

Fitting Motivational Content and Process:

A Systematic Investigation of Fit between Value Framing and Self-Regulation

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Abstract

Objective: Values are often phrased as ideals that people seek to approach, but they can also be conceptualized as counter-ideals that people seek to avoid. We aimed to test whether individuals endorse more strongly values that are framed in line with their predominant self-regulatory motivation, using individual difference scales in promotion/prevention (Higgins, 1997) and in behavioral approach/inhibition (Carver & White, 1994). To address this systematically, we developed approach- and avoidance-framed versions of the Portrait Value Questionnaire-RR (PVQ-RR; Schwartz et al., 2012).

Method: Participants completed approach- and avoidance-framed PVQ-RR versions in two studies measuring regulatory focus or motivational orientation (together 423 USA adults, 48% female, ages 18-69) and one study manipulating motivational orientation (39 UK high school students, 79% female, ages 16-19).

Findings: Value framing consistently interacted with both self-regulation variables. However, a fit between self-regulation and value framing resulted in greater value endorsement only for promotion-focused and approach-oriented (not prevention-focused and avoidance-oriented) participants. This may be because values are more naturally understood as ideal states that people seek to approach.

Conclusions: Our findings provide first insights into the psychological process of person–value framing fit affecting value endorsement. We discuss implications for cross-cultural value research and research on value-congruent behavior.

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Fitting Motivational Content and Process:

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Motivational theories are often studied in isolation from one another. An important motivational approach that focuses on the classification of the contents of motivational goals (e.g., benevolence, stimulation) and their inter-relations is the Schwartz theory of basic human values (Schwartz, 1992). Values convey what is important to people, energizing their goal engagement, and are the “dominating force in life” (Allport, 1961, p. 543). They are among the most important predictors of attitudes, perceptions and behavior, and transcend specific situations (Schwartz, 1992; for reviews see Maio, 2010; Roccas & Sagiv, 2010). Values thus serve as motivators.

Whereas the Schwartz (1992) value theory focuses on contents of motivation, several motivational theories focus on the self-regulatory processes underlying behavior, highlighting differences in strategic inclinations during goal pursuit. For example, several theories postulate a general distinction between individuals who are rather approach- or avoidance-oriented in pursuing their goals (for a review see Carver, Sutton, & Scheier, 2000). Furthermore, regulatory focus theory (Higgins, 1997, 1998) assumes promotion-oriented individuals to be concerned with wishes and aspiration, which they approach using eager strategies, and prevention-oriented individuals to be concerned with duties and responsibilities, which they avoid falling short of using vigilant strategies.

It is unclear yet how these content and process approaches operate together. For example, would it matter if values were framed in terms of approach or in terms of avoidance goals? There is ample evidence from research on both regulatory focus and approach/avoidance motivational orientation demonstrating that fit between individuals’ strategic self-regulatory inclination and

events, behaviors and targets increases value (Higgins, 2000, 2005). Similarly, individuals may be more inclined to endorse basic human values if their framing (as states people seek to approach or to avoid) fits their self-regulatory inclinations. Investigating this would allow for more fine-grained analyses of value endorsement and value-congruent behavior, as well as novel research avenues such as tailoring value claims to individual differences (for a similar approach using the Big Five, see Hirsch, Kang, & Bodenhausen, 2012) and investigating person-value fit effects on well-being (for environmental and interpersonal fit, see Gaunt, 2006; Sagiv & Schwartz, 2000). Moreover, if we find that value endorsement is strongly dependent on fit with how the values are framed, then previous knowledge on values may have to be adjusted as most value items in value questionnaires tend to be framed in terms of approaching (or promoting) a goal (see, e.g., Schwartz et al., 2012).

We start by describing these motivational theories as well as the concept of and research on regulatory fit. We then briefly review research considering these different approaches. For the first time, we devise two parallel measures of the Schwartz values, one in which items are framed in terms of ideals people seek to approach and one in which they are framed in terms of counter-ideals people seek to avoid. This enables us to provide a solid test of the possibility that people endorse values more strongly when there is a fit between value framing and their predominant strategic motivational inclinations. To this end, we conducted three studies, assessing or inducing individual differences in regulatory focus and motivational orientation.

Basic human values

One of the most studied value theories is the Schwartz (1992) value theory, which defines ten basic values according to their underlying motivational goals. A central assumption of this theory is that the array of values represents a circular motivational continuum. Conflicting values

are located in opposite sides of the circle (and their priorities are negatively correlated), whereas congruent values are adjacent to one another (and their priorities are positively correlated). The ten values can be further organized along two bipolar dimensions, resulting in four higher order value types: self-enhancement (power, achievement, in some instances also hedonism) versus self-transcendence (benevolence, universalism), and openness to change (stimulation, self-direction, in some instances also hedonism) versus conservation (conformity, tradition, security). This structure replicated in over 75 countries worldwide (Sagiv & Schwartz, 2000; Schwartz, 2011)¹ and also exists within persons (Borg, Bardi, & Schwartz, 2017).

Despite universal similarities in the value structure, individuals differ substantially in how important each value is to them. The higher a value is located in a person's hierarchy, the more it is likely to affect perceptions, preferences, choices and actions (Schwartz, 1992).

Nonetheless, average value hierarchies in samples from over 50 nations show striking cross-cultural similarities, with benevolence values being consistently most important and power values being consistently the least important (Schwartz & Bardi, 2001).

To date values have been predominantly conceptualized as desirable ideals people strive for, such as “desirable trans-situational goals” (Schwartz, 1994, p. 21) or “enduring beliefs that a specific mode of conduct or end-state of existence is personally or socially preferable” (Rokeach, 1973, p. 5). This has generally led to understanding them as motivating approach toward the respective goal. However, given that “the primary content aspect of a value is the type of goal or motivational concern that it expresses” (Schwartz, 1992, p. 4), values can also be conceptualized as motivating avoidance of an undesirable end-state. Indeed, one of the most frequently used instruments to assess values, the Portrait Value Questionnaire (PVQ; Schwartz, Melech,

¹ A recent refinement proposes a differentiation of the ten values into 19 lower-order but more discrete values (Schwartz et al., 2012).

Lehmann, Burgess, & Harris, 2001), implicitly acknowledges this. Our close examination of the items in the most recent PVQ version (PVQ-RR, Schwartz, personal communication; based on Schwartz et al., 2012) revealed that items pertaining to the higher-order value types of self-transcendence, openness to change, and self-enhancement are framed as approaching desired end-states (e.g., stimulation: “It is important for him always to look for different things to do”). In contrast, several items pertaining to the higher-order value type of conservation are framed as avoiding undesired end-states (e.g., conformity: “It is important to him to avoid upsetting other people”). Thus, a second layer of values is conceivable, representing undesirable end-states people seek to avoid (see Van Quaquebeke, Graf, Kerschreiter, Schuh, & van Dick, 2014). To illustrate using the above examples, a more fine-grained assessment might also consider stimulation in terms of avoidance (e.g., “It is important for him to avoid always doing the same things”) and conformity in terms of approach (e.g., “It is important for him to please other people”). This is important as “neither the existing operationalization of the circumplex model, nor Schwartz’s (1994) value theory itself allows certain values to repel individuals to the degree that people actually identify themselves by the values that they repel” (Van Quaquebeke et al. 2014, p. 214). Following Higgins (2000, 2005), framing values’ content to fit individuals’ predominant strategic motivational inclinations should increase value endorsement.

Approach and avoidance orientation and regulatory focus

The view of human self-regulation being guided by opposing forces can be traced back a long way in the motivation literature (for a review, see Elliot, 2008), with some arguing that self-regulation strategies give rise to basic structural dimensions of personality (Carver et al., 2000; Elliot & Thrash, 2010). Several theories taking a two-forces stance consider a behavioral approach system (BAS), which motivates approach towards specific end-states, is activated by

reward signals, and biased towards positive cues and approach goals, as opposed to a behavioral inhibition system (BIS), which motivates avoidance of specific end-states (i.e., inhibits movement that may lead to negative outcomes), is activated by punishment signals, and biased towards negative cues and avoidance goals (Cloninger, 1987; Derryberry & Reed, 1994; Elliot & Sheldon, 1997; Elliot & Thrash, 2002; Gable, 2006; Gray, 1990; Lewin, 1935; for a review see Carver et al., 2000). Similarly, self-regulation theory (Carver & Scheier, 1998, 1999) postulates discrepancy-reducing (regulating approach to desired end-states) and -increasing loops (regulating avoidance from undesired end-states). Individuals indeed differ in their motivational orientation towards approach (high BAS sensitivity) and avoidance (high BIS sensitivity; Carver & White, 1994).

According to regulatory focus theory, the two distinct self-regulatory systems operating within individuals are a promotion and a prevention focus (Higgins, 1997, 1998). In a promotion focus on advancement and growth, the goals individuals pursue are wishes and aspirations (ideals), which they pursue using eager strategies, and they focus on the presence/absence of positive outcomes (gains). Conversely, in a prevention focus on safety, the goals individuals pursue are duties and responsibilities (oughts), which they pursue with vigilant strategies, and they focus on the presence/absence of negative outcomes (losses). The foci vary chronically and situationally (see Sassenberg & Woltin, 2008, 2009).

Of interest in the current context, a strategic approach (avoidance) orientation “is the natural strategy for promotion (prevention) self-regulation” (Higgins, 1997, p. 1282, parenthesis added; see also Higgins 1998, 2002; cf. Carver & Scheier 1998). Specifically, people’s approach and avoidance strategies vary as a function of their regulatory focus (Higgins, Roney, Crowe, & Hymes, 1994; Shah, Higgins, & Friedman, 1998). Furthermore, Förster, Higgins and Idson

(1998) showed that promotion and prevention influence the strength and persistence with which approach and avoidance behaviors are performed. Whereas people use approach and avoidance in both foci, they are more likely to use approach in a promotion and avoidance in a prevention focus. Thus, we are not suggesting that the two conceptualizations are equivalent (for a discussion see Elliot & Thrash, 2010; Higgins, 1998; Scholer & Higgins, 2011). Indeed, under certain conditions prevention focus also entails risky approach (rather than vigilant avoidance; Scholer, Zou, Fujita, Stroessner, & Higgins, 2010). However, regulatory focus and motivational orientation are positively correlated (e.g. Elliot & Thrash, 2010; Summerville & Roese, 2008), operate functionally similarly (for creativity see Friedman & Förster, 2000; 2002), and are often treated as conceptual replications – a stance we also take. Their remarkably similar effects in fit research further illustrate this.

Regulatory fit

Although any specific goal, including trans-situational goals such as values, can be pursued with either a promotion focus or a prevention focus, some goals are more compatible with a particular self-regulatory strategy, resulting in fit. Regulatory fit occurs when individuals pursue a goal in a manner that sustains, rather than disrupts, their orientation or when their orientation and the nature of the end-state are congruent (Higgins, 2000, 2005; Cesario, Higgins, & Scholer, 2008). When there is regulatory fit, the manner of goal pursuit or the goal itself feels right and increases value and engagement (Higgins, 2000, 2005).

A few examples from the regulatory focus and motivational orientation literature help illustrate this. First, approach goals pertaining to desirable end-states are more compatible with a promotion focus, and avoidance goals pertaining to undesirable end-states are more compatible with a prevention focus (Higgins, 2002). Also, messages focusing on desirable outcomes people

seek to approach are more effective in a promotion focus and with approach motivation (BAS), and those focusing on undesirable outcomes people seek to avoid are more effective in a prevention focus and with avoidance motivation (BIS; Cesario, Grant, & Higgins, 2004; Cesario, Corker, & Jelinek, 2013; Mann, Sherman, & Updegraff, 2004; Sherman, Mann, & Updegraff, 2006). For example, Mann and colleagues (2004) found that when given a loss-framed dental health message, avoidance-oriented individuals flossed more than approach-oriented individuals and vice-versa when given a gain-framed message. Likewise, messages advocating HPV vaccinations are more effective when stressing desirable outcomes resulting from vaccination among high BAS individuals and when stressing undesirable outcomes from avoiding vaccination among high BIS individuals (Gerend & Shepherd, 2007). Moreover, regulatory fit transfers to monetary evaluations, with people assigning higher prices to objects when their choice strategy (eager approach vs. vigilant avoidance) fits their regulatory focus (Higgins, Idson, Freitas, Spiegel, & Molden, 2003). Relatedly, high BAS individuals donate more money to charities promoting positive compared with preventing negative outcomes (and vice-versa for high BAS individuals; Jeong, Shi, Baazova, Chiu, Nahai et al., 2011). In line with the above research, we expect value endorsement to be stronger under fit (predominant promotion or BAS/approach values and predominant prevention or BIS/avoidance values) than misfit.

Previous research

To our knowledge, a comprehensive investigation of approach and avoidance values has so far not been systematically endeavored. Using factor analysis, previous work showed that the structure of negative values (e.g., boredom, hopelessness) does not mirror the structure of positive values (e.g., kindness, independence; Aavik & Allik, 2006). However, the authors assessed value endorsement with a bi-polar scale, ranging from important to avoid to important

to aspire, and did not consider approach and avoidance independently.

Other research argued that some of the Schwartz values are associated with a promotion focus and others with a prevention focus. For example, Leikas, Lönnqvist, Verkasalo and Lindeman (2009) found that people with a strong chronic promotion focus tend to value achievement and to not value tradition, and people with a strong chronic prevention focus tend to value conformity and security and to not value self-direction and stimulation. Further research conceptualized regulatory focus itself as a combination of a subset of the Schwartz values. Specifically, Van Dijk and Kluger (2004) measured promotion focus as a combination of high self-direction/stimulation and low conformity/security and prevention focus as the opposite (for different combinations and theoretical propositions see Kluger, Stephan, Ganzach, & HersHKovitz, 2004; Schwartz, 2006). Nonetheless, this research also did not address the endorsement of values framed in terms of approach or avoidance.

More akin to the current research question, recent work showed that employees' trust in their organization is higher the more there is fit between employees' and organizations' approach and avoidance values (Schuh, Van Quaquebeke, Keck, Göritz, De Cremer, & Xin, 2016). Also, followers' identification and satisfaction with their leader is higher the more they perceive leader-follower fit regarding ideal and counter-ideal values (i.e., values a leader should or should not represent; Van Quaquebeke, Kerschreiter, Buxton, & Van Dick, 2010). Building on this prior research, we examine fit effects between value content framing and individuals' motivational inclinations.

The Present Research

Based on the above, we expect that a fit between people's predominant regulatory focus or motivational orientation and value framing in terms of approach versus avoidance will

increase value endorsement. Three studies tested this prediction by assessing endorsement of approach- versus avoidance-framed values. Study 1 investigated fit among participants with a predominant promotion versus prevention focus. Extending this research, Study 2 investigated fit among participants with a predominant BAS versus BIS sensitivity. Finally, Study 3 investigated fit among participants with an induced approach versus avoidance orientation. We discuss the pattern emerging from all three conceptual replications in the General Discussion.

Study 1: Approach- and Avoidance-Framed Values and Chronic Promotion and Prevention Focus

To establish our hypothesis, we developed an approach- and an avoidance-version of the Portrait Values Questionnaire-RR (PVQ-RR; cf. Schwartz et al., 2012) and assessed individual differences in regulatory focus (Higgins, 1997) in an online sample.

Method

Participants

A total of 300 participants with U.S. IP addresses and an approval rate of 99% in previous assignments were recruited on Amazon's MTurk (www.mturk.com). Past research shows that data from MTurk is reliable and reflects a more diverse sample than other Internet or student samples (e.g., Buhrmester, Kwang, & Gosling, 2011; Mason & Suri, 2012). Participants were informed that they would take part in a study on personal values, gave their informed consent and took part online for a remuneration of \$ 1.30. We included a question probing participants' attention and compliance with instructions; participants who did not correctly answer it ($n=88$) were excluded from the analyses (see Oppenheimer, Meyvis, & Davidenko, 2009), together with non-native speaking participants ($n=5$) because of the subtle differences

between the two questionnaire versions (see below). The sample thus comprised 207 participants (102 males, 105 females; $M_{\text{age}}=37.61$, $SD_{\text{age}}=11.96$; see Table 1 for further information).

Procedure and Materials

Participants completed two novel versions of the refined Portrait Values Questionnaire (PVQ-RR; cf. Schwartz et al., 2012), consisting of 57 items, each a short portrait of a person's goals, aspirations and wishes, reflecting the person's values. Participants rate to what extent each person (always of the same gender) portrayed is similar to them, using a 6-point scale (1=*not like me at all* to 6=*very much like me*). Higher values indicate stronger value endorsement.

As noted before, in the regular version of the PVQ-RR portraits pertaining to values in the higher-order categories of openness to change, self-enhancement and self-transcendence are formulated with regard to end-states people seek to approach (e.g., stimulation: "It is important to him to always look for different things to do"; achievement: "It is important to her to have ambitions in life"). Contrary, several portraits pertaining to values in the higher-order category of conservation are formulated with regard to end-states people seek to avoid (e.g., security: "It is important to him to avoid anything dangerous"; conformity: "It is important to her to never violate rules or regulations"). To develop novel PVQ versions distinguishing approach and avoidance values we first separated the 57 portraits from the PVQ-RR into those measuring approach versus avoidance values. We then excluded six portraits measuring the only recently proposed values of humility and face to reduce items and ensure compatibility with most past research. Finally, we developed new items for two PVQ-RR versions (excluding humility and face): One framing all items in terms of approach (AP-PVQ; e.g., new security: "It is important to him to be safe and secure"; new conformity: "It is important to her to always follow rules or regulations") and one framing all items in terms of avoidance (AV-PVQ; e.g., new stimulation:

“It is important to him to avoid always doing the same things”; new achievement: “It is important to her to avoid an unambitious life”). Thus, half of the items (51) stem from Schwartz et al. (2012) but now are part of different PVQ versions, while we created the other half (51).

Participants completed both PVQ versions, starting with the AP-PVQ, and their values were centered around the personal mean (see Parks-Leduc, Feldman, & Bardi, 2015) so that each of the items assessed with the AP-PVQ (AV-PVQ) was centered using participants’ mean endorsement of the AP-PVA (AV-PVA) values (for reliabilities, means and standard deviations see Table 2). As would be expected given that they measure similar content, the AV- and AP-scores for all 10 values were correlated ($.42 \leq r_s \leq .87$, all $ps < .001$).

Participants’ regulatory focus was then assessed with the Regulatory Focus Questionnaire (RFQ; Higgins et al., 2001). This 11-item instrument consists of a promotion focus subscale (6 items; $M=3.55$, $SD=.71$; $\alpha=.75$; e.g., “How often have you accomplished things that got you psyched to try even harder?”) and a prevention focus subscale (5 items; $M=3.47$, $SD=.80$; $\alpha=.83$; e.g., “Not being careful enough has gotten me into trouble at times”, reverse-scored). Items are rated on a 5-point scale (1=*never or seldom; certainly false* to 5=*very often; certainly true*). The foci were not correlated, $r(212)=.04$, $p>.52$ (Higgins, 1997).

In line with previous research on regulatory fit in various domains (e.g., Cesario et al., 2004; Cesario & Higgins, 2008; Cesario et al., 2008; Hamstra, Van Yperen, Wisse, & Sassenberg, 2013; Righetti, Finkenauer, & Rusbult, 2011) we computed a regulatory focus predominance measure (promotion – prevention)². Based on this, participants were classified as

² The usage of difference scores comes at some costs (cf. Edwards, 1994; 2001). However, from a theoretical point of view, regardless of the strength of each focus/orientation, it is the *relative* strength that determines fit. The predominance perspective thus creates the clearest theory-driven predictions as predominance determines which focus/orientation is chronically in the foreground (cf. Cesario & Higgins, 2008; Righetti et al., 2011; Webb, Coleman, Rossignac-Milon, Tomasulo, & Higgins, 2017). As noted elsewhere (e.g., Higgins, 2012; Righetti et al., 2011; Webb et al., 2017), regulatory focus and other motivational orientations are in opposition at the

predominantly promotion-focused (upper 50%; ≥ 0.13 ; $n=106$) or prevention-focused (lower 50%; $< .13$; $n=101$). Regulatory focus was assessed after the PVQs to avoid value responses being influenced by the potential activation of the foci. Finally, participants were fully debriefed.

Results

Outliers with studentized residuals with values greater than 3 or less than -3 and Cook's distance scores $> .05$ (Cohen, Cohen, West, & Aiken, 2003; Judd, McClelland, & Ryan, 2009; $n=7$) in the analyses reported below were excluded. Mauchly's sphericity assumptions were violated for value type and the value type by value frame interaction in all studies, which is why we use the Greenhouse-Geisser correction in the relevant analyses.

A 2 (Regulatory Focus: promotion vs. prevention; between participants) \times 2 (Value Framing: approach vs. avoidance; within participants) \times 10 (Value Type - Centered: self-direction, stimulation, hedonism, achievement, power, security, tradition, conformity, benevolence, universalism; within participants) mixed ANOVA³ indicated a main effect of value frame, $F(1,198)=128.86$, $p<.001$, $\eta_p^2=.39$, such that approach-framed values were endorsed more strongly ($M=-.08$, $SD=.17$) than avoidance-framed values ($M=-.15$, $SD=.14$). As usually found (see Schwartz & Bardi, 2001), there was also a main effect of value type, $F(4.79,947.37)=146.97$, $p<.001$, $\eta_p^2=.43$, indicating that the values were differently endorsed

system and strategic level. For example, at the system level promotion (prevention) has a concern for advancement and growth (safety and security). At the strategic level, promotion (prevention) thus entails a preference for eager and risky approach (cautious and vigilant avoidance) strategies (for a similar reasoning and predominance approach regarding regulatory mode, not considered in this work, see for example Higgins, Pierro, & Kruglanski, 2008; Orehek, Mauro, Kruglanski, & van der Bles, 2012; Webb et al., 2017).

³ Using a mixed repeated measures ANOVA is a conservative means to test our hypothesis regarding the regulatory focus \times value framing interaction as it controls for the covariation of all 20 dependent variables (i.e., the 10 values in both frames). Furthermore, the ANOVA analyses strategy comes with the advantages of all further results being directly comparable to previous research and to our Study 3. However, the use of a median split has the disadvantage of reducing variance. We therefore also regressed participants' mean approach- and avoidance-value endorsement on their continuous regulatory focus predominance score. This yielded the same conclusions (see main text and Footnote 4) as for our interaction of interest, with the predominance measure more strongly predicting endorsement of approach (AP) than avoidance (AV) values: $B_{AP}=.03$, $SE_{AP}=.01$, $t_{AP}=2.47$, $p_{AP}=.014$, and $B_{AV}=.01$, $SE_{AV}=.01$, $t_{AV}=1.02$, $p_{AV}=.311$.

(benevolence being endorsed most strongly and power being endorsed the least). There was also a main effect of regulatory focus, $F(1,198)=5.96, p=.016, \eta_p^2=.03$: regardless of framing, values were more strongly endorsed by predominantly promotion ($M=-.09, SD=.15$) compared with predominantly prevention focused individuals ($M=-.14, SD=.14$).

These main effects were qualified by several interactions. First, there was a value frame by value type interaction, $F(7.35,1454.35)=97.28, p<.001, \eta_p^2=.33$. Self-direction, stimulation, hedonism, security, tradition, and universalism were endorsed more strongly when framed in terms of approach rather than avoidance; contrary, achievement, power, conformity and benevolence were endorsed more strongly when framed in terms of avoidance rather than approach (see Table 2 and means and standard deviations in parentheses).

Second, a value type by regulatory focus interaction emerged, $F(9,1782)=4.68, p<.001, \eta_p^2=.02$. Stimulation, $F(1,198)=10.98, p=.001, \eta_p^2=.05$ ($M_{\text{prom}}=-.68, SD_{\text{prom}}=.95; M_{\text{prev}}=-1.11, SD_{\text{prev}}=.86$), and hedonism $F(1,198)=6.35, p=.013, \eta_p^2=.03$ ($M_{\text{prom}}=-.08, SD_{\text{prom}}=.89; M_{\text{prev}}=-.37, SD_{\text{prev}}=.76$) were more strongly endorsed by predominantly promotion- compared with prevention-focused participants; this reversed for security, $F(1,198)=11.25, p=.001, \eta_p^2=.05$ ($M_{\text{prom}}=.28, SD_{\text{prom}}=.63; M_{\text{prev}}=.57, SD_{\text{prev}}=.61$), and conformity, $F(1,198)=15.45, p<.001, \eta_p^2=.07$ ($M_{\text{prom}}=-.39, SD_{\text{prom}}=.79; M_{\text{prev}}=.00, SD_{\text{prev}}=.60$), largely in line with previous research (see Leikas et al., 2009).

Most importantly, the predicted regulatory focus by value frame interaction was also significant, $F(1,198)=4.43, p=.037, \eta_p^2=.02$. Approach-framed values were endorsed more strongly than avoidance-framed values under both foci, but more strongly by predominantly promotion-focused ($M_{\text{AP}}=-.05, SD_{\text{AP}}=.17$ vs. $M_{\text{AV}}=-.14, SD_{\text{AV}}=.14$), $F(1,198)=93.38, p<.001, \eta_p^2=.32$, compared to predominantly prevention-focused participants ($M_{\text{AP}}=-.11, SD_{\text{AP}}=.16$ vs.

$M_{AV}=-.17$, $SD_{AV}=.13$), $F(1,198)=41.92$, $p<.001$, $\eta_p^2=.18^4$. These results support our hypothesis that a fit between regulatory focus and value framing increases value endorsement, albeit only for promotion focus and approach values.

Finally, the value framing by value type by regulatory focus interaction was not significant, $F(9, 1782)=1.32$, $p=.222$, $\eta_p^2=.01$.

Study 2: Approach- and Avoidance-Framed Values and Chronic Approach versus Avoidance Motivational Orientation

In order to generalize our results beyond regulatory focus to further individual differences in terms of a chronic inclination towards approach versus avoidance, the current study assesses inter-individual differences in terms of people's behavioral inhibition or avoidance system (BIS) and behavioral approach system (BAS; Carver & White, 1994) while measuring the basic values with the two PVQ versions.

Method

Participants

A total of 301 participants were recruited on MTurk with the same criteria, information, and remuneration as in Study 1. Also as in Study 1, we excluded participants who failed to correctly answer a question probing their attention and compliance ($n=90$) or who were non-native speakers ($n=3$). We furthermore excluded one participant who responded with "5" to all 102 value items. The sample thus comprised 207 participants (113 males, 94 females;

$M_{age}=35.71$, $SD_{age}=12.00$; see Table 1 for further information).

Procedure and Materials

⁴ Alternatively, when values were approach-framed, they were endorsed more strongly by predominantly promotion- than by predominantly prevention-focused participants, $F(1,198)=7.51$, $p=.007$, $\eta_p^2=.04$; when values were avoidance-framed, only a marginal difference for differently focused participants emerged, $F(1,198)=3.34$, $p=.069$, $\eta_p^2=.02$.

After providing demographic information, participants completed the AP-PVQ and the AV-PVQ (see Study 1); their value ratings were centered around the personal mean as in Study 1 (see Table 3 for reliabilities, means and standard deviations). The AP- and AV-scores for all 10 values were again highly correlated ($.40 \leq r_s \leq .83$, all $ps < .001$).

Subsequently, participants were presented the BIS/BAS Scales (Carver & White, 1994), measuring people's chronic behavioral inhibition or avoidance system (BIS) and behavioral approach system (BAS). Respondents indicate to what extent items are true of them on a 4-point scale (1=*very true for me* to 4=*very false of me*). We reversed the coding of these items, so that higher scores indicate stronger chronic BIS and BAS sensitivity.

The BAS scale ($M=2.85$, $SD=0.54$; $\alpha=.89$) comprises 13 items assessing the tendency to experience positive affect or behavioral approach when there are cues of incentives (e.g., "When I get something I want, I feel excited and energized"). The BIS scale ($M=2.80$, $SD=0.76$; $\alpha=.90$) comprises 7 items assessing the tendency to experience negative affect or behavioral inhibition when there are cues of threat (e.g., "Criticism or scolding hurts me quite a bit"). These orientations are considered independent (Carver & White, 1994), and indeed BIS and BAS scores were not correlated, $r(207)=-.06$, $p>.37$.

As in Study 1, we computed a motivational orientation predominance measure (BAS – BIS; Diego, Field, & Hernandez-Reif, 2001; Field et al., 2003; Sutton & Davidson, 1997) and participants were classified as predominantly approach- (upper 50%; ≥ 0.00 ; $n=104$) or avoidance-focused (lower 50%; < 0.00 ; $n=103$). These scales were again assessed after the PVQs to prevent BIS/BAS activation from influencing value responses. Finally, participants were fully debriefed.

Results

As in Study 1, outliers (with studentized residuals with values greater than 3.35 or less than -3.35 and Cook's distance scores $> .06$; Cohen et al., 2003; Judd et al., 2009; $n=4$) in the analyses reported below were excluded.

A 2 (Motivational Orientation: approach/BAS vs. avoidance/BIS; between participants) \times 2 (Value Framing: approach vs. avoidance; within participants) \times 10 (Value Type - Centered: self-direction, stimulation, hedonism, achievement, power, security, tradition, conformity, benevolence, universalism; within participants) mixed ANOVA⁵ indicated, as in Study 1, a main effect of value frame, $F(1,201)=124.74$, $p<.001$, $\eta_p^2=.38$, such that approach-framed values were endorsed more strongly ($M=-.07$, $SD=.15$) than avoidance-framed values ($M=-.14$, $SD=.12$). There was again a main effect of value type, $F(5.02,1008.42)=150.34$, $p<.001$, $\eta_p^2=.43$ (see Schwartz & Bardi, 2001). Also replicating Study 1, a main effect of motivational orientation emerged, $F(1,201)=10.92$, $p=.001$, $\eta_p^2=.05$: values were more strongly endorsed by predominantly approach- ($M=-.08$, $SD=.12$) compared with predominantly avoidance-orientated individuals ($M=-.14$, $SD=.13$).

These main effects were again qualified by several interactions. First, there was a significant value frame by value type interaction, $F(7.43,1492.38)=85.24$, $p<.001$, $\eta_p^2=.30$. Self-direction, stimulation, hedonism, security, tradition, and universalism were more strongly endorsed when framed in terms of approach; achievement, power, conformity, and benevolence were more strongly endorsed when framed in terms of avoidance (see Table 3 and means and standard deviations in parentheses).

⁵ As in Study 1, we also regressed participants' mean approach- and avoidance-value endorsement on their continuous motivational orientation predominance score. This again yielded the same conclusions as for our interaction of interest (see main text and Footnote 6), with the predominance measure more strongly predicting endorsement of approach (AP) than avoidance (AV) values: $B_{AP}=.04$, $SE_{AP}=.01$, $t_{AP}=3.69$, $p_{AP}<.001$, and $B_{AV}=.03$, $SE_{AV}=.01$, $t_{AV}=3.29$, $p_{AV}=.001$.

Second, a significant value type by motivational orientation interaction emerged, $F(9,1809)=5.86, p<.001, \eta_p^2=.03$. Self-direction, $F(1,201)=4.51, p=.035, \eta_p^2=.02$ ($M_{BAS}=.62, SD_{BAS}=.64; M_{BIS}=.43, SD_{BIS}=.61$), stimulation, $F(1,201)=18.06, p<.001, \eta_p^2=.08$ ($M_{BAS}=-.55, SD_{BAS}=.90; M_{BIS}=-1.08, SD_{BIS}=.87$), and hedonism, $F(1,201)=12.95, p<.001, \eta_p^2=.06$ ($M_{BAS}=.11, SD_{BAS}=.67; M_{BIS}=-.25, SD_{BIS}=.78$) were more strongly endorsed by predominantly approach- (BAS) than predominantly avoidance-oriented (BIS) individuals. This reversed for security, $F(1,201)=7.03, p=.009, \eta_p^2=.03$ ($M_{BAS}=.26, SD_{BAS}=.61; M_{BIS}=.48, SD_{BIS}=.57$) and conformity, $F(1,201)=14.93, p<.001, \eta_p^2=.07$ ($M_{BAS}=-.36, SD_{BAS}=.62; M_{BIS}=-.02, SD_{BIS}=.63$), largely in line with Study 1 and research on regulatory focus (Leikas et al., 2009).

Most importantly in the context of the current study, the predicted motivational orientation by value frame interaction emerged, $F(1,201)=4.43, p=.036, \eta_p^2=.02$. Structurally paralleling Study 1, approach-framed values were endorsed more strongly than avoidance-framed values under both predominant orientations, but stronger so under approach orientation ($M_{AP}=-.04, SD_{AP}=.15$ vs. $M_{AV}=-.12, SD_{AV}=.12$), $F(1,201)=89.43, p<.001, \eta_p^2=.31$, than under avoidance orientation ($M_{AP}=-.11, SD_{AP}=.15$ vs. $M_{AV}=-.16, SD_{AV}=.12$), $F(1,201)=40.47, p<.001, \eta_p^2=.17^6$. Overall, these results again partially support our hypothesis that a fit between motivational orientation and value framing increases value endorsement, albeit only for approach orientation and approach values.

Finally, the value framing by value type by motivational orientation interaction was significant, $F(9,1809)=2.81, p=.003, \eta_p^2=.01$, indicating that the above effects were stronger or

⁶ Alternatively, when values were approach-framed, they were endorsed more strongly by predominantly approach-oriented than avoidance-oriented participants, $F(1,201)=12.23, p=.001, \eta_p^2=.06$. This was also, but somewhat weaker the case when values were avoidance-framed, $F(1,201)=7.26, p=.008, \eta_p^2=.04$.

weaker depending on value type. As this interaction was not significant in Study 1, does not replicate in Study 3, and constitutes a very small effect we refrain from further interpreting it.

Study 3: Approach- and Avoidance-Framed Values and Induced Approach versus Avoidance Motivational Orientation

Whereas our previous studies measured chronic individual differences, the current study temporarily induces differences in approach versus avoidance orientation. Furthermore, the current study considers young U.K. students' value endorsement as a function of value framing. Finally, these differences are assessed using shorter PVQ versions and counterbalancing the order of assessment (i.e., approach-PVQ vs. avoidance-PVQ rated first).

Method

Participants and Design

Participants were recruited during a university Taster Day, at which high-school students could take part in various experiments. Overall, 39 students decided to take part in the current experiment on a voluntary basis and gave their informed consent. We excluded one participant who did not understand the task instructions well and was extremely slow, leaving a total sample of 38 (7 males; 31 females; $M_{age}=16.79$, $SD_{age}=0.84$). Participants were randomly assigned to the approach (AP; $n=18$) or the avoidance motivation condition (AV; $n=20$) and reported approach and avoidance value endorsements.

Procedure and Materials

Participants received all instructions and responded to all questions using a computer. They were told that the study investigated muscle activities and life values. After providing demographic information, they received instructions on the manual task they were asked to engage in, using a soft rubber object that was lying next to their keyboards. We used the

commonly applied isometric flexion (inducing approach) versus extension (inducing avoidance) contraction of the arm to induce differences in motivational orientations (Cacioppo, Priester, & Bernston, 1993; for examples see Friedman & Förster, 2000, 2002; Nussinson, Seibt, Häfner, & Strack, 2010). In the AV (AP) condition, participants were told: “Using your non-dominant hand, place the rubber object between your palm and the table (underneath side of the table) and push down (up) slightly against the table so you feel a slight tension in your arm. The rubber object should be slightly flattened.” They were also provided with a visual image of how they should press the object against the table while responding (taken from Hengstler, Holland, van Steenbergen, & van Knippenberg, 2014).

We used the short 21-items PVQ also used in the European Social Survey, which assesses universalism with 3 items and each of the remaining values with two items (for all items, see Bilsky, Janik, & Schwartz, 2011). As before, we developed gender-matched AP-PVQ (sample item for achievement: “It is important for her to have ambitions in life; she wants people to admire what she does”) and AV-PVQ versions (sample item for achievement: “It is important to her to avoid an unambitious life; she does not want people to despise of what she does”). Participants responded using the 6-point response scale as in the previous studies. PVQ-order was counterbalanced and had no effect in the analysis reported below (all F s<1.31, all p s>.23).

We used this shorter questionnaire to avoid putting too much strain on participants pressing the soft rubber object. However, with this instrument, “internal reliabilities of the values are necessarily low because the two items that measure each value (3 for universalism) are intended to cover the conceptual breadth of the value rather than a core idea” (Schwartz & Rubel-Lifschitz, 2009, p. 175). This was also evident in our sample, with only seven correlations for the items measuring approach values being significantly correlated (range r s=.33-.77; range

for uncorrelated items $r_s=.16-.28$) and only four correlations for the items measuring avoidance values being significantly correlated (range $r_s=.41-.81$; range for uncorrelated items $r_s=-.01-.27$).

Nonetheless, the associations of these values scores, included in the current research, support their validity. For example, this instrument has shown predictive validity in terms of immigration attitudes (Davidov & Meuleman, 2012) and political activism (Vecchione, Schwartz, Caprara, Schön, Cieciuch, Silvester et al., 2015). Moreover, the 21 items form the circular value structure in multidimensional scaling analysis (Davidov, Schmidt, & Schwartz, 2008). Finally, the analyses below are based on means, which are not restricted by low reliabilities.

Participants' values were centered as before (see Table 4 for means and standard deviations). Again, AP and AV scores were highly correlated, $.33 \leq r_s \leq .82$, all $p_s < .05$, with the exception of power which only showed a marginal correlation between the AP and the AV version ($r=.30, p<.10$). Participants were fully debriefed about the aim of this study.

Results and Discussion

A 2 (Motivational Orientation: approach vs. avoidance; between participants) x 2 (Value Framing: approach vs. avoidance; within participants) x 10 (Value Type - Centered: self-direction, stimulation, hedonism, achievement, power, security, tradition, conformity, benevolence, universalism; within participants) mixed ANOVA revealed no main effects of value frame or motivational orientation, $F_s < 1, p_s > .38$, but again a main effect of value type, $F(5.48, 197.31) = 15.59, p < .001, \eta_p^2 = .30$. As in the previous studies, benevolence was endorsed most strongly and power was endorsed the least (Schwartz & Bardi, 2001).

Also as in the previous studies, a significant value frame by value type interaction emerged, $F(6.03, 216.95) = 14.98, p < .001, \eta_p^2 = .29$. In line with the pattern obtained previously, self-direction and stimulation were endorsed more strongly when framed in terms of approach

(vs. avoidance); contrary, power, conformity and benevolence were endorsed more strongly when framed in terms of avoidance (vs. approach; see Table 4).

There was no motivational orientation by value type interaction, $F < 1, p > .53$. Importantly, however, the predicted motivational orientation by value frame interaction was significant, $F(1,36) = 4.61, p = .039, \eta_p^2 = .11$. Participants induced with an approach motivation endorsed approach-framed values ($M = -.006, SD = .036$) more strongly than avoidance-framed values ($M = -.017, SD = .038$), $F(1,36) = 4.37, p = .044, \eta_p^2 = .11$. Participants induced with an avoidance motivation did not differ in their value endorsement ($M_{AP} = -.020, SD_{AP} = .039$; $M_{AV} = -.016, SD_{AV} = .033$), $F < 1, p > .36$. Again a fit between motivational orientation and value framing increased value endorsement, but consistent with the previous studies the results are limited to an approach motivational orientation and approach values.

Finally, a marginal value type by value frame by motivational orientation interaction indicated that the above reported differences tended to be stronger or weaker depending on value type, $F(6.03, 216.95) = 2.01, p = .065$ (see Study 2).

General Discussion

Three studies, involving participants online and in the laboratory, measuring and manipulating differences in motivational orientations towards approach and avoidance, and using different instruments to assess approach- and avoidance-framed values provided the first evidence that value endorsement is stronger when value framing fits people's predominant motivational orientation. However, in all three studies fit had a stronger effect on value endorsement for individuals with a predominant approach orientation/promotion focus than for individuals with a predominant avoidance-orientation/prevention focus. We interpret this asymmetrical pattern below. This effect is important as it is caused by minimal changes in value

framing and observed on a dependent variable quite resistant to change (Prentice & Miller, 1992; cf. Bardi & Goodwin, 2011). Thus, we show for the first time how value framing impacts value endorsement, adding a further factor to previous research on contextual influences on value endorsement (e.g., Daniel, Scheifer, & Knafo, 2012; Mikulincer et al., 2003).

Taken together, our results suggest that communicating the basic values in terms of approach increases value endorsement amongst people generally more inclined towards approach/promotion, while at the same time not undermining value endorsement among people generally more inclined towards avoidance/prevention. As most PVQ items are phrased as desirable end-states (approach values), the implication of our results for value measurement is that there is no need to develop a different version for individuals with an avoidance/prevention motivation. A further direct implication concerns interventions to enhance values or change values (Bardi & Goodwin, 2011): By and large they should focus on framing values in terms of approach.

There are at least two reasons for the stronger importance of fit under predominant approach/promotion focus compared with avoidance/prevention focus. First, as discussed in more detail below, people may naturally conceptualize the majority of values in terms of desired end-states they wish to approach. The phrasing of most items in the original PVQ in terms of approach thus simply conveys the natural way of thinking about values. Hence, even prevention/avoidance-oriented people may be used to thinking about values in approach terms, and they are equally ready to endorse the values that are important to them – whether they are phrased in terms of approach or avoidance. It is only promotion/approach-oriented individuals who are less likely to endorse values if they are framed in terms of avoidance. This reasoning is in line with findings showing that though people naturally hold both approach and avoidance goals, they prefer approach goals, which are more salient in their minds: They report more

approach than avoidance goals in free goal listing tasks and choose more approach from lists (e.g., Elliot & Sheldon, 1997; Elliot, Sheldon, & Church, 1997; cf. Emmons, 1996),

Second, previous research on regulatory fit found a similar asymmetry as we did, with fit effects emerging only for promotion focus/approach orientation (e.g., Fayant, Muller, Nurra, Alexopoulos, & Palluel-Germain, 2011; Nussinson et al., 2010; Righetti et al., 2011; see also Woltin & Yzerbyt, 2015). This has been attributed to the greater focus on similarities rather than differences under promotion focus/approach orientation (Förster, 2009; Förster, Liberman & Kuschel, 2008). Thus, an important task for future research is to test whether a similar advantage of promotion/approach emerges when assessing values without comparing to another individual (as is done in the PVQ we used).

Contributions

The current research offers several contributions to theory and research on values. First, it integrates previously unconnected lines of work on core motivational variables: values and motivational orientations. As noted elsewhere (Van Quaquebeke et al., 2014), current value conceptualizations do not consider avoidance values people might hold and thus do not explain well how values can energize avoidance behavior. Also, though research on differences in self-regulation has looked at its effect on values (Leikas et al., 2009; see also Van Dijk & Kluger, 2004; Kluger et al., 2004), it has not considered values directly framed in terms of approach or avoidance. By systematically taking into account both approach and avoidance values based on the Schwartz (1992) value theory, we shed light on previous theoretical propositions (Schwartz, 2006; Van Quaquebeke et al. 2014): We showed that people indeed also hold avoidance values (though to a lesser extent) which convey similar content as approach values (as evidenced by significant correlations in all studies) but entail different psychological consequences. This

provides first insight into a new psychological process impacting value endorsement, namely fit between people's self-regulation and value framing (Higgins, 2000, 2005; Cesario et al., 2008).

Second, our findings contribute to research on the importance of personal/situational characteristics and value fit. For example, people report better well-being if their personal values and social environment fit (e.g., Sagiv & Schwartz, 2000), higher marriage satisfaction if their values fit those of their spouses (Gaunt, 2006), and they embark on life transitions that fit their values (Bardi, Buchanan, Goodwin, Slabu, & Robinson, 2014). Our findings additionally demonstrate that value framing contributes to fit and, in turn, to increased value endorsement.

Third, this change in focus on the values themselves opens up interesting avenues for future research. The current results might inspire further research on cultural differences in value endorsement as well as research on values energizing behavior. Specifically, an interdependent self-construal is positivity related to adopting avoidance goals and individuals from Asian cultures adopt more avoidance goals, whilst an independent self-construal is positively related to adopting approach goals and individuals from Western cultures adopt more approach goals (Elliot, Chirkov, Kim, & Sheldon, 2001). Also, people from Eastern cultures are more attentive to avoidance-oriented information and are prevention oriented, whereas people from Western culture are more attentive to approach-oriented information and are promotion oriented (Hamamura, Meijer, Heine, & Kamaya, 2009; Lee, Aaker, & Gardner, 2000). In light of the current findings, a question emerging is whether cultural differences in value priorities can be partially explained by a (mis)fit between value framing and predominant cultural orientations.

Turning to a different question, would values energize behavior (Bardi & Schwartz, 2003) to a larger extent when their framing fits people's predominant motivational orientations? Priming benevolence values has been shown to increase helping behavior (Maio, Pakizeh,

Cheung, & Rees, 2009, Study 5) and an intervention emphasizing the importance of benevolence increased people's willingness to help others (Arieli, Grant, & Sagiv, 2014, Study 2). In light of fit energizing behavior (Higgins, 2000, 2005), a fit between framing values in terms of approach versus avoidance and people's motivational orientation might increase value congruent behavior.

Additional Results

In the online studies focusing on chronic inter-individual differences, promotion- or approach-oriented participants generally endorsed values more strongly regardless of framing. This dovetails with work showing that under promotion focus/approach orientation, individuals have an eager response bias towards "yes" as they want to ensure hits and safeguard against errors of omission, whilst under prevention focus/avoidance orientation they have a vigilant response bias towards "no" as they want to ensure correct rejections and safeguard against errors of commission (Crowe & Higgins, 1997; Scholer & Higgins, 2011). It also dovetails with research showing that people evaluate stimuli more favorably under approach than avoidance (e.g., Cacioppo et al., 1993; Neumann & Strack, 2000). Also, people endorsed approach-compared to avoidance-framed values more strongly, in line with claims that values are "desirable goals that motivate action" (Schwartz, 2012, p. 3; see also Schwartz, 1992). This finding points to the importance of understanding better the meaning of the personal average of value importance, which is often used simply as a way to control scale use (see Parks-Leduc et al., 2015) but may actually have substantial meaning (see Borg & Bardi, 2016).

Across all studies we found differences in value endorsement as a function of framing, with self-direction and stimulation being endorsed more strongly with an approach frame. This also held for hedonism and universalism in the online studies on chronic differences. This finding converges with the view of these values as anxiety free and growth focused (Schwartz et

al., 2012). In contrast, conformity, benevolence, and power were more strongly endorsed with an avoidance frame; this also held for achievement in the online studies. Apart from benevolence, these values are anxiety-avoidance and self-protection oriented (Schwartz et al., 2012).

Finally, previous research proposed self-direction, stimulation and achievement to be associated with promotion, and security and conformity with prevention (Leikas et al., 2009, p. 417). We indeed found in our online samples that stimulation and hedonism were more strongly endorsed by promotion- and approach-oriented participants (the latter also more strongly endorsed self-direction and achievement); we also found that security and conformity were more strongly endorsed by prevention- and avoidance-oriented participants. Overall, our results thus replicate previous findings (Leikas et al., 2009). They also extend this research to approach and avoidance motivation as a further individual difference impacting value endorsement.

Limitations

The current findings come with some caveats. In the first two studies, participants provided their ratings for the approach values prior to the avoidance values. This order of assessment might have contributed to the stronger preference of people for approach compared with avoidance values. However, given that the order of assessment was counterbalanced in Study 3 and had no effect, this does not seem to be too large a concern.

Also, whereas we did find similar effects for both chronic and situationally induced differences in approach and avoidance motivation, it remains for future research to test whether the effects reported here also hold for situationally induced differences in promotion versus prevention focus. Similarly, and as noted above, our findings may be at least partly due to the use of self-other similarity ratings in the PVQ. Future research needs to clarify if the results reported here generalize across value assessment instruments that are not based on such similarity ratings.

Finally, though we considered two broad perspectives on individual differences in motivational orientation (i.e., regulatory focus and motivational orientation), other differentiations have been proposed. For example, a distinction has been made between a locomotion orientation with a concern for movement from state to state and an assessment orientation with a concern for critical evaluation (Kruglanski, Thompson, Higgins, Atash, Pierro, et al. 2000). Also, people differ in terms of an eager action orientation with a fully developed intentional action structure to change the current state versus a state orientation with perseverating cognitions (Kuhl, 1985). Future research should assess whether the fit effects reported here generalize to these and other related inter-individual differences.

Conclusion

This research shifted the focus from considering human values only as desirable end-states people seek to approach to also considering them as undesirable end-states people seek to avoid. It also took into account individual differences in regulatory focus and approach/avoidance orientation in investigating approach and avoidance value endorsement. Apart from demonstrating that people indeed also hold avoidance values, the findings suggest that a fit between value framing and individuals' regulatory focus or motivational orientation increases value endorsement for promotion focus/approach motivation and approach values. Our hope is that by also considering avoidance values and individual differences, the field may be in a better position to understand the dynamics of value relations, value-congruent behavior, and more generally conditions of fit in value relevant contexts.

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Table 1. *Demographic Information on Samples in Studies 1 and 2*

	Study 1	Study 2
Ethnic Background:		
White	84.1%	74.9%
African American	5.3%	7.2%
Other (Hispanic, Asian, Native, Mixed)	10.6%	17.9%
Religion:		
Christian	53.1%	44.9%
Non-religious	39.7%	47.8%
Other (Buddhist, Hindu, Muslim, Jewish)	7.2%	7.3%
Relationship Status:		
Committed Relationship	58.9%	53.6%
Single	33.3%	40.6%
Divorced / Widowed	7.8%	5.8%
Profession:		
Professional Job (e.g., engineer, teacher)	23.7%	26.1%
Administrative / Secretarial	12.6%	13.0%
Sales / Customer Services	11.6%	12.6%
Manager / Senior Official	8.7%	6.3%
Skilled Trade Job / Manual Job	12.5 %	7.7%
Unemployed/Retired	15.5%	16.9%
Other	15.4%	17.4%
Mean (SD) Years of Education since 1 st Grade	15.40 (2.62)	15.18 (2.13)

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Table 2. Reliabilities, Means (*M*) and Standard Deviations (*SD*) for all Centered Approach- (*AP*) and Avoidance-Framed (*AV*) Values (*Means and Standard Deviations from Main Analyses in Parenthesis*) and Value Endorsement Differences in Study 1

	AP-PVQ			AV-PVQ			Endorsement Differences		
	α	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	η_p^2
Self Direction	.89	.89 (.89)	.75 (.72)	.69	.23 (.21)	.76 (.75)	279.76	<.001	.59
Stimulation	.82	-.65 (-.63)	.96 (.95)	.79	-1.17 (-1.16)	1.07 (1.07)	83.49	<.001	.30
Hedonism	.84	-.05 (-.04)	.96 (.93)	.72	-.41 (-.40)	.94 (.91)	47.29	<.001	.19
Achievement	.66	-.43 (-.40)	.85 (.83)	.60	-.13 (-.12)	.77 (.76)	26.52	<.001	.12
Power	.90	-1.53 (-1.51)	1.00 (.99)	.71	-.59 (-.58)	.72 (.70)	326.01	<.001	.62
Security	.88	.58 (.56)	.71 (.68)	.82	.30 (.29)	.68 (.66)	85.43	<.001	.30
Tradition	.82	-.84 (-.85)	1.13 (1.12)	.91	-.95 (-.96)	1.26 (1.24)	6.22	.013	.03
Conformity	.87	-.32 (-.30)	.77 (.75)	.88	-.11 (-.09)	.82 (.80)	30.75	<.001	.13
Benevolence	.88	.78 (.76)	.65 (.61)	.89	.87 (.87)	.69 (.65)	15.19	<.001	.07
Universalism	.89	.76 (.76)	.65 (.65)	.89	.42 (.42)	.79 (.74)	43.52	<.001	.18

Table 3. Reliabilities, Means (*M*) and Standard Deviations (*SD*) for all Centered Approach- (*AP*) and Avoidance-Framed (*AV*) Values (*Means and Standard Deviations from Main Analyses in Parenthesis*) and Value Endorsement Differences in Study 2

	AP-PVQ			AV-PVQ			Endorsement Differences		
	α	<i>M</i>	<i>SD</i>	α	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	η_p^2
Self Direction	.90	.82 (.80)	.73 (.72)	.72	.26 (.25)	.64 (.64)	228.46	<.001	.53
Stimulation	.73	-.60 (-.58)	.90 (.87)	.79	-1.06 (-1.04)	1.12 (1.11)	75.60	<.001	.27
Hedonism	.84	.08 (.09)	.83 (.82)	.67	-.22 (-.22)	.82 (.81)	44.31	<.001	.18
Achievement	.75	-.36 (-.38)	.84 (.83)	.63	-.12 (-.13)	.75 (.71)	21.62	<.001	.10
Power	.90	-1.48 (-1.48)	1.02 (1.02)	.72	-.59 (-.60)	.72 (.69)	331.14	<.001	.62
Security	.88	.52 (.52)	.69 (.66)	.75	.23 (.22)	.66 (.63)	75.71	<.001	.27
Tradition	.83	-.86 (-.86)	1.18 (1.17)	.89	-1.01 (-1.01)	1.22 (1.22)	9.37	.003	.05
Conformity	.84	-.28 (-.27)	.71 (.70)	.85	-.12 (-.11)	.74 (.70)	21.34	<.001	.10
Benevolence	.91	.74 (.75)	.66 (.64)	.91	.81 (.82)	.70 (.66)	6.12	.014	.03
Universalism	.88	.72 (.71)	.60 (.59)	.89	.41 (.40)	.67 (.67)	41.13	<.001	.17

Table 4. Means (*M*) and Standard Deviations (*SD*) for all Centered Approach- (*AP*) and Avoidance-Framed (*AV*) Values and Value Endorsement Differences in Study 3

Value	AP-PVQ		AV-PVQ		Endorsement Differences		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	η_p^2
Self Direction	0.56	0.91	-0.19	0.76	23.79	<.001	.40
Stimulation	0.08	0.89	-0.77	0.83	50.40	<.001	.58
Hedonism	-0.05	0.76	0.13	0.99	1.07	.309	.03
Achievement	0.51	0.82	0.29	0.90	2.52	.121	.07
Power	-1.21	0.95	-0.24	0.91	28.83	<.001	.45
Security	-.07	0.90	-0.10	0.78	0.05	.827	.00
Tradition	-.58	1.04	-0.53	1.04	0.19	.669	.01
Conformity	-.53	0.97	-0.17	0.84	6.97	.012	.16
Benevolence	0.88	0.51	1.09	0.53	7.31	.010	.17
Universalism	0.27	0.76	0.33	0.70	0.78	.383	.02