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Beyond Self-Report in the Study of Hedonic and Eudaimonic Well-Being: Correlations with Acquaintance Reports, Clinician Judgments and Directly Observed Social Behavior

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Individuals differ in their overall levels of psychological health and well-being. These individual differences are important because well-being is associated with many positive life and health outcomes. The two traditional approaches to studying well-being (Keyes, Shmotkin, & Ryff, 2002; Ryan & Deci, 2001; Waterman, 1993) are the hedonic or subjective well-being (SWB) tradition, which emphasizes constructs such as happiness, positive affect, low negative affect, and satisfaction with life (e.g., Bradburn, 1969; Diener, 1984; Lyubomirsky & Lepper, 1999; Kahneman, Diener, & Schwarz, 1999), and the eudaimonic or psychological well-being tradition (PWB), which emphasizes positive psychological functioning and human development (e.g., Rogers, 1961; Ryff, 1989a; Ryff 1989b; Waterman, 1993). While hedonic and eudaimonic approaches are conceptually distinct, empirical findings using self-report measures and self-report outcomes suggest that both approaches tap largely overlapping constructs (King, In-press; Ryan & Deci, 2000; 2001). The current study explores this assertion in some detail, moving beyond associations between self-reported personality and self-reported behavior by using acquaintance ratings, clinician judgments, and directly observed social behaviors, correlating them with a widely-used hedonic conceptualization of well-being, subjective happiness (SH: Lyubomirsky & Lepper, 1999) and a widely-used eudaimonic measure, Ryff's (1989a, 1989b) psychological well-being (PWB) scale.

The achievement of happiness has been identified as an important goal for people living in Western cultures (Diener, Suh, Smith & Shao, 1995; Freedman, 1978; Triandis, Bontempo, Leung, & Hui, 1990; Veenhoven, 1994). Though several measures of hedonic well-being have been widely used, most operationalizations of the construct include measures assessing high positive affect, low negative affect, and satisfaction with life. These measures include Bradburn's (1969) Affect Balance Scale, the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), and the Delighted-Terrible Scale (Andrews & Withey, 1976). Because these measures generally tap only one of the affective or the satisfaction with life components of happiness, Lyubomirsky and Lepper (1999) developed a broader measure of hedonic well-being, the Subjective Happiness (SH) scale which is, "a global, subjective assessment of whether one is a happy or unhappy person" (p. 139). The SH scale, though relatively new, has been used in over 40 studies and in at least 4 cultures outside of the United States (Korean: Lee & Im, 2007, Japanese: Otake, Shimai, Ikemi, Utsuki, Peterson, & Seligman, 2005; Otake, Shimai, Tanaka-Matsumi, Otsui, & Fredrickson, 2006; Russian:

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Lyubomirsky & Lepper, 1999; Spanish: Extremera & Fernandez-Berrocal, 2006). In sum, SH is a widely used measure of hedonic well-being and global happiness in various domains and across cultures.

Ryff's conceptualization of PWB stems from themes regarding positive functioning and optimal aging common among various theorists of life-span and human development including Erik Erikson, Carl Jung, Gordon Allport, and Abraham Maslow (Keyes, Shmotkin, & Ryff, 2002; Schmutte & Ryff, 1997). Ryff developed a multidimensional model of well-being that includes six dimensions: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance, which are theorized to vary across the lifespan (Ryff 1989b; Keyes, Shmotkin, & Ryff, 2002; Ryan & Deci, 2001). Ryff's PWB scale has been used in numerous studies in applied and experimental domains. PWB was featured in the 1995 National Survey of Midlife Development in the U.S. (MIDUS; MIDUS II data collection in progress since 2002). In addition, PWB has been examined cross-culturally and has been translated into multiple languages including Swedish (Lindfors, Berntsson, & Lundberg, 2006), Greek (Vleioras & Bosma, 2005), Japanese (Kitamura, Kishida, Gatayama, Matsuoka, Miura & Yamabe, 2004), Chinese (Cheng & Chan, 2005), and Italian (Ruini, Ottolini, Rafanelli, Ryff, & Fava, 2003). In sum, PWB is a measure pervasively used in various domains and across age and culture.

Despite the abundance of research on the two conceptualizations of well-being, the range of methods typically employed has been surprisingly narrow. Schmutte and Ryff (1997, p. 550) noted that "the majority of prior studies used self-reports of personality and well-being/affect without external validation of either construct." A recent meta-analysis of 225 studies (Lyubomirsky, King, & Diener, 2005) concluded that SH as well as other measures of hedonic well-being (e.g. subjective well-being, positive affect, and low negative affect) and eudaimonic well-being (e.g., psychological well-being), are related to positive outcomes in work life, social relationships, health, perceptions of self and others, sociability and activity, likeability and cooperation, prosocial behavior, physical well-being and coping, and creativity and problem solving. For example, self-reported extraversion has been found to be highly correlated with positive affect (Costa & McCrae, 1980; Headey & Wearing, 1989; Lucas, Diener, Grob, Suh, & Shao, 2000), negative affect (Costa & McCrae, 1980; Headey & Wearing, 1989), Subjective Happiness (Lyubomirsky, Tkach, & DiMatteo, 2006), satisfaction with life (Diener & Seligman, 2002; Schimmack, Oishi, Furr, & Funder, 2004), and other measures of happiness (Bradburn, 1969; Brebner, Donaldson, Kirby, & Ward, 1995; Costa, McCrae, & Norris, 1981). However, most of these studies examined personality traits using a measure of the Big Five (Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience) and *all* relied upon self-reports. As Lyubomirsky et al. (2005) noted, "Clearly, more non-self-report measures of key variables are needed in future studies" (p. 841). These could include studies of a) acquaintance ratings, b) clinician judgments, or c) directly observed social behaviors.

Acquaintance and clinician ratings

Acquaintance judgments are important to examine because a person's reputation can be defined as the sum total of judgments made of him or her by others (Funder, 1999; Hogan, 1982). The way others perceive a particular person (e.g., as friendly or unfriendly) greatly influences important social outcomes for him or her (e.g., being embraced or avoided by others). Moreover, self-reports of personality are not always equivalent to the way an individual is seen by others (Hofstee, 1994; Kolar, Funder, & Colvin, 1996). Clinician judgments might be important to examine, in addition, because of clinicians' special training and experience in diagnosing and assessing mental health.

One study assessing hedonic well-being (Costa & McCrae, 1991) went beyond self-report by asking the spouse of each target how they perceived him or her. The study found happy people were perceived by their spouses to be extraverted, agreeable, conscientious, and not neurotic.

Another rare exception to the paucity of research on eudaimonic well-being and reputation was a study that compared self-reports of PWB and the Big Five items of personality with spousal ratings of PWB one year later (Schmutte, & Ryff, 1997). Participants and their spouses tended to agree with respect to the participant's levels of PWB across all six dimensions (range for r 's = .35–.55). However, this study did not examine how participant's PWB scores were related to their spouse's perceptions of their personalities. Moreover, the authors of this study suggested that it might be useful to examine traits less broad than the Big Five.

Behavioral correlates

Even more neglected than studies of the reputational correlates of well-being are its associations with behavior, a situation common to many areas of personality and social psychology (Baumeister, Vohs & Funder, In-press; Funder, 2001; Ryff & Singer, 2000). Accurate descriptions of personality depend upon observing what people do, not just what they say about themselves (Gosling, John, Craik, & Robins, 1998; Hofstee, 1994; Kolar et al., 1996). The “behaviors” associated with happiness in the leading meta-analysis (Lyubomirsky et al., 2005) were almost always assessed by self-report (e.g. time spent running, volunteering, hospital visits). Similar to self-reports of personality, self-reports of behavior have also been identified as sometimes untrustworthy (Kolar et al., 1996; Gosling et al., 1998).

One study found that self-reports of subjective well-being were positively correlated with acquaintance ratings of several behaviors including social skills, physical attractiveness, athletic ability, assertiveness, good manners, public speaking skills, and articulateness (Diener & Fujita, 1995), but still did not observe behavior directly. Another study found a one-item measure of happiness correlated with a player's cricket batting average, which could be regarded as a behavioral outcome (Thoits & Hewitt, 2001). Overall, very little research can be found that examines the relationship between hedonic well-being and directly observed behaviors.

The few studies that go beyond self and peer report of PWB have primarily investigated neural correlates and biological markers (Urry et al., 2004; Ryff et al., 2006). In one study, seven biomarkers (e.g., HDL cholesterol, systolic blood pressure) were related to higher levels of self-rated PWB whereas weight and glycosylated hemoglobin were associated with lower levels of PWB. This study suggests that well-being and ill-being have distinct biological implications. Another study found that individuals high in PWB have greater left than right superior frontal activation (Urry et al., 2004). While these studies are groundbreaking in their demonstration of how well-being is instantiated in biology, little remains known about the association between PWB and social behavior

Beyond self-report

Ryff and Singer (2000) called on researchers to examine new directions and methods of study in assessing PWB. In response, the current study attempts to answer three neglected questions: a) what are the social reputations associated with hedonic (e.g., SH) and eudaimonic (e.g., PWB) conceptualizations of well-being, b) how are both types of well-being associated with judgments by clinically trained interviewers, and c) how are both types of well-being associated with behavior as directly observed in social settings? Do both conceptualizations of well-being have similar personality and behavioral associations, as the empirical self-report data would suggest (King, In-press; Ryan & Deci, 2000; 2001) – or do associations among well-being and

reputation, clinical judgments, and/or observed social behaviors differ depending on whether a eudaimonic or hedonic conceptualization of well-being is employed?

Method

Overview

The current study used data collected from the Riverside Accuracy Project - Phase II (RAP-II), a large multi-method data set designed to assess factors associated with accurate personality judgment. Over 550 undergraduate students from the University of California-Riverside were included in the study as either target participants or informants. Targets were administered multiple personality assessments over several sessions, and interacted with other participants in one of several videotaped experimental conditions. Participants also completed a one-hour semi-structured life-history interview with a professional psychologist. Two informants were recruited to provide peer descriptions of each target participant. Data have been reported in several publications (Fast & Funder, In-press; Greve, Reimer, & Funder, In-press; Letzring, Block, & Funder, 2005; Letzring, Wells, & Funder, 2006; Vazire & Funder, 2006; Wagerman & Funder, 2007). Analyses in the current study are new and not previously reported.

Participants

196 participants (100 male and 96 female) from the RAP-II sample who completed either the Subjective Happiness Scale (SHS: Lyubomirsky & Lepper, 1999), the PWB Questionnaire, or both are considered the target participants in the current analyses. Most of these participants were described by two peer informants (see below). The approximate ethnic breakdown was 38% Asian American, 20% Hispanic, 14% Caucasian, 12% African American, and 16% other or not specified. The *n* varies among analyses because of missing or incomplete data. All participants were compensated for their time.

Procedure

Participant Ratings—Participants completed all measures reported (along with others not included in the current study) in a take-home packet. Participants returned to the lab on several occasions to provide additional ratings, to take part in a life-history interview as well as an experimental social interaction. The life-history interview and experimental interaction are described in more detail below.

Subjective Happiness—The Subjective Happiness Scale (SHS: Lyubomirsky & Lepper, 1999) is a widely used, 4-item global assessment of happiness. Each item was assessed on a 7 point Likert scale (e.g. Item 1 – “In general I consider myself: 1 = *Not a very happy person* to 7 = *A very happy person*). Internal consistency (*alpha*) was 0.81, consistent with Lyubomirsky and Lepper’s (1999) findings of 0.79 to 0.94 (*M* = 0.86). SHS has demonstrated good psychometric properties such as test-retest reliability, discriminant validity, and convergent validity (Lyubomirsky & Lepper, 1999; Mattei & Schaefer, 2004). This scale has also been used in many prior studies of happiness (Lyubomirsky & Ross, 1999; Lyubomirsky, Tkach, & DiMatteo, 2006; Sheldon & Lyubomirsky, 2006).

Psychological Well-Being—The Psychological Well-Being Questionnaire (PWB) includes 84 items that assess well-being along six dimensions: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Each dimension comprises 14 items assessed on a six point Likert scale (1 = *strongly disagree*, 6 = *strongly agree*). Items and dimensions were derived from the writings of theorists of life-span development, personal growth, and mental health (Ryff, 1989a). Internal consistency (*alpha*) coefficients for each of the six dimensions ranged from .85 to .92 and were consistent with previous research using the PWB questionnaire (Ryff, 1989b; Ryff et al.,

2006; Schmutte & Ryff, 1997). Intercorrelations among the six PWB dimensions were similar to previous findings (Schmutte & Ryff, 1997) and ranged from .33 to .71. Average ratings across the six dimensions were combined and averaged into an overall PWB measure ($\alpha = .89$) for each participant with higher scores reflecting higher PWB.¹

Acquaintance Ratings

Participants provided names and information of two individuals at the university who knew the participant the best. Acquaintances were then recruited, came into the lab, and described the participants who identified them, using the BFI and the CAQ.

The Big Five Inventory—The Big Five Inventory (BFI: John & Srivastava, 1999) consists of 44 items that assess the global personality traits of agreeableness, conscientiousness, extraversion, neuroticism, and openness. Each item is assessed on a five-point Likert scale (1 = *disagree strongly*, 5 = *agree strongly*). Acquaintance ratings were obtained for each participant, with 165 participants having two acquaintance ratings and 29 having only one rating. For participants with two acquaintance ratings, a composite rating was created by averaging them. The Cronbach's α reliabilities for each composite were: Agreeableness = .57, Extraversion = .63, Conscientiousness = .60, Neuroticism = .61, and Openness = .38.

The California Adult Q-Set—The California Adult Q-Set (CAQ: Block, 1961; as modified for use by non-professionals by Bem & Funder, 1978) contains 100 diverse personality characteristics (e.g., "Is personally charming"; "Has a wide range of interests"). Participants assessed themselves on each of the 100 items using a nine-point Likert scale (1 = *extremely uncharacteristic*, 9 = *extremely characteristic*). 164 participants were rated by two acquaintances while 30 participants were rated by only one. A composite score was created for participants with two acquaintance ratings by averaging the ratings for each of the 100 items. The average reliability of the 100 CAQ item composites (Cronbach's α) is .30 ($SD = .15$).

Life-History Interview

Participants individually completed a one-hour semi-structured life history interview with one of four professionally trained (i.e., MA in counseling, MSW, or Ph.D. in clinical psychology) clinicians who had experience with a college-age individuals. Each participant consented to having his or her interview videotaped. The life history interview was adapted from a protocol developed by the Institute of Personality Assessment and Research at UC-Berkeley (IPAR; Craik et al., 2002)²; the protocol was modified to capture a more diverse range of personality-relevant information within a college sample. Topics included academic and college experiences, interpersonal relationships, family history, and future plans. Clinicians began each interview by asking a participant to "tell me something about yourself" and by asking about a significant event that changed or altered the participant's life.³ Following the interview, clinicians completed a Q-sort description for each participant.

Clinician ratings of each participant were obtained using the traditional *Q-sort* method, where 100 items are placed in 9 categories (1 = *extremely uncharacteristic*, 9 = *extremely*

¹The current paper presents analyses using an overall PWB measure, summed across dimensions, correlated with acquaintance ratings, clinician judgments, and ratings of observed behaviors. The correlations of the various subscales, considered one at a time, are highly similar to each other. The average vector correlation among the patterns of correlates of each of the PWB subscales and acquaintance ratings of the 100 CAQ items was $r(98) = .83$ (range: .53–.95), clinician judgments using the CAQ, $r(98) = .75$ (range: .32–.94), and observed behavior using the RBQ, $r(62) = .74$ (range: .41–.92). For the curious, a complete list of correlates for each PWB subscale in relation to acquaintance ratings, clinician ratings, and ratings of observed behavior are available on our website at: www.rap.ucr.edu/PWB.

²Since renamed the Institute of Personality and Social Research.

³The full protocol is available on our website at: www.rap.ucr.edu/PWB.

characteristic) using a forced-choice, quasi normal distribution in which each category contains a pre-determined number of CAQ items. In 47 instances, a second clinician was available to view the videotaped life history interview and provided a Q-sort for the same participant.⁴ In these instances, a composite rating was formed by averaging the two ratings for each of the 100 CAQ items. The average reliability of the 100 CAQ item composites (Cronbach's *alpha*) is .45 (*SD* = .24).

Experimental Interactions

Participants were randomly assigned to interact with two unacquainted individuals on the condition that participants did not know the other group members, and that the group consisted of a pre-determined number of males per group (i.e., 0, 1, 2, or 3 males). There were one of five experimental conditions: 1) Minimal Interaction, in which participants were not allowed to interact; 2) Trivia Quiz Condition, in which participants worked together to unanimously arrive at and answer as many trivia questions as possible in a 50 minute span; 3) Get to Know Condition, in which participants were instructed to learn as much about each other as possible over 50 minutes; 4) Short Unstructured Condition, in which participants discussed whatever they desired over a 50 minute time-span; and 5) Long Unstructured Condition, in which participants discussed whatever they desired over a three-hour time-span (for more information on the experimental procedure, see Letzring et al., 2006). Gender composition for each group included all males (MMM), all females (FFF), two males and one female (MMF), and two females and one male (FFM). Preliminary analyses suggested that groups were more similar than different, and all analyses will be conducted across gender compositions.

Behavioral Ratings

Behavioral ratings for each participant were obtained from videotapes of four of the five experimental interactions, as the Minimal Interaction condition lacked sufficient social behaviors to code meaningfully. Four trained undergraduate coders used the 64-item Riverside Behavioral Q-Sort (RBQ: Funder et al., 2000) and assessed each participant's behavior following the conclusion of experimental interaction. The Riverside Behavioral Q-Sort (RBQ: Funder, Furr, & Colvin, 2000) is a 64-item assessment tool designed to describe behaviors associated with social interactions. Each of the 64 behaviors is placed into one of 9 categories (1 = *extremely uncharacteristic*, 9 = *extremely characteristic*) by coders using a forced-choice, quasi-normal distribution in which each category contains a pre-determined number of RBQ items. The RBQ items describe behavior at a mid-level of analysis (e.g., "Is talkative", "Initiates humor"), as opposed to a low-level of analysis (e.g. number of speech utterances, head nods).

A composite RBQ rating for each participant was formed by averaging the four scores on each RBQ item (mean *alpha* of the 64 items = .61, *SD* = .17). Preliminary analyses indicated that the behavioral correlates of PWB and SH did not differ by experimental condition and therefore subsequent analyses reported are across experimental conditions.⁵

Results

Descriptive Statistics

Scores on the Subjective Happiness Scale (Lyubomirsky & Lepper, 1999) of the 196 participants were fairly normally distributed ($M = 5.08$, $SD = 1.20$, $Med = 5.12$) and there were no gender differences (males $M = 5.08$, females $M = 5.08$). Psychological Well-Being (PWB)

⁴When participants did not show up for their appointment, clinicians were given the option to watch a recorded life-history interview and provide a second Q-Sort rating for that participant.

⁵Treating each experimental condition as a different study and analyzing the data meta-analytically yielded a vector correlation of $r(62) = .95$ for PWB and $r(62) = .96$ for SH with the present method of analyzing the data across experimental conditions.

self-report scores were fairly normally distributed ($M = 4.37$, $SD = 0.64$, $Med = 4.37$). No significant gender differences were found for the composite PWB score (males $M = 4.36$, females $M = 4.39$). The scores on each BFI (John & Srivastava, 1999) factor were fairly normally distributed for males and females in both self and acquaintance reports. Means and standard deviations were comparable to those obtained by John and Srivastava (1999).⁶

Self Reports

The self-reported Big Five correlates of Subjective Happiness (SH) were similar to those found in other studies (Costa & McCrae, 1980; Headey & Wearing, 1989). The pattern of correlations for both genders is quite similar and indicates that those who rated themselves highly on SH also rated themselves as extraverted ($r = .42$) and conscientious ($r = .33$), somewhat agreeable ($r = .19$) and open to experiences ($r = .14$), and not neurotic ($r = -.53$). Correlations of self-reported CAQ ratings with SH yielded 61 out of 100 correlations significant at the .05 level, or more than 12 times as many as would nominally be expected by chance. Because the unique contribution of the present study focuses on acquaintance-reports, clinicians' judgments, and behavior, we do not present all of the self-report correlates here.⁷

Participants who described themselves as higher in PWB also tended to describe themselves as relatively extraverted ($r = .43$), conscientious ($r = .52$), agreeable ($r = .26$), open to experience ($r = .33$), and not neurotic ($r = -.50$) compared to those lower in PWB. Correlations of self-reported CAQ ratings with PWB yielded 75 out of 100 correlations significant at the .05 level, or more than 15 times as many as would nominally be expected by chance. Again, we do not present all of the self-report correlates here.

Acquaintance Reports

Table 1 presents the correlates between self-rated PWB and SH with acquaintance ratings of the BFI and the CAQ. A similar pattern emerged in acquaintance BFI ratings for PWB and SH such that those high in well-being are rated by their peers as extraverted, conscientious, and not neurotic. Of the 100 items on the CAQ, 21 acquaintance ratings were significantly correlated with SH at the .05 level, whereas 29 acquaintance ratings were significantly correlated with PWB at the .05 level, which is more than 4 and 5 times as many as nominally expected by chance, respectively. Only the ten strongest positive and negative acquaintance rated CAQ correlates of PWB and SH are shown in Table 1.⁸

The pattern suggests that those who rated themselves highly on PWB and SH are perceived by acquaintances as cheerful, sociable, assertive, and satisfied; whereas those who rated themselves as lower on PWB and SH are perceived as feeling a lack of meaning in life and of being self-defeating and generally negative. The vector correlation⁹, which is the degree to which a set of correlations is similar to a different set of correlations, between acquaintance-reported CAQ-PWB correlations and acquaintance-reported CAQ-SH correlations was $r(98) = 0.86$, $p < .0001$, suggesting that acquaintance ratings of personality empirically demonstrate substantially similar patterns of correlates between self-reports of SH and PWB. As for gender differences, vector correlations were conducted comparing the patterning of acquaintance CAQ ratings with male's PWB and SH scores and acquaintance CAQ ratings with female's PWB and SH scores. The vector correlation across acquaintance CAQ ratings for males and females for PWB, $r(98) = 0.53$, $p < .0001$, and for SH, $r(98) = 0.73$, $p < .0001$, suggests very similar patterns of correlates. Average absolute Zr differences between males and females on CAQ-

⁶Descriptive statistics for self and acquaintance ratings on the BFI are displayed on our website: www.rap.ucr.edu/PWB.

⁷A full table of self-report CAQ correlates of PWB and SH can be found on our website: www.rap.ucr.edu/PWB.

⁸We only report the top ten positive and negative correlates here. A full table of correlates can be found on our website: www.rap.ucr.edu/PWB.

⁹Specifically, the two lists of correlates provide the X and Y variables in a bivariate correlation calculated across items.

PWB correlations, and CAQ-SH correlations were 0.14 (*SD*: 0.09), and 0.10 (*SD*: 0.08), respectively. Males had fewer significant correlations as compared to females on for both PWB and SH, but nearly all the correlations were in the same direction.¹⁰

Clinician Ratings

Table 2 presents correlates between self-rated PWB and SH, and clinician ratings of the CAQ. Of the 100 items on the CAQ, 45 were correlated significantly with PWB at the .05 level, which is 9 times as many as nominally expected by chance and 42 were significantly correlated with SH at the .05 level which is more than 8 times as many as nominally expected by chance. Only the ten strongest positive and negative clinician rated CAQ correlates of PWB and SH are shown in Table 2.¹¹

The overall pattern of correlates displayed in Table 2 suggests that clinicians may have subtly distinguished between PWB and SH on the positive CAQ correlates; however, this distinction was diminished for the negative CAQ correlates. Those who rated themselves higher on PWB were rated by clinicians as relatively productive, having high aspiration levels, assertive, and being an interesting person. This is opposed to participants who rated themselves higher on SH, who were rated by clinicians as relatively cheerful, sociable, charming, and interesting. The pattern of clinician CAQ correlates overlapped more for negative correlations, as clinicians rated those who self-reported being lower in PWB and/or SH as tending to feel a lack of personal meaning in life, give up and withdraw where possible, have a brittle ego defense system, and be sensitive. Despite these slight distinctions in correlate patterns among CAQ ratings by clinicians, the vector correlation between clinician rated CAQ-PWB correlations and clinician rated CAQ-SH correlations was $r(98) = 0.88, p < .0001$, suggesting that the two patterns of correlates are highly similar. Thus it appears that while for some of the positive correlates of SH and PWB clinicians may be distinctive among clinicians' ratings, the overall patterns of clinician rated personality correlates of PWB and SH are generally similar. Vector correlations were conducted to test whether there were any differences in patterning of acquaintance and clinician ratings associated with PWB, $r(98) = .79, p < .001$, and SH, $r(98) = .63, p < .001$. The patterning of correlates between clinician and acquaintance CAQ ratings and self-reported PWB and SH were highly similar. As for gender differences, vector correlations were conducted comparing the patterning of clinician's CAQ ratings with male's PWB and SH scores and clinician's CAQ ratings with females PWB and SH scores. The vector correlation across CAQ clinician ratings for males and females for PWB, $r(98) = 0.44, p < .0001$, and for SH, $r(98) = 0.65, p < .0001$, suggests very similar patterns of correlates for males and females with respect to CAQ items and PWB and SH. Average absolute Zr differences between males and females on CAQ-PWB correlations, and CAQ-SH correlations were 0.18 (*SD*: 0.13), and 0.14 (*SD*: 0.10), respectively. Males had less significant correlations as compared to females on for both PWB and SH, but nearly all the correlations were in the same direction.

Behavioral Ratings

Behavioral ratings were available for 144 participants in the RAP-II data set. Of those 144 participants, 139 participants completed the PWB questionnaire and 140 completed the SH scale. Table 3 presents the correlations between self-rated PWB and SH with the 64 behavioral items of the RBQ. Of the 64 items on the RBQ, 28 correlations between RBQ items and PWB were significant at the .05 level, more than 8 times greater than nominally expected by chance

¹⁰A full table providing gender comparisons for PWB and SH scores paired with acquaintance ratings, clinician judgments, and observed social behaviors can be found on our website: www.rap.ucr.edu/PWB.

¹¹We only report the top ten positive and negative correlates here. A full table of correlates can be found on our website: www.rap.ucr.edu/PWB.

whereas 17 were significantly associated with SH at the .05 level, more than 5 times as many as nominally expected by chance. Only the ten strongest positive and negative behavioral correlates of PWB and SH are shown in Table 3.¹²

The overall pattern of correlations in Table 3 overlaps highly between PWB and SH. Those who rated themselves highly on PWB and SH displayed behaviors that were observed to be cheerful, socially skilled, expressive, and likeable; while those who rated themselves lower on SH displayed actual behaviors that were seen to be unexpressive, hostile, negative, and interpersonally awkward. As for gender differences, vector correlations were conducted comparing the patterning of RBQ ratings with male's PWB and SH scores and RBQ ratings with females PWB and SH scores. The vector correlation across RBQ ratings for males and females for PWB, $r(62) = 0.61, p < .0001$, and for SH, $r(62) = 0.33, p = .0077$, suggests very similar patterns of correlates for males and females with respect to RBQ items and PWB and SH. Average absolute Zr differences between males and females on RBQ-PWB correlations, and RBQ-SH correlations were 0.14 ($SD: 0.11$), and 0.19 ($SD: 0.11$), respectively. In this instance, females had fewer significant correlations as compared to males on for both PWB and SH, but nearly all the correlations were in the same direction.

A surprisingly large amount of overlap was found for correlates associated with PWB and SH calculated from acquaintance reports, clinician ratings, and directly observed social behaviors. Additional analyses were conducted to determine the degree of overlap between PWB and SH. Not surprisingly, PWB and SH are highly correlated ($r(190) = 0.68, p < .0001$). Simultaneous multiple regressions were also conducted, using the Big Five as predictors of PWB and SH (See Table 4). Each Big Five predictor was mean-centered. The Big Five predicted very similar amounts of the variance in PWB and SH, $R^2 = .14, F(5,187) = 6.16, p < .0001$, and $R^2 = .12, F(5,187) = 5.17, p = .0002$, respectively. Extraversion and conscientiousness were significantly positive predictors of both PWB and SH, although the beta values are stronger for extraversion predicting SH compared with extraversion predicting PWB. Neuroticism was a significant negative predictor of PWB and SH, with beta values stronger for neuroticism predicting SH, compared to neuroticism predicting PWB. Agreeableness was a moderately significant predictor of both PWB and SH and Openness was not found to predict either PWB or SH.

Discussion

This study sought to answer three neglected questions in well-being research: a) what are the social reputations associated with hedonic (e.g., SH) and eudaimonic (e.g., PWB) conceptualizations of well-being b) how are both types of well-being associated with clinical judgments, and c) how are both types of well-being associated with behavior as directly observed in a social setting? Additionally, this study sought to determine whether the patterns of correlations addressing these three questions were similar or different across the two traditions. In terms of social reputations, the results of this study demonstrate that those who rated themselves high in SH or PWB were perceived by their acquaintances as cheerful, sociable, and satisfied with life. Unlike acquaintances, clinician judgments made slight distinctions among the strongest positive personality correlates of SH and PWB, such that clinicians perceived those high in SH as cheerful, sociable, charming, and interesting while those high in PWB we perceived as productive, having high aspiration levels, and assertive. Over all 100 personality characteristics of the CAQ, however, clinicians' ratings showed very similar patterns of correlations with SH and PWB. The behavioral correlates of SH and PWB were also empirically similar such that those who rated themselves high in SH and PWB were seen to actually behave in cheerful, socially skilled, expressive, and likeable ways. Additional

¹²We only report the top ten positive and negative correlates here. A full table of correlates can be found on our website: www.rap.ucr.edu/PWB.

analyses demonstrated a large correlation between PWB and SH as well as little discrimination in how the Big Five predict both PWB and SH. The exception was that extraversion and neuroticism were better predictors of SH than PWB, although correlations between acquaintance CAQ ratings and SH and acquaintance CAQ ratings and PWB were nearly identical.

Overall, the results of this study suggest that the pattern of social reputations, clinician judgments, and behaviors associated with self-reports of SH and PWB are remarkably similar. In fact, the patterns are so similar that one might question whether SH and PWB are truly distinct psychological constructs (King, In-press; Ryan & Deci, 2000; 2001). In a recent article, King (in press) states that, "...research has shown that individuals engaged in eudaimonic [e.g. PWB] pursuits enjoy higher levels of hedonic [e.g. SH] well-being" (p. 8 of ms.) and "Research has shown, again and again, that hedonic well-being is sensitive to the dynamics of eudaimonia: People are, in fact, (hedonically) happier when they are engaged in meaningful, self expression" (p. 18 of ms.).

The current study provides additional evidence of overlap between hedonic and eudaimonic constructs through examination of social reputation, clinician judgments, and observed social behaviors. What is intriguing is that the eudaimonic and hedonic well-being traditions stem from distinctive theoretical conceptions and numerous theoretical papers. Yet, self-report research on well-being has offered little evidence of truly distinct correlates and outcomes. Ryff's (1989b) widely-cited article on happiness and PWB states that the "previous literature has been guided by somewhat narrow conceptions of positive functioning" (p. 1077). While we whole-heartedly agree with this statement, particularly because prior research on well-being focused almost exclusively on unhappiness and the absence of illness (Diener, 1984), we also caution that current theories regarding well-being may be more divergent than are necessary. Our research is the first of its kind in examining whether the high overlap in self-report findings for well-being are present in non self-report data, and finds that high overlap does exist across the various non self-report data of acquaintance ratings, clinician judgments, and directly observed social behaviors.

It is important to note that the current study only examined two out of several hedonic and eudaimonic conceptualizations of well-being. Research comparing multiple measures of well-being (not just SH and PWB) should be investigated before making the claim that hedonic and eudaimonic well-being are truly only one construct, and a theoretical distinction might be worth maintaining even if, as seen here, the empirical correlates are highly similar.

Future research is desperately needed that uses outcomes beyond self-report to determine how personality and well-being influence each other. We hope that the present study may encourage other researchers to venture into the less entered world of peer-report and the even lesser explored area of observable behavior.

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Table 1
 Acquaintance-Rated Big Five and Top 10 CAQ Correlates of Self-Reported PWB and SH

BFI Trait	PWB	SH
	N = 188	N = 188
Extraversion	.25***	.26***
Agreeableness	-.01***	-.02*
Conscientiousness	.24***	.14*
Neuroticism	-.21**	-.20**
Openness	.11	.12 ⁺
	PWB	SH
## - CAQ Item	N = 188	N = 188
<u>Positive Correlates</u>		
52 – Behaves in an assertive fashion	.34 ***	.23 **
74 – Un-aware of self-concerns; Satisfied with self	.33 ***	.33 ***
71 – Has a high aspiration level for self	.31 ***	.17 *
31 – Regards self as physically attractive	.29 **	.31 ***
20 – Rapid personal tempo; Behaves and acts quickly	.27 ***	.24 **
77 – Straightforward, forthright & candid in dealing w/ others	.22 ***	.17 *
84 – Cheerful	.22 **	.27 ***
60 – Has insight into own motives and behaviors	.20 **	.15 *
26 – Productive; Gets things done	.19 **	.10
75 – Has clear-cut, internally consistent personality	.19 **	.16 *
92 – Has social poise and presence; Appears socially at ease	.19 **	.25 ***
4 – Talkative	.15 *	.21 **
32 – Aware of impression he/she makes on others	.15 *	.16 *
<u>Negative Correlates</u>		
22 – Feels lack of personal meaning in life	-.36 ***	-.33 ***
55 – Self-defeating	-.27 ***	-.21 **
42 – Reluctant to commit self to definite course of action	-.24 **	-.16 *
14 – Genuinely submissive; Accepts domination	-.22 **	-.13
45 – Brittle ego defense system	-.22 **	-.20 **
78 – Feels cheated and victimized by life; Self-pitying	-.20 **	-.21 **
21 – Arouses nurturant feelings in others	-.18 *	-.16 *
13 – Thin-skinned; sensitive	-.15 *	-.09
76 – Project his/her feelings and motivations onto others	-.15 *	-.07
86 – Handles anxiety/conflicts by not recognizing their presence	-.15 *	-.04
79 – Ruminates and has persistent, preoccupying thoughts	-.14 ⁺	-.19 **
49 – Basically distrustful of people in general	-.06	-.16 *
68 – Is basically anxious	-.13 ⁺	-.12 ⁺

 Note. $p < .001$

**
 $p < .01$

*
 $p < .05$.

⁺
 $p < .10$

Vector correlation between PWB and SH $r(98) = .86$. CAQ item content is abbreviated. Top 10 values and ties for PWB and SH are indicated in bold.

Table 2
Top 10 Clinician- Rated CAQ Correlates of Self-Reported PWB and SH

## - CAQ Item	PWB	SH
	N = 192	N = 196
Positive Correlates		
26 – Productive; Gets things done	.30 ***	.16*
71 – High aspiration level	.30 ***	.16*
52 – Assertive	.29 ***	.14*
57 – Is an interesting, arresting person	.29 ***	.28 ***
8 – High degree of intellectual capacity	.28 ***	.19*
51 – Values intellectual and cognitive matters	.28 ***	.16*
75 – Clear-cut internally consistent personality	.24 **	.20 **
98 – Verbally fluent; Can express ideas well	.23 **	.11
94 – Expresses hostile feelings directly	.23 **	.05
74 – Un-aware of self-concerns; Satisfied with self	.22 **	.18*
84 – Cheerful	.16*	.31 ***
54 – Emphasizes being with others; Gregarious	.19**	.29 ***
11 – Protective of those close to him or her	.16*	.29 ***
28 – Arouses liking	.11	.26 ***
88 – Is personally charming	.20**	.22 **
92 – Has social poise and presence; Socially at ease	.17*	.20 **
43- Facially/gesturally expressive	.10	.19 **
73- Perceives context in sexual terms	.18*	.19 **
Negative Correlates		
22 – Feels lack of personal meaning in life	-.33 ***	-.31 ***
30 – Gives up and withdraws where possible	-.33 ***	-.14*
45 – Brittle ego defense system	-.30 ***	-.23 **
13 – Thin-skinned; Sensitive	-.27 ***	-.22 **
42 – Reluctant to commit to definite course of action	-.27 ***	-.21 **
69 – Sensitive to demands	-.26 ***	-.20 **
78 – Feels victimized by life; Self-pitying	-.26 ***	-.20 **
55 – Self-defeating	-.25 ***	-.25 ***
36 – Tends to undermine or sabotage	-.24 **	-.30 **
9 – Uncomfortable with uncertainty	-.23 **	-.14*
72 – Concerned with own adequacy as a person	-.23 **	-.25 ***
40 - Vulnerable to real or fancied threat; Fearful	-.19**	-.25 ***
34 – Over-reactive to minor frustrations; Irritable	-.16*	-.24 **
48 – Avoids close interpersonal relationships	-.20**	-.23 **

Note: $p < .001$

**
 $p < .01$

*
 $p < .05$

+
 $p < .10$.

Vector correlation between PWB and SH $r(98) = .88$. CAQ item content is abbreviated. Table is organized by PWB values. Top 10 values and ties for PWB and SH are indicated in bold.

Table 3
Top 10 Behavioral Correlates of PWB and SH.

## - CAQ Item	PWB	SH
	N = 139	N = 140
Positive Correlates		
8 – Exhibits social skills	.26**	.21*
21 – Talkative	.26**	.22**
38 – Expressive in face, voice, or gestures	.25**	.29***
29 – Seems likable	.24**	.15
57 – Speaks in a loud voice	.24**	.16 ⁺
16 – High enthusiasm and energy level	.23**	.21*
50 – Behaves in a cheerful manner	.22*	.32***
54 – Speaks fluently; Expresses ideas well	.21*	.04
7 – Relaxed and comfortable	.20*	.14
43 – Seems to enjoy the interaction	.20*	.21*
11 – Smiles frequently	.09	.18*
63 – Acts playful	.11	.17*
26 – Initiates humor	.11	.16*
Negative Correlates		
1 – Aware of camera	-.32***	-.24**
14 – Awkward interpersonal style	-.26**	-.22**
61 – Seems detached from interaction	-.26**	-.24**
9 – Reserved and unexpressive	-.25**	-.26**
34 – Tries to undermine and/or sabotage	-.24**	-.25**
22 – Expresses insecurity	-.23**	-.15⁺
32 – Acts irritated	-.23**	-.26**
37 – Behaves in a fearful or timid manner	-.23**	-.21*
48 – Expresses self-pity; Feels victimized	-.23**	-.14⁺
18 – Talks at partner(s)	-.21*	-.20*
41 – Keeps partner at a distance	-.18*	-.18*

Note: $p < .001$

**
 $p < .01$

*
 $p < .05$

⁺
 $p < .10$.

Vector correlation between PWB and SH $r(62) = .90$. RBQ item content is abbreviated. Table is organized by PWB values. Top 10 values for PWB and SH are indicated in bold.

Table 4

Simultaneous Regression Predicting PWB and SH.

Variable	PWB (N=188)			SH (N=188)		
	B	SE B	β	B	SE B	β
Extraversion	.20**	.07	.21	.40**	.14	.23
Conscientiousness	.22**	.08	.21	.22**	.15	.11
Agreeableness	-.17 ⁺	.09	-.15	-.30 ⁺	.17	-.14
Openness	.01	.10	.01	.07	.20	.03
Neuroticism	-.19*	.07	-.19	-.40**	.14	-.21
R ²				.14***		
F				6.16***		5.17***

*** Note: $p < .001$

** $p < .01$

* $p < .05$

+ $p < .10$.