challenges associated with selecting an appropriate criterion for accuracy.

**Methods and Confounding Factors**

Research conducted in the 1940s and 1950s typically operationalized accuracy as the summed difference between a participant’s ratings of his or her own personality traits and a criterion rating for these traits (Bernieri, Zuckerman, Koestner, & Rosenthal, 1994; Funder & Colvin, 1997). For instance, if a participant rated herself “5,” “3,” and “2” on the traits of sociability, conscientiousness, and hostility, respectively, and her friend rated her “3,” “4,” and “3” on the same traits, she would receive a score of “4” to reflect the summed difference between the three ratings. Cronbach (1955) criticized this method because it potentially confounds genuine individual differences in sensitivity with idiosyncratic effects associated with how a rater uses the response scale.

An alternative approach to evaluate the accuracy of personality judgments involves computing profile correlations...
(Bernieri et al., 1994; Gosling et al., 1998; John & Robins, 1994; Snodgrass & Rosenthal, 1985). An individual’s set of ratings across personality traits (e.g., sociability, conscientiousness, and hostility) is correlated with a set of criterion ratings for these traits, resulting in a correlation coefficient that represents the correspondence between the rating and criterion. This coefficient is then treated as an accuracy score. To the extent that ratings and criterion profiles covary, a high accuracy score is achieved (Funder, 1995; Kruglanski, 1989). This approach indicates whether an individual and a criterion source agree on the rank ordering of the most and least salient characteristics within the individual and, as such, does not indicate whether the profiles are similar in an absolute sense (i.e., rank orders are similar and numerical assignments to traits are similar). Because of the relatively large extant literature that has utilized the profile score approach, we opted for this strategy in this study.

This method eliminates two of the confounding factors that plague difference scores (i.e., elevation and differential elevation; Cronbach, 1955), although it does not eliminate all potential artifacts (Bernieri et al., 1994; Colvin & Bundick, 2001; Vogt & Colvin, 2003). For example, projection (also referred to as assumed similarity), a factor that was first introduced by Hastorf & Bender (1952), can result in high accuracy scores when a judge describes a target as similar to himself or herself, and the judge and target actually do possess similar personality characteristics. This component is not an issue for the study of accurate self-knowledge because in this case, the judge is the target. Another factor that has been of great concern is stereotype usage (Bernieri et al., 1994; Cook, 1984; Vogt & Colvin, 2003). To the extent that an individual has a reasonable understanding of the personality profile that fits most people, the judge can use this information to accurately rate an unknown individual (Cronbach, 1955; Gage & Cronbach, 1955). However, this explanation is not terribly compelling when applied to self-judgments. According to this explanation, an individual would have to possess a personality profile that is “common” or typical in the population, be aware of this profile, and draw on this knowledge in describing himself or herself. Yet, it seems unlikely that individuals would rely on knowledge of others when they have access to a vast store of information pertaining to themselves and can draw on this information in their self-descriptions.

Another concern with the computation of accuracy scores for self-judgments regards the extent to which accuracy scores may be confounded with the social desirability of these descriptions. In turn, this confounding could result in subsequent associations between accurate self-knowledge and other positive characteristics (e.g., indicators of psychological well-being). This might occur in the event that individuals who describe themselves in a socially desirable manner are both correct in their judgments (as one might expect, given that it may be easier to know one’s more positive than negative characteristics; Colvin, 1993) and likely to report positive characteristics on other measures. In this study, we used semipartial correlation analyses to address the role of social desirability in accurate self-knowledge.

Selecting an Appropriate Criterion

Many researchers now prefer to use a multicriterion approach to assess judgmental accuracy (Funder, 1995; Robins & John, 1996, 1997). Moreover, researchers concerned with the accuracy of self-ratings of psychiatric disorders now typically base diagnoses on multiple sources of data, such as clinician ratings and informant reports (Kessler, Wittchen, Abelson, & Zhao, 2000). In this article, we used multiple independent operationalizations of accurate self-knowledge to provide a broad assessment of the construct. Because we defined accurate self-knowledge as knowledge of one’s personality traits that are expressed in behavior, individuals who possess high levels of accurate self-knowledge should provide self-descriptions of personality that (a) predict behavior on multiple occasions and (b) agree with ratings provided by knowledgeable others who have had ample opportunity to observe the individual’s behavior over time. Thus, accurate self-knowledge was operationalized by multiple indicators of (a) correspondence between self-descriptions of personality and trained coders’ ratings of behavior and (b) correspondence between self-descriptions of personality and parents’ aggregated ratings of personality.

As recently recognized in the psychiatric assessment literature (Kraemer et al., 2003), valid assessment requires that researchers move beyond a concern with how many informants are needed to a theoretical consideration of how informants can be selected in such a way that the deficiencies in one informant’s report are corrected by another’s report. Thus, the goal here was not to obtain sources of information that were not redundant with one another but that represented different perspectives on personality. Our choice of behavioral ratings generated from the laboratory and parents’ ratings of personality reflects this concern. Both criteria have strengths and weaknesses. Although the validity of behavioral ratings has been demonstrated (Funder & Colvin, 1991; Kolar, Funder, & Colvin, 1996), and there has been a call for greater use of behavioral ratings as a criterion for assessing accuracy (Funder & Colvin, 1997; Kenny, 1994), one’s behavior may not reflect underlying personality characteristics in every situation. Likewise, although there is some evidence that the most valid source of personality judgments may be judgments provided by knowledgeable others (Kolar et al., 1996; Kenny, 1991, 1994), and parents certainly have ample opportunity to observe their children across the life course, there is no one person who has had the opportunity to observe an individual in every possible situation. The advantage of using multiple operationalizations of accuracy is that it allows one to aggregate the strengths of each criterion and to cancel out the weaknesses associated with different criteria (Block & Block, 1980; Kraemer et al., 2003; Robins & John, 1997).
In summary, the goal of this study was to develop a multimethod measure of accurate self-knowledge and examine its reliability and validity. First, we describe the development of this measure and provide evidence for internal consistency reliability. Then, we present evidence for the convergent, discriminant, and criterion-related validity of this assessment procedure. Specifically, we examine relationships between accurate self-knowledge and scores on an array of indexes of psychological well-being derived from participants, knowledgeable others, and interaction partners to provide evidence for convergent validity. As discussed previously, accurate perceptions of the self are considered to be one of the defining features of mental health (Jahoda, 1958; Rogers, 1961), and thus, accurate self-knowledge was expected to be associated with a variety of indicators of mental health. We also examined the association between accurate self-knowledge and a measure of the consistency of self-descriptions. Given that individuals who possess more consistent views of themselves may be in a better position to accurately know themselves, we expected to find a positive relationship.

To provide evidence for discriminant validity, we examined associations between accurate self-knowledge and measures of constructs that were expected to differ from accurate self-knowledge, including judgmental accuracy, defined as the ability to accurately know others’ personality characteristics (Vogt & Colvin, 2003) and general cognitive ability (Wonderlic, 1983). Finally, associations between accurate self-knowledge and ratings of the accuracy of participant’s self-knowledge provided by knowledgeable others are presented as evidence for criterion-related validity. In a final section, we examine the role of social desirability in accurate self-knowledge.

METHOD

The data we present in this article represent a subset of data collected as part of a larger research project on personality and interpersonal perception (Colvin, 1995). Only those data pertaining to this study are described. Over a 6-month period, participants completed a battery of self-report questionnaires and tests, were videotaped in up to four dyadic interactions, and had their personality traits and behavioral tendencies described by parents, friends, behavioral coders, and interaction partners. In total, participants interacted with up to two unacquainted, opposite-sex partners and two unacquainted, same-sex partners. A team of trained coders later rated participants’ behavior in each of the four 5-min unstructured interactions. Participants also rated their partner’s behavior in each of the interactions.

Participants

At a large urban university, 143 participants were recruited by posting notices around campus. Across two waves of data collection that spanned approximately 6 months each, 93 of these university students (48 women and 45 men) completed the project. Participants came to the laboratory on five separate occasions, each time for a 2-hr research session. Participants were paid for their time and could earn up to $100 for completing all five research sessions. Participants were primarily White undergraduate students. Approximately half of the sample were in either their first or second year at the university. The average age of students included in the sample was 21, with ages ranging between 17 and 33.

Participants’ self-descriptions. Participants described their global personality characteristics on two well-established omnibus measures of personality. To reduce self-presentational concerns and encourage participants to provide honest descriptions of their perceived personality traits, participants were assured that their responses would be completely confidential. First, each participant described his or her own personality characteristics using the California Adult Q-sort (CAQ; Block, 1961/1978). The CAQ consists of 100 descriptive statements printed on separate cards that describe a full range of personality, cognitive, and social attributes. The task requires the Q-sorter to place the items into a forced, approximately normal, nine-category distribution that ranges from extremely uncharacteristic to extremely characteristic. Examples of items in the CAQ include “is critical, skeptical, not easily impressed”; “wide range of interests”; “talkative”; “thin-skinned”; “sensitive to criticism”; and “high aspiration level.” The reliability and validity of this measure for describing global personality characteristics has been well established (Block, 1961/1978; Ozer, 1993).

Participants also described themselves on another comprehensive personality measure, the Revised NEO Personality Inventory (NEO–PI–R; Costa & McCrae, 1992), which assesses the big five factors of personality: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. This measure contains 240 items that tap six facets of each of the big five factors of personality. Example items include “I am not a worrier” (low neuroticism); “I am dominant, forceful, and assertive” (high extraversion); “I often enjoy playing with theories or abstract ideas” (high openness); “I try to perform all the tasks assigned to me conscientiously” (high conscientiousness); and “I believe that most people are basically well-intentioned” (high agreeableness). Participants rated the extent to which each item was characteristic of their personalities using a 5-point Likert scale response format that ranged from 1 (strongly disagree) to 5 (strongly agree). The NEO–PI–R has demonstrated acceptable levels of reliability and validity (Costa & McCrae, 1992).

In addition to these two omnibus measures of personality, measures of psychological well-being assessed happiness (Fowdyce, 1988), satisfaction with life (Diener, Emmons, Larsen, & Griffin, 1985), positive and negative affect (Watson, Clark, & Tellegen, 1988), self-esteem (Rosenberg, 1965), and ego resiliency (Block & Kremen, 1996). Each of
these measures has been widely used in previous research and have demonstrated reliability and validity. A measure of self-consistency was derived from the correspondence of CAQ and NEO–PI–R ratings. For the CAQ, five unit-weighted factor scores that correspond to the big five factors of personality were first derived from a factor analysis (McCrae, Costa, & Busch, 1986). The 20 highest loading CAQ items were summed to create each factor score. Profile correspondence scores were then derived by correlating the CAQ and NEO–PI–R domain scale scores separately for each participant (\( M_r = .52, SD = .39 \)). A measure of judgmental accuracy, developed for a separate study, was based on the correspondence between participants’ personality ratings of four targets and accuracy criteria generated from self CAQ, friend CAQ, and behavioral ratings (for additional details regarding this measure and its psychometric properties, see Vogt & Colvin, 2003).

**Parents’ and friends’ ratings.** Two parents or guardians and two friends were recruited to provide personality descriptions of each participant. They were mailed the CAQ, modified to accommodate Likert ratings, and the NEO–PI–R, and asked to describe the personality characteristics of the participant. They were also asked to complete a measure assessing their length of acquaintanceship with the participant. The median length of time friends reported knowing participants was approximately 4½ years, suggesting that they were in a relatively good position to provide accurate personality ratings (Funder & Colvin, 1988).

**Coded behavior.** Participants were videotaped in up to four separate 5-min “getting acquainted” dyadic interactions with other participants from the study. On two occasions, participants interacted with an opposite-sex partner; on two other occasions, participants interacted with a same-sex partner. The videotaped behavior of each participant was coded using the 64-item Behavioral Q-sort (BQ; Funder, Furr, & Colvin, 2000) by a team of trained coders. This method involves assessing molar-level behaviors that tap the psychological meaning inherent in behaviors (Funder & Colvin, 1991). For instance, rather than coding how many frowns a participant exhibited, the extent to which a participant “expresses hostility” was coded. Forty items describe behaviors directly relevant to characteristics included in the CAQ. For example, one item in the CAQ reads “is cheerful,” and the corresponding BQ item reads “behaves in a cheerful manner.” Another CAQ item reads “feels cheated and victimized by life” and the corresponding BQ item reads “expresses self-pity or feeling of victimization.”

Coders viewed each 5-min videotape a minimum of two times, after which they rearranged the cards of the BQ deck into a forced, quasi-normal distribution ranging from 1 (extremely uncharacteristic) to 9 (extremely characteristic) of the behavior exhibited by the target person. Coders were instructed to use the BQ items to describe behaviors they had witnessed and to avoid, as far as possible, “playing psychologist” or making inferences about participants’ behavior in other situations (Funder & Colvin, 1991). Overall, each 5-min interaction was coded by an average of five coders. No coder rated the behavior of a participant in more than one interaction.

As a general rule, coders were asked to recode any target for whom their average zero-order profile correlation with other coders fell below \( r = .30 \). This procedure was instituted to ensure that targets were coded reliably. In contrast with the more typical emphasis on the reliability of coders’ ratings across targets, we were interested in whether each target was coded reliably across coders. Thus, we examined the internal consistency reliability of the coders’ ratings for each individual target. In each case, the ratings of the four coders that had the highest contributions to the overall alpha reliability were retained. The average pairwise rater-by-rater correlation across the 64 items of the BQ was \( r = .26 \). For each item, Spearman–Brown reliabilities were computed across all targets. The aggregate (Spearman–Brown) reliabilities of the BQ items created using this method were as high as .79, with a median reliability of .60 and a mean of .58 (SD = .13). The average item reliability of these behavioral ratings compares favorably with the reliability of behavioral ratings reported elsewhere (Funder et al., 2000). Thus, the four behavioral rating profiles were averaged to create a composite rating of each target person in each interaction.

**Interaction partner’s ratings.** Following each videotaped interaction, participants rated their partner’s behavior on 20 adjectives selected to tap the big five factors of personality on a scale ranging from 1 (very uncharacteristic) to 5 (very characteristic). For example, they rated the extent to which their partners were “outgoing,” “trusting,” “practical,” “fearful,” and “insightful” in the interaction.

**Procedure**

**Session 1.** In the first session, the primary investigator (C. R. Colvin) described to groups ranging from one to four judges the goals of the project, the requirements for participating in the project (e.g., time requirements), and answered any questions that participants had about the study. After receiving a detailed description of the goals of the project, participants completed a general consent form to participate in the study and a demographics questionnaire. They completed a variety of self-report measures of personality including the CAQ and the NEO–PI–R. As time permitted, participants began working on one of three questionnaire packets that consisted of randomly ordered items from the battery of personality measures administered in the study.

**Session 2 through Session 5.** Participants were videotaped in unstructured interactions with randomly assigned partners with whom they were not previously acquainted in the remaining sessions. Specifically, two participants were...
seated on a couch in the laboratory while the experimenter turned on the videotaping equipment in full view of the participants. They were then instructed to “talk about whatever you would like” for approximately 5 min while the experimenter left the room. Following the interaction, both participants completed a brief questionnaire describing their partner’s behavior in the interaction. In Sessions 2 and 3, participants interacted with opposite-sex partners; in Sessions 4 and 5, they interacted with same-sex partners. In Session 4, participants also completed the Wonderlic Personnel Test (Wonderlic, 1983), a 12-min timed test of general cognitive ability. For the remainder of each of these sessions, they continued to work on the personality questionnaire packets they began in Session 1.

RESULTS

Development and Internal Consistency
Reliability of Accurate Self-Knowledge Measure

As discussed previously, accurate self-descriptions of personality should (a) predict behavior and (b) agree with personality ratings provided by knowledgeable others. Thus, two types of indicators were used to assess accurate self-knowledge. We discuss each in turn.

Correspondence between self-descriptions and behavioral ratings. Two indexes of the accuracy of self-knowledge were derived from the correspondence between self-descriptions and behavioral ratings generated by trained coders. The extent to which self-descriptions agreed with BQ ratings was examined using a subset of the CAQ/BQ items. To ensure the validity of these indexes of accuracy, only those CAQ items that had previously been rated as relatively observable were utilized (Funder & Dobroth, 1987). In addition, only those BQ items that were reliably coded by behavioral raters were used to generate this index of accurate self-knowledge. Moreover, to provide a broad representation of personality, items were selected that sampled each of the big five factors of personality (McCrae & Costa, 1987). McCrae & Costa, 1985). As discussed previously, this measure taps six facets of each of the big five factors of personality. Profile correspondence scores were computed by correlating the 30 facet scores generated from self-descriptions and parents’ composite ratings on the NEO–PI–R separately for each participant. A high score on this measure indicated that a participant described himself or herself in a manner that was similar to his or her parents’ composite ratings of personality on the CAQ.

To increase the reliability of the personality-based assessment of accurate self-knowledge, the correspondence between self and parent ratings was also assessed on the NEO–PI–R, a popular and psychometrically sound measure of the five factors of personality (Costa & McCrae, 1985). As discussed previously, this measure taps six facets of each of the big five factors of personality. Profile correspondence scores were computed by correlating the 30 facet scores generated from self-descriptions and parents’ composite ratings on the NEO–PI–R separately for each participant. A high score on this measure indicated that a participant and his or her parents’ provided similar ratings across the 30 facet scores.

Development of Final Accurate Self-Knowledge Scores

Means, standard deviations, and ranges of the accurate self-knowledge indexes are displayed in Table 1. As the results in this table indicate, agreement between self-descriptions and parents’ ratings was slightly higher than agreement between self-descriptions and behavioral coders’ ratings. The correlations among the four indexes are included in Table 2. As this table indicates, all pairwise correlations among the accurate self-knowledge scores were significant at $p < .05$ and ranged from a low of $r = .24$ to a high of $r = .71$. With the exception of one correlation ($r = .71$), all bivariate correlations fell in the recommended range of .15 to .50 for interitem correlations (Clark & Watson, 1995). Internal consistency reliability was computed by treating each of these four indexes as items on a scale. The resulting alpha was .70, providing evidence that each

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1Separate profile correlations were computed for the opposite-sex and same-sex interactions due to our expectation that different behaviors might be emitted in interactions with opposite-sex versus same-sex partners. The first opposite-sex and same-sex interactions were used to ensure an independent source of information (i.e., the second interactions) would be available for further analyses regarding the correlates of accurate self-knowledge.

2Because some readers might be concerned that the high interitem correlation between the two indexes based on the correspondence between self-ratings and behavioral ratings might account for the internal consistency reliability that was obtained, we recomputed Cronbach’s alpha after eliminating one of the two behavioral indexes and obtained $\alpha = .60$, a slightly lower but yet quite acceptable estimate of reliability for a measure based on three items.
of the indexes was tapping a similar construct. The evidence for internal consistency is especially compelling given the limited number of items that went into the calculation of internal consistency as well as the diverse nature of both the sources of information that served as criteria (i.e., behavioral ratings, parents’ ratings) and the personality measures used to assess personality and behavior (i.e., CAQ, BQ, NEO–PI–R). Moreover, this convergence of ratings suggests that each of these sources provides valid information about underlying personality characteristics, thus reducing the likelihood that findings can be accounted for by biases associated with any one type of criterion.

The acceptable level of reliability justified combining these indexes to create an overall accurate self-knowledge score. The four correlation coefficient scores were converted to z scores using the Fisher’s r to z conversion and were then standardized and averaged to create a final accurate self-knowledge score. Because participants had varying combinations of accurate self-knowledge indexes, final scores were computed for only those individuals who had both of the agreement scores (based on patients’ ratings) and at least one of the agreement scores (based on behavioral ratings). As a result, composite accurate self-knowledge scores were created for 93 participants in the study. This measure, which was used for all subsequent analyses, had \( M = -.01 \) and \( SD = .74 \). An analysis was conducted to examine gender differences in the accuracy of self-knowledge. Results revealed that the accuracy of women’s \( (M = .04) \) and men’s \( (M = -.06) \) self-knowledge was not significantly different, \( t(91) = .67, n.s., r = .07 \).

Although we expected that self-ratings and behavioral ratings would covary differently than self-ratings and parent ratings due to differences in aspects of personality captured by each source of information, this alpha may represent a slight overestimate due to the overlap in item content (e.g., self-ratings appear in all four indexes).

### Evidence for Convergent, Discriminant, and Criterion-Related Validity

Accurate self-knowledge has long been considered an integral component of mental health (Jahoda, 1958; Rogers, 1961). To examine convergent validity, we correlated our measure of accurate self-knowledge with several indicators of mental health, including measures of happiness (Fordyce, 1988), satisfaction with life (Diener et al., 1985), positive affect and negative affect (Watson et al., 1988), self-esteem (Rosenberg, 1965), and ego resiliency (Block & Kremen, 1996). Results of these analyses are presented in the first column in the top half of Table 3. Individuals who possessed more accurate self-knowledge reported being happier, more satisfied with life, experiencing more positive affect and less negative affect, having higher self-esteem, and being more ego resilient than individuals who possessed less accurate self-knowledge.

To provide further evidence for convergent validity, our measure of accurate self-knowledge was next correlated with two indexes of psychological well-being derived from personality and behavioral ratings provided by friends and interaction partners (two sources of information that were not used to develop the measure of accurate self-knowledge). Research conducted by McCrae and Costa (1991) demonstrated that the factors of extraversion, emotional stability (i.e., the opposite pole of neuroticism), agreeableness, and conscientiousness are positively related to psychological well-being. Thus, one measure was developed by standardizing and summing friends’ NEO–PI–R items ratings for each of these four factors after reverse keying neuroticism scores. A second measure was created by standardizing and summing interaction partners’ ratings of personality on each of these four factors after reverse keying neuroticism scores. Results of these analyses are presented in the first column in
the bottom half of Table 3. Individuals who possessed more accurate self-knowledge were described by their friends and interaction partners as possessing personality attributes and exhibiting behaviors that are characteristic of individuals high in psychological well-being. These findings provide additional evidence for the convergent validity of our measure of accurate self-knowledge.

One might also expect that individuals who possess consistent self-views would be more knowledgeable about what they are like than those whose self-views are less stable. From a psychometric perspective, self-descriptions that are more reliable (i.e., consistent) are likely to be more valid (i.e., predict some criterion of accuracy; Lord & Novick, 1968). Thus, we examined the association between our measure of accurate self-knowledge and an index of correspondence between self-descriptions on two omnibus measures of personality (i.e., CAQ and NEO–PI–R). The resulting correlation, $r = .34, p < .05$, suggests that indeed, individuals who described themselves more consistently across conceptually related measures of personality provided self-descriptions that were more accurate.

There is currently insufficient theory regarding those constructs that should be unrelated to accurate self-knowledge. Nevertheless, we offer some preliminary evidence for discriminant validity. We explored the relationship between accurate self-knowledge and a measure of judgmental accuracy defined as the general ability to accurately know others (Vogt & Colvin, 2003). To the extent that our measure of accurate self-knowledge taps a construct that is distinct from a more general ability to understand personality, we would expect a weak association between accurate self-knowledge and judgmental accuracy. Results based on the correlation between accurate self-knowledge and a previously validated measure of judgmental accuracy revealed a small yet marginally significant association, $r = .20, p = .09$. We also examined the association between our measure of accurate self-knowledge and a test of general cognitive ability. To the extent that our measure of the accuracy with which people are able to describe their own personality and behavioral tendencies reflects something more than a general cognitive ability, one would expect a null relationship. The association between accurate self-knowledge and the test of general cognitive ability (Wonderlic, 1983) was $r = .05, p = ns$, supporting the conceptual distinctiveness of these constructs.

Some support for criterion-related validity was obtained from the correlation between accurate self-knowledge and ratings of participants’ “insight into (their) own motives/behaviors” provided by (up to) two friends and two parents. Accurate self-knowledge was correlated $r = .24, p < .05$ with the composite of CAQ ratings provided by two friends, and $r = .33, p < .05$ with parents’ composite CAQ ratings, suggesting that what is assessed by our measure of accurate self-knowledge is related to what is measured by friend’s and parent’s ratings of the accuracy of participants’ self-knowledge. One would not expect this association to be much higher given the previously discussed difficulty inherent in asking observers to provide judgments of the accuracy of another’s self-knowledge.

### Examination of Role of Social Desirability

As discussed previously, it is possible that individuals who describe themselves in a more socially desirable manner (i.e., more favorably) might score higher on a measure of accurate self-knowledge. In turn, this confounding could inflate associations between accurate self-knowledge and other self-report measures of positive characteristics of people who report positive characteristics on one measure report positive characteristics on another. In particular, we were concerned with whether this proposed relationship might influence our analyses of the association between accurate self-knowledge and the self-reported measures of psychological well-being. Therefore, we derived a measure of self-perceived favorability by correlating self-ratings on the CAQ with a prototype of favorability that was developed by aggregating CAQ ratings of the prototypically favorable person provided by nine raters ($\alpha = .95$). As expected, our measure of accurate self-knowledge was highly correlated with this measure of favorability, $r = .69, p < .05$. Thus, we next recomputed our correlations with the self-reported measures of psychological well-being after partialing variance associated with self-perceived favorability from accurate self-knowledge (i.e., using a semipartial correlation).

The results of these analyses are presented in the right-most column of Table 3. Overall, it appears that controlling for the effect of self-perceived favorability does result in a meaningful drop in the associations between accurate self-knowledge and the self-report indicators of psychological well-being. Only two correlations remained

### Table 3

<table>
<thead>
<tr>
<th>PWB Measures</th>
<th>ASK</th>
<th>ASK Partialing Favorability From ASK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Happiness</td>
<td>$r = .34^{**}$</td>
<td>.02</td>
</tr>
<tr>
<td>Satisfaction with life</td>
<td>$r = .31^{**}$</td>
<td>.17*</td>
</tr>
<tr>
<td>Positive affect</td>
<td>$r = .28^{**}$</td>
<td>.04</td>
</tr>
<tr>
<td>Negative affect</td>
<td>$r = -.31^{**}$</td>
<td>-.13</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>$r = .47^{**}$</td>
<td>.12</td>
</tr>
<tr>
<td>Ego-resiliency</td>
<td>$r = .47^{**}$</td>
<td>.20**</td>
</tr>
<tr>
<td>PWB based on friends’ ratings</td>
<td>$r = .38^{**}$</td>
<td>.24**</td>
</tr>
<tr>
<td>NEO–PI–R ratings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PWB based on interaction partners’ ratings</td>
<td>$r = .42^{**}$</td>
<td>.26**</td>
</tr>
</tbody>
</table>

Note. Ns vary from 68 to 93. ASK = accurate self-knowledge; PWB = psychological well-being; NEO–PI–R = Revised NEO Personality Inventory.

*p < .10. **p < .05.
statistically significant after controlling for the favorability of self-ratings.

Does this suggest that the relationship between accurate self-knowledge and psychological adjustment is an artifact?: maybe and maybe not. Some participants who rated themselves favorably may have been justified in doing so (i.e., they actually do possess favorable personality characteristics), and thus, we might have controlled for variance that is part and parcel of psychological adjustment (because people who possess favorable characteristics can be expected to describe themselves as better adjusted). To address this concern, a measure of psychological adjustment that was not based on self-report data is required. As previously discussed, we had two such measures of adjustment—one based on friends’ ratings and one based on interaction partners’ ratings. As the results presented in the bottom of the right-most column in Table 3 indicate, the correlations between accurate self-knowledge and these non self-report indicators of psychological well-being remained statistically significant after controlling for self-perceived favorability. Thus, we concluded that the relationship between accurate self-knowledge and psychological adjustment can not be attributed to a self-report response bias associated with social desirability.

DISCUSSION

In this study, we developed a new procedure for assessing individual differences in the accuracy of self-knowledge and provided psychometric support for its reliability and validity. We employed aggregation throughout our development of accurate self-knowledge scores, both in the creation of the final index of accuracy and in the initial generation of criterion ratings with which to correlate self-ratings. As discussed previously, aggregation is effective in reducing errors in measurement and produces results that more accurately reflect true underlying associations among variables (Block & Block, 1980; Kraemer et al., 2003; Robins & John, 1997). The measure demonstrated satisfactory internal consistency reliability and convergent validity, and some preliminary evidence was observed for discriminant and criterion-related validity. Convergent and criterion-related validity evidence, in the form of documented associations with conceptually related constructs, provided compelling support for meaningful individual differences in the accuracy of self-knowledge. Future research, guided by the logic of construct validation, will seek additional evidence for convergent and discriminant validity. For example, “judgability,” defined as the extent to which an individual is knowable to others (Colvin, 1993), is both conceptually and operationally related to accurate self-knowledge. Yet, accurate self-knowledge captures that which is know to oneself, whereas judgability reflects that which is known to external others. For mentally healthy individuals in particular, the two concepts should produce results that are very similar. For individuals who are less mentally healthy and who are less comfortable exhibiting their true self, the two concepts are likely to produce results that are unrelated because self-reports will reflect personality characteristics that are not readily exhibited in social situations.

The concept of self-enhancement is also related to accurate self-knowledge. However, as previously discussed, research on the avoidance of error, as indicated by the lack of self-enhancement, addresses a different question than research on the achievement of accuracy as indicated by the presence of accurate self-knowledge. Additional research that follows the logic of John and Robins (1994) in which bias and accuracy are simultaneously studied is needed to better understand the association between bias and accuracy in self-perception.

Additional effort might also focus on validating this measure in other populations. It is unlikely that many of the college students included in this sample possessed extremely negative personality characteristics, for which one can hardly expect accurate self-knowledge to be related to psychological well-being. In fact, knowledge of this kind, although perhaps related to positive long-term consequences, might be quite painful over the short term. Thus, the generalizability of these findings may be limited to individuals who fall within the normal range on adjustment and personality functioning.

Other researchers interested in studying the accuracy of self-knowledge might wish to adopt the procedure used in this study in their own research endeavors. Some readers might be concerned that the correlations among accurate self-knowledge indexes were lower than one might desire; however, it is important to remember that our goal was not to obtain sources of information that provided redundant perspectives but that could contribute to a broader perspective on personality. Of course, this procedure is both time consuming and laborious. Aspects of this procedure might be adapted for a less labor-intensive approach to assessing the accuracy of self-knowledge in the future. Moreover, effort might be geared toward developing a self-report instrument, based on the empirical approach to scale construction, that reflects those self-report characteristics that distinguish individuals with more accurate self-knowledge from those with less accurate self-knowledge.

In addition, the measure of accurate self-knowledge that is reported in this article addresses a specific form of self-knowledge: knowledge of personality and behavioral tendencies. Clearly, there are many other forms of self-knowledge. For example, some people may possess keen insight into their emotional states. Others may possess accurate knowledge of particular Trait × Situation interactions. Thus, findings based on the administration of this measure cannot be generalized beyond the specific type of self-knowledge that is assessed with this procedure. In addition, this measure is based on the use of the profile correlation method and as such is uninformative regarding the absolute
similarity of ratings. Future research efforts might benefit from the use of a measure that combines rank order and absolute similarity such as that proposed by McCrae (1993).

With regard to the association between accurate self-knowledge and the consistency of self-ratings, this finding, although in the predicted direction, was slightly weaker than we would have expected given that in some sense, the measure of consistency addresses the reliability of self-ratings, whereas our measure of accurate self-knowledge provides evidence for the validity of self-ratings. According to classical test theory, reliability is a prerequisite for validity (Lord & Novick, 1968). Perhaps the attenuated correlation can be accounted for by the fact that some individuals may possess reliable or consistent beliefs about themselves that have no basis in external reality. Thus, one can achieve a high score on the consistency measure in one of two different ways—high consistency may result when one possesses consistent beliefs about the self that are valid and when one possesses consistent beliefs that are invalid. On the other hand, one can attain a high score on our measure of accurate self-knowledge in only one manner, that is, when one’s self-view is confirmed by others, and thus, evidence is provided for validity. The finding that scores based on the correspondence of self-reports are not highly related to scores based on the correspondence between self-ratings and ratings provided by others has interesting implications for psychometric assessment more generally. Specifically, this finding recapitulates the importance of moving beyond self-reports to other sources of information in the validation of new assessment procedures (Block & Block, 1980).

Turning to our investigation of the role of social desirability in accurate self-knowledge, our results revealed a meaningful relationship between accurate self-knowledge and indexes of psychological adjustment derived from friends’ and interaction partners’ ratings after controlling for the association between accurate self-knowledge and social desirability. A secondary result indicates that social desirability, here indexed by the favorability of one’s self-ratings, was related to accurate self-knowledge. Some readers may wonder if people with less favorable personality traits can exhibit equal levels of accurate self-knowledge as individuals who possess favorable traits. The answer from this single study is no. More generally, the answer may be the same. Individuals who recognize that they are not the person whom they would like to be are likely to find the mismatch between real and ideal self to be psychologically uncomfortable. Their options may be either to seek counseling in which they attempt to remedy their personal shortcomings or rely on defensive processes to keep their inadequacies from regularly reaching awareness. In the latter case, one’s level of accurate self-knowledge is likely to be low given the constant use of distorting defense mechanisms.

Social perception studies tend to elicit the “social desirability reflex.” We do it, our colleagues do it, and reviewers do it when there is an interesting finding involving self-perception and psychological adjustment. In this article, the relationship between accurate self-knowledge and adjustment was a prime candidate for this potential artifact. As previously stated, our findings revealed a meaningful relationship between accurate self-knowledge and psychological adjustment after controlling for social desirability. Although empirical evidence often makes the strongest case against an artifact, there is at least one logical reason why the artifact explanation is not compelling in this study. A putative measure of social desirability is often suggested to “unconfound” a relationship between social perception and adjustment. Unfortunately, social desirability measures can introduce another confound rather than help to eliminate one. Rarely is it clear exactly what a measure of social desirability actually assesses. Some argue they measure a tendency for individuals to present themselves in an unrealistically positive manner on self-report measures (Edwards, 1990), whereas others believe social desirability measures assess psychological adjustment (Block, 1990). To the extent that the latter is true, partialing social desirability from constructs (in this case, accurate self-knowledge) that are to be correlated with other measures of psychological adjustment is problematic. Clearly, additional thought and consideration regarding how best to approach the issue of social desirability is warranted in future research.

On a practical level, evidence for meaningful individual differences in the accuracy of self-knowledge suggests that the use of self-reports of personality may be more valid for some individuals than others. This finding, along with the results of Shedler, Mayman, and Manis’s (1993) earlier investigation of the validity of self-reports of mental health, emphasizes the importance of using multiple sources of information in the assessment of personality characteristics. On a theoretical level, the finding that accurate self-knowledge is associated with psychological well-being is consistent with the assertion that accurate appraisals of the self are an essential element of psychological well-being (Colvin et al., 1995). Several explanations for the association between accurate self-knowledge and mental health have been offered. Some imply that self-knowledge may precede psychological adjustment. For example, several researchers have suggested that self-knowledge may be used to guide decisions ranging from where to work to whom to marry (Baumeister, Campbell, Krueger, & Vohs, 2003; Kirkpatrick & Ellis, 2001; Vogt, 1998). To the extent that self-knowledge is accurate, positive outcomes may result, leading to enhanced psychological well-being (Vogt, 1998). Decisions based on inaccurate self-knowledge, on the other hand, may have negative implications for psychological well-being (Funder, 1999). Relatedly, many therapeutic approaches are grounded on the premise that positive behavioral change comes from the acquisition of accurate self-knowledge regarding problematic personality characteristics and behavioral patterns (Brown, 1991).
On the other hand, the writings of at least one psychologist indicate that self-knowledge may follow from psychological adjustment. According to Rogers (1961), individuals who are more mentally healthy may be able to more easily understand themselves because there is less of a need to engage in distortion or denial among well-adjusted individuals than among those for whom accurate self-knowledge highlights personal inadequacies and painful truths. Perhaps the truth can be found at the intersection of these two perspectives; in other words, it may be the case that this relationship is bidirectional, with accurate self-knowledge contributing to mental health and mental health contributing to accurate self-knowledge. Future research, based on designs that allow for an examination of causality, is needed to gain a better understanding of the mechanisms underlying the relationship between accurate self-knowledge and mental health.

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REFERENCES


### APPENDIX

**Corresponding CAQ and BQ Items in Behavior-Based Accurate Self-Knowledge Indexes**

<table>
<thead>
<tr>
<th>CAQ Item</th>
<th>BQ Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>33. Is calm</td>
<td>7. Appears to be relaxed and comfortable</td>
</tr>
<tr>
<td>92. Has social poise</td>
<td>8. Exhibits social skill</td>
</tr>
<tr>
<td>97. Emotionally bland</td>
<td>9. Is reserved and unexpressive</td>
</tr>
<tr>
<td>3. Wide range of interests</td>
<td>17. Shows a wide range of interests</td>
</tr>
<tr>
<td>1. Is critical, skeptical, not easily impressed</td>
<td>20. Expresses criticism</td>
</tr>
<tr>
<td>4. Talkative individual</td>
<td>21. Is talkative</td>
</tr>
<tr>
<td>13. Thin-skinned; sensitive to criticism</td>
<td>22. Expresses insecurity</td>
</tr>
<tr>
<td>68. Basically nervous</td>
<td>23. Shows physical signs of tension or anxiety</td>
</tr>
<tr>
<td>8. High intellect</td>
<td>24. Exhibits high degree of intelligence</td>
</tr>
<tr>
<td>18. Initiates humor</td>
<td>26. Initiates humor</td>
</tr>
<tr>
<td>28. Aroused liking and acceptance in people</td>
<td>29. Seems likable</td>
</tr>
<tr>
<td>34. Over-reactive to minor frustrations</td>
<td>32. Acts irritated</td>
</tr>
<tr>
<td>35. Has warmth; compassionate</td>
<td>33. Expresses warmth</td>
</tr>
<tr>
<td>38. Hostile toward others</td>
<td>35. Expresses hostility</td>
</tr>
<tr>
<td>40. Generally fearful</td>
<td>37. Behaves in a fearful or timid manner</td>
</tr>
<tr>
<td>43. Facialy and/or gesturally expressive</td>
<td>38. Is expressive in face, voice, or gestures</td>
</tr>
<tr>
<td>48. Keeps people at a distance</td>
<td>41. Keeps partner at a distance</td>
</tr>
<tr>
<td>51. Values intellectual and cognitive matters</td>
<td>42. Shows interest in intellectual/cognitive matters</td>
</tr>
<tr>
<td>57. Interesting, arresting person</td>
<td>44. Says or does interesting things in interaction</td>
</tr>
<tr>
<td>71. High aspiration level</td>
<td>46. Displays ambition</td>
</tr>
<tr>
<td>84. Is cheerful</td>
<td>50. Behaves in a cheerful manner</td>
</tr>
<tr>
<td>93. Sex-typed</td>
<td>52. Behaves in stereotypical masculine/feminine style</td>
</tr>
<tr>
<td>95. Gives advice</td>
<td>53. Offers advice</td>
</tr>
</tbody>
</table>

*Note.* CAQ = California Q-sort; BQ = Behavioral Q-sort.

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