

The Roles of Values, Behavior, and Value-Behavior Fit in the Relation of Agency and
Communion to Well-Being

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Abstract

Objective

Four studies examined whether agency and communion values, behaviors or an interaction between values and behaviors (value-behavior fit) would predict well-being. In addition, Study 2 examined whether agency and communion goals, behaviors or goal-behavior fit would predict well-being.

Method

In all four studies participants completed online questionnaires containing measures of agency and communion values, behaviors, and well-being. In Studies 1 and 4 participants were recruited from the general population (respectively ($N = 373$, $M_{\text{age}} = 37.49$ and $N = 133$, $M_{\text{age}} = 36.59$). In Studies 2 and 3 participants consisted of undergraduate students (respectively, $N = 239$, $M_{\text{age}} = 20.8$ and $N = 242$, $M_{\text{age}} = 21.6$).

Results and conclusions

All four studies consistently found that agency and communion behaviors were significantly positively correlated with both subjective and psychological well-being. There was no strong indication that either values were directly associated with well-being. Neither was there any indications that well-being was predicted by value-behavior fit. The implications of these findings for theory and improving well-being are discussed.

Keywords: Well-being, Agency/Communion, Values, Person-Activity Fit.

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Agency and communion have been associated with high well-being (e.g., Fournier & Moskowitz, 2000; Helgeson, 1994; Saragovi, Aube, Koestner, & Zuroff, 2002; Saragovi, Koestner, DiDio & Aube, 1997; Sheldon & Cooper, 2008). However, the broad nature of agency and communion means that these terms include an array of constructs such as values, goals, and behaviors. As such, it is difficult to identify which of the aforementioned relates to well-being. Moreover, it remains to be seen if well-being is predicted by an interaction between behaviors and the corresponding values that a person considers important. For example, it might be that agency behavior will only contribute to well-being for those that hold agency values. Given that such findings may have practical implications for effectively improving well-being, it is surprising that other researchers have not yet addressed this question. Consequently, in the present research, we examine the extent to which each of these aspects is associated with well-being and test our proposition that the behavioral aspect of agency and communion is the only aspect which is most consistently associated with well-being.

Agency and Communion

Bakan (1966) first introduced the terms agency and communion to describe two fundamental dimensions that produce distinct ways of being and behaving. Agency and communion are ‘meta constructs’ (Moksowitz, Suh, & Desaulniers, 1994, p.753) that are, ‘broad enough to encompass several levels of analysis including motives, values, life-goals, traits, and behavior’ (Trapnell & Paulhus, 2012, p.39). *Agency*, characterized as ‘getting ahead’, involves a self-focused orientation which manifests itself in self-advancement and self-reliance and entails pursuing self-orientated goals, striving for achievement and

independence. *Communion*, characterized as ‘getting along’, involves an other-focused orientation which manifests itself in benevolence and interpersonal connections, and it entails consideration of others, helping, and social connectedness (Abele & Wojciske, 2007; Brunstein, Schultheiss, & Grassmann, 1998; Frimer et al., 2011; Horowitz et al., 2006; Kuiper & Borowicz-Sibenik, 2005; Kumashiro et al., 2008; McAdams, 2001; Wiggins, 1992).

Unmitigated agency (UA) and unmitigated communion (UC) refer to extreme versions of the dimensions (Bakan, 1966; Bruch, 2002; Helgeson, 1999; Helgeson & Fritz, 1999). A person high in UA is dictatorial, egoistical, and considers oneself as superior to others, whereas a person high in UC is subordinate to others and succumbs to others’ preferences (Spence et al., 1974).

Agency, Communion and Well-Being

Agency and communion are consistently positively related to well-being (e.g., Aube, 2008; Fournier & Moskowitz, 2000; Helgeson, 1994; Krueger, 1999; Saragovi et al., 1997, Saragovi et al., 2002; Sheldon & Cooper, 2008). In contrast, UA and UC are negatively related to well-being (Bakan, 1966; Bruch, 2002; Helgeson, 1999; Helgeson & Fritz, 1999). As we aim to identify which aspects of agency and communion are positively linked with well-being, we exclude UA and UC from our investigation.

Typically, agency and communion have been conceptualized as traits (for meta-analysis see Bassoff & Glass, 1982) and measured using the personality attributes questionnaire (PAQ; Spence et al., 1979). This conceptualization has two caveats for linking agency and communion to well-being. First, the items used to assess traits are similar to the items that are used to assess affect, thereby increasing the likelihood of inflated positive correlations. For example, an item used to measure trait agency is ‘never gives up’ (Spence et al., 1979). ‘Never gives up’ is a synonym of ‘determined’, which is an item used to assess

positive affect (Watson, Clark & Tellegen, 1988). Second, the definition of traits includes behaviors. Specifically, traits are defined as, ‘those characteristics of the person that account for consistent patterns of feelings, thinking and behaving’ (Pervin & John, 2001, p.4). Indeed, items assessing agency and communion traits (Spence et al., 1974) reflect behaviors (e.g., ‘stands up well under pressure’). Consequently, it is impossible to disentangle whether agency and communion as traits or agency and communion as behaviors contribute to well-being. Yet such information has important implications because while a link between personality and well-being suggests that well-being cannot readily be changed, a link between behavior and well-being implies that well-being can be changed (Lyubomirsky, Sheldon & Schkade, 2005).

In the present research we conceptualize agency and communion as values and examine whether they are linked with well-being. Values are broad constructs that have overarching effects across time and situations (Rokeach, 1973; Schwartz, 1992, 2004). Their breadth makes this conceptualization appropriate because the broad dimensions of agency and communion are best conceptualized at a similarly broad level. Moreover, a conceptualization of agency and communion as values advances existing research because although values are a part of personality (e.g., McCrae & Costa, 1999), they clearly differ from behavior. For example, one can value kindness but not behave kindly, whereas the trait ‘kindness’ already includes kind behavior.

Values

Values convey broad life goals (e.g., achievement, security). They serve as basic motivators and act as guiding principles in daily life, thereby influencing perception, goals, attitudes, and behavior (reviewed, e.g., in Roccas, & Sagiv, 2010; Maio, 2010). Values are ordered in a personal hierarchy of importance, and the location of a value in that hierarchy determines perception and behavior (e.g., Rokeach, 1973; Schwartz, 1992). Agency and

communion values can be assessed using a measure of agency and communion values (ACV; Paulhus & Trapnell, 2012). The ACV was primarily developed by extracting items from the Schwartz Value Survey (1992) that fitted with classic definitions of agency and communion (Bakan, 1966; Wiggins, 1992). Agency values are measured using items from the value indices of achievement, self-direction, stimulation, hedonism, and power, whereas communion values are measured using items from the value indices of benevolence, universalism, tradition, and conformity. In the present study, we use an adapted version of the ACV that excludes items relating to power and conformity as they are conceptually similar to UA and UC. Specifically, UA has clear links to power values because both constructs emphasize dominance and superiority. UC has clear links to conformity values because both constructs emphasize compliance with others and submission to their wishes.

Possible Links between Agency, Communion, and Well-Being

We present three ways in which agency and communion may relate to well-being. First, agency and communion values may be associated with well-being. Second, agency and communion behaviors may be associated with well-being. Third, agency and communion behaviors may only relate to well-being when they fit with a person's values.

Values and Well-Being

To date, researchers have not examined whether agency and communion values contribute to well-being, however, they have examined the correlations between other values and well-being (e.g., Sagiv & Schwartz, 2000), and tested the hypotheses that some values are healthy and others are not (Sagiv, Roccas, & Hazan, 2004). Notably, the values specified as healthy fall into the categories of agency (achievement, self-direction, stimulation) or communion (universalism, benevolence). Some support for the healthy values perspective is evident in findings that well-being is positively correlated with the values of achievement, self-direction, stimulation, universalism, and negatively correlated with the values of power,

conformity, security, and tradition are negatively correlated with well-being (Sagiv & Schwartz, 2000). However, the reported correlations are weak and subsequent findings have not provided consistent replications (Haslam, Whelan, & Bastian, 2009; Karabati & Cemalcilar, 2010; Oishi, Diener, Suh, & Lucas, 1999). As such, it appears that values are not strongly related with well-being and may only relate to it because they are associated with an increased likelihood of enacting behaviors that express these values. Indeed, values are defined as ‘guiding influences in daily life’ and have been linked with behaviors (reviewed in Roccas & Sagiv, 2010). Consequently, we expect that agency and communion values will be positively correlated with well-being but that this correlation will be relatively weak and may be rendered null when we employ regression analyses that control for the contribution of agency and communion behaviors to well-being¹.

Behaviors and Well-Being

In the past, researchers have prolifically and consistently found that agency and communion behaviors are positively correlated with well-being (e.g, Saragovi et al, 1997; Saragovi et al., 2002; Fournier & Moskowitz, 2000). However, the behavioral measures in these studies had important caveats. Specifically, Saragovi and colleagues (1997, 2002) based their behavior conceptualizations on a proposition which is not supported anymore (Twenge, 1997), that agency is characteristic of men and that communion is characteristic of women (Bakan, 1966). Therefore, their findings may say more about how well-being relates to stereotypical ‘masculine’ and ‘feminine’ behaviors than to how it relates to agency and communion behaviors. Fournier and Moskowitz (2000) used an alternative measure and instead conceptualized agency as the difference between dominance and submissiveness, and communion as the difference between agreeableness and quarrelsomeness. However, we suggest such an approach is limited in its practical applications because it cannot be used to

¹ We note that research on self-affirmation generally shows effects of re-affirming one’s values (any value; reviewed in McQueen & Klein, 2006). In contrast, in the present research, we have examined holding values of particular content (agency and communion) and asked whether holding such values, rather than reaffirming any value, increase well-being.

identify specific behaviors that could benefit well-being. Hence, in the present research, we examine the direct association of agency and communion behaviors to several aspects of well-being using behaviors that are not based on gender stereotypes.

Other support for the idea that agency and communion behavior may relate to well-being can be found in existing ‘happiness enhancing’ intervention studies that involve aspects of the two dimensions. For example, goal pursuit behaviors which reflect agency, and kind behaviors which reflect communion, have both been found to increase well-being (Buchanan & Bardi, 2010; Macleod, Coates, & Hetherington, 2008). In addition, there are clear links between agency and communion and Self Determination Theory (SDT; Deci & Ryan, 2000) which explain why these two fundamental dimensions may relate to well-being. Specifically, according to SDT, well-being is obtained via the satisfaction of universal and organismic needs. Two of these needs are competence and relatedness, which Bauer and McAdams (2000) have linked to agency and communion respectively. Indeed, agency entails achievement and environmental mastery, both of which are emphasized in the definition of competence as, ‘the propensity to have an effect on the environment as well as to attain valued outcomes with it’ (Deci & Ryan, p.231). Communion involves benevolence and connections with others, both aspects that are evident in the definition of relatedness as, ‘the desire to feel connected to others – to love and care, and to be loved and cared for’ (Deci & Ryan, p.231). Given these similarities and a substantial body of evidence supporting the notion that satisfaction of these needs increases well-being (Deci & Ryan, 2000) there are clear reasons to expect that agency and communion behaviors should relate to well-being. We therefore hypothesize that agency and communion behaviors will be significantly associated with well-being, even when agency and communion values, and agency and communion value-behavior fit are controlled for statistically.

Value-Behavior Fit and Well-Being

According to SDT one might expect agency and communion behaviors to be universally beneficial, regardless of individual differences, yet such a notion is in opposition with person-activity fit theory which predicts that the highest gains in well-being occur when an activity fits an individual (Lyubomirsky et al., 2005). We conceptualize person-activity fit as a match between values and behaviors. According to person-activity fit one might expect agency values to interact with agency behaviors to predict well-being and communion values to interact with communion behaviors to predict well-being. To our knowledge, researchers have not yet tested these hypotheses, although some support for them can be inferred from findings examining the contribution of value-environment fit to well-being. However, the findings in this area are somewhat inconsistent. Specifically, some findings indicate that value-environment fit is important for well-being (see review in Sagiv et al., 2004) whereas others do not (Kasser & Ahuvia, 2002; Sheldon, Elliot, Kim & Kasser, 2001). As such, these weak and inconsistent findings lead us to hypothesize that value-behavior fit will not predict well-being.

The Present Research

In the present research we aimed to identify which of the following aspects of agency and communion relates to well-being: the values, the behaviors or value-behavior fit. We hypothesized that when all three aspects of agency and communion are taken into account (i.e., values, behaviors, and value-behavior fit) that behaviors will be the aspect most consistently correlated with well-being.

In Studies 1 to 4 we examine the relations of agency and communion values, agency and communion behaviors, and value-behavior fit to both subjective and psychological well-being. In Study 1, we develop and validate our measure of behaviors and examine which aspect of agency and communion relates to well-being. In the subsequent studies we examine whether the results of Study 1 are replicable using goals (Study 2), peer-reports of behaviors

(Study 3), and measuring total behavior frequency (Study 4) rather than behavior frequency relative to opportunities as in the previous studies.

Analytic Strategy

In each of the four studies we used regression analyses to examine whether values, behavior and value-behavior fit predict well-being. As recommended by Aiken and West (1991), each of the predictors (values and behavior) were centered on the sample mean, the interaction variable was calculated as the product of the two centered predictors, and the three predictors were entered in the same step. In addition, we also report zero order correlations between values, behaviors, and well-being.

Study 1

In Study 1 we aimed to examine the relations of agency and communion, values, behaviors and value-behavior fit to subjective well-being. To achieve this aim we developed a measure of agency and communion behaviors and tested the scales' structural, convergent, discriminant, and incremental validity.

Method

Participants

A total of 373 participants (245 male, 110 female, 16 declined to respond) were recruited from Amazon's Mechanical Turk² (MTurk) to complete an online questionnaire. All respondents were from the US and their ages ranged from 18 to 71 ($M = 37.49$, $SD = 12.8$). The majority were Caucasian (75%).

Measures

Well-being. We measured subjective well-being using the Positive and Negative Affect Scale (PANAS, Watson et al., 1988) and the Satisfaction with Life Scale (SWLS;

² Past research studies have indicated that data obtained from M-turk is at least as reliable as data obtained via traditional methods and reflects a more diverse sample than either internet or college student samples (Buhrmester, Kwang, & Gosling, 2011; Mason & Suri, 2011; Paolacci, Chandler & Ipeirotis, 2010; Rand, 2011). Appropriate measures were taken to ensure the data were of acceptable standard. Specifically, we prevented respondents from taking the questionnaire more than once and nine attention checks were included where participants were instructed to select a particular option (e.g., please select the middle option to show you are paying attention). The 27 participants who failed to pass all of these checks were excluded from the sample.

Diener, Emmons, Larsen, & Griffin, 1985). The PANAS consists of 20 adjectives comprising two subscales -- positive affect and negative affect. Participants used a 5-point scale from 1 (*very slightly or not at all*) to 5 (*extremely*) to indicate the extent to which they generally felt this way. The SWLS consists of 5 unidirectional attitude expressions (e.g., ‘The conditions of my life are excellent’) conveying cognitive evaluations of global happiness. Participants rated the expressions using a 7-point scale, from 1 (*strongly disagree*) to 7 (*strongly agree*). Both the PANAS and SWLS have good internal and test-retest reliability (Diener et al, 1985; Watson et al, 1988). The alpha coefficients were good (PA $\alpha = .91$, NA $\alpha = .91$, SWLS $\alpha = .93$).

Need Satisfaction. Satisfaction of the three core needs posited by SDT was assessed using the general version of the basic psychological needs scale (BPNS-general; Ilardi, Leone, Kasser, & Ryan, 1993). The BPNS-general version contains 21 items, which measure satisfaction of three psychological needs: autonomy (7 items), competence (6 items), and relatedness (8 items). Sample items include ‘I am free to decide for myself how to live my life’ (autonomy), ‘People I know tell me I am good at what I do’ (competence), and ‘I really like the people I interact with’ (relatedness). Participants indicate how well each psychological need is generally satisfied in their life using a 7-point scale from 1 (*not true at all*) to 7 (*very true*). In line with past research (Gagné, 2003) we found the BPNS had acceptable reliability (autonomy: $\alpha = .79$, competence: $\alpha = .76$, and relatedness: $\alpha = .81$).

Agency and Communion Values. We assessed values using an adapted version of the Trapnell and Paulhus’s (2012) agentic and communal value scale that excluded items reflecting UA and UC. Participants rate the importance of each value as a guiding principle in their daily lives using a 9 point scale ranging from *not important to me* to *highly important to me*. Each value is emphasized in capitals and followed by an explanation in parentheses, e.g., COMPETENCE (displaying mastery, being capable, effective). The agency scale was

composed of the following 7 items: influential, competence, achievement, pleasure, ambition, excitement and autonomy. The communion scale was composed of the following 9 items: compassion, altruism, forgiveness, humility, harmony, loyalty, equality, trust and tradition. Analyses of structural, convergent and discriminant validity found this adapted version of the measure adequately represented agency and communion³ and each subscale had acceptable reliability (agency $\alpha = .74$, communion $\alpha = .80$).

Agency and Communion Behaviors. We selected behavior items from the value-expressive behavior questionnaire (Bardi & Schwartz, 2003) in accordance with existing operationalizations of agency and communion (Helgeson, 1994). Some items were adapted to ensure they were relevant to the general population. For example, ‘Study hard in order to get the highest grade in class’ became ‘strived to improve my skills’. All items were presented to a panel of six judges with informed knowledge about the constructs. Items were only retained if a consensus was reached about the items’ face validity. After this process, ten items remained, five for each construct. We adopted Bardi and Schwartz’s (2003) instructions. Specifically, participants indicated how frequently they had engaged in each behavior, during the past six months, relative to their opportunity to do so using a 5-point scale from 0 (*never*) to 4 (*always*).

Agency and Communion Traits. Agency and communion traits were measured using the personal attributes questionnaire (Spence, et al, 1979). The scales’ reliability was acceptable (agency: $\alpha = .75$, communion: $\alpha = .73$).

Study 1 Results

Validating the Agency and Communion Behavior Measure

Structural Validity. To assess the structural integrity of the agency and communion behavior scale, we first conducted parallel analysis (PA; Horn, 1965) using the SPSS syntax

³ The full results are available on request from the first author.

developed by O'Connor (2000) to determine how many factors to extract⁴. Previous studies have found that PA is one of the most accurate methods for deciding how many factors to retain (e.g., Zwick & Velicer, 1986). Our results showed that only the first two mean eigenvalues of 4.44 and 1.41 were greater than the first two mean eigenvalues in our data set, indicating a two-factor solution. Hence, we conducted an exploratory factor analysis specifying a two-factor solution using an oblimin rotation on the basis that agency behaviors and communion behaviors could be positively correlated as they are both positive behaviors. The results of Bartlett's test ($\chi^2(78) = 1315.98, p < .001$) indicated that there was an adequate sample size for this analysis and the results of the Kaiser-Meyer-Olkin (.88) test indicated that the data were suitable for factor analysis. The first two factors respectively accounted for 34.22% and 11.61% of the variance. The first factor represented communion and the second factor represented agency. As expected, these two factors were significantly positively correlated ($r = .58, p < .01$). All items loaded .30 or more on the expected factors and were free of cross loadings (see Table 1). Reliabilities of the behavior subscales were acceptable (agency: $\alpha = .76$) or good (communion: $\alpha = .82$). Further analyses using Structural Equation Modeling revealed that a two factor model fitted the data satisfactorily (goodness of fit (GFI) = .95; root mean square error of approximation (RMSEA) = .05; comparative fit index (CFI) = .96) whereas the one factor model did not (GFI = .84; CFI = .80; RMSEA = .11). Indeed, the results of the chi squared test showed that the two factor model ($\chi^2(65) = 116.98, p < .001$) was superior to the one factor model ($\chi^2(64) = 334.22, p < .001, \Delta\chi^2 = 217.21, p < .001$).

Convergent and Discriminant Validity. As expected, there were significant positive correlations between (a) agency behaviors and agency traits and values, and (b) communion behaviors and communion traits and values (See Table 2) thus providing support for convergent validity. Support was also found for discriminant validity as agency behaviors

⁴ PA is based on the Monte Carlo simulation method and entails comparing observed eigenvalues extracted from the correlation matrix to "expected" eigenvalues. "Expected" eigenvalues are computed by simulating random samples/datasets that parallel the observed data in terms of sample size and number.

had significantly higher correlations with agency traits and values than communion behavior (respectively, Z 's = 2.96, 6.17 and 7.23, all p 's < .01). Similarly, communion behaviors had significantly higher correlations with communion traits and values than agency behavior (respectively, Z 's = 8.43, 2.93 and 4.94, all p 's < .01). There were some significant cross correlations between agency behaviors and communion constructs, and vice versa. However, given the positive correlation between agency and communion behaviors, cross-correlations are not surprising. Further correlations analyses were conducted between (a) agency behaviors and each of the agency and communion constructs (traits and values) controlling for communion behaviors, and (b) communion behaviors and each of the agency and communion constructs (traits and values) controlling for agency behaviors (see Table 2). Using this approach, support was evident for discriminant validity as agency behaviors were only significantly positively correlated with agency constructs and communion behaviors were only significantly correlated with communion constructs.

Predictive Validity. Agency and communion behaviors were significantly positively correlated with the satisfaction of autonomy, competence and relatedness needs suggesting little support for the unique predictive validity of the behaviors. However, controlling for the alternative behavior (i.e., controlling for communion behaviors when examining the correlations between agency behaviors and need satisfaction and vice versa) provided support for predictive validity as overall the correlations between the behaviors confirmed the expectations posited by other researchers (Bauer & McAdams, 2000). Specifically, the correlation between agency behavior and competence satisfaction was significantly larger than the correlation between communion behavior and competence satisfaction ($Z = 2.65, p < .01$). Similarly, relatedness satisfaction was only significantly correlated with communion

behavior. In addition, autonomy was significantly positively correlated with communion behaviors when controlling for agency behaviors⁵.

Incremental Validity. We tested incremental validity of the behavior scale by predicting each aspect of subjective well-being from each of the behaviors beyond the contribution of traits. We used hierarchical analyses in regressing agency and communion traits at Step 1 and the agency and communion behaviors scales at Step 2. Correlations between the behaviors and well-being measures are shown in Table 2.

Positive Affect: At Step 1 positive affect was predicted by both agency traits and communion traits (respectively, $\beta = .53, t = 12.55, p < .01$ and $\beta = .24, t = 5.58, p < .01$). Together agency and communion traits accounted for 33.70% of the variance in positive affect. Above and beyond these effects, both agency and communion behaviors were significantly related to positive affect (respectively, $\beta = .18, t = 3.71, p < .01$ and $\beta = .19, t = 3.44, p < .01$), accounting for an additional significant 8% of the variance.

Negative Affect: At Step 1 negative affect was predicted by trait agency but not trait communion (respectively, $\beta = -.40, t = -8.45, p < .01$ and $\beta = -.07, t = -1.58, NS$). Together, agency and communion traits accounted for 16.30% of the variance in negative affect. Above and beyond these effects, agency behavior significantly related to negative affect ($\beta = .16, t = -2.72, p < .01$), but communion behavior was not ($\beta = -.10, t = -1.59, NS$). The behaviors accounted for an additional significant 2% of the variance.

Life Satisfaction: At Step 1, life satisfaction was predicted by both agency traits and communion traits (respectively, $\beta = .44, t = 9.53, p < .01$ and $\beta = .11, t = 2.44, p < .01$). Together, agency and communion traits accounted for 20.50% of the variance in positive

⁵ Such findings are in line with previous researchers arguments that autonomy is not incompatible with relatedness (see Hodgins, Koestner, & Duncan, 1996) as such we would not expect there to be a negative correlations between autonomy and communion.

affect. At Step 2, communion behavior but not agency behavior significantly predicted life satisfaction (respectively, $\beta = .28$, $t = 4.52$, $p < .01$, and $\beta = -.06$, $t = -1.01$, *NS*), accounting for an additional significant 4.5% of the variance.

The Contribution of Values, Behaviors, and Value-Behavior Fit to Well-Being

Table 3 shows the zero order correlations between values and well-being, and between behaviors and well-being. Both values and behaviors were significantly correlated with well-being, although in half of these cases behaviors were significantly more strongly correlated with well-being than values were.

Table 4 shows the results of the regressions examining the contribution of values, behaviors and value-behavior fit to well-being. Overall, the results support our hypothesis as behaviors were the aspect of agency and communion most consistently associated with higher well-being. None of the interaction terms composed of values and behaviors predicted well-being and agency and communion values only predicted positive affect.

Study 1 Discussion

In Study 1 we aimed to validate our measure of agency and communion behaviors as well as test our hypothesis that the behavioral aspect of agency and communion would be most consistently correlated with well-being. Analyses showed that the behavior scale consisted of the expected two factors. All items loaded on the anticipated factors and there were no cross loadings. Our data provide support for the scales' convergent, discriminant, predictive and incremental validity. Notably, the incremental validity analyses showed that our measure of agency and communion behaviors accounted for additional variance in well-being beyond the contribution of agency and communion traits. This suggests that assessing agency and communion as behaviors can improve predictions of well-being. As such it is clear that there is value in considering the contribution of behaviors to well-being rather than focusing solely on traits.

Overall, we found support for our hypothesis as agency and communion behaviors predicted more of the outcome measures than either agency and communion values or agency and communion value-behavior fit. However, the zero order correlations indicate that in some cases values are related to well-being. In the case of positive affect these correlations persist even when the contribution of behaviors is controlled for. Given that our value indices included positively phrased words ‘competence (displaying mastery, being capable, effective)’ and ‘harmony (good relations, balance, wholeness)’ these results are perhaps unsurprising. Moreover, measuring all of the variables in the same session may have inflated the correlations. Hence, it is important to replicate the findings using more neutrally phrased value items and to administer each measure on separate occasions to minimize inflated correlations. It is also important to replicate Study 1’s results using an alternative measure of well-being, because researchers have argued that values may only usefully predict certain aspects of well-being (Joshani & Ghaedi, 2009; Sagiv & Schwartz, 2000). Similarly, person-activity fit may be more relevant in predicting eudaimonic well-being (i.e., self-fulfillment), because this type of well-being is theorized to occur when people’s life activities match their values (Waterman, 1993). Consequently, Study 2 addressed these possibilities by measuring six different aspects of eudaimonic well-being using Ryff’s (1989) questionnaire.

In addition in Study 2 we examined whether the results of Study 1 would be replicable using goals instead of values. Values are an abstract concept that generally people do not consciously think about. Therefore, people may not be aware of a fit between their values and their behavior and thus their well-being may not be affected by a possible fit between them (see Maio, 2010). However, compared with values, goals are more concrete and therefore goal-behavior fit may relate to well-being. Indeed, progress towards motive-congruent goals contributed to daily emotional well-being (Brunstein, et al., 1998). Consequently, in Study 2 we examined whether goal-behavior fit relates to well-being.

Study 2

In Study 2, we aimed to provide a replication of Study 1's findings using an alternative measure of well-being that assesses six aspects of eudaimonic well-being (Ryff, 1989). In addition, we also examined if the results of Study 1 would extend to goals, such that neither goals nor goal-behavior fit would predict well-being. Furthermore, we improved on Study 2 by minimizing the conceptual overlap between our measure of values and well-being by substituting the positively phrased value items from the Paulhus and Trapnell (2012) values measure with the original more neutrally phrased items from the Schwartz Value Survey (1992). Finally, we administered each measure at different times to minimize inflated correlations between our variables of interest due to time proximity.

Study 2 Method

Participants and Procedure

A total of 239 undergraduate students (76% women, $M_{\text{age}} = 20.8$, $SD = 2.2$) in an introductory psychology class in the USA completed the online questionnaire for extra class credit. All measures were assessed at least one week apart.

Measures

Well-being. We used Ryff's (1989) questionnaire to measure six aspects of well-being: Self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Each aspect is measured by 14 items. The six aspects of well-being have high internal reliability, temporal stability, and external validity (Ryff, 1989). Across the six aspects of well-being the alpha reliability coefficient ranged from .82 to .89.

Values. We measured agency and communion values as described in Study 1. As in Study 1, we assessed agency and communal values using Trapnell and Paulhus's (2012) conceptualization. However, in this study, we used the items as worded in the original

Schwartz Value Survey⁶ (Schwartz, Sagiv, & Boehnke, 2000). The original 9-point scale was also used in which participants rate each value as a guiding principle in their own life on a 9-point scale from -1 (*opposed to my principles*) to 0 (*not important*) to 7 (*of supreme importance*). Cronbach alpha reliabilities were .68 for agency and .72 for communion.

Behaviors. As in Study 1, we administered a measure of agency and communion behaviors and participants indicated how frequently they had enacted each behavior relative to their opportunity to do so. Cronbach alpha reliabilities were .76 for agency behavior and .79 for communion.

Life Goals. We measured life goals using a revised version of the major life goals scale (Roberts & Robins, 2000) which consisted of 38 goals classified into 11 domains. Participants rated the importance of each goal on a 5-point scale from 1 (*not important to me*) to 5 (*very important to me*). We created an agency goal index and a communion goal index, each included 4 items⁷. The Cronbach alpha coefficient was acceptable for communion (.69) and low for agency (.57).

Study 2 Results

As expected, each behavior type was significantly positively correlated with the values and goals they were designed to express (value-behavior correlations: agency $r = .18$, $p < .05$, communion, $r = .43$, $p < .01$, goal-behavior correlations: agency $r = .23$, communion $r = .23$, both p 's $< .01$). Moreover, there were no significant cross correlations (agency values-communion behaviors: $r = -.04$, *NS*, communion values with agency behaviors: $r = -.05$, *NS*, agency goals with communion behaviors: $r = .04$, *NS*, and communion behaviors with agency goals: $r = .12$, *NS*).

⁶ Agency: influential, capable, successful, ambitious, an exciting life, choosing own goals, independent. Communion: forgiving, humble, helpful, loyal, honest, social justice, equality.

⁷ Agency goals were: Preparing myself for graduate school; having a high status career; becoming an authority on a special subject of in my field; and be well read. Communion goals were: Working to promote the welfare of others; helping others in need; taking part in volunteer, community and public service work; and having harmonious relationships with my parents and my siblings.

Overall, further support was found for our hypothesis as Table 3 shows that behaviors were more consistently correlated with well-being than values were. Notably, agency and communion values were significantly correlated with some aspects of psychological well-being but in the majority of cases these correlations were significantly smaller than the correlations between behaviors and well-being.

The regressions shown in Table 4 provide similar findings to those obtained in Study 1. Specifically, agency and communion behaviors were the most consistent predictors of well-being. Agency values did not predict any of the well-being measures and communion values only predicted positive relations with others. Neither agency nor communion value-behavior fit terms significantly predicted any of the well-being measures. This pattern of results was also evident with goals. Specifically, both agency and communion behaviors predicted each type of well-being whereas agency goals did not predict any of the well-being measures and communion goals only significantly predicted two out of six of the well-being measures: positive relations with others and personal growth. Goal-behavior fit was not positively related to well-being. Rather, there were two instances in which goal-behavior fit was negatively related to well-being. Hence, our data do not support the idea that either value-behavior fit or goal-behavior is associated with higher well-being.

Study 2 Discussion

Overall, the data obtained in Study 2 replicated Study 1's findings and provide further support for our hypothesis that the behavioral aspect of agency and communion is most consistently related to well-being. In addition, Study 2 enables us to conclude that our findings extend to eudaimonic well-being and occur regardless of whether the focus is on values or goals. Yet, a weakness of Studies 1 and 2 is that both our behavior and well-being assessments entail respondents completing self-report questionnaires. As such, our findings

may reflect social desirability biases. To test this possibility, in Study 3 we aimed to replicate our previous findings using peer report assessments of agency and communion behaviors.

Study 3 Method

Participants and Procedure

A total of 242 participants (80% female, $M_{age} = 21.6$, $SD = .40$) in an introductory psychology class in a university in the USA completed the measures for extra class credit. Participants completed the questionnaire online. As in Study 2, all measures were administered at least a week apart.

Measures

We used the same measures of values, behaviors and well-being as in Study 2. All Cronbach alpha coefficients were acceptable (the six aspects of well-being ranged from .81 to .90, agency values $\alpha = .75$, communion values $\alpha = .73$, agency behaviors $\alpha = .76$ and, communion behaviors $\alpha = .79$).

Peer-Reports of Behaviors. Participants were asked to invite a peer to rate the participant's behavior on an online questionnaire, using the same items as in the self-report behavior questionnaires. Peers were generally either friends or partners or roommates of the participant and reported knowing the participant quite well (25.6%), very well (39.7%) or extremely well (34.7%). The Cronbach alpha coefficients for the peer report behaviors were acceptable (agency $\alpha = .71$ and communion $\alpha = .67$).

Study 3 Results

Each value was significantly correlated with its corresponding self-reported behavior (agency: $r = .20$ and communion: $r = .26$, both p 's $< .01$). Equally, agency values were not correlated with communion behaviors ($r = -.01$, *NS*) nor communion values with agency behaviors ($r = -.01$, *NS*).

As can be seen in Table 3, typically behaviors, and not values, were significantly positively correlated with well-being. However, agency values were positively correlated

with personal growth and communion values were positively correlated with positive relations with others.

As in Studies 1 and 2, the regressions presented in Table 4 confirm our hypothesis that the element of agency and communion most associated with well-being is behaviors. Neither values nor value-behavior fit significantly predicted well-being.

Analysis of the peer reports of behaviors showed that they significantly correlated with self-reported behaviors (agency: $r = .43$, and communion: $r = .29$, both p 's $< .01$). Additionally, agency values correlated with peer reported agency behavior ($r = .22$, $p < .01$) and communion values were positively correlated with peer reported communion behaviors although this correlation was not large enough to reach significance ($p = .08$). The results of the regressions using the peer-reports of behavior were mostly consistent with our previous findings (see Table 4). Specifically, we found the peer-reported behaviors significantly predicted well-being while the values and value-behavior fit indices did not. Only communion peer-reported behaviors did not significantly predict some aspects of well-being (autonomy and self-acceptance).

Study 3 Discussion

The results obtained in Study 3 replicate the findings we obtained in Studies 1 and 2 and in doing so confirm our hypothesis that the behavioral aspect of agency and communion is most consistently correlated with well-being. Moreover, in Study 3 we showed that relations between agency and communion behaviors and well-being persist even when behaviors are assessed with peer reports. Notably, these relations were smaller in magnitude than those obtained using self-report behavior indices. However, this is perhaps not surprising given the elimination in self-report biases and also the peers' limited knowledge about every occurrence of their friend's behavior. Indeed, in a similar vein, Bardi and

Schwartz (2003) found that values correlated to a lesser extent with peer-reported behaviors than with self-reported behaviors.

In Studies 1 to 3 we consistently found that agency and communion behaviors are related to well-being. However, all three studies employed the same measure of agency and communion behaviors which asked participants to indicate how frequently they had engaged in each behavior relative to their opportunity to do so. We employed this method on the basis that opportunities may substantially affect frequency. Yet by taking opportunities into consideration we may have confounded the relationship between behaviors and well-being, especially given that opportunities have been linked to well-being (e.g., Cantor & Sanderson, 2003; Costanza, et al., 2007). Consequently, in Study 4 we simply asked participants to report how frequently they had engaged in each behavior.

Study 4 Method

Participants

A total of 133 respondents (54 males, 77 females, 2 declined to respond) recruited via M-turk, completed an online questionnaire. All participants were recruited from the US, and their ages ranged from 17 to 64 ($M_{\text{age}} = 36.59$, $SD = 12.84$). The majority were Caucasian (71%).

Measures

We used the same measures of values and behaviors as in Studies 2 and 3. However, in this study, our behavior assessment measured only behavior frequency and rather than behavior frequency relative to opportunity. As in Study 1, we measured well-being using the Positive and Negative Affect Scale (Watson et al., 1988) and Satisfaction with Life Scale (SWLS; Diener et al., 1985). The Cronbach reliability coefficients of each measure were acceptable (agency values $\alpha = .78$, communion values $\alpha = .83$, agency behaviors $\alpha = .68$, communion behaviors $\alpha = .83$, PA $\alpha = .93$, NA $\alpha = .92$, SWLS $\alpha = .92$).

Study 4 Results & Discussion

The correlations were strongest between each value and its corresponding behavior index. Specifically, agency values were more strongly correlated with agency behavior than communion behavior (respectively, $r = .57$ vs. $r = .30$, $Z = 3.08$, $p < .01$) and communion values were more strongly correlated with communion behavior than agency behavior (respectively, $r = .59$ vs. $r = .42$, $Z = 2.16$, $p < .05$).

As can be seen in Table 3, although agency values were significantly correlated with positive affect and life satisfaction, and although communion values were significantly correlated with positive affect, these correlations were still smaller than the corresponding ones with behaviors (although these differences were not significantly smaller for agency). Agency and communion behaviors were significantly correlated with every aspect of subjective well-being, except for the correlation between agency behaviors and negative affect. As in our previous studies, the regressions (see Table 4) show that well-being was usually predicted by behaviors and not values or value-behavior fit. Only agency values significantly predicted one aspect of well-being, positive affect. Therefore, these findings provide further support for the notion that it is the behavior aspect of agency and communion that mainly relates to well-being.

General Discussion

We provided the first attempt to systematically examine which aspects of agency and communion relate to well-being -- values, behavior or value-behavior fit. The answer that emerges from the four studies we conducted is clear and confirms our hypotheses: behaving in an agentic or communal way is the main element associated with well-being.

Agency and Communion Values and Well-Being

Agency and communion values were weakly and inconsistently associated with well-being. Specifically, out of the 36 possible correlations between agency and communion values and well-being only 17 were significant and the majority of these correlations were

significantly smaller for values than for behaviors. Moreover, controlling for the contribution of agency and communion behaviors resulted in just three instances in which agency and communion values significantly predicted well-being. There was similar pattern of correlations when we measured agency and communion using goals.

This suggest that neither values nor goals are strongly associated with well-being. However, as values and goals may be an important instigator that serve to increase the likelihood of agency and communion behaviors they may still play an important part in increasing well-being. Therefore, it is not possible to preclude the indirect influence values and goals may have on well-being. Consequently, future research utilizing an experimental design is needed in order to conclusively establish whether behaviors mediate the relationship between values/goals and well-being.

Agency and Communion Behaviors and Well-Being

Across four studies, our results show that agency and communion behaviors are consistently and strongly associated with both subjective and psychological well-being and that these correlations are evident whether self-report or peer-report measures of behavior are utilized. Our development and validation of a new measure of agency and communion behaviors enabled us to advance existing research in several ways. First, we were able to show that agency and communion behaviors provide an important and unique contribution to well-being beyond the measures of traits. Second, unlike previous research, we did not utilize gender stereotypical behaviors to conceptualize agency and communion. As such, our results show the association of agency and communion behaviors to well-being without introducing the extraneous concepts of masculinity and femininity. Finally, unlike past approaches, our measure of agency and communion behaviors was not calculated as the difference between two constructs (Fournier & Moskowitz, 2000). Consequently, our results have practical implications as we identified specific behaviors that could be used to increase well-being. Of

course, further research is required as the correlational design we used precludes causality. Furthermore, given that we have not established causality it is also possible that an additional variable may explain the relationship between behavior and well-being.

Value-Behavior Fit and Well-Being

Across all four studies, there was no indication that value-behavior fit is associated with well-being. As such, our findings do not provide support for the hypotheses derived from person-activity fit and are not consistent with previous findings (e.g., Brunstein, et al., 1999). We speculate that these null findings may have occurred for a number of reasons. First, it is possible that even if agency and communion behaviors do not fit with a person's values or goals they might fit other elements of the person, such as habits or upbringing. Second, person-activity fit may be a subjective phenomenon influenced entirely by a person's perception of both themselves and also the activity or behavior. There is some support for this idea from findings in occupational psychology that show a positive link between person-occupation fit and work satisfaction only when fit is measured by directly asking participants about their perception of such fit (Kristof-Brown & Guay, 2011). Third, person-activity fit may enhance well-being for some people but not for others. Such an explanation suggests that a missing variable (such as openness to experience) may moderate the link between person-activity fit and well-being. Hence, future research should examine person-activity across multiple domains using both subjective and objective measures as well as considering the role of potential mediating and moderating variables.

Conclusion

The findings of the present research strongly suggest that agency and communion behaviors may be beneficial for everyone, regardless of the values they hold or the goals they pursue. These findings consistently emerged across four studies regardless of whether we

measured agency and communion behaviors using self-report or peer-report methods. This confirms a proposition put forwards by the sustainable happiness model -- that intentional activities (e.g., Lyubomirsky et al., 2005) or the performance of certain behaviors are a decidedly promising pathway to higher well-being. Moreover, our findings make a strong case for future research to use agency and communion as a framework to derive activities or interventions that can be implemented with the aim of increasing people's happiness.

Table 1.

Exploratory Factor Analysis on Agency and Communion Behavior Items Using Oblimin Rotation

Behavior Items	Factors		Communalities	
	1	2	Initial	Extracted
Enjoyed helping others.	.80		.47	.58
Made people feel welcome	.71		.38	.46
Rejoiced in the successes of others	.67		.41	.47
Done favors without being asked	.65		.41	.46
Spent some quality time connecting with family/friends	.52		.25	.27
Strived to improve my skills		.76	.53	.65
Persevered with a challenging task		.70	.43	.52
Set myself a task and challenged myself to complete it within a certain time.		.68	.33	.43
Engaged in optional activities to improve my career prospects		.60	.33	.34
Done something for myself that someone else usually does for me		.36	.24	.26
Tried to solve a problem myself before seeking help from others	.23	.34	.18	.14

Note. Loadings smaller than .10 suppressed.

Table 2.

Correlation Analyses Showing Convergent and Discriminant Analyses For Agency and Communion Behaviors

	Zero Order Correlations		Partial Correlations	
	Agency Behavior	Communion Behavior	Agency behavior	Communion behavior
Controlling for:	-	-	Communion behavior	Agency behavior
Traits				
Agency	.41**	.27**	.32**	.07
Communion	.12	.52**	-.20**	.54**
Values				
Agency	.38**	.02	.42**	-.23**
Communion	.25**	.48**	.00	.42**
Need Satisfaction				
Competence	.44**	.37**	.32**	.19**
Relatedness	.20**	.48**	-.06	.45**
Autonomy	.20**	.31**	.05	.25**
Subjective Well-Being				
Positive Affect	.46**	.46**	.29**	.28**
Negative Affect	-.08	-.16**	.02	-.13**
Life Satisfaction	.25**	.35**	.08	.26**

Note. * = $p < .05$, ** = $p < .01$.

Table 3.

Comparing the Correlations of Values and Behaviors to Well-Being

	Agency			Communion		
	Values	Behaviors	Steigers Z	Values	Behaviors	Steigers Z
Measures of Well-Being						
Study 1						
Positive Affect	.36**	.46**	-2.05, <i>p</i> < .05	.28**	.46**	-3.61, <i>p</i> < .01
Negative Affect	-.11*	-.08	-.53, <i>NS</i>	-.14**	-.16**	.37, <i>NS</i>
Life Satisfaction	.18**	.25**	-1.28, <i>NS</i>	.18**	.35**	-3.23, <i>p</i> < .01
Study 2						
Autonomy	.20**	.43**	-2.53, <i>p</i> < .05	.04	.25**	-2.58, <i>p</i> < .01
Environmental Mastery	.13	.35**	-2.34, <i>p</i> < .05	.17*	.34**	-2.15, <i>p</i> < .05
Personal Growth	.11	.46**	-3.81, <i>p</i> < .01	.27**	.38**	-1.43, <i>NS</i>
Positive Relations	.06	.32**	-2.72, <i>p</i> < .01	.36**	.41**	-.68, <i>NS</i>
Purpose in Life	.17*	.44**	-2.96, <i>p</i> < .01	.20**	.45**	-3.26, <i>p</i> < .01
Self Acceptance	.09	.39**	-3.20, <i>p</i> < .01	.14	.27**	-1.68, <i>NS</i>
Study 3						
Autonomy	-.03	.38**	-5.02, <i>p</i> < .01	-.04	.16*	-2.55, <i>p</i> < .05
Environmental Mastery	.08	.34**	-3.21, <i>p</i> < .01	-.02	.26**	-3.60, <i>p</i> < .01
Personal Growth	.13*	.48**	-4.51, <i>p</i> < .01	-.01	.38**	-5.09, <i>p</i> < .01
Positive Relations	-.05	.24**	-3.49, <i>p</i> < .01	.14*	.40**	-3.49, <i>p</i> < .01
Purpose in Life	.11	.43**	-4.05, <i>p</i> < .01	.04	.36**	-4.19, <i>p</i> < .01
Self Acceptance	.01	.39**	-4.68, <i>p</i> < .01	-.03	.29**	-4.11, <i>p</i> < .01
Study 4						
Positive Affect	.49**	.56**	-1.05, <i>NS</i>	.34**	.55**	3.04, <i>p</i> < .01
Negative Affect	-.14	-.16	.25, <i>NS</i>	-.02	-.17*	-2.39, <i>p</i> < .01
Life Satisfaction	.27**	.34**	-.91, <i>NS</i>	.07	.38**	-4.02, <i>p</i> < .01

Note. * = *p* < .05, ** = *p* < .01, *NS* = Not Significant.

Table 4.

Regressions of Agency and Communion Variables Predicting Well-Being

Dependent Variables	Agency Predictor Variables			Communion Predictor Variables		
	Values	Behaviors	Values x Behaviors	Values	Behaviors	Values x Behaviors
Study 1: Values						
Positive Affect	.19**	.38**	-.02	.12	.42**	.09
Negative Affect	-.10	-.04	.00	-.10	-.13*	-.03
Life Satisfaction	.09	.21**	-.03	.05	.34**	.04
Study 2: Values						
Autonomy	.12	.41**	.05	-.08	.31**	.14
Environmental Mastery	.07	.33**	.08	.03	.32**	-.03
Personal Growth	.03	.47**	-.12	.13	.32**	-.03
Positive Relations	.00	.32**	-.02	.23**	.31**	-.02
Purpose in Life	.09	.42**	.08	.12	.19*	.00
Self Acceptance	.02	.38**	.06	.03	.27**	.07
Study 2: Goals						
Autonomy	-.03 ^a	.44**	.07	-.03 ^a	.26**	.14
Environmental Mastery	-.08 ^a	.37**	.03	-.03 ^a	.34**	.08
Personal Growth	.04 ^a	.46**	-.09	.17* ^a	.32**	.03
Positive Relations	-.09 ^a	.34**	-.15*	.19** ^a	.34**	.01
Purpose in Life	.12 ^a	.42**	-.14*	.13 ^a	.20**	-.05
Self Acceptance	-.07 ^a	.42**	-.11	.06 ^a	.25**	.08
Study 3: Values						
Autonomy	-.10	.39**	-.04	-.09	.19**	.04
Environmental Mastery	.02	.33**	-.09	-.09	.28**	.01
Personal Growth	.05	.47**	-.06	-.11	.40**	-.04
Positive Relations	-.10	.25**	-.08	.03	.38**	-.10
Purpose in Life	.04	.42**	-.07	-.05	.37**	-.02
Self Acceptance	-.06	.39**	-.06	-.11	.31**	-.03
Study 3: Peer-report Behaviors						
Autonomy	-.11	.37** ^b	-.01	-.05	.03	-.08
Environmental Mastery	.03	.23** ^b	-.10	-.03	.16*	.01
Personal Growth	.07	.28** ^b	-.15*	-.02	.15*	-.10
Positive Relations	-.08	.13** ^b	-.06	-.08	.16**	-.08
Purpose in Life	.07	.18** ^b	-.08	.02	.16**	-.06
Self Acceptance	-.06	.30** ^b	-.08	-.04	.09	-.03
Study 4: Values						
Positive Affect	.24*	.42**	-.03	.02	.53**	-.04
Negative Affect	-.08	-.12	-.03	.05	-.27**	-.20*
Life Satisfaction	.13	.27**	.05	-.20	.54**	.12

Note. ^a= goals assessed, ^b= behaviors assessed using peer reports. In all other instances values and self-reported behaviors were assessed.

*= $p < .05$, ** = $p < .01$

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