
Article:
Byerly, T.R. orcid.org/0000-0002-0702-1790, Hill, P.C. and Edwards, K.J. (2022) Others-centeredness: a uniquely positive tendency to put others first. Personality and Individual Differences, 186 (Part A). 111364. ISSN 0191-8869

https://doi.org/10.1016/j.paid.2021.111364

Abstract

Is putting the interests of others ahead of one's own interests a virtuous tendency? Previous research has produced ambivalent results about this. Some existing constructs that involve prioritizing others' interests over one's own, such as unmitigated communion, are treated primarily as negative features of personality, while others, such as high other-focus, are treated primarily as positive features. This study involved developing a new scale to measure others-centeredness, a tendency derived from philosophical research which involves prioritizing others' interests over one's own because one judges each person's interests to be equally valuable while also valuing interpersonal unions. This scale is used in both correlational and experimental studies to demonstrate that others-centeredness is uniquely positively related to indicators of well-being when controlling for unmitigated communion and high other-focus, while the latter relate negatively to indicators of well-being, or lack positive associations with such, when controlling for others-centeredness. Accordingly, others-centeredness may be a uniquely positive, virtuous tendency to put others' interests first.

Keywords: others-centeredness; humility; unmitigated communion; high other-focus; self-differentiation; dictator game

Others-Centeredness: A Uniquely Positive Tendency to Put Others First

1. Introduction

It is not uncommon for people to be praised because they habitually put others' interests ahead of their own. Being the sort of person who puts others first was identified as one of the key difference-makers between Gentiles who rescued Jews during the Holocaust and Gentiles who did not do so (Oliner & Oliner, 1988, pp. 161-164). Certain religious texts also appear to champion such an ideal. One example comes from the New Testament: "Do nothing from selfishness or empty conceit, but with humility of mind regard one another as more important than yourselves" (Phil 2:3, NASB).

Taken at face value these affirmations suggest the hypothesis that there is a character strength or virtue that goes beyond common prosocial tendencies in that it specifically requires putting others' interests ahead of one's own. This character strength, like others, would be a dispositional feature that could manifest under various conditions, but perhaps especially conditions in which a person cannot equally promote their own interests and others' interests, but must make a choice between these. To be a virtue, this character trait would need to contribute toward a person's functioning well, making their life better, rather than detracting from it (Battaly, 2015; Peterson & Seligman, 2004), and would be grounded in psychological processes conducive toward well-being.

In a recent interdisciplinary book, philosopher T. Ryan Byerly (2019) advances a conceptualization of just such a virtue, called "others-centeredness". The purpose of the research reported here was to develop a self-report measure of this trait and to examine its relationship to the conceptually similar psychological constructs of unmitigated communion and high other-focus, which also involve tendencies to prioritize others' interests. This research suggests that others-centeredness is closely related to these other traits, but differs from them in subtle but important ways, making unique contributions to human well-being,

while the latter have unique liabilities for well-being. As such, others-centeredness may be a uniquely positive tendency to put others' interests ahead of one's own.

1.1 Existing Research on Related Constructs

There is a broad array of previous psychological research that is related to a putatively virtuous tendency to put others' interests ahead of one's own. However, existing measures do not reflect well the internal features that would lead a person to stably put others' interests ahead of their own in a virtuous way.

First, a growing body of research has consistently found that people who benefit others experience greater well-being than people who benefit themselves to a comparable extent (Aknin et al., 2013; Dunn et al., 2008; Greenen et al., 2014). Typically, this hypothesis has been tested in experimental contexts in which participants either give a sum of money to another individual or group or retain these funds for themselves. A recent study found that the explanation for why people experience greater well-being when giving to others is that this satisfies not only their needs for competence, but—uniquely—their needs for experiencing relatedness to others (Titova & Sheldon, forthcoming). Notably, this research focuses only on one-off decisions regarding allocating resources, and is not concerned with a broader, stable tendency to favor others in decisions of this kind.

Research on social value orientation (Messick & McClintock, 1968) comes closer to identifying a broad tendency to consider others' interests when making decisions about how to allocate resources. Most frequently, this research has focused on comparing three specific orientations: a cooperative orientation that aims to maximize resources for one's group; a competitive orientation that aims to maximize the gap between one's own resources and others' resources; and an individualistic orientation that aims to maximize one's own resources absolutely (Balliet et al., 2009; Bogaert et al., 2008). Yet, some researchers have

critiqued this narrow focus, and have argued that social value orientation should be understood as a continuous variable, and as such it can be conceptualized as the extent to which a person takes others' interests into account when making resource allocation decisions (Murphy, Ackermann, & Handgraaf, 2011). Still, the measures used to study social value orientation focus only on overt behavioral patterns, and not on internal psychological features that might give rise to these patterns (Murphy & Ackerman, 2014).

A great deal of psychological research has been concerned with personality tendencies that are strongly prosocial and as such are conceptually similar to a virtuous tendency to put others' interests first (Leary & Hoyle, 2009). For instance, the basic personality tendency of agreeableness has been found to be the strongest predictor of prosocial behavior among the Big Five (Habashi, Graziano, & Hoover, 2016). The altruism facet of agreeableness might seem to be especially relevant to a tendency to prioritize others' interests, given how the term "altruism" is colloquially understood. Yet, the items used to measure altruism (e.g., "I see myself as someone who is generally trusting"), as well as agreeableness (e.g., "I see myself as someone who tends to find fault with others" (reverse scored)), do not at face value reflect a tendency to prioritize others' interests over one's own, but instead tendencies to cooperate more generally with others. Likewise, research has confirmed that one of the central pathways to altruistic behavior—behavior intended to benefit others rather than the self—is via experiencing empathy for others (Batson, 1991). The trait of dispositional empathic concern (Davis, 1980) is a tendency to experience empathy for others which is related to prosocial behavior (Davis, 2015). Here too this trait is reflective of a broader process that contributes to prosociality, especially in contexts where others experience distress, rather than a more specific tendency concerned with putting others' interests ahead of one's own.

The recent emergence of interest in hypo-egoic phenomena has directed attention to tendencies that involve comparatively low concern for the self—often complemented by comparatively high concern for others (Brown & Leary, 2016). For instance, the construct of the quiet ego is meant to reflect a stance toward the self and others that is balanced and not very defensive (Wayment, Bauer, & Sylaska, 2015). As measured in the Quiet Ego Scale, it reflects four facets: having a detached awareness when performing activities; having an inclusive identity toward other persons and the natural world; tending to take others' perspectives; and having a positive attitude toward growth. Much like other generally prosocial tendencies, this construct does not appear to have a specific focus on putting others' interests first.

Research on the virtue of humility has also often emphasized strongly other-oriented tendencies (e.g., Davis et al., 2017; Exline & Hill, 2012), though there has been considerable debate about whether humility itself is best understood as including such tendencies (e.g., Austin, 2018; Banker & Leary, 2020; Snow, 2017). One example of an other-oriented tendency that has been studied as a facet of humility is high other-focus. Wright and colleagues (2018) argue that the virtue of humility reflects the dual dimensions of low self-focus and high other-focus. They found that the high other-focus, as measured by their High Other-Focus subscale, is related to several positive psychological variables, including positive life-regard and sense of life purpose. While high other-focus clearly involves a heightened attentiveness toward others and even a prioritizing of others' interests over one's own, the High Other-Focus subscale does not tap into underlying psychological features that explain why a person prioritizes others' interests.

Not all studies that have directed attention to strongly other-oriented tendencies have treated these tendencies as unequivocally positive. Some research has argued that there are strongly other-oriented tendencies that tend to affect one's well-being negatively (Jack &

Dill, 1992). One example is research on unmitigated communion, identified as an excessive concern for others and over-involvement with others (Helgeson & Fritz, 1998). Researchers first identified unmitigated communion as part of an effort to understand why women are more likely to experience depression than men. Unmitigated communion has indeed been associated with female sex, psychological distress, neuroticism, depression, anxiety, lower optimism, and more disappointment in life (Danoff-Burg et al., 2004; Fritz, 2000; Fritz & Helgeson, 1998; Helgeson, 2003; Helgeson & Fritz, 1999; Helgeson & Palladino, 2012; Piro et al., 2001). While, like high other-focus, unmitigated communion includes a tendency to prioritize others' interests over one's own, this trait would not appear to be a good candidate for a virtuous other-favoring tendency, given these associations with poor psychological functioning.

1.2 The Potential Uniqueness of Others-Centeredness

While the behavioral and trait measures surveyed above tap into phenomena that overlap with what might be expected of a virtuous tendency to put others' interest first, there is also reason to think that they do not capture the richness of such a tendency. To see this more clearly, it is helpful to consider others-centeredness in more detail.

On Byerly's (2019) account, others-centeredness is a disposition that involves being more strongly motivated to promote others' interests than to promote one's own interests. The others-centered person would prefer to promote an interest for someone else than to promote that same interest for themselves. Yet, for this other-favoring tendency to be virtuous, Byerly argues that it must arise from two underlying features of personality. The first feature is a tendency to consider the value of each person's interests to be equal. The others-centered person judges, for example, that it is just as valuable in the grand scheme of things for one's own self to be happy and satisfied as it is for anyone else to be happy and

satisfied. This feature may be called "judging each person's outcomes equally." The second feature is a tendency to value the kinds of relationships that form between people when they cooperate in promoting each other's interests. An others-centered person values, for example, when people (including themselves) cooperate together, and when people recognize and understand and appreciate each other. This feature may be called "valuing interpersonal unions."

Byerly shows how judging each person's outcomes equally and valuing interpersonal unions, when taken together, can lead a person to prioritize promoting others' interests. To see how the idea works, consider a case where a person can promote an interest for their own self, or promote this same interest for someone else, but not both, such as with limited available funds purchasing a gift for a friend or for their own self. If they judge each person's outcomes equally, they will judge it equally valuable for their self to receive the gift as for their friend to receive the gift. Yet, if they also value interpersonal unions, they may display a preference for purchasing the gift for their friend. For, if they do so, it is more likely they will promote interpersonal union between themselves and their friend, than if they instead purchase the gift for themself. Prioritizing others' interests thus tends to have the advantage of not just promoting the interest in question, but also promoting a greater degree of interpersonal union. Indeed, this rationale for other-favoring behavior coheres well with the finding noted above that giving to others tends to satisfy a person's needs for both competence and relatedness, while giving to themself only satisfies their needs for competence (Titova & Sheldon, forthcoming). A person who recognizes this advantage of prioritizing others' interests may for this reason prioritize others' interests. If so, they would be others-centered: their tendency to prioritize others' interests would have arisen from their judging each person's outcomes equally together with the value they place on interpersonal unions.

Given this conceptualization of others-centeredness, it does not appear that the measures surveyed above would capture the construct well. Because it is a stable dispositional feature of personality, exclusively behavioral measures such as social value orientation are not appropriate for measuring others-centeredness. Measures of broadly prosocial tendencies such as agreeableness, altruism, or empathy would seem to lack the specificity necessary for capturing others-centeredness as a tendency to prioritize others' interests over one's own, and much the same is true of existing measures of hypo-egoic traits such as the quiet ego.

The reasons why measures of high other-focus and unmitigated communion do not capture the richness of others-centeredness are more subtle, since these constructs do involve stable tendencies to prioritize others' interests. Where they seem to depart from others-centeredness has to do with the internal features that characteristically lead the person who possesses these traits to prioritize others.

Some of the items in the Unmitigated Communion Scale (Helgeson & Fritz, 1998) reflect a tendency to prioritize others' interests over one's own, making it overlap with others-centeredness. For example, the scale contains the items "I always place the needs of others above my own" and "It is impossible for me to satisfy my own needs when they interfere with the needs of others". Yet, even these items, with their uncompromising language ("always", "impossible"), may reflect a more extreme tendency toward self-sacrifice than would be expected of others-centeredness. The scale is further differentiated from others-centeredness in its other items, which include "I worry about how other people get along without me when I am not there," "For me to be happy, I need others to be happy," and "I never find myself getting overly involved in people's problems" (reverse scored). In these items, it is clear that unmitigated communion involves tendencies to worry about

others, to be excessively involved with others, and to entangle one's own happiness with others' happiness—tendencies which are not clearly features of others-centeredness.

These latter features of unmitigated communion are conceptually similar to the construct of self-differentiation. Self-differentiation, derived from Bowen's (1978) theory, refers to the degree to which one is able to balance emotional and intellectual functioning as well as intimacy and autonomy in relationships (Skowron & Friedlander 1998). Individuals who are low in self-differentiation tend to exhibit greater emotional reactivity, finding it difficult to remain calm in the face of the emotionality of others. Studies have found lower self-differentiation to be associated with anxiety, depression, lower self-esteem, and perceived stress (Chung & Gale, 2006; Drake et al., 2015; Knauth et al., 2006; Peleg 2005; Peleg et al. 2006; Peleg-Popko, 2002). The tendency to prioritize others' interests characteristic of unmitigated communion appears to derive from low self-differentiation. However, given its incorporation of tendencies to judge each person's outcomes equally and to value interpersonal unions, the explanation for why others-centered people put others first is different.

The items of the High Other-Focus subscale likewise sound conceptually very similar to others-centeredness. They include, for example, "I often place the interests of others over my own interests," "My friends and family would say I focus more on others than I do myself," and "I care about the welfare of others, at times more than my own welfare." Compared with the Unmitigated Communion Scale, the more compromising language of these items may reflect an even closer conceptual overlap with others-centeredness. Yet, despite this overlap, the High Other-Focus subscale does not contain items that make it clear why the high-scoring respondent prioritizes others' interests over their own. It merely contains items that reflect that they do this. Thus, the High Other-Focus subscale does not discriminate between respondents whose prioritizing of others' interests is prompted by

psychological features characteristic of unmitigated communion and respondents whose prioritizing of others' interests is prompted by psychological features characteristic of others-centeredness. Moreover, high other-focus was found to lack positive associations with agentic values of self-direction and achievement, as well as participants' sense of autonomy and personal growth (Wright et al., 2018). Thus, one may question whether high other-focus is more similar to unmitigated communion than to others-centeredness, perhaps having similar liabilities to those associated with the former.

1.3 The Present Research

With the potential uniqueness of others-centeredness in view, the present studies set out to develop a new, short measure of this construct, and to evaluate empirically whether this tendency is unique in comparison to unmitigated communion and high other-focus. Given the conceptual overlap between others-centeredness, high other-focus and unmitigated communion, it was expected that all three constructs would be correlated. The focus of this research was to investigate the psychometric properties of a new scale to measure others-centeredness and test the scale's uniqueness when controlling for these latter two constructs. Five specific hypotheses were formulated for testing.

Given the theoretical argument that others-centeredness gives rise to other-favoring behavior in ways that are divergent from and more uniquely positive than unmitigated communion and high other-focus the researchers hypothesized that:

(H1) Unmitigated communion and high other-focus will be significantly, positively correlated with neuroticism, stress, and low self-differentiation when controlling for others-centeredness. Other-centeredness will not be significantly, positively related to these variables when controlling for unmitigated communion and high other-focus.

Individuals high in self-differentiation are said to be less reactive to the experiences of emotionally close others. The researchers developed a simple exercise in which the participants reported their affects after imagining neutral and positive experiences of a close other. Difference in affect under these two conditions was used as a measure of emotional reactivity. The researchers have argued that unmitigated communion and high other-focus are more predictive of reactivity to the experience of close others than is others-centredness and, thus, hypothesize that:

(H2) Unmitigated communion and high other-focus will be significantly, positively correlated with change in affect in this exercise when controlling for others-centeredness. Other-centeredness will not be significantly, positively related to change in affect when controlling for unmitigated communion and high other-focus.

Third, it was hypothesized that others-centeredness, as a virtuous tendency, would be related to several positive variables. The variables selected were based on the conceptualization of others-centeredness and previous research that has identified potential antecedents and consequences of others-centeredness (Byerly, 2019). This research has emphasized that basic sources of prosocial behavior such as agreeableness and empathy that do not appear to conflict with others-centeredness might be expected to relate positively to others-centeredness and may serve as potential causes of it, while more specific virtuous tendencies such as kindness or forgiveness, as well as effects of such tendencies such as enhanced satisfaction with life, may be expected to relate positively to others-centeredness and may serve as causal consequences of it. Given the theoretical argument that others-centeredness may be uniquely positive in relation to unmitigated communion and high other-focus, it was expected that others-centeredness may relate more strongly to some of these potential consequences than unmitigated communion and high other-focus do. Thus, it was hypothesized that:

(H3) Others-Centeredness will be significantly, positively correlated with agreeableness and dispositional empathic concern.

(H4) Others-centeredness will be significantly, positively correlated with fairness, kindness, forgiveness, satisfaction with life, and presence of meaning in life when controlling for unmitigated communion and high other-focus. Unmitigated communion and high other-focus will not be significantly, positively correlated with all of these variables when controlling for others-centeredness.

Finally, the researchers devised a behavioral simulation that might demonstrate the unique contribution of others-centeredness to prosocial behavior. If being others-centered leads people to prioritize others' interests especially in cases where they cannot promote their own interests and others' interests equally, then it might be expected that others-centered people would uniquely distribute five unearned $2 bills in an other-favoring way, giving a greater number of these $2 bills to the other person. Thus, it was hypothesized that:

(H5) Others-centeredness will be significantly, positively related to distributing five unearned $2 bills in an other-favoring way when controlling for unmitigated communion and high other-focus. High other-focus and unmitigated communion will not be significantly, positively related to distributing five unearned $2 bills in an other-favoring way when controlling for others-centeredness.

By testing these five hypotheses, the present research uses correlational and experimental methods to examine whether others-centeredness represents a uniquely positive tendency to put others' interests ahead of one's own, as well as whether high other-focus or unmitigated communion have unique liabilities in comparison to others-centeredness. Given the hypothesized overlap between others-centeredness, unmitigated communion, and high other-focus, it was anticipated that the relationships indicated in the hypotheses would be small to moderate, reflecting somewhat subtle differences between the constructs. The studies

reported below were reviewed in accordance with the University of [redacted for review]'s ethics review procedure.

2. Study 1: Initial Scale Development

2.1 Method

2.1.1 *Participants*

Five hundred twenty five participants completed an online survey in July 2019, after giving informed consent. This sample size satisfies common rules of thumb proposed for exploratory factor analysis (Tabachnick & Fidell, 2013). Participants were recruited using Qualtrics' panellist service and received Qualtrics' standard rate as payment. Researchers used a minimum completion time of 190 seconds to ensure that participants were responding thoughtfully. This eliminated fourteen participants, resulting in a sample of 511 participants. Of these 51% were female, 50% US and 50% UK, and 82% White. All were above 18 years old, with 14% between 18 and 25, 18% between 26 and 35, 17% between 36 and 45, 18% between 46 and 55, 16% between 56 and 65, and 17% older than 65.

2.1.2 *Materials*

Sixty-one items were drafted by the researchers with the intention of covering the various dimensions of others-centeredness as described above and in Byerly (2019). These items were developed in direct consultation with Byerly. The original item pool was intentionally broad, reflecting both tendencies to make relevant cognitive judgments, tendencies to experience relevant emotions, and motivations to perform relevant behaviors, because others-centeredness, like other virtues, is conceptualized as a multi-track disposition. One group of items was intended to capture participants' tendencies to judge each person's outcomes equally (e.g., "My well-being matters no more and no less than anyone else's"). A

second group was intended to capture participants' tendencies to judge that interpersonal unions are valuable (e.g., "It is a good thing when one person understands another person's needs and desires"). A third group was intended to capture participants' motivations to promote interpersonal unions and their tendencies to experience positive affect toward interpersonal unions (e.g., "I encourage those around me to be helpful to each other" and "It makes me feel good when people cooperate with each other"). A fourth group was intended to capture participants' tendencies to prioritize promoting others' interests over their own (e.g., "I prefer to secure a benefit for someone else than to secure it for myself").

Items intended to capture judgments were assessed using a seven-point Likert scale anchored by "Strongly Disagree"/ "Strongly Agree". Items intended to capture affective tendencies or motivations were assessed using a seven-point Likert scale anchored by "Very much unlike me"/ "Very much like me". Questions about participants' age, sex, and country of residence were included in the demographics section.

2.1.3 *Data Analysis Procedures*

Following common procedures (Furr, 2011), the researchers created a scree plot of the 61 others-centeredness items and then conducted exploratory factor analysis using the number of factors indicated by a visual inspection of the scree plot. A Promax rotation was selected because it was expected that there may be positive correlations among the factors (Tabachnick & Fidell, 2013). These procedures were caried out in R using the VSS.scree and fa functions. The researchers inspected the content of the highest loading items for each factor to discern whether the factors exhibited adequate conceptual unity. An equal number of the highest scoring items across the factors was then retained for the next stage of analysis, with the aim being to creating a scale of 9-15 items in total length.

Table 1

Factor Loadings for the Others-Centeredness Scale

Item	Factor Number			
	1	2	3	4
It makes me feel good when people cooperate with each other.	**.82**	-.10	.12	.01
I try to get people to work together well.	**.80**	.10	-.04	.01
I encourage those around me to be helpful to each other.	**.66**	.07	.12	.05
I prefer to secure a benefit for someone else than to secure it for myself.	.06	**.86**	-.04	-.02
I would rather promote an interest for someone else than promote this same interest for myself.	-.15	**.80**	.03	.11
I am more strongly motivated to do something if it will ease someone else's suffering than if it will ease my own suffering.	.16	**.71**	.02	-.06
It is good for people to be attentive toward each other.	-.10	.01	**.84**	.06
It is valuable when people cooperate with each other.	.14	-.05	**.76**	.00
It is a good thing when one person understands another person's needs and desires.	.07	.05	**.72**	-.04
It's no better in the grand scheme of things for one person to have an excellent life than for another person to have an excellent life.	.05	.01	-.06	**.76**
The effects of our acts on ourselves are no more and no less important than the effects of our acts on others.	-.06	.02	.03	**.75**
My well-being matters no more and no less than anyone else's.	.08	.00	.08	**.59**

2.2 Results and Discussion

The scree plot indicated four factors, all with eigenvalues > 1. Inspection of the content of the items for these factors revealed that the highest-loading items had significant conceptual unity among them. Factor one contained 24 items primarily related to affective and motivational tendencies toward interpersonal union. Factor two contained 16 items primarily related to a tendency to prioritize others' interests over one's own. Factor three contained 13 items primarily related to judgments that interpersonal unions are valuable.

Factor four contained eight items primarily related to judgments that each person's interests are equal in value to each other person's. Researchers selected the three highest loading items per factor to retain for the next level of analysis. Primary factor loadings ranged from .59 to .86, with no cross-factor loadings higher than .16. Table 1 is a full table of these factor loadings. The four factors correspond closely with the others-centeredness conceptualization provided in the Introduction.

3. Study 2: Scale Goodness of Fit and Reliability and Validity Testing

In Study 2, the researchers conducted confirmatory factor analysis to test the fit of the four-factor model of others-centeredness derived from Study 1. The Cronbach's alpha was computed for the twelve-item others-centeredness scale and its subscales to examine their reliability. Researchers also examined the relationships between others-centeredness, unmitigated communion, and high other-focus and various features of personality and significant life outcomes in order to test hypotheses (H1), (H3), and (H4), using semi-partial correlations to examine the uniqueness of these constructs.

3.1 Method

3.1.1 *Participants*

Three hundred ten participants completed an online survey in October 2019, after giving informed consent. This sample size satisfies common rules of thumb for confirmatory factor analysis (Furr, 2011). Participants were recruited using Qualtrics' panellist service, and were paid Qualtrics' standard fee. Fifty-one percent were female and all were US residents. The sample was more ethnically diverse than the sample for Study 1, with 63% White, 16% Latino, 13% Black or African American, and 5% Asian. All were above 18 years old, with 6% between 18 and 24, 22% between 25 and 34, 21% between 35 and 44, 21% between 45 and 54, 16% between 55 and 64, and 13% older than 65.

3.1.2 *Materials*

Participants completed the twelve-item others-centeredness scale alongside demographic and behavioral questions and several established scales used to measure personality characteristics, character strengths, and significant life outcomes. Demographic questions included participants' age, sex, ethnicity, educational attainment, employment status, and country of residence.

The established scales used were the Empathic Concern subscale of the Interpersonal Reactivity Index (Davis, 1980; $\alpha = .76$); the High Other-Focus subscale of the dual-dimension humility measure (Wright et al., 2018, $\alpha = .92$); the Unmitigated Communion Scale (Helgeson & Fritz, 1998, $\alpha = .72$); the Big Five Inventory-10 (Rammstedt & John, 2007); the Satisfaction with Life Scale (Diener et al., 1985, $\alpha = .91$); the Presence subscale of the Meaning in Life Questionnaire (Steger et al., 2006, $\alpha = .85$); and the Kindness ($\alpha = .91$), Forgiveness ($\alpha = .91$), and Fairness ($\alpha = .90$) subscales of the Values-in-Action Inventory 240 (Peterson & Seligman, 2004).

Participants' frequency of experiencing stress was assessed through the question, "How frequently do you experience high levels of stress?" with response options anchored by a five-point "never"/"very often." Participants' coping ability was measured using the question, "Which of the following describes how well you typically cope with stress?" with response options anchored by a four-point "very poorly"/"very well."

3.1.3 *Data Analysis Procedures*

Confirmatory factor analysis was performed in R for the four-factor model derived from Study 1, using the lavaan package. Hypotheses (H1), (H3), and (H4) were tested by examining bivariate correlations between others-centeredness and the other variables mentioned in these hypotheses, with the exception of self-differentiation which is examined

in Study 3. Semi-partial correlations (Cohen et al., 2003) were computed using the ppcor function to examine the uniqueness of others-centeredness, unmitigated communion, and high other-focus in relation to the variables identified in (H1), (H3), and (H4).

3.2 Results

3.2.1 *Confirmatory Factor Analysis and Cronbach's Alpha*

The confirmatory factor analysis indicated good fit for the four-factor model derived from Study 1, with a Comparative Fit Index (CFI) of .98, a Tucker-Lewis Index (TLI) of .97, a Standardized Root Mean Square Residual (SRMR) of .038, and a Root Mean Square Error of Approximation (RMSEA) of .055. The Cronbach's alpha for the full scale was .88, while the Cronbach's alphas for each subscale were .86 (Judging Interpersonal Union Valuable), .75 (Judging Each Person's Outcomes Equally), .88 (Valuing Interpersonal Union), and .86 (Prioritizing Others' Interests).

Table 2

Correlations for Others-Centeredness, Unmitigated Communion, and High Other-Focus

	Others-Centeredness	Unmitigated Communion	High Other-Focus
Unmitigated Communion	0.41***		
High Other-Focus	0.36***	0.7***	
Satisfaction with Life	0.21**	0.11*	0.17**
Presence of Meaning	0.25**	0.09	0.14*
Kindness	0.59***	0.57***	0.56***
Forgiveness	0.57***	0.49***	0.46***
Fairness	0.59***	0.53***	0.5***
Empathy	.33***	.45***	.43***
Agreeableness	0.17**	0.33**	0.24**
Neuroticism	-0.03	0.12*	0.12*

Conscientiousness	0.12*	0.22**	0.18**
Extraversion	0.10	0.02	0.03
Openness	0.14*	0.12*	0.15*
Frequency of Stress	0.06	0.13*	0.19***
Coping Ability	0.15*	0.04	0.04

Note: *p < .05; **p < .005; ***p < .001

3.2.2 *Bivariate and Semi-Partial Correlations*

Table 2 includes the key bivariate correlations relevant for assessing (H1), (H3), and (H4). Others-centeredness, high other-focus, and unmitigated communion all had mostly significant correlations across the various dependent variables. Since the focus of the present study was to investigate the uniqueness of others-centeredness relative to unmitigated communion and high other-focus, statistics that provide a test of uniqueness were examined.

The first indication of uniqueness is the degree of shared variance of each pair of variables as indicated by the square of the correlations. Unmitigated communion and high other-focus had 49% shared variance (r=0.70) whereas others-centeredness had 16.8% (r=0.41) and 13% (r=0.36) shared variance with these other two variables, respectively.

The second test of uniqueness is provided by the semi-partial correlation of each construct with other measures of personal functioning when controlling for the other two constructs. The size of the semi-partial correlation indicates the degree of incremental validity (uniqueness) of each variable. Table 3 provides these semi-partial correlations.

Table 3

Semi-Partial Correlations for Others-Centeredness, Unmitigated Communion, and High Other-Focus

Dependent Variable	Others-centeredness	Unmitigated communion	High other focus

Satisfaction with Life	.16**	.03	
Satisfaction with Life	.15**		.10
Satisfaction with Life	.15**	-.03	.08
Presence of Meaning	.22***	-.01	
Presence of Meaning	.20***		.05
Presence of Meaning	.21***	-.04	.06
Coping Ability	.13*	-.03	
Coping Ability	.14*		-.02
Coping Ability	.13*	-.02	.001
Kindness	.43***	.41***	
Kindness	.47***		.43***
Kindness	.42***	.15***	.18***
Forgiveness	.42***	.31***	
Forgiveness	.46***		.31***
Forgiveness	.41***	.12***	.11***
Fairness	.44***	.36***	
Fairness	.48***		.36***
Fairness	.43***	.14***	.13***
Neuroticism	-.08	.13*	
Neuroticism	-.07		.13*
Neuroticism	-.08	.05	.04
Stress	.00	.11*	
Stress	-.01		.17**
Stress	-.01	.00	.08

Note: *p < .05; **p < .005; ***p < .001

These results indicate that others-centeredness has a significant, positive semi-partial correlation with satisfaction with life, presence of meaning in life, coping ability, kindness,

forgiveness, and fairness when controlling for unmitigated communion and high other-focus both individually and together. While unmitigated communion and high other-focus each have significant positive semi-partial correlations with kindness, forgiveness, and fairness when controlling for others-centeredness, they do not have significant positive semi-partial correlations with satisfaction with life, presence of meaning, or coping ability when controlling for others-centeredness. Moreover, unmitigated communion and high other-focus each have a significant positive semi-partial correlation with neuroticism and stress when controlling for others-centeredness, while others-centeredness does not have a significant positive semi-partial correlation with these variables when controlling for unmitigated communion or high other-focus individually or together.

3.3 Discussion

These results serve to support both a good fit of the four-factor model as well as the reliability and validity of the Others-Centeredness Scale. Others-centeredness had significant positive associations with both its hypothesized antecedents (H3) and consequents (H4).

The differences in the degree of shared variance among others-centeredness, unmitigated communion and high other-focus suggest that others-centeredness is unique with respect to the other two. The semi-partial correlations confirmed the existence of significant unique variance in others-centeredness, with the pattern of results indicating that others-centeredness is uniquely more positive. Unmitigated communion and high other-focus had small, significant positive semi-partial correlations with neuroticism and stress, while others-centeredness's semi-partials were virtually zero or negative (H1). On the other hand, others-centeredness had small, significant, positive semi-partial correlations with coping ability, meaning, and satisfaction with life, while unmitigated communion and high other-focus did not (H4). In these ways, it would appear that others-centeredness keeps the positive

associations of unmitigated communion and high other-focus, while potentially avoiding some drawbacks associated with the latter.

4. Study 3: Behavioral Simulations with Others-Centeredness, and Self-Differentiation

This study included two behavioral simulations to test hypotheses (H2) and (H5), and it included a scale for measuring self-differentiation in order to assess its relationships with others-centeredness, unmitigated communion, and high other-focus (H1).

4.1 Method

4.1.1 *Participants*

Two hundred sixty-six participants recruited through Qualtrics panellist services completed an online questionnaire in November 2020 and were paid Qualtrics' standard fee. All participants were US residents. Forty-eight percent were female. Four percent were 18-24 years old; 8% were 25-34; 12% were 35-44; 7% were 45-54; 9% were 55-64; and 60% were 65 or older. Four participants were eliminated from the analysis because they selected a response option to a question that contained an error.

4.1.2 *Materials*

After giving informed consent, participants completed items measuring personality constructs and demographics, and participated in two online behavioral simulations. In addition to scales for others-centeredness, unmitigated communion, and high other-focus, a short inventory for measuring self-differentiation (Drake et al., 2015, $\alpha = .90$) was included. Demographic information collected again included participants' age, sex, and country of residence.

4.1.3 *Procedures*

To examine the relationships between others-centeredness, unmitigated communion, high other-focus, and self-differentiation, correlations and semi-partial correlations were computed as in Study 2.

The first behavioral simulation was designed to force a choice in a dictator game (Engel, 2011) by having participants distribute unearned resources between themselves and another person when it is not possible to distribute the resources equally. Participants were randomly divided into two groups. Participants in the first group were told that there were five $2 bills available to be divided between themselves and another participant. They were told it was up to them how to divide the $2 bills, and they were given response options ranging from "5 for me, 0 for them" to "5 for them, 0 for me" to indicate their choice about how to divide the money. The second group of participants were given a similar task for comparison purposes, except that in their case it was four $2 bills. Thus, in the first group but not the second, the $2 bills could not be divided evenly. While the participants were in this way led to believe that their decisions would have financial implications for them, all participants were in fact given the full amount at the end of the study and debriefed about the study's use of deception.

To evaluate this behavioral simulation, correlations between others-centeredness, unmitigated communion, high other-focus, and dividing $2 bills in a more other-favoring way were examined for the full populations in each of the two groups. To examine whether others-centeredness could uniquely predict giving more $2 bills to the other person in the five $2 bill condition, researchers used two procedures. First, semi-partial correlations were calculated to examine whether others-centredness was significantly positively correlated with giving in the five $2 bill condition when controlling for unmitigated communion and high other-focus. Second, moderation analyses (Cohen et al., 2003) were conducted using the gvlma package in order to examine whether others-centeredness, unmitigated communion, or

high other-focus moderated the relationship between being in the five $2 bill condition rather than the four $2 bill condition and giving more $2 bills to the other person. Researchers examined whether any of these three constructs had a significant interaction effect with the condition both independently and when controlling for the other two constructs and their interactions with the condition.

The second behavioral simulation concerned participants' changes in affect between time 1 and time 2, where t1 was just after imagining a close other in a neutral state and t2 was just after imagining a close other finding out they had received a surprise sum of money that they were very happy and excited about. Affect was measured at t1 and t2 using the positive and negative affect schedule (Watson et al., 1988; $\alpha = .92$ for positive affect, $\alpha = .95$ for negative affect).

To evaluate the second behavioral simulation, a total score for affect was computed at t1 and t2. Negative affect was negatively scored, and positive affect positively scored. Then, a score for difference in affect was computed by subtracting the total affect score at t1 from the total affect score at t2. Correlations between others-centeredness, unmitigated communion, high other-focus and difference in affect were examined in the whole sample. Semi-partial correlations were then examined to determine whether unmitigated communion and high other-focus uniquely predicted change in affect when controlling for others-centeredness.

4.2 Results

Table 4 includes bivariate correlations relevant for hypotheses (H1) and (H2). Others-centeredness had non-significant correlations with self-differentiation and change in affect in the second behavioral simulation, while unmitigated communion and high other-focus had significant, small, negative correlations with self-differentiation and positive correlations

with change in affect in the second behavioral simulation. Self-differentiation had a large, negative correlation with change in affect in the second behavioral simulation.

Table 4

Correlations with Self-differentiation and Change in Affect

	Others-Centeredness	Unmitigated Communion	High Other-Focus	Self-differentiation
Unmitigated Communion	.53***			
High Other-Focus	.59***	.74***		
Self-differentiation	.01	-.19**	-.19**	
Change in Affect	-.06	.17**	.17**	-.50***

Note: *p < .05; **p < .005; ***p < .001

Semi-partial correlations, given in Table 5, indicated that others-centeredness, unmitigated communion, and high other-focus explain unique variance in these variables. Each of unmitigated communion and high other-focus had significant negative semi-partial correlations with self-differentiation when controlling for others-centeredness, while others-centeredness was positively but non-significantly related to self-differentiation when controlling for the other constructs individually and together. Similarly, each of unmitigated communion and high other-focus had significant, positive semi-partial correlations with change in affect in the second behavioral simulation when controlling for others-centeredness, while others-centeredness had significant, negative correlations with change in affect when controlling for the other two constructs individually and together.

Table 5

Semi-Partial Correlations with Self-differentiation, Change in Affect, and $2 Giving

	Others-Centeredness	Unmitigated Communion	High Other-Focus
Self-differentiation	.09	-.18**	
Self-differentiation	.12		-.19**
Self-differentiation	.12	-.06	-.08
Change in Affect	-.13*	.20**	
Change in Affect	-.17*		.21**
Change in Affect	-.16*	.06	.09
Giving $2 to Other	.20*	.02	
Giving $2 to Other	.19*		-.04
Giving $2 to Other	.16*	.06	.09

Note 1: *p < .05; **p < .005; ***p < .001
Note 2: Semi-partial correlations for self-differentiation and change in affect use the full sample, while semi-partial correlations for giving $2 to other use only participants in the five $2 bill condition (*N*=116).

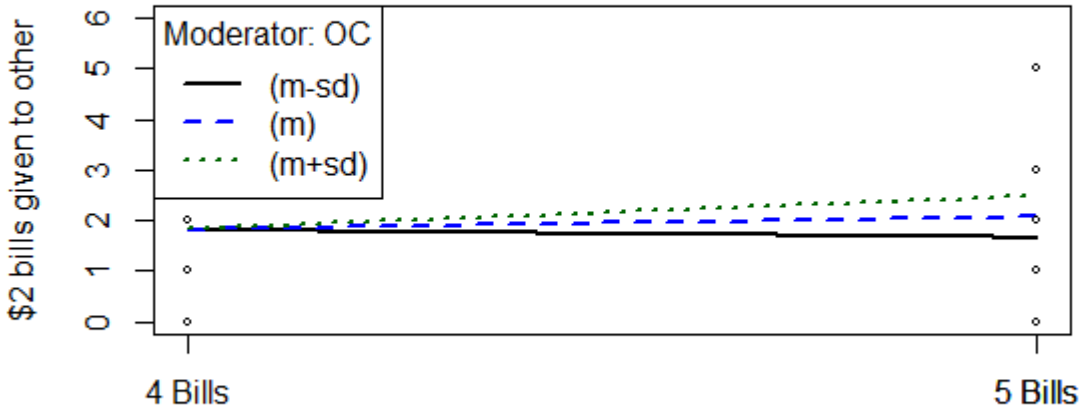
In the first behavioral simulation, 74% of participants in the comparison group divided the four $2 bills evenly between themselves and the other participant. Neither others-centeredness nor unmitigated communion nor high other-focus had a significant correlation with giving to the other participant in the four $2 bill condition.

In the five $2 bill condition, a large percentage divided the $2 bills with either three for the other and two for the self (32%) or two for the other and three for the self (42%). In this condition, others-centeredness (r=.30, p<.001), unmitigated communion (r=.20, p<.05), and high other-focus (r=.18, p<.05) were all significantly, positively related to giving more $2 bills to the other. Results for semi-partial correlations between these variables are given in Table 5. When controlling for unmitigated communion, high other-focus, and both of these constructs together, others-centeredness had significant, positive semi-partial correlations

with giving $2 bills to the other in this condition. Neither unmitigated communion nor high other-focus had significant semi-partial correlations with giving $2 bills to the other when controlling for others-centeredness.

Moderation analyses indicated that only the interaction between others-centeredness and the condition moderated the relationship between being in the four versus five $2 bill condition and giving $2 bills to the other (*B*=.03, SE=.01, p=.02). When unmitigated communion, high other-focus, and their interactions with the condition were included in the moderation alongside others-centeredness and its interaction with the condition, the interaction between others-centeredness and the condition was significant (*B*=.04, SE=.02, p=.02), while neither the other two constructs nor their interactions with the condition were significant, as shown in Figure 1.

Figure 1



Moderation of Giving and Condition by Others-Centeredness

4.3 Discussion

These results provide further support for the uniqueness of others-centeredness in relation to unmitigated communion and high other-focus, confirming hypotheses (H1), (H2), and (H5).

The correlations and semi-partial correlations between unmitigated communion and high other-focus and self-differentiation, when compared with the correlations and semi-partial correlations between others-centeredness and self-differentiation, suggest that the former two constructs are each more strongly related to a lack of self-differentiation than others-centeredness is (H1). The results from the analysis of behavioral similuation two also suggest this relationship, as unmitigated communion and high other-focus bore stronger relationships to change in affect than others-centeredness did in this simulation (H2), and the strong negative correlation between self-differentiation and change in affect suggests that this behavioral simulation was a valid, simple, behavioral measure of emotional reactivity.

The results for behavioral simulation one also confirmed the uniqueness of others-centeredness. When it comes to the specific behavior of dividing five unearned $2 bills between oneself and someone else, others-centeredness uniquely predicts that participants will divide these in an other-favoring way, beyond what is predicted by unmitigated communion and high other-focus.

Together, these results provide further support for thinking that while others-centeredness overlaps with these other tendencies to prioritize others' interests, it also comes apart from them in ways that suggest it is uniquely positive in comparison with them. It is a better candidate for a virtuous tendency to put others first.

5. General Discussion

Others-centeredness is a character trait identified in recent philosophical research which involves a distinctive prosocial tendency to put others' interests ahead of one's own as a result of judging that each person's outcomes are equally valuable while also valuing interpersonal unions. The studies reported above developed a new self-report scale for measuring others-centeredness and used this scale to investigate the potential empirical

uniqueness of others-centeredness in comparison to similar constructs, especially unmitigated communion and high other-focus, which like others-centeredness involve tendencies to prioritize others' interests. It was hypothesized that others-centeredness would be uniquely positive in comparison to unmitigated communion and high other-focus because of the unique psychological features that lead the others-centered person to prioritize others' interests. As such, others-centeredness would be a better candidate for a virtuous tendency to put others first.

The results of these studies provided strong support for the reliability and validity of the others-centeredness scale, as well as support for a good fit for its four-factor structure. They also provided a pattern of results that confirm that others-centeredness is uniquely positive in comparison to unmitigated communion and high other-focus, as articulated in five focal hypotheses. Specifically, others-centeredness was found to be related to generally prosocial tendencies such as agreeableness and dispositional empathic concern, which may serve as causal antecedents of it (H3). Others-centeredness was also strongly related to the virtues of kindness, forgiveness, and fairness, and remained moderately related to these when controlling for unmitigated communion and high other-focus (H4). In comparison to unmitigated communion and high other-focus, others-centeredness was uniquely predictive of satisfaction with life, presence of meaning in life, and coping ability (H4), while the latter were uniquely predictive of neuroticism, stress, and lack of self-differentiation (H1). In terms of specific behaviors, unmitigated communion and high other-focus were each uniquely predictive of experiencing positive change in affect after first imagining a close other in a neutral state and then imagining them in a positive state (H2), a behavior likely indicative of emotional reactivity. Others-centeredness was uniquely predictive of giving more $2 bills to another person when given the task of dividing five $2 bills, predicting this behavior beyond unmitigated communion and high other-focus (H5).

The findings of this study advance not only scientific understanding of others-centeredness, but scientific understanding of unmitigated communion and high other-focus. First, research on unmitigated communion has focused almost exclusively on retrospective correlational studies in which participants are asked to recall behavior from past weeks or months (Helgeson et al., 2015). Study 3 highlighted how unmitigated communion is related to behaviors exhibited by participants on the spot—specifically, the behavior of exhibiting greater change in positive affect in response to first imagining a close other in a neutral state and then in a positive state. Second, to our knowledge, no prior study has examined the relationship between unmitigated communion and self-differentiation. Study 3 showed that these are negatively correlated. Finally, little research has been conducted on high other-focus, including its relationships to unmitigated communion and self-differentiation. Studies 2 and 3 showed that it is positively related to unmitigated communion and negatively related to self-differentiation. More generally, it behaves very similarly to unmitigated communion, and appears to have vulnerabilities associated with the latter.

Study 3 also makes two methodological contributions. First, it shows that using an uneven split in a dictator game in which it is not possible to divide resources evenly may provide a scenario in which personality traits can make more of a difference to behavior than they do when an even distribution of resources is possible. Second, this study's test of change in affect appears to provide a simple and effective behavioral test of emotional reactivity, given the strong relationship observed between change in affect and lack of self-differentiation.

The studies reported here have their limitations. First, like many other studies, they rely primarily on self-perceptions which are subject to bias. Second, the research reported here is cross-sectional and whether the findings hold up within participants over time has yet to be determined. Third, though the hypotheses were largely supported, many of the findings

were not very robust. Fourth, even when some of the findings were more robust, they sometimes reflected subtle differences between the main constructs being considered. After all, these constructs do correlate moderately to strongly and overlap with each other both conceptually and empirically in many ways, despite the differences between them observed in these studies. However, with regard to the third and fourth limitations, small and subtle differences should not be considered insignificant when 1) investigating complex virtuous dispositions and behavior, and 2) there are competing constructs related to the topic at hand.

There are many potential future directions research could take. For example, there are other prosocial constructs to which others-centeredness might be fruitfully compared besides those examined in these studies: does others-centeredness explain unique variance beyond altruism, communion (Spence, Helmreich & Holahan, 1979), or prosociality (Caprara et al., 2005)? Given the research on how self-sacrifice is important for healthy close personal relationships (Van Lange et al., 1997), might others-centeredness make unique contributions to relationship satisfaction or health? How do the differences between others-centeredness and unmitigated communion as well as high other-focus found here apply to specific populations such as a clinical population of depressed people or a highly prosocial population of, for example, volunteers? To what extent is others-centeredness uniquely related to other virtues such as humility (as suggested by Wright et al., 2018), generosity, and gratitude? How might others-centeredness be related to civic engagement? Given that the concept of others-centeredness is inspired in part by theological ideas derived from Christian thought, might others-centeredness relate in interesting ways to variables pertaining to religion or spirituality? Future research should attend to such questions.

References

Aknin, L. B., Dunn, E. W., Sandstrom, G. M., & Norton, M. I. (2013b) Does social connection turn good deeds into good feelings? On the value of putting the 'social' in prosocial spending. *International Journal of Happiness and Development,* 1 (2), 155-171. https://doi.org/10.1504/IJHD.2013.055643

Austin, M. (2018). *Humility and human flourishing*. New York: Oxford University Press.

Balliet, D., Parks, C., & Joireman, J. (2009). Social value orientation and cooperation in social dilemmas: A meta-analysis. *Group Processes & Intergroup Relations,* 12, 533-547. https://doi.org/10.1177/1368430209105040

Banker, C. C., & Leary, M. R. (2020). Hypo-egoic nonentitlement as a feature of humility. *Personality and Social Psychology Bulletin,* 46(5), 738-753. https://doi.org/10.1177/0146167219875144

Batson, C. D. (1991). *The altruism question: Toward a social-psychological answer*. Hillsdale, NJ: Lawrence Erlbaum.

Battaly, H. (2015). *Virtue*. Malden, MA: Polity Press.

Bogaert, S., Boone, C., & Declerck, C. (2008). Social value orientation and cooperation in social dilemmas: A review and conceptual model. *British Journal of Social Psychology,* 47, 453-48. https://doi.org/10.1348/014466607X244970

Bowen, M. (1978). *Family therapy in clinical practice.* New York: Jason Aronson.

Brown, K. W., & Leary, M. R. (Eds.) (2016). *Oxford handbook of hypo-egoic phenomena*. New York, NY: Oxford University Press

Byerly, T. R. (2019). *Putting others first: The Christian ideal of others-centeredness*. New York: Routledge Press.

Caprara, G. V., Steca, P., Zelli, A., & Capanna, C. (2005). A new scale for measuring adults'

prosocialness. *European Journal of Psychological Assessment*, *21*(2), 77-89. Doi: https://doi.org/10.1027/1015-5759.21.2.77

Chung, H., & Gale, J. (2006). Comparing self-differentiation and psychological well-being between Korean and European American students. *Contemporary Family Therapy, 28*(3), 367–381. doi.10.1007/s10591-006-9013-z

Cohen, J., Cohen, P., West, S., & Aiken, L. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences*, 3rd edition. London: LEA Publishers.

Danoff-Burg, S., Revenson, T. A., Trudeau, K. J., & Paget, S. A. (2004). Unmitigated communion, social constraints, and psychological distress among women with rheumatoid arthritis. *Journal of Personality, 72*(1)*,* 29-46. http://dx.doi.10.1111/j.0022-3506.2004.00255.x

Davis, D. E., Hook, J. N., McAnnally-Linz, R., Choe, E., & Placeres, V. (2017). Humility, religion, and spirituality: A review of the literature. *Psychology of Religion and Spirituality,* 9, 242-253. https://doi.org/10.1037/rel0000111

Davis, M. (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology 10,* 85.

Davis, M. (2015). Empathy and prosocial behavior. In D. Schroeder & W. Graziano (Eds.), *The Oxford handbook of prosocial behavior* (pp. 282-306). New York: Oxford University Press.

Diener, E., Emmons, R., Larsen, R., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessmen,t 49*(1), 71-75. https://rb.gy/x8wvls

Drake, J. R., Murdock, N. L., Marszalek, J. M., & Barber, C. (2015). Self-differentiation inventory—short form: development and preliminary validation. *Contemporary Family Therapy, 37*(2)*,* 101-112. https://doi 10.1007/s10591-015-9329-7

Dunn, E. W., Aknin, L. B., & Norton, M. I. (2008). Spending money on others promotes

happiness. *Science,* 319 (5870), 1687-1688. https://doi.org/10.1126/science.1150952

Engel, C. (2011). Dictator games: A meta study. *Experimental Economics, 14*(4), 583-610. doi 10.1007/s10683-011-9283-7

Exline, J. J., & Hill, P. C. (2012). Humility: A consistent and robust predictor of generosity. *Journal of Positive Psychology,* 7, 208-218. https://doi.org/10.1080/17439760.2012.671348

Furr, M. (2011). *Scale construction and psychometrics for social and personality psychology*. SAGE Publications.

Greenen, N. Y. R., Hohelüchter, M., Langholf, V., & Walther, E. (2014). The beneficial effects of prosocial spending on happiness: work hard, make money, and spend it on others?, *The Journal of Positive Psychology*, 9 (3), 204-208https://doi.org/10.1080/17439760.2014.891154

Fritz, H. (2000). Gender-linked personality traits predict mental health and functional status following a first coronary event. *Health Psychology, 19*(5)*,* 420-428. doi:10.1037(An7S-6133.l9 5.420

Fritz, H., & Helgeson, V. (1998). Distinctions of unmitigated communion from communion: Self-neglect and overinvolvement with others. *Journal of Personality and Social Psychology, 75*(1), 121-140. http://doi.org/10.1037/0022-3514.75.1.121

Habashi, M. M., Graziano, W. G., & Hoover, A. E. (2016). Searching for the prosocial personality: A big five approach to linking personality and prosocial behavior. *Personality and Social Psychology Bulletin*, *42*(9)*,* 1177-92. doi: 10.1177/0146167216652859

Helgeson, V. (1993). Implications of agency and communion for patient and spoe adjustment to a first coronary event. *Journal of Personality and Social Psychology, 64*(5), 807-816. doi: 10.1037/0022-3514.64.5.807

Helgeson, V. (1994). Relation of agency and communion to well-being: Evidence and postential explanations. *Psychological Bulletin, 116*(3), 412-428. doi: 10.1037/0033-2909.116.3.412

Helgeson, V. (2003). Unmitigated communion and adjustment to breast cancer: Associations and explanations. *Journal of Applied Social Psychology, 33,* 1643-1661. https://doi-org/10.1111/j.1559-1816.2003.tb01967.x

Helgeson, V., & Fritz, H. (1998). A theory of unmitigated communion. *Personality and Social Psychology Review, 2*(3), 173-183. doi: 10.1207/s15327957pspr0203_2

Helgeson, V., & Fritz, H. (1999). Unmitigated agency and unmitigated communion: Distinctions from agency and communion. *Journal of Research in Personality 33*(2), 131-158. doi: 10.1006/jrpe.1999.2241

Helgeson, V., & Palladino, D. (2012). Agentic and communal traits and health: Adolescents with and without diabetes. *Personality and Social Psychology Bulletin, 38*(4), 415-428. doi: 10.1177/0146167211427149

Helgeson, V., Swanson, J., Ra, O. Randall, H., & Zhao, Y. (2015). Links between unmitigated communion, interpersonal behaviors and well-being: A daily diary approach. *Journal of Research in Personality, 57*(1), 53-60. doi: 10.1016/j.jrp.2014.12.007

Jack, D. C., & Dill, D. (1992). The Silencing of the Self Scale: Schemas of intimacy association with depression in women. *Psychology of Women Quarterly, 16*(1), 97-106. http://dx.doi.org/10.1111/j.1471-6402.1992.tb00242.x

Knauth, D., Skowron, E., & Escobar, M. (2006). Effect of self-differentiation on adolescent risk behavior. *Nursing Research, 55*(5), 336–345. doi:10.1097/00006199-200609000-00006

Leary, M. R. & Hoyle, R. H. (Eds.). (2009). *Handbook of individual differences in social*

behavior. New York, NY: Guilford Press.

Messick, D., & McClintock, C. (1968). Motivational bases of choice in experimental games. *Journal of Experimental Social Psychology,* 4, 1-25. https://doi.org/10.1016/0022-1031(68)90046-2

Murphy, R. O., & Acckermann, K. A. (2014). Social value orientation: Theoretical and measurement issues in the study of social preferences. *Personality and Social Psychology Review,* 18(1), 13-41. DOI: 10.1177/1088868313501745

Murphy, R. O., Ackermann, K. A., & Handgraaf, M. J. J. (2011). Measuring social value orientation. *Judgment and Decision Making,* 6, 771-781. http://dx.doi.org/10.2139/ssrn.1804189

Oliner, S., & Oliner, P. (1988). *The altruistic personality: Rescuers of Jews in Nazi Europe*. New York: The Free Press.

Peleg, O. (2005). The relation between differentiation and social anxiety: What can be learned from students and their parents? *American Journal of Family Therapy, 33*(2), 167–183. doi:10.1080/01926180590921403.

Peleg, O., Halaby, E., & Whaby, E. (2006). The relationship of maternal separation anxiety and self-differentiation to children's separation anxiety and adjustment to kindergarten: A study in druze families. *Journal of Anxiety Disorders, 20*(8), 973–995. doi:10.1016/j.janxdis.2006.01.008.

Peleg-Popko, O. (2002). Bowen theory: A study of self-differentiation, social anxiety, and physiological symptoms. *Contemporary Family Therapy: An International Journal, 24*(2), 355. doi:10.1023/A:1015355509866.

Peterson, C., & Seligman, M. (2004). *Character strengths and virtues: A handbook and classification*. New York: Oxford University Press.

Piro, M. Zeldow, P. B., Knight, S. J., Mytko, J. J., & Gradishar, W. J. (2001). The

relationship between agentic and communal personality traits and psychosocial adjustment to breast cancer. *Journal of Clinical Psychology in Medical Settings, 8*(4), 263-271. doi: 10.1023/A:1011916813171

Rammstedt, B., & John, O. P. (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German. *Journal of Research in Personality, 41*(1), 203-212. https://doi.org/10.1016/j.jrp.2006.02.001

Skowron, E. A., & Friedlander, M. L. (1998). The Self-differentiation Inventory: Development and initial validation. *Journal of Counseling Psychology, 45*(3), 235-246. doi:10.1037/0022-0167.45.3.235

Spence, J. T., Helmreich, R. L, & Holahan, C. K. (1979). Negative and positive components of psychological masculinity and femininity and their relationship to self-reports of neurotic and acting out behaviors. *Journal of Personality and Social Psychology*, 37, 1673-1682. Doi: https://doi.org/10.1037/0022-3514.37.10.1673

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*(1), 80-93. doi:10.1037/0022-0167.53.1.80

Tabachnick, B.G. & Fidell, L.S. (2019). *Using multivariate statistics* (7th ed.). London: Pearson.

Titova, L., & Sheldon, K. M. (forthcoming). Happiness comes from trying to make others feel good, rather than oneself. *The Journal of Positive Psychology*. https://doi.org/10.1080/17439760.2021.1897867

Van Lange, P., Drigotas, S., Rusbult, C., Arriaga, X., & Witcher, B. (1997). Willingness to sacrifice in close relationships. *Journal of Personality and Social Psychology* 72, 6: 1373-1395. Doi: https://doi.org/10.1037/0022-3514.72.6.1373

Watson, D., Clark, L. A., & Telegen, A. (1988). Development and validation of brief

measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6) 1063-1070 doi:10.1037/0022-3514.54.6.1063

Wayment, H. A., Bauer, J. J., & Sylaska, K. (2015). The quiet ego scale: Measuring the compassionate self-identity. *Journal of Happiness Studies,* 16, 999-1033. DOI 10.1007/s10902-014-9556-z

Wright, J. C., Nadelhoffer, T., Thomson Ross, L., & Sinnott-Armstrong, W. (2018). Be it ever so humble: Proposing a dual-dimension account and measurement of humility. *Self and Identity, 17*(1), 92-125. https://doi.org/10.1080/15298868.2017.1327454

Appendix

The Others-Centeredness Scale

Select how much you AGREE or DISAGREE with the following statements. (1 = Strongly disagree; 2 = Disagree; 3 = Somewhat disagree; 4 = Neither agree nor disagree; 5 = Somewhat agree; 6 = Agree; 7 = Strongly agree.)

1. It is a good thing when one person understands another person's needs and desires.
2. It is good for people to be attentive toward each other.
3. It is valuable when people cooperate with each other.
4. It's no better in the grand scheme of things for one person to have an excellent life than for another person to have an excellent life.
5. The effects of our acts on ourselves are no more and no less important than the effects of our acts on others.
6. My well-being matters no more and no less than anyone else's.

Select how much LIKE YOU or UNLIKE YOU each of the descriptions is. (1 = "Very much unlike me"; 2 = "Mostly unlike me"; 3 = "Somewhat unlike me"; 4 = "No more like me than unlike me"; 5 = "Somewhat like me"; 6 = "Mostly like me"; 7 = "Very much like me.)

7. It makes me feel good when people cooperate with each other.
8. I encourage those around me to be helpful to each other.
9. I try to get people to work together well.
10. I prefer to secure a benefit for someone else than to secure it for myself.

11. I am more strongly motivated to do something if it will ease someone else's suffering than if it will ease my own suffering.

12. I would rather promote an interest for someone else than promote this same interest for myself.

Judging Interpersonal Union Valuable = sum of 1-3; Judging Each Person's Outcomes Equally = sum of 4-6; Valuing Interpersonal Union = sum of 7-9; Prioritizing Others' Interests = sum of 10-12.