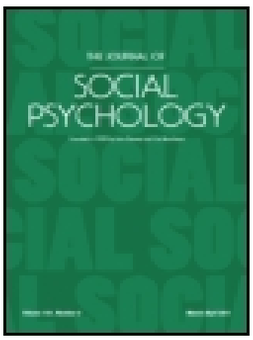

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Empathy and universal values explicated by the empathy-altruism hypothesis

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ABSTRACT

Research reports that empathy is on the decline in present-day society, together with an increasing trend in self-enhancing values. Based on the empathy-altruism hypothesis, we investigated whether these constructs are interlinked by analyzing the relationships between emotional and cognitive empathy and 10 universal values. In the first study, using a middle-aged U.S. sample, the results showed that empathy was strongly and positively related to altruistic values and negatively to self-enhancing values in a pattern that aligned with the empathy-altruism hypothesis. In a second confirmation study, these findings were replicated and extended, while also controlling for the Big Five personality traits, to discount that empathy is only captured by basic personality. Only emotional empathy, not cognitive empathy, accounted for up to 18% additional variance in altruistic values, which further confirmed the emphasis on feelings, as postulated by the empathy-altruism hypothesis.

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Empathy; empathy-altruism hypothesis; personality traits; values

Understanding the relationship between empathy (i.e., other-oriented feelings elicited by the perceived welfare for others; see Batson et al., 1988) and values (i.e., cognitive beliefs in emotionally desirable goals; see Grankvist & Kajonius, 2015) is an important undertaking, since empathy is a source for moral development and decision-making, both on an individual and a societal level (Lönnqvist, Walkowitz, Verkasalo, & Wichardt, 2011; Silfver, Helkama, Lönnqvist, & Verkasalo, 2008). Self-enhancing values are on the rise in contemporary society, paralleled with a corresponding decline in empathy. This trend is seen both in Generation X (i.e., born before 1981) and in Millennials (i.e., born after 1981), through longitudinal age- and cohort studies (Konrath, O'Brien, & Hsing, 2011; Twenge, Campbell, & Freeman, 2012). It is noteworthy that so few studies have attempted to document a universal value system (e.g., Schwartz, 1992) associated with empathic persons, considering the importance of values in relationships in society and that values, at least to a degree, can be learned (Knafo, Zahn-Waxler, Van Hulle, Robinson, & Rhee, 2008). Using predictions from the empathy-altruism hypothesis (Batson, Duncan, Ackerman, Buckley, & Birch, 1981; Batson, Lishner, & Stocks, 2015), we seek to uncover how empathy relates to the universal value model (Schwartz, 1992), duly named due to its consistent structure across diverse groups and cultures (Schwartz, 2012).

The empathy-altruism hypothesis

The empathy-altruism hypothesis states that feelings, or emotions, of empathy is the driving force behind altruistic motivation (Batson et al., 2015). The central proposition is that empathy entails emotions of concern for other people, and that altruism is comprised of genuine (not egoistic) pro-social values and behaviors. The idea is that the perceived predicament of others is activated through emotional arousal

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(Dovidio, 1991), which in turn produces altruistic motivation. Large cross-temporal, meta-analyses show that emotional concern has been declining between the years 1979 and 2009, with the sharpest drops in the last decade (Konrath et al., 2011). Moreover, based on 8.7 million Americans, civic values (such as interest in social problems, taking action for environment etc.) have been declining between the years 1966 and 2009 (Twenge et al., 2012). The premise for our present study is that altruistic motivation can be captured with values, which is well supported by earlier research (Nelissen, Dijker, & De Vries, 2007). The empathy-altruism hypothesis predicts that emotional empathy accounts for values better than cognitive empathy, which is what the present study investigates.

Empathy and values

Empathy is sometimes regarded as a distinct construct, separate from personality traits (Davis, 1983). Personality traits have repeatedly demonstrated high levels of heritability (Polderman et al., 2015), while empathy has demonstrated considerably lower levels. This finding is consistent with studies showing that states of empathy can be induced to a degree (Ruffman, Slade, Devitt, & Crowe, 2006; Van der Graaff, Branje, De Wied, & Meeus, 2012) and that empathy training has been shown to be efficient (van Berkhout & Malouff, 2015), while personality traits tends to be very stable over time (Briley & Tucker-Drob, 2015). However, in criticism against this view, the emotional side of empathy is sometimes construed as a component of the broader personality trait Agreeableness (e.g., Vachon, Lynam, & Johnson, 2014; Watson, Stasik, Ro, & Clark, 2013), which is part of the well-researched and universal Big Five model (i.e., Openness to Experience, Conscientiousness, Extraversion, Agreeableness, Neuroticism; Costa & McCrae, 1992). The trait Openness to Experience is linked with an interest for ideas, such as others' beliefs and values, which relates to the cognitive side of empathy (Proctor & McCord, 2009; Toto, Man, Blatt, Simmens, & Greenberg, 2014). Two types of empathy can be distinguished: First, emotional empathy (i.e., empathic concern, EC) and second, cognitive empathy (i.e., perspective-taking, PT), both of which have been hypothesized to predict pro-social values (Declerck & Bogaert, 2008; Silfver et al., 2008).

The relationship between traits and values are well documented (Parks & Guay, 2009; Parks-Leduc, Feldman, & Bardi, 2014). Traits have been conceptualized as being more representative of "nature," and values as more representative of "nurture" (Olver & Mooradian, 2003). However, not only traits, but also values have shown high heritability (Schermer, Feather, Zhu, & Martin, 2008), and both show change as seen over the life span (McAdams & Olson, 2010). Traits are an expression of what people mostly are like, whereas values are an expression of what people like. Schwartz's theory of universal values (Schwartz, 1992) describes what people like, in terms of how people believe one ought to behave toward one another in society (Roccas, Sagiv, Schwartz, & Knafo, 2002). These values have been shown to be universal, just like the Big Five trait model, as the value structure has been maintained in more than 80 countries (Schwartz, 2012). See Figure 1 for a depiction of the circumplex model with the 10 universal values, summarized by the two domain-axes: self-enhancing/self-transcending and openness to change/conservation.

Only a handful of studies have reported on the relationships between empathy and values before (Balliet, Joireman, Daniels, & George-Falvy, 2008; Myyry & Helkama, 2001; Myyry, Juujärvi, & Pesso, 2010; Silfver et al., 2008). The results from these studies generally showed positive correlations between empathy and the self-transcending values of universalism and benevolence, and similarly, negative correlations between empathy and the self-enhancing values achievement and power. Conservation values such as tradition and security, and openness to change-values such as hedonism and stimulation, have shown small and occasionally negative correlations with empathy in previous studies. To the best of our knowledge, no studies have focused on the differences between emotional and cognitive empathy in relation to values, in light of the empathy-altruism hypothesis.

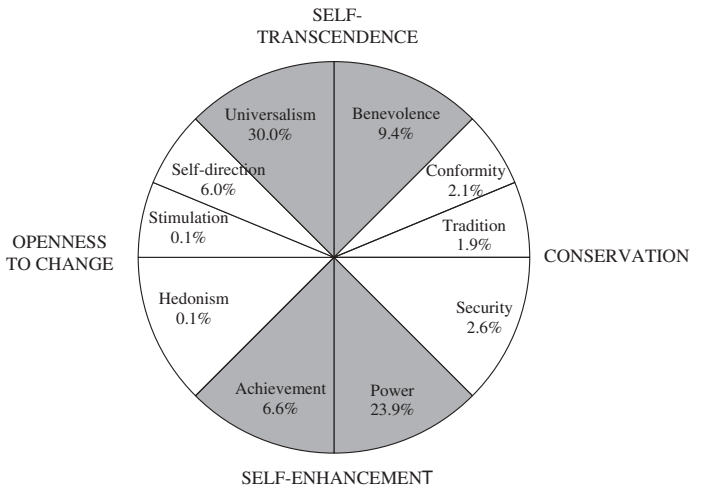

Figure 1. Empathic values. *Note*. ΔR^2 coefficients from regressions show the accounted variance from empathy on Schwartz's original 10 value types. The areas filled with gray illustrate the significant explained variance with empathy ($p < .01$). The original value model (Schwartz, 1992) consists of the following values, each followed by exemplary items in parenthesis: *power* (authority, wealth), *achievement* (success, ambition), *hedonism* (pleasure, enjoying life), *stimulation* (exciting life, varied life), *self-direction* (creativity, independence), *universalism* (social justice, equality), *benevolence* (helpfulness, loyalty), *tradition* (devoutness, humility), *conformity* (obedience, honoring parents), and *security* (national security, social order).

The present research

First, what the present research adds is that previous studies on the subject all made use of young, homogenous cohorts, such as Finnish adolescents and military recruits, or U.S. students (all groups below 24 years of age). It is a well-established fact that empathy follows certain age trajectories (O'Brien, Konrath, Grühn, & Hagen, 2013), and that traits vary in stability depending on age (Milojev & Sibley, 2014). Thus, there is a need to generalize and replicate previous results with more heterogeneous samples, including older participants. Second, and more importantly, based on the emphasis on feelings of concern in the empathy-altruism hypothesis (Batson et al., 2015), the premise that emotional empathy is the source of altruistic values, and not cognitive empathy, is tested.

In Study 1, we tested whether empathy predicted altruistic values, including all 10 original value types (Knafo, Roccas, & Sagiv, 2011), using both the emotional and cognitive aspects of empathy (Davis, 1983). The sample consisted of a middle-aged U.S.-only sample thought to represent Westernized values. In Study 2, we attempted to replicate the findings of Study I with an extended sample, including nationalities other than only Americans. In addition, we controlled for the basic Big Five traits, for the purpose of indirectly assessing whether empathy can be regarded as part of the basic personality traits (Toto et al., 2014).

Study 1

Method

Participants

An online sample made up of U.S. participants were recruited through Amazon's Mechanical Turk (MTurk), which has proven to be a reliable way to acquire data (Buhrmester, Kwang, & Gosling, 2011). Further, this method of data gathering has been used successfully in previous studies of empathy (Buckels, Trapnell, & Paulhus, 2014). The sample consisted of 193 participants (105 women, 88 men). This number was above the point of stability ($N = 161$), after which effect sizes

only shows tolerable fluctuations around the true value (Schönbrodt & Perugini, 2013). Only participants from the United States were recruited, due to representing typical Westernized individualistic values (Hofstede, 2001), and only participants with an acceptance rate of 97% or more were included, indicating thoroughness in task completion. Participants ranged in age from 19 to 76 years (M_{Age} = 38.59, SD_{Age} = 12.63). Participants were compensated with $1 for completing a task that lasted, on average, 16 minutes. Five control questions were used in order to discriminate disingenuous participants (e.g., "This questionnaire is about classical economics"). The collected data was also filtered in terms of excluding participants that answered in unnatural answering patterns (e.g., a consistent use of only two alternatives). In total, 14 participants were excluded.

Instruments

The Interpersonal Reactivity Index (IRI; Davis, 1983) was used to measure empathy, which totals 28 items. This is the same instrument that Konrath et al. (2011) used when showing the mentioned sharp decline in empathy across 72 American college campuses in the last decade. With recommendation from previous research (Cliffordson, 2002; Hepper, Hart, Meek, Cisek, & Sedikides, 2014; Silfver et al., 2008) we used 2 subscales (14 items); one measuring emotional empathy (EC) and one measuring cognitive empathy (PT). The scale ranges from 0 ("Does not describe me well") to 4 ("Describes me very well"). A sum score was computed on each subscale.

The Portrait Value Questionnaire (PVQ-RR; Schwartz et al., 2012) is a 57-item self-report questionnaire that estimates the universal values of individuals by describing how much the participant is like a described portrait. Items are scored on a 6-point Likert scale ranging from "Not like me at all" to "Very much like me". The items were rephrased to be gender neutral (e.g., "It is very important to this person to have a good time"). The scale requires centering to control for differences in individual response patterns. Items were averaged to create each value dimension. The values Face and Humility included in the scale were not used, as they are not part of the original 10 Schwartz's values that we wanted to test.

Results

Schwartz's value type means and standard deviations are reported in Table 1. Cronbach's alphas ranged from .70–.88, which corresponds well with meta-analytic results (Parks-Leduc et al., 2014). Cronbach's alphas for the empathy scales were overall very high (EC, α = .91 and PT, α = .87). In Table 1, all zero-order correlations between emotional and cognitive empathy, and the universal values, are reported. Both EC and PT showed overall strong positive associations with the self-transcending values benevolence and universalism, as well as overall negative associations with the self-enhancing values achievement and power. Figure 1 illustrates the circumplex model with the accounted variances from total empathy on each value type. The

Table 1. Correlations and regression coefficients between empathy and Schwartz's 10 value types.

Value type	EC (*r*)	EC (β)	PT (*r*)	PT (β)	*M*	*SD*
Security	−.11	−.02	−.16	−.15	4.77	.89
Tradition	.00	.11	−.11	−.18	3.42	1.51
Conformity	.14	.18	.04	−.06	4.07	1.12
Benevolence	.30**	.24*	.24**	.10	4.99	.83
Universalism	.49**	.31**	.49**	.30**	4.62	.94
Self-direction	−.24**	−.28*	−.10	.07	5.03	.72
Stimulation	−.08	−.08	−.05	.00	3.55	1.13
Hedonism	−.04	−.05	−.02	.01	4.14	1.03
Achievement	−.25**	−.28*	−.13	.04	3.96	1.05
Power	−.48**	−.41**	−.36**	−.11	2.54	1.07

Note. N = 193. EC = Empathic Concern (M = 20.98, SD = 5.71) PT = Perspective-Taking (M = 19.24, SD = 5.71). Schwartz's value type means are based on raw scores.
*p < .01. **p < .001. (two-tailed).

orthogonal values of universalism and power had the strongest relationships with empathy (30% and 24% explained variance, respectively), while the orthogonal values of benevolence and achievement had weaker relationships (9% and 7% explained variance, respectively). The first conclusion is that in accordance with the empathy-altruism hypothesis, altruistic values follow empathy in a predictable pattern (cf. Figure 1).

Furthermore, to establish which values are related to which aspect of empathy, we conducted a series of separate regressions with both EC and PT on each of the 10 universal values, also shown in Table 1. The beta values for emotional and cognitive empathy, when controlling within-taxonomy variance, show that emotional empathy consistently explained more variance in values than cognitive empathy. The second conclusion is that in accordance with the empathy-altruism hypothesis, emotional empathy explained values to a much greater degree than cognitive empathy.

Study 2

The aim of Study 2 was to replicate and extend the findings of Study 1. The first purpose was to test the robustness of the findings with an extended multi-national sample, including several different countries, known to have distinctly different values from U.S. residents (Schwartz et al., 2012). The second purpose was to control for the Big Five personality traits, to establish the accounted variance from emotional and cognitive empathy alone. This would confirm that the results of Study 1 were not only due to method artifacts, country-specific sample selection, or basic personality traits. Furthermore, considering empathy as a trait of its own and that the emotional aspect is associated with altruistic values is in line with the empathy-altruism hypothesis.

Method

Participants

A new online sample (N = 184) was collected.[1] Mechanical Turk was used again, due to being known to provide a wide range of socio-economic backgrounds (Casler, Bickel, & Hackett, 2013), which is desirable particularly in value research. The sample was comparable to the first Study and consisted of 94 men and 90 women, 18 to 75 years (M_{Age} = 34.82, SD_{Age} = 12.13), but it also included participants from other countries (i.e., Greece, Germany, Indonesia, Serbia, Jamaica, Philippines, Italy, and India). Five control questions were added, as well as response filtering, which led to the exclusion of 20 participants.

Instruments

The Big Five Inventory (John, Naumann, & Soto, 2008) is a 44-item self-report personality inventory. Participants rated how much they agreed (1 = Strongly disagree; 5 = Strongly agree) with statements such as, "I see myself as someone who is full of energy" (i.e., Extraversion). Items were averaged to create each dimension.

The Interpersonal Reactivity Index (IRI; Davis, 1983) was used to measure empathy, measuring affective empathy (EC) and cognitive empathy (PT), with 14 items.[2] The scale ranges from 0 ("Does not describe me well") to 4 ("Describes me very well"). A sum score was computed on each subscale.

The Portrait Value Questionnaire (Schwartz et al., 2001) is the original 40-item self-report questionnaire that measures universal values by allowing the participant to identify with short vignettes. Participants were asked how similar they felt (1 = Not like me at all; 6 = Very much like me). The scale requires centering to control for differences in individual response patterns. Items were averaged to create each dimension in the circumplex. Cronbach's alphas ranged from universalism (α = .87), being the highest, to tradition (α = .49), which most often is the lowest, according to meta-analytic results (Parks-Leduc et al., 2014).

Table 2. Accounted variance from the big five and empathy on 10 universal values.

Value Type	Big Five R^2 (Step 1)	Big Five + Empathy R^2 (Step 2)	ΔR^2	EC (β)	PT (β)
Security	21.5**	23.5	2.0	.22	−.10
Tradition	13.9**	14.5	0.6	−.05	−.06
Conformity	35.5**	35.7	0.2	−.08	.04
Benevolence	33.3**	51.2	17.9**	.48**	.16
Universalism	33.7**	48.6	14.9**	.52**	.02
Self-direction	38.7**	39.8	1.0	.14	−.11
Stimulation	32.9**	38.5	5.6**	−.33**	.02
Hedonism	11.4**	24.8	13.4**	−.41**	−.15
Achievement	19.5**	24.8	5.3*	−.36**	.15
Power	42.9**	47.9	5.0**	−.27*	−.07

Note. $N = 184$. EC = Empathic Concern. PT = Perspective-Taking. All R^2 values are reported in percentages (%).
*$p < .01$. **$p < .001$. (two-tailed).

Results

First, we conducted a series of hierarchical multiple regressions with the Big Five in Step 1, and the two empathy facets, EC and PT, in Step 2. Table 2 shows that the Big Five personality traits captured most of the variance in values, and that empathy consistently accounted for added variance. In particular, empathy was able to specifically explain the altruistic values (i.e., benevolence, 18% and universalism, 15%) beyond the Big Five, further confirming of the results in Study 1. Also, among the self-enhancing values, empathy accounted for added variance in hedonism (i.e., the more empathy, the less hedonistic values). More importantly, cognitive empathy failed to explain values, and emotional empathy accounted for all of the variance, giving credit to the premise that feelings of empathy are the driving force for pro-social values, in alignment with the empathy-altruism model.

General discussion

First, in accordance with the empathy-altruism hypothesis, we have shown that empathy consistently correlates positively with values relating to altruistic behaviors (cf. Figure 1). This result, using older respondents than previous research, shows that the relationship between empathy and values may not be age-dependent (Balliet et al., 2008; Myyry et al., 2010; Silfver et al., 2008). Second, empathy accounted for a substantial 30% variance in altruistic values (i.e., benevolence/universalism), which further confirms empathy as being a source for pro-social, motivational beliefs. It has moreover been shown in previous research that this relationship implies a true altruistic motivation, rather than a hidden egoistic agenda (Batson et al., 1981). Third, concerning the nature of empathy, while the Big Five personality traits overall accounted for a larger portion of variance in values, empathy added explained variance beyond the Big Five (cf. Table 2), which affirms that empathy is a construct that is not simply explained by basic personality traits. Fourth, when controlling for within-taxonomy variance to distinguish differences in empathy, only emotional, but not cognitive empathy, was a good predictor of values (cf. Tables 1 and 2). This result aligns with one of the main premises in the empathy-altruism hypothesis; namely, that it is empathy-directed *feelings*, or *emotional concern*, that drives altruism. These findings, taken together, bring further nuance to the empathy-altruism theory by showing predictive patterns on diverse universal values, and by showing that emotional empathy carries more impact than cognitive empathy, not only in experimental conditions, but also in low arousal conditions such as online self-reporting questionnaires.

Limitations

One limitation of the present study is that direct behaviors were not studied, only self-reports. Having high levels of emotional empathy may not increase behaviors directly, but instead may indirectly stimulate behaviors through motivations and values. Furthermore, potential moderators were not

considered. For instance, Lönnqvist, Leikas, Paunonen, Nissinen, and Verkasalo (2006) showed that the link between values and behaviors is moderated by one's level of conformity. Further limitations are that the studies did not control for common method variance (CMV), that is, the tendency for respondents to react to the different instruments in similar patterns (e.g. acquiescence, extreme responding, or social desirability), which might inflate relationships. However, meta-analytic reviews have shown that CMV is generally not a large problem (Moorman & Podsakoff, 1992). Also, the present study only measured trait-based empathy and interpretations could depend on whether trait-based or ability-based instruments are used (see Baldner & McGinley, 2014).

Implications and the nature of empathy

We now have an extended empirical basis for future expectations on what value types will follow increases and decreases in empathy. It can benefit practice, both in clinical and subclinical settings to know which values are interconnected with an increase in empathy, thus giving a more complete profile of empathic individuals and work-related consequences. This advantage could be fruitful with counselors in therapy situations or policy-makers for decision-making directions (cf. Twenge et al., 2012). For instance, knowing that emotional empathy has significantly more impact on values than cognitive empathy could help focus on information and education. The truism, "Knowing the perspective of others is not the same as feeling others," is of vital importance for anyone who wants to make an impact. For example, an educator only spending time teaching about the needs of others, such as in school, or a charity worker only talking about his or her product and not letting students or others experience and feel actual needs, might not carry much effect.

From a theoretical standpoint, however, as some view empathy as a trait—known to be more heritable and more stable (Polderman et al., 2015) than values—could explain why studies on inducing empathy have shown limited results (Stepien & Baernstein, 2006). However, on the contrary, some report clear learning effects with empathy (Ruffman et al., 2006; Van der Graaff et al., 2012). Considering empathy to be mostly a heritable trait, while values to be more of a learned behavior, could give credence to the argument that empathy mostly affects altruism and not the other way around. Even though cognitive empathy showed only marginal effects in our two studies, there has also been some support for the possibility of "over-riding" the stability of personality by influencing PT in order to diminish antisocial acts in both undergraduate and jail samples (Martinez, Stuewig, & Tangney, 2014). Guilt is suggested to be the social psychological process behind the link between empathy and the decrease of an undesired universal value, which might show promise in practical settings and should be revisited in future research. For now, some will argue that empathy is an ability that can be learned, while others argue that empathy is mainly a stable personality trait. We are inclined to view empathy as a disposition unlikely to change under one's own power.

In conclusion, seeing how universal values are considered an important part of cultural development, the present study is part of a line of research revealing that a decline in altruistic values might be following a decline of particularly emotional empathy in contemporary society (cf. Twenge et al., 2012), thus affirming the empathy-altruism hypothesis (Batson et al., 2015). Concerning, the elusive nature of empathy, the universal altruistic values presented in these studies bear similarities to the nature of light and energy in the physical world—latent and constantly available, but in need of recognition and harnessing to achieve its full positive power in society.

Notes

1. The aim was to gather a sample size not only large enough for the "the corridor of stability," after which the effect size only shows minimal fluctuations around the true value (Schönbrodt & Perugini, 2013), but also to reach a sufficient sample size for conducting a SEM-analysis with 18 regressions (10 data points per regression) (Tabachnick & Fidell, 2012).
2. EC correlated with PT ($r = .66$, $p < .001$).

Notes on contributors

Björn N. Persson (MSc) is an active researcher in the field of personality, with a particular interest in maladaptive traits.
Petri J. Kajonius (PhD) is a personality psychologist with wide-reaching interest in life outcomes.

References

Baldner, C., & McGinley, J. J. (2014). Correlational and exploratory factor analyses (EFA) of commonly used empathy questionnaires: New insights. *Motivation and Emotion*, *38*, 727–744. doi:10.1007/s11031-014-9417-2

Balliet, D., Joireman, J., Daniels, D., & George-Falvy, J. (2008). Empathy and the Schwartz value system: A test of an integrated hypothesis. *Individual Differences Research*, *6*, 269–279.

Batson, C. D., Duncan, B. D., Ackerman, P., Buckley, T., & Birch, K. (1981). Is empathic emotion a source of altruistic motivation? *Journal of Personality and Social Psychology*, *40*, 290–302. doi:10.1037/0022-3514.40.2.290

Batson, C. D., Dyck, J. L., Brandt, J. R., Batson, J. G., Powell, A. L., McMaster, M. R., & Griffitt, C. (1988). Five studies testing two new egoistic alternatives to the empathy-altruism hypothesis. *Journal of Personality and Social Psychology*, *55*, 52–77. doi:10.1037/0022-3514.55.1.52

Batson, C. D., Lishner, D. A., & Stocks, E. L. (2015). The empathy-altruism hypothesis. In D. A. Schroder & W. G. Graziano (Eds.), *The Oxford handbook of prosocial behavior* (pp. 259–281). New York, NY: Oxford University Press.

Briley, D. A., & Tucker-Drob, E. M. (2015). Comparing the developmental genetics of cognition and personality over the life span. *Journal of Personality*. Advance online publication. doi:10.1111/jopy.12186.

Buckels, E. E., Trapnell, P. D., & Paulhus, D. L. (2014). Trolls just want to have fun. *Personality and Individual Differences*, *67*, 97–102. doi:10.1016/j.paid.2014.01.016

Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk a new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, *6*, 3–5. doi:10.1177/1745691610393980

Casler, K., Bickel, L., & Hackett, E. (2013). Separate but equal? A comparison of participants and data gathered via Amazon's MTurk, social media, and face-to-face behavioral testing. *Computers in Human Behavior*, *29*, 2156–2160. doi:10.1016/j.chb.2013.05.009

Cliffordson, C. (2002). The hierarchical structure of empathy: Dimensional organization and relations to social functioning. *Scandinavian Journal of Psychology*, *43*, 49–59. doi:10.1111/sjop.2002.43.issue-1

Costa, P. T., & McCrae, R. R. (1992). *Revised NEO personality inventory (NEO PI-R)*. Odessa, FL: Psychological Assessment Resources.

Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, *44*, 113–126. doi:10.1037/0022-3514.44.1.113

Declerck, C. H., & Bogaert, S. (2008). Social value orientation: Related to empathy and the ability to read the mind in the eyes. *The Journal of Social Psychology*, *148*, 711–726. doi:10.3200/SOCP.148.6.711-726

Dovidio, J. F. (1991). The empathy-altruism hypothesis: Paradigm and promise. *Psychological Inquiry*, *2*, 126–128. doi:10.1207/s15327965pli0202_4

Grankvist, G., & Kajonius, P. (2015). Personality traits and values: A replication with a Swedish sample. *International Journal of Personality Psychology*, *1*, 8–14.

Hepper, E. G., Hart, C. M., Meek, R., Cisek, S., & Sedikides, C. (2014). Narcissism and empathy in young offenders and non-offenders. *European Journal of Personality*, *28*, 201–210. doi:10.1002/per.v28.2

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. 2nd. ed. Thousand Oaks, CA: Sage.

John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative big five trait taxonomy. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 114-158). New York, NY: Guilford Press.

Knafo, A., Roccas, S., & Sagiv, L. (2011). The value of values in cross-cultural research: A special issue in honor of Shalom Schwartz. *Journal of Cross-Cultural Psychology*, *42*, 178–185. doi:10.1177/0022022110396863

Knafo, A., Zahn-Waxler, C., Van Hulle, C., Robinson, J. L., & Rhee, S. H. (2008). The developmental origins of a disposition toward empathy: Genetic and environmental contributions. *Emotion*, *8*, 737–752. doi:10.1037/a0014179

Konrath, S. H., O'Brien, E. H., & Hsing, C. (2011). Changes in dispositional empathy in American college students over time: A meta-analysis. *Personality and Social Psychology Review*, *15*, 180–198. doi:10.1177/1088868310377395

Lönnqvist, J. E., Leikas, S., Paunonen, S., Nissinen, V., & Verkasalo, M. (2006). Conformism moderates the relations between values, anticipated regret, and behavior. *Personality and Social Psychology Bulletin*, *32*, 1469–1481. doi:10.1177/0146167206291672

Lönnqvist, J. E., Walkowitz, G., Verkasalo, M., & Wichardt, P. C. (2011). Situational power moderates the influence of self-transcendence vs. self-enhancement values on behavior in ultimatum bargaining. *Journal of Research in Personality*, *45*, 336–339.

Martinez, A. G., Stuewig, J., & Tangney, J. P. (2014). Can perspective-taking reduce crime? Examining a pathway through empathic-concern and guilt-proneness. *Personality and Social Psychology Bulletin*, *40*, 1659–1667. doi:10.1177/0146167214554915

McAdams, D. P., & Olson, B. D. (2010). Personality development: Continuity and change over the life course. *Annual Review of Psychology*, *61*, 517–542. doi:10.1146/annurev.psych.093008.100507
Milojev, P., & Sibley, C. G. (2014). The stability of adult personality varies across age: Evidence from a two-year longitudinal sample of adult New Zealanders. *Journal of Research in Personality*, *51*, 29–37. doi:10.1016/j.jrp.2014.04.005
Moorman, R. H., & Podsakoff, P. M. (1992). A meta-analytic review and empirical test of the potential confounding effects of social desirability response sets in organizational behaviour research. *Journal of Occupational and Organizational Psychology*, *65*, 131–149. doi:10.1111/joop.1992.65.issue-2
Myyry, L., & Helkama, K. (2001). University students' value priorities and emotional empathy. *Educational Psychology*, *21*, 25–40. doi:10.1080/01443410123128
Myyry, L., Juujärvi, S., & Pesso, K. (2010). Empathy, perspective taking and personal values as predictors of moral schemas. *Journal of Moral Education*, *39*, 213–233. doi:10.1080/03057241003754955
Nelissen, R. M. A., Dijker, A. J. M., & De Vries, N. K. (2007). Emotions and goals: Assessing relations between values and emotions. *Cognition and Emotion*, *21*, 902–911. doi:10.1080/02699930600861330
O'Brien, E., Konrath, S. H., Grühn, D., & Hagen, A. L. (2013). Empathic concern and perspective taking: Linear and quadratic effects of age across the adult life span. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *68*, 168–175. doi:10.1093/geronb/gbs055
Olver, J. M., & Mooradian, T. A. (2003). Personality traits and personal values: A conceptual and empirical integration. *Personality and Individual Differences*, *35*, 109–125. doi:10.1016/S0191-8869(02)00145-9
Parks, L., & Guay, R. P. (2009). Personality, values, and motivation. *Personality and Individual Differences*, *47*, 675–684. doi:10.1016/j.paid.2009.06.002
Parks-Leduc, L., Feldman, G., & Bardi, A. (2014). Personality traits and personal values: A meta-analysis. *Personality and Social Psychology Review*, *19*, 3–29. doi:10.1177/1088868314538548
Polderman, T. J., Benyamin, B., De Leeuw, C. A., Sullivan, P. F., Van Bochoven, A., Visscher, P. M., & Posthuma, D. (2015). Meta-analysis of the heritability of human traits based on fifty years of twin studies. *Nature Genetics*, *47*, 702–709. doi:10.1038/ng.3285
Proctor, S. L., & McCord, D. M. (2009). Correlates of the openness to experience domain. *Individual Differences Research*, *7*, 222–227.
Roccas, S., Sagiv, L., Schwartz, S. H., & Knafo, A. (2002). The Big Five personality factors and personal values. *Personality and Social Psychology Bulletin*, *28*, 789–801. doi:10.1177/0146167202289008
Ruffman, T., Slade, L., Devitt, K., & Crowe, E. (2006). What mothers say and what they do: The relation between parenting, theory of mind, language and conflict/cooperation. *British Journal of Developmental Psychology*, *24*, 105–124. doi:10.1348/026151005X82848
Schermer, J. A., Feather, N. T., Zhu, G., & Martin, N. G. (2008). Phenotypic, genetic, and environmental properties of the portrait values questionnaire. *Twin Research and Human Genetics*, *11*, 531–537. doi:10.1375/twin.11.5.531
Schönbrodt, F. D., & Perugini, M. (2013). At what sample size do correlations stabilize? *Journal of Research in Personality*, *47*, 609–612. doi:10.1016/j.jrp.2013.05.009
Schwartz, S. H. (1992). Are there universal aspects in the structure and contents of human values? *Journal of Social Issues*, *50*, 19–45. doi:10.1111/j.1540-4560.1994.tb01196.x
Schwartz, S. H. (2012). An overview of the Schwartz theory of basic values. *Online Readings in Psychology and Culture*, *2*, 1–20. doi:10.9707/2307-0919.1116
Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C., & Konty, M. (2012). Refining the theory of basic individual values. *Journal of Personality and Social Psychology*, *103*, 663–688. doi:10.1037/a0029393
Schwartz, S. H., Melech, G., Lehmann, A., Burgess, S., Harris, M., & Owens, V. (2001). Extending the cross-cultural validity of the theory of basic human values with a different method of measurement. *Journal of Cross-Cultural Psychology*, *32*, 519–542. doi:10.1177/0022022101032005001
Silfver, M., Helkama, K., Lönnqvist, J. E., & Verkasalo, M. (2008). The relation between value priorities and proneness to guilt, shame, and empathy. *Motivation and Emotion*, *32*, 69–80. doi:10.1007/s11031-008-9084-2
Stepien, K. A., & Baernstein, A. (2006). Educating for empathy. *Journal of General Internal Medicine*, *21*, 524–530. doi:10.1111/j.1525-1497.2006.00443.x
Tabachnick, B. G., & Fidell, L. S. (2012). *Using multivariate statistics* (6th ed.). New York, NY: Pearson Education.
Toto, R. L., Man, L., Blatt, B., Simmens, S. J., & Greenberg, L. (2014). Do empathy, perspective-taking, sense of power and personality differ across undergraduate education and are they inter-related? *Advances in Health Sciences Education*, *20*, 23–31. doi:10.1007/s10459-014-9502-z
Twenge, J. M., Campbell, W. K., & Freeman, E. C. (2012). Generational differences in young adults' life goals, concern for others, and civic orientation, 1966–2009. *Journal of Personality and Social Psychology*, *102*, 1045–1062. doi:10.1037/a0027408
Vachon, D. D., Lynam, D. R., & Johnson, J. A. (2014). The (non)relation between empathy and aggression: Surprising results from a meta-analysis. *Psychological Bulletin*, *140*, 751–773. doi:10.1037/a0035236

van Berkhout, E. T., & Malouff, J. M. (2015, July 20). The efficacy of empathy training: A meta-analysis of randomized controlled trials. *Journal of Counseling Psychology*, Advance online publication. doi:10.1037/cou0000093

Van der Graaff, J., Branje, S., De Wied, M., & Meeus, W. (2012). The moderating role of empathy in the association between parental support and adolescent aggressive and delinquent behavior. *Aggressive Behavior*, *38*, 368–377. doi:10.1002/ab.21435

Watson, D., Stasik, S. M., Ro, E., & Clark, L. A. (2013). Integrating normal and pathological personality: Relating the DSM-5 trait-dimensional model to general traits of personality. *Assessment*, *20*, 312–326. doi:10.1177/1073191113485810