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Journal of Cross-Cultural Psychology 2014 45: 282 originally published online 3 October 2013

DOI: 10.1177/0022022113504621

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Journal of Cross-Cultural Psychology
2014, Vol 45(2) 282–299
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DOI: 10.1177/0022022113504621
jccp.sagepub.com



Florencia M. Sortheix¹ and Jan-Erik Lönnqvist²

Abstract

The present study examined the relations of personal values to life satisfaction (LS) across 25 European nations. Multilevel statistics with country-level Human Development Index (HDI) as a contextual moderator tested its effect on the individual-level relations between personal values and LS. HDI moderated the relations between LS and 8 of the 10 basic values identified by Schwartz's values theory. Across countries, high benevolence and hedonism values were associated with heightened LS, whereas high power and security values were related to lower LS. Achievement was positively related to LS in low HDI countries, but negatively in high HDI countries, whereas the opposite pattern occurred for universalism values and LS. Our results emphasize the importance of considering the broader context in which personal values are pursued when examining their implications for LS.

Keywords

well-being, life satisfaction, values, socioeconomic development, value–environment fit, multilevel analyses

The last few decades have witnessed an increased interest in the study of subjective well-being (SWB; for a review, see Diener, Oishi, & Lucas, 2003). SWB measures reflect the influence of several indicators of quality of life for a country (Diener, Inglehart, & Tay, 2012). The notion that SWB could and should be used to inform public policy is gaining momentum, and SWB measures have recently been included in government programmes to complement more traditional measures (Diener & Seligman, 2004). In this study, we focused on the cognitive rather than affective aspect of SWB, because the former are more strongly related to overall living conditions reflected by the country's level of socioeconomic development (Diener, Ng, Harter, & Arora, 2010). Life satisfaction (LS) refers to the cognitive evaluation of one's life, in general and in specific areas, such as relationships and work (Diener, 1984).

The study of the relations between personal values and well-being has generally been conducted under the assumption that these relations are universal (Bobowik, Basabe, Paez, Jimenez,

¹Department of Social Research, University of Helsinki, Finland

²Swedish School of Social Science, University of Helsinki, Finland

Corresponding Author:

Florencia M. Sortheix, Department of Social Research, University of Helsinki (P.O. Box 54), 00014, Helsinki, Finland.
Email: florencia.sortheix@helsinki.fi

& Bilbao, 2011; Joshanloo & Ghaedi, 2009; Sagiv, Roccas, Hazan, 2004). However, Sagiv and Schwartz (2000) suggested that the environment in which values are pursued may influence these relations. Person–environment value congruence, or value–environment fit, refers to the idea that people are happier when their environments allow them to pursue and fulfill their values (Sagiv et al., 2004; Sagiv & Schwartz, 2000). However, to the best of our knowledge, no previous research has examined which country-level variables are related to systematic variation in relations between individual-level personal value priorities (Schwartz, 1992) and LS. In fact, although there is much cross-cultural research on values, there seem to be no systematic cross-cultural comparisons on how values relate to other psychologically meaningful variables (Roccas & Sagiv, 2010; for a very recent exception, see Boer & Fischer, 2013).

In this study, we focused on two questions. First, are specific personal values related to LS? Second, does the relation between personal values and LS vary according to the level of socio-economic development of the country? Answers to these questions may shed light on the extent to which certain values are ubiquitously related to LS, and to what extent such relations are influenced by contextual variables. Based on value–environment fit, we expect that different values will predict well-being differently across European countries that vary in terms of socio-economic development. We will use Schwartz's theory (1992, 2006) of universal human values to argue and develop our hypotheses, and multilevel modeling techniques to test our ideas.

Schwartz's Value Theory and Structural Relations Among Values

Values represent basic individual motivations (Schwartz, 1992) and are also internalized as specific cultural practices through social institutions (Rokeach, 1973). Values define what is important for us, are stable through time and situations (Schwartz, 1992), and guide choices and behavior (Bardi & Schwartz, 2003; Lönnqvist, Leikas, Paunonen, Nissinen, & Verkasalo, 2006). A dynamic circumplex structure, shown in Figure 1, describes the relations among values. Schwartz (2006) defined the 10 basic values in terms of the broad goals that they express as follows:

- Conformity*—restraint of actions, and intentions which could upset or harm others and/or violate social norms and expectations.
- Tradition*—respect, commitment, and acceptance of the customs and ideas that one's culture or religion provides.
- Benevolence*—preserving and enhancing the welfare of those with whom one is in frequent personal contact.
- Universalism*—understanding, appreciation, tolerance, and protection for the welfare of all people and for nature.
- Self-Direction*—independent thought and action—choose own goals, create, explore.
- Stimulation*—excitement, novelty, and challenge in life.
- Hedonism*—pleasure, doing things that bring gratification for oneself.
- Achievement*—personal success through demonstrating competence according to social standards.
- Power*—social status and prestige, control or dominance over people and resources.
- Security*—safety, harmony, and stability of society.

Schwartz's (1992) original dimensional organization of values describes the oppositions between openness to change versus conservation and self-transcendence to self-enhancement values. A complementary classification scheme was proposed by Schwartz (2006) to differentiate values according to the interests they serve: the self or others. Person-focused values regulate how one expresses personal characteristics and interests, and include self-direction, stimulation,

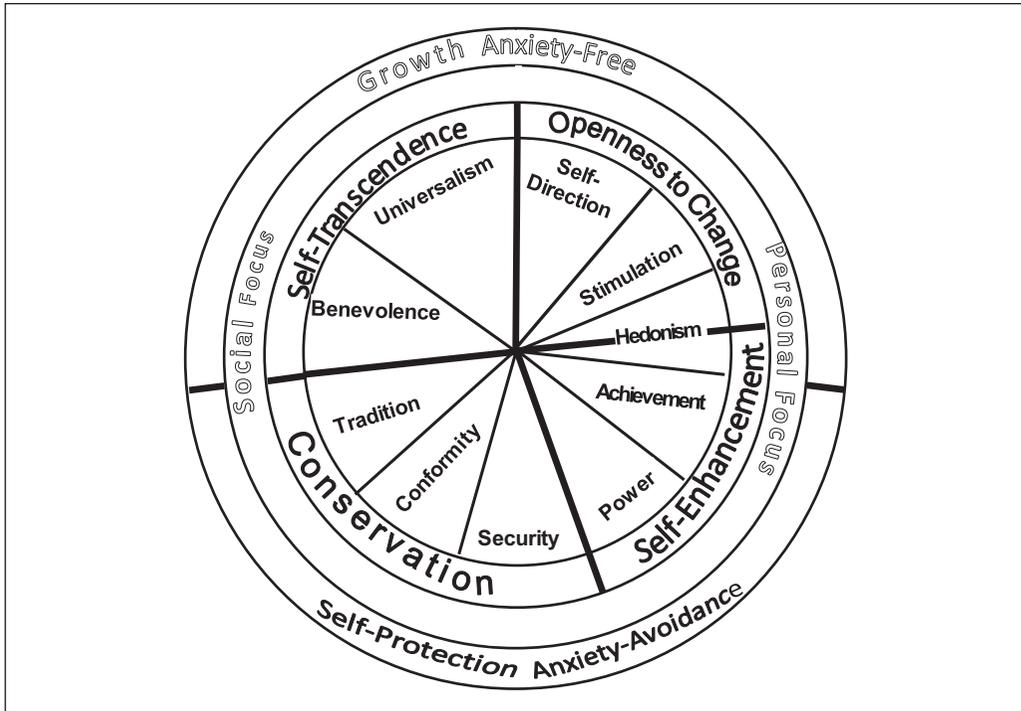


Figure 1. Structural relations among the 10 values, four higher order value dimension and two underlying motivational sources.

Source: Schwartz (2011). Reproduced with permission.

hedonism, achievement, and power. Social-focused values are those that promote, regulate, and preserve cooperative and supportive relations among groups. These values regulate how one relates socially to others and affect their interests, and include universalism, benevolence, conformity, and tradition. Security does not fit well into this classification scheme; although security tends to correlate most strongly with the social-focused values, it shares the self-concerned motivations of person-focused values as it is concerned mainly with protecting the self against threat (Schwartz, 2006; Schwartz et al., 2012).

Previous research using European samples has, at the individual level, reported LS to be positively associated with openness to change (self-direction, stimulation, and hedonism) and negatively associated with conservation values (conformity, tradition, and security; Bobowik et al., 2011). The associations between self-transcendence (universalism and benevolence) and self-enhancement (power and achievement) values and LS were smaller and less consistent (Bobowik et al., 2011). However, this research did not test for country-level moderators. By contrast, we believe that the consideration of the *context* in which values are pursued may be necessary to better understand the relations between well-being and values.

Value–Environment Fit

Value–environment fit refers to the notion that the context—through a series of rewards, social sanctions and affordances or possibilities for action (see Sagiv & Schwartz, 2000)—influences the type of values that will be positively related to well-being. For instance, Sagiv and Schwartz (2000) showed that the context offered by individuals' study majors moderated the relations

between values and well-being in student samples. Specifically, they found that power values were related to higher well-being only among business students, but that benevolence values were related to higher well-being only among psychology students. They suggested that when the environment supported and encouraged certain types of values (e.g., power in business careers), then adhering to these values brought about positive outcomes in terms of personal happiness. That is, based on the idea of value–environment fit, similarity between the individual’s values and the values that he or she encounters in his or her environment would be expected to contribute to satisfaction. Does the surrounding social context promote those values that the individual adheres to?

In this study, we will extend the idea of value–environment fit (Sagiv et al., 2004; Sagiv & Schwartz, 2000) to argue that it is not only value similarity that determines how values are related to well-being in different contexts, but also pertinent are the possibilities and constraints that countries with different socioeconomic realities place on their citizen (Gibson, 1977). Such realities may determine the possibilities of individuals to act on their values; whether it is possible for the individual to live up to his or her ideals and values may to some extent depend on the societal context. The main argument of this article is that the extent to which the individual’s values are aligned with the socioeconomical context afforded by the country in which he or she lives is associated with LS.

One of the most plausible candidates to moderate the relations between personal values and well-being in general population samples is the socioeconomic context afforded by one’s country of residence. In this study, we used the Human Development Index (HDI), as a measure of country socioeconomic development. HDI includes measures for a long and healthy life, access to education and a decent standard of living. The index reflects how well the country is doing for the majority of its citizens (e.g., in education, health, etc.) and is often used as a measure of quality of life. HDI may adequately capture the overall long-term life circumstances which have been shown to be strongly related to LS judgments (Diener et al., 2010).

We will develop our hypotheses regarding the associations between values and LS based on the classification into person and social-focused values (Schwartz, 2006). These dimensions, reflecting self- versus other orientation, appear to be consistently distinguishable across societies and measurement instruments. Similar dimensions have also been found in other field of research than values research; for example, Hogan (1983) labeled these dimensions rather intuitively as “getting ahead” and “getting along.” We expect person and social-focused values to have different consequences for LS in high and low socioeconomically developed European countries.

The Present Research

In highly developed countries (e.g., Western European countries like Norway or Switzerland), we expect social-focused values (universalism, benevolence, tradition, and conformity) to be positively related to LS, and self-enhancement values (achievement and power) to be negatively related to LS. Western European countries receiving the highest HDI ratings are all long-standing democracies with strong welfare systems that guarantee the fulfillment of their citizens’ basic requirements for living. Under such favorable conditions, a focus on getting along with others and participating in community life may be the better strategy in terms of well-being. Indeed, it seems that once basic needs are satisfied, interpersonal relationships and social capital become highly relevant for individual happiness (Diener & Seligman, 2004; Helliwell & Putnam, 2004). Universalism and benevolence values are, based on their very definitions, concordant with such environments in which social justice and equality are promoted. Tradition and conformity values, sharing the prosocial motivation of self-transcendence values (Schwartz, 2006), could also fit such environments. These two values are related to trust in institutions (Morselli, Spini, & Devos, 2012), which is likely to be related to happiness with the public goods that those institutions

provide, which in turn is known to predict well-being (Oishi, Schimmack, & Diener, 2012). In sum, social-focused values should fit the social, economic, and institutional realities that characterize high HDI countries.

The pursuit of personal gain and dominance over others (power), and of being recognized as more successful than others (achievement), represents a self-concerned motivation that has been associated with lower well-being in samples of Western and economically developed countries (Bilsky & Schwartz, 1994; Deci & Ryan, 1995). In these countries, such pursuits may be discouraged, equality being the social ideal. Thus, we expect self-enhancement values to be negatively related to LS in more developed European countries. Regarding openness to change values, prior research has consistently linked these values with higher SWB (Bobowik et al., 2011; see also the importance of autonomy in self-determination theory, Deci & Ryan, 1995). However, these values may be more vital in countries in which a climate of instability reigns. The turmoil characteristic of countries undergoing large structural changes—that is, postcommunist countries (see the following)—is likely to necessitate adaptation to new life circumstances, social roles, and norms. Because openness to change values may be important for LS primarily because they facilitate such adaptation, we expect these values to be of importance primarily in low HDI countries, but less so in high HDI countries.

In contexts of low human development, much of the above delineated hypotheses for high HDI countries may be reversed. First, we expect person-focused values to be positively related to LS. Life goals such as progressing in one's career and gaining higher social status (achievement) and wealth (power) could be fundamental tools for meeting basic needs and for providing material security not only for oneself but also for close others. This is consistent with previous findings showing, for example, that financial satisfaction was a stronger predictor of LS among general population in poorer nations (Oishi, Diener, Lucas, & Suh, 1999) and research showing that the pursuit of material goods is negatively related to well-being mainly in richer nations (Dittmar, 2008).

Openness to change values—also classified as person-focused—are also expected to be positively related to life-satisfaction in low HDI countries. The HDI serves as an indicator of vulnerability—individuals and communities faced with rapid change and increasing uncertainty have lower HDI scores. In our European sample, the most vulnerable countries are the postcommunist ones which have undergone massive economic, social, and institutional changes in the past two decades. The instability that characterizes former communist countries (Bulgaria, Ukraine, Russian Federation, etc.) has created a context of uncertainty and large inequalities in wealth. The capacity to adapt to rapid change may be crucial in such contexts. Consistent with this idea, previous research conducted in these countries reported a strong positive relation between being young and LS (Realo & Dobewall, 2011). This result was explained by youth being more successful in adapting to change. Older people adhering to the old traditions and social order were the most vulnerable group (Realo & Dobewall, 2011). In terms of personal values, those scoring high in openness to change values could be more comfortable with adopting a new system, and this could in low HDI countries contribute to their well-being.

We expect social-focused values to be negatively related to LS in low HDI countries. Continued resistance to change and adherence to the norms and conventions established by the old system should be reflected by higher scores on the conservation values of tradition, conformity, and security. These values may have adverse consequences for satisfaction in the face of inevitable and profound change. We also expect universalism to be negatively related to LS in low HDI countries. People living in such a context may simply have fewer resources to pursue universalism. A large proportion of their time and resources may be spent in striving to satisfy the more basic requirements of living, and due to a lack of appropriate policies and practices, they may have fewer possibilities to fulfill the goals motivated by universalism values. Protecting the environment or caring for social justice may simply not be very feasible options in everyday life.

Furthermore, striving for equality in countries with increasing social disparities may be a source of distress. Thus, besides not being able to live up their personal standards, those scoring high on universalism may, in low HDI countries, find more causes of frustration in the surrounding events, activities, policies, and social realities. Benevolence values, mainly concerned with the well-being of close others, derive from the universal need to belong (Baumeister & Leary, 1995). Because there is consistent evidence on the universal positive effect of interpersonal relations on well-being (Helliwell & Putnam, 2004), we expect benevolence to be positively related to LS also in low HDI countries.

In sum, in high HDI countries we expect social-focused values (self-transcendence and conservation) to promote well-being, but self-enhancement values to be detrimental to well-being. By contrast, in low HDI countries, we expect person-focused values (self-enhancement and openness to change) to promote well-being, but social-focused values (conservation and universalism) to be detrimental to well-being. This study is the first to systematically test cross-cultural variations in the individual-level relation between values and well-being. The European Social Survey (ESS) data set allows us to test our ideas using nationally representative samples from 25 European countries.

Our operationalization of context, the HDI, is an index of living conditions that offer opportunities or set limitations for the pursuit of certain values. However, socioeconomic development also brings about changes in the cultural orientation of countries—It is correlated with the importance of freedom and democracy (Inglehart, Foa, Peterson, & Welzel, 2008). In terms of Schwartz's (2007) cultural value theory, Autonomy—conceptually close to individual-level openness to change—and Egalitarianism¹—close to self-transcendence—correlate positively with the HDI (Basabe & Ros, 2005). Thus, it is important to test whether the proposed effects of the HDI remain even after accounting for variations in cultural values.

Method

Participants

We used data from the ESS Round 3 collected in 2006 from 25 European countries (Jowell & The Central Coordinating Team, 2007).² The ESS data includes strict probability samples representative of the population 15 years and older and is available online at www.ess.nsd.uib.no. We excluded 6.3% of participants who had more than five missing values in their responses to the Portrait Value Questionnaire (Schwartz, 2003). The total final sample size was $N = 44,106$ (for a country-level breakdown, see Table 1).

Measures

Life Satisfaction (LS). The ESS Round 3 included a number of questions to assess general LS. We used the following 3 items: “How satisfied are you with life as a whole?” “How satisfied are you with how life has turned out so far?” and “How happy are you?” The questions were answered from 0 (*extremely dissatisfied/unhappy*) to 10 (*extremely satisfied/happy*) and were averaged to create a single score. Average Cronbach's alpha across countries was .85. The two first questions were conceptually very similar to those in Diener's (1984) Satisfaction With Life Scale which assesses the cognitive aspect of SWB and has been used for multiple cross-cultural studies (Biswas-Diener, Vittersø, & Diener, 2010; Oishi et al., 1999). The inclusion of an emotional item (“how happy are you?”) was justified as it loaded strongly with the two more cognitive items. Tests of explanatory equations show that the same variables (e.g., income) explained variations in happiness and LS to similar degree in the ESS data set (Helliwell, Layard, & Sachs, 2012). Country-level averages are presented in Table 1.

Table 1. Number of Participants, Average Age, Life Satisfaction, and Value Priorities, and the Human Development Index of 25 European Countries.

Country	<i>n</i>	Age	LS	BEN	UN	SD	ST	HE	ACH	PO	SE	CO	TRA	HDI
Norway	1,533	46.2	7.77	1.23	1.19	1.13	0.87	0.90	0.89	0.79	1.06	1.08	0.97	0.970
Ireland	1,582	46.09	7.53	1.19	1.18	1.13	0.85	0.87	0.90	0.78	1.15	0.98	1.07	0.964
Sweden	1,585	47.97	7.80	1.24	1.20	1.16	0.87	1.05	0.84	0.78	1.00	0.96	1.02	0.961
Switzerland	1,758	49.88	7.94	1.22	1.22	1.16	0.82	1.04	0.88	0.78	1.05	0.88	1.03	0.956
The Netherlands	1,814	48.7	7.44	1.18	1.17	1.16	0.90	1.04	0.89	0.77	1.03	1.00	0.97	0.961
Finland	1,645	48.46	7.95	1.21	1.22	1.12	0.87	0.93	0.81	0.70	1.12	1.03	0.99	0.958
France	1,948	48.09	6.78	1.24	1.27	1.11	0.84	1.07	0.78	0.69	1.08	0.94	1.05	0.958
Denmark	1,451	49.49	8.26	1.30	1.21	1.18	0.87	1.07	0.88	0.81	0.99	1.03	0.98	0.953
Spain	1,802	46.08	7.49	1.23	1.20	1.10	0.79	0.91	0.82	0.77	1.18	1.03	1.07	0.952
Austria	2,326	44.28	7.42	1.19	1.13	1.14	0.85	1.04	0.97	0.85	1.10	0.89	0.95	0.952
Belgium	1,767	46	7.42	1.21	1.17	1.08	0.86	1.06	0.91	0.78	1.07	0.98	1.05	0.951
UK	2,301	49.44	7.27	1.22	1.18	1.12	0.88	0.94	0.89	0.77	1.13	0.97	1.03	0.945
Germany	2,828	48.05	6.89	1.20	1.16	1.14	0.80	0.99	0.91	0.79	1.09	0.93	1.00	0.945
Slovenia	1,329	46.12	7.09	1.13	1.13	1.09	0.88	0.99	0.97	0.80	1.08	0.97	1.06	0.924
Cyprus	933	47.55	7.51	1.19	1.12	1.10	0.83	0.93	0.88	0.84	1.21	0.97	1.11	0.911
Portugal	2,117	51.18	6.05	1.18	1.14	1.04	0.80	0.92	0.96	0.85	1.14	0.97	1.09	0.907
Hungary	1,409	51.13	5.90	1.17	1.15	1.10	0.79	1.07	0.94	0.81	1.23	0.93	1.07	0.878
Poland	1,629	43.79	6.89	1.14	1.16	1.06	0.84	0.80	0.93	0.86	1.16	1.10	1.08	0.876
Slovakia	1,670	43.44	6.35	1.10	1.12	1.06	0.83	0.81	0.95	0.87	1.17	1.05	1.08	0.873
Estonia	1,420	47.2	6.60	1.17	1.17	1.08	0.83	0.89	0.88	0.78	1.16	1.01	1.03	0.878
Latvia	1,592	42.62	6.20	1.05	1.03	1.06	0.91	0.96	1.00	0.96	1.12	0.91	0.98	0.859
Bulgaria	1,248	49.94	5.05	1.17	1.12	0.98	0.82	0.83	1.06	0.65	1.20	1.06	1.11	0.835
Romania	1,876	46.07	6.10	1.06	1.10	1.03	0.79	0.80	1.00	0.95	1.12	1.06	1.02	0.832
Russ. Fed.	2,306	46.15	5.54	1.12	1.13	1.05	0.77	0.83	0.97	0.96	1.22	1.00	1.07	0.811
Ukraine	1,877	48.83	5.09	1.15	1.18	1.04	0.78	0.81	0.90	0.94	1.22	1.08	1.07	0.789

Note. Former communist countries are in italics. LS = Life Satisfaction; BEN = benevolence; UN = universalism; SD = self-direction; ST = stimulation; HE = hedonism; ACH = achievement; PO = power; SE = security; CO = conformity; TRA = tradition; UK = United Kingdom; HDI = Human Development Index (UNDP, 2007).

The cross-country invariance of our measure of LS was tested using multi-group confirmatory factor analyses (MGCFAs) with Mplus software (Muthén & Muthén, 2004). The model fit of the three-item LS scale (with all factor loadings constrained to be equal across countries), assessed was very good (Comparative Fit Index, CFI = 0.99, Tucker–Lewis Index, TLI = 0.99, and the Root Mean Square of Approximation, RMSEA = 0.06), confirming metric invariance—a precondition for working with correlation and regression coefficients—across countries. Although the metric scalar invariant model exhibited a significant inflation of the χ^2 value, $\Delta\chi^2(44) = 356.65$, $p < 0.001$, compared with the factorial invariant model, the approximate goodness-of-fit measures signaled a good to very good model fit, with CFI and TLI above 0.90 and RMSEA below 0.08 (for a description of the procedure for cross-national comparisons, see Davidov, Schmidt, & Billiet, 2011).

Personal values. Participants completed the 21-item version of the Portrait Values Questionnaire (PVQ21) adapted by Schwartz (2003) for the ESS. The 21 items each offer verbal portraits of different people and respondents have to rate how similar they are to the portrait. For example, “Thinking new ideas is important for him (or her for female respondents). He or she likes to do things in his or her own unique way” suggests a person for whom self-direction values are important. Respondents were asked, “how much like you is this person?” and answers were given on scale from 1 (*very much like me*) to 6 (*not like me at all*). All responses were recoded so that higher values represented higher agreement with the description. Reliabilities averaged .56, ranging from .35 for tradition to .72 for hedonism, and were very similar to previously reported reliabilities (e.g., Schwartz & Rubel, 2005). Low reliabilities are to be expected due to

few items measuring each value (2-3) and the broad concepts that each value represents. Despite some low reliabilities, there is firm evidence supporting the validity of the PVQ21. The measure has been consistently related to different variables such as political orientation, interpersonal trust, immigration attitudes (Schwartz, 2007) and gender differences (Schwartz & Rubel, 2005). Multidimensional scaling and MGCFA of the values measured with the PVQ21 in 19 representative European samples from the ESS data set supported the near equivalence of meaning of the values across countries (Schwartz & Rubel, 2005). To control for individual differences in scale use, we followed standard procedures to center participants' answers using their mean for all items (Lindeman & Verkasalo, 2005; Lönnqvist et al., 2006). The values scores, therefore, represent the relative importance to the person of each value type compared with the other value types, with the average score for all 10 value scales being 1.00. Country-level averages are shown in Table 1.

Control variables. We included gender, age, and education as control variables, because they have both been shown to influence value priorities (Puohiniemi, 2002; Schwartz, 1992; Schwartz & Rubel, 2005). Within each country, almost exactly half of the participants were female. Country-level averages of age are presented in Table 1. We also controlled for personal income, as this variable has previously been associated with SWB (Diener et al., 2010). Subjective income was assessed by asking "How do you feel about your household's income nowadays?" The categorical response options were 1 (*living comfortably on present income*), 2 (*coping on present income*), 3 (*living difficultly on present income*), and 4 (*living very difficultly no present income*). This variable was dummy coded using "coping on present income" as the reference category.

Socioeconomic development. As an indicator of socioeconomic development, we used the HDI of the United Nations Development Program (UNDP, 2007) which reflects the time period of ESS Round 3 (2006). This index assesses inter-country development levels on the basis of three so-called deprivation indicators: life expectancy, adult literacy, and the logarithm of purchasing power adjusted per capita gross domestic product (GDP). All Western European countries were labeled by UNDP as "very high human development," whereas all of the former communist countries, except Slovenia were labeled as "high human development." Country scores are shown in the last column of Table 1 (sorted from highest to lowest scores on the HDI).

Cultural values. Country scores for Autonomy versus Embeddedness and Egalitarianism versus Hierarchy were obtained from Schwartz's large-scale survey on teacher from 55 countries.³ To obtain two bipolar value dimensions, we subtracted Embeddedness scores from Autonomy scores and Hierarchy scores from Egalitarianism scores.

Analyses

Using data from the ESS, we wanted to study the relations between values and LS across European countries which varied in level of development. The associations were expected to vary across countries, and all analyses were therefore performed by means of multilevel techniques which allowed relating properties of individuals and properties of the groups and structures in which they function. The analyses were conducted using the Statistical Package for the Social Sciences (SPSS) Mixed-Model procedure (see Singer, 1998). LS and values were individual-level variables, and individuals were nested in countries that differed in HDI. As our model included a cross-level interaction we used grand mean centered variables to allow for a clearer interpretation of the results (Hox, 2010).⁴

Table 2. Mixed-Model Parameters for Control Variables, Individual Values (Social-Focused), and the Interaction Between Individual Values and HDI in the prediction of Life Satisfaction.

Parameter	Security		Conformity		Tradition		Benevolence		Universalism	
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE
Fixed effects										
Intercept	7.08**	0.06	7.07**	0.07	7.07**	0.07	7.08**	0.06	7.07**	0.07
Individual-level variables										
Control variables ^a										
Personal value	-0.52**	0.07	-0.12*	0.06	-0.08	0.06	0.44*	0.08	-0.08	0.08
Country-level variable										
HDI	9.14**	2.03	9.44**	1.38	9.627**	1.38	9.495**	2.01	9.749**	2.06
Egalitarianism-hierarchy	-0.07	0.07	-0.07	0.07	-0.07	0.07	-0.07	0.07	-0.07	0.07
Autonomy-embed.	-0.13	0.20	-0.12	0.21	-0.13	0.21	-0.15	-0.02	-0.13	0.21
Cross-level interaction										
HDI × Individual value	7.69**	1.2	5.14**	1.16	6.74**	1.06	2.80	1.422	5.06**	1.43
Covariance parameters										
Random intercept variance	0.096**	0.03	0.103**	0.032	0.106**	0.032	0.095**	0.029	0.101**	0.031
Random slope variance	0.079*	0.03	0.071*	0.029	0.055*	0.025	0.10*	0.044	0.098*	0.043
Residual variance	2.42**	0.02	2.437**	0.016	2.436**	0.016	2.437**	0.016	2.44**	0.017

Note. Gender (male = 0, female = 1); HDI = Human Development Index; Est = Parameter Estimate. $N = 39,278-40,278$.

^aAverage coefficients for control variables (all $p > .001$): age (Est. = $-.006$, $SD = .00$), gender (Est. = $.06$, $SD = .016$), years of education (Est. = $.01$, $SD = .00$), living comfortably on present income (Est. = $.53$, $SD = .02$), living with difficulty on present income (Est. = $-.87$, $SD = .02$), and living very difficultly on present income (Est. = -2.06 , $SD = .03$).

* $p < .05$. ** $p < .01$.

Results

As a starting point, we examined how much variance in LS was explained by the grouping category (country) by means of the intraclass correlation coefficient. We compared in an unconditional model (a model without predictors), the obtained variances at Level 1 (individual) and Level 2 (country). The percentage of variance that occurred between countries was 23. Thus, a rather high proportion of LS was explained by belonging to a country and justified the further use of multilevel techniques. The country-level variables correlated as expected: HDI was positively correlated with the cultural value of autonomy versus embeddedness ($r = .83$; $p < .001$) and egalitarianism versus hierarchy ($r = .48$; $p < .001$). The two cultural value dimensions were also highly correlated ($r = .67$; $p < .001$).

To test our hypotheses regarding the cross-level interaction, we ran 10 separate mixed-models analyses predicting LS (to avoid multicollinearity, each basic value was analyzed separately). The mixed models included, as Level 1 predictors age, gender, subjective income (dummy coded), and one basic value, as Level 2 predictors, HDI and the two cultural value dimensions, and finally, the cross-level interaction between the basic value and HDI. Only the effects of values were modeled as random. In the prediction of LS, the HDI was the only statistically significant country-level predictor when the three country-level variables were entered simultaneously. At the level of the individual, the relations between personal values and LS were consistently qualified by the interactions between personal values and HDI: the interactions between 8 of the 10 basic values and country-level HDI were significant (Tables 2 and 3). The exceptions were benevolence and hedonism suggesting that these values have a positive and similar relation with LS across different levels of the HDI.

Table 3. Mixed-Model Parameters for Control Variables, Individual Values (Person-Focused), and the Interaction between Individual Values and HDI in the prediction of Life Satisfaction.

Parameter	Self-direction		Hedonism		Stimulation		Achievement		Power	
	Est	SE	Est	SE	Est	SE	Est	SE	Est	SE
Fixed effects										
Intercept	7.07**	0.07	7.05**	0.07	7.07**	0.06	7.05**	0.07	7.07**	0.06
Individual-level variables										
Control variables^a										
Individual value	0.331**	0.08	0.51**	0.06	0.24**	0.05	0.01	0.07	-0.49**	0.06
Country-level variables										
HDI	9.21**	2.04	9.47**	2.15	9.36**	2.07	10.04**	2.07	9.46**	2.05
Egalitarianism-hierarchy	-0.07	0.07	-0.06	0.07	-0.00	0.07	-0.06	0.07	-0.07	0.07
Autonomy-embed.	-0.12	0.21	-0.18	0.22	-0.11	0.21	-0.15	0.21	-0.14	0.21
Cross-level interaction										
HDI × Individual value	-6.56**	1.35	-1.31	0.68	-6.48***	0.82	-9.25***	1.33	-4.0***	1.09
Covariance parameters										
Random intercept variance	0.097**	0.03	0.109**	0.034	0.101**	0.031	0.107**	0.031	0.099**	0.031
Random slope variance	0.098*	0.041	0.077*	0.03	0.026	0.031	0.098*	0.039	0.054*	0.024
Residual variance	2.43**	0.017	2.428**	0.02	2.434**	0.016	2.429**	0.016	2.43**	0.016

Note. Gender (Male = 0, Female = 1); HDI = Human Development Index; Est = Parameter Estimate. *N* = 39,278-40,278.

^aAverage coefficients for control variables (all *p* > .001): age (Est. = -.006, *SD* = .00), gender (Est. = .06, *SD* = .016), years of education (Est. = .01, *SD* = .00), living comfortably on present income (Est. = .53, *SD* = .02), living with difficulty on present income (Est. = -.87, *SD* = .02), and living very difficultly on present income (Est. = -2.05, *SD* = .03).

p* < .05. *p* < .01.

For testing and probing the two-way interactions estimated in the hierarchical linear regression models we used the computational tool developed by Preacher, Curran, and Bauer (2006) for the case of a Level 1 predictor and a Level 2 moderator variable. The associations between values and LS were tested at high (1 *SD* above the mean) and low (1 *SD* below the mean) values of HDI. To illustrate the relations between values and LS at high, average, and low levels of HDI, we plotted the obtained simple slope estimates of the 10 values (Figure 2). To facilitate interpretation, prior to the computation of these slope coefficients, all of the predictor variables and the dependent variable were standardized; this entails that the slope estimates can, for the evaluation of effect sizes, be interpreted as correlation coefficients.⁵

We expected that prosocial values would be positively related to LS in highly developed countries. Slopes analyses showed that in high HDI countries only benevolence and tradition were positively related to LS. Universalism (*p* = .09) and conformity (*ns*), had, as expected, a positive relation to LS, but slopes tests revealed that these relations were not significant. Thus, our hypothesis regarding the positive relation between social-focused values and LS in high HDI countries received only partial support. We also hypothesized that self-enhancement values would be negatively related to LS in highly developed countries. As expected, achievement and power values showed a negative association with LS in these countries. Security values did not show a statistically significant relation to LS and had a small negative slope.

In low HDI countries, we expected that person-focused values would show a positive relation with LS. Slope analyses (Figure 2) showed, as expected, that self-direction, stimulation, hedonism, and achievement were all positively related to LS (*p* < .01). Contrary to our hypothesis, the slope for power values (person-focused) was negative. However, consistent with our expectations, the social-focused values universalism, tradition, and conformity were all negatively associated with LS (all *p* < .01). Security values were also negatively related to LS.

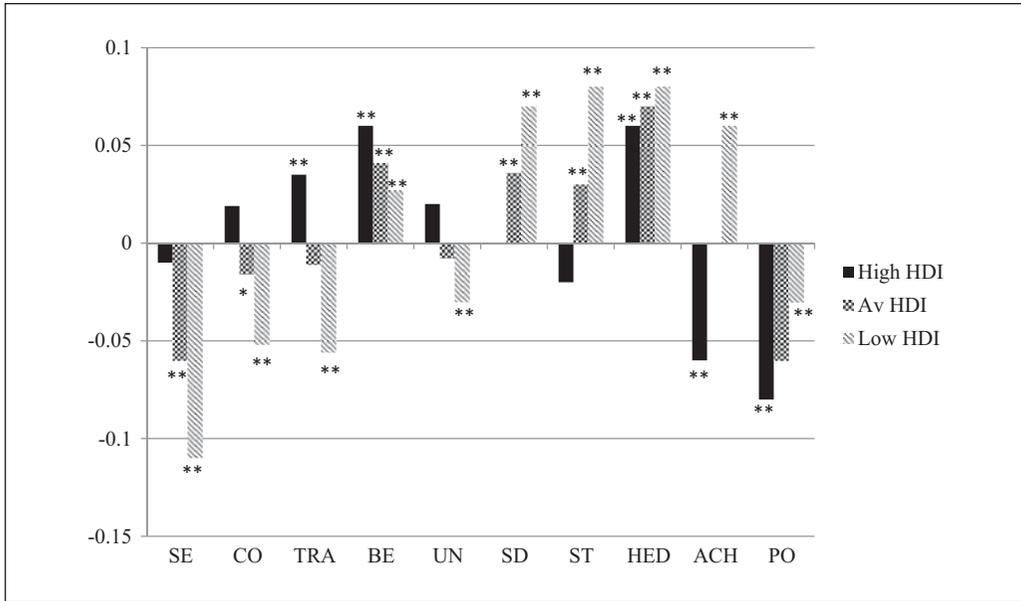


Figure 2. Multilevel slope estimates of the 10 values at high (+1 standard deviation), average (Av) and low (-1 standard deviation) levels of HDI (Human Development Index) in the prediction of Life Satisfaction.

Note. SE = security; CO = conformity; TR = tradition; BE = benevolence; UN = universalism; SD = self-direction; ST = stimulation; HE = hedonism; AC = achievement; PO = power.

* $p < .05$. ** $p < .01$.

Our hypothesis suggesting that openness to change values would be positively related to LS in low HDI countries was supported: the slopes for self-direction, stimulation and hedonism were, in low HDI countries, .07, .08 and .08, respectively. In high HDI countries, the corresponding slopes were .00 (NS), .02 (NS), and .06, respectively, and supported our assumption that these values would be less relevant in more stable contexts.

Four values showed similar relation to LS across countries: valuing hedonism or benevolence was consistently positively related to LS scores. Furthermore, valuing power or security was negatively related to LS in all countries.

Discussion

Previous research on the relationships between personal values and well-being has mainly focused on the main effects of values on well-being without paying careful attention to contextual effects. The results of the present research show that country-level HDI moderates the associations of 8 of the 10 personal values with well-being, with benevolence and hedonism values being the only exception.

In high HDI countries, we expected social-focused values to be positively related to LS. However, simple slope tests showed that in these countries, only benevolence and tradition were statistically significantly positively associated with LS. Nevertheless, the expected positive associations between the other two social-focused values, universalism and conformity, were almost statistically significant. Of the person-focused values, the self-enhancement values, showed, as expected, negative associations with LS, whereas the associations between the openness to change values and LS were, also as expected, very weak. In low HDI countries, the relations between social-focused values and LS were consistent with our expectations: all social-focused

values, except benevolence, were negatively related to LS. We further predicted that in these countries, person-focused values would predict higher levels of LS. Only power values contradicted this hypothesis, showing a negative association with LS.

Comparison of the associations between values and LS in high and low HDI countries shows that these associations were reversed for achievement and universalism (although the association between universalism and LS did not quite reach statistical significance in high HDI countries; Figure 2). The more general motives of personal progress and social concern are most clearly crystallized in achievement and universalism values, respectively. As expected, valuing equality, social justice, and the welfare of people in general (some of the central goals of universalism values) may decrease LS in more competitive and ruthless environments. In such environments, situations of inequality and social injustice are likely to be encountered frequently. This discrepancy between the reality that one encounters and the values that one adheres to may lead people adhering to universalistic values to report lower levels of LS. However, focusing on getting ahead (achievement) may be the best option in such environments.

The divergent associations of achievement values with LS could help explain why it has been theoretically conceptualized as a healthy (Bilsky & Schwartz, 1994; Sagiv et al., 2004) and anxiety-based value, presently located at the border zone of anxiety-based and growth values (Schwartz et al., 2012). Our findings are consistent with a previous study showing that achievement values are related to higher well-being in Iran—another low HDI country (Joshanloo & Ghaedi, 2009).

In low HDI countries, why do universalism and benevolence values show opposite associations with LS? Recall that benevolence values are mainly concerned with the well-being of close others. The ubiquitous relation of benevolence and LS is consistent with extensive research on the importance of close interpersonal relationships for well-being (Baumeister & Leary, 1995; Ryan & Deci, 2001; Ryff & Keyes, 1995).

Hedonism values had the strongest positive association with LS across high and low HDI countries. The circular structure of values suggests that the strength of associations between values and other outcome variables should follow a sinusoid curve (Schwartz, 1992). Any external variable would be expected to be associated similarly with values adjacent in the value structure, and associations with the external variable (in our case, LS) should decrease as one moves around the circle from the strongest positive to the strongest negative association (these should be located at opposite sides of the circle). As, shown in Figure 2, hedonism values do not comply with such a sinusoidal pattern. One reason for this could be that behaviors motivated by hedonism; that is, pursuing activities that lead to pleasure and gratification (Bardi & Schwartz, 2003), could ubiquitously lead to increases in positive affect. Positive affect, being a component of SWB (Diener, 1984) is across countries positively associated with LS (Kuppens, Realo, & Diener, 2008).

Power values also deserve special attention as the expected positive association with LS did not emerge in low HDI countries. Although power values share the self-oriented motivation of achievement values, they are directly focused on obtaining material rewards and dominance. There is a large body of research within SDT (Kasser, Ryan, Couchman, & Sheldon, 2004) that suggests that the motivational goals that power values represent are “extrinsic” (for a review on SDT, see Deci & Ryan, 1995; Ryan & Deci, 2001; Sagiv, et al., 2004) and therefore associated with higher anxiety and lowered well-being. The pursuit of power is contingent on attaining wealth and respect from others and could thus undermine personal autonomy and prevent individuals from focusing on more rewarding goals, such as cultivating oneself and one’s interpersonal and community relations (Ryan & Deci, 2001). Based on Dittmar’s (2008) ideas, we believe that in more developed nations material goods may be pursued with the illusion of overcoming identity deficits (e.g., appear successful in the eyes of others). By contrast, in less-developed countries the motivation for pursuing wealth may, for many people, and especially the most

disadvantaged ones, just be to provide for a living, and this may diminish the negative effects of the pursuit of wealth.

Finally, security values were negatively related to LS in high HDI countries. This is consistent with Schwartz's suggestion that security values, despite being located among the social-focused values, may not share the same prosocial motivations as conformity and tradition (Schwartz, 2006). Furthermore, there is quasi-experimental and longitudinal evidence suggesting that heightened adherence to security values may be a reaction to a perceived lack of security. That is, unsettling or stressful events, at a societal level (terrorist attacks; Verkasalo, Goodwin, & Bezmenova, 2006) and personal level (migration to another country; Lönnqvist, Jasinskaja-Lahti, & Verkasalo, 2011) have been shown to increase the importance of security values. Such increases in the importance of security values as a reaction to threatening events would suggest that high security values could be related to lower LS across cultures.

More generally, our results suggest that some of the relations between personal values and well-being are context-dependent, thereby supporting models in which the links between well-being and values are qualified by the particular environment (Diener & Diener, 1995; Diener et al., 2003; Sagiv & Schwartz, 2000). Our results are also in line with some recent research that has challenged the universality of value-attitude links by showing that macro-contextual variables influence such links (Boer & Fischer, 2013). However, we also found some consistent patterns of associations across countries: Focusing on the well-being of close others (benevolence), enjoying life (hedonism), and not attributing importance to material wealth (power) and personal safety (security) are associated with increased feelings of satisfaction.

Implications and Further Research

Similarity between an individual's values and the surrounding cultural value system has been argued to be associated with higher LS (e.g., Oishi et al., 1999; Sagiv & Schwartz, 2000). In light of our results, things might be more complicated. We reasoned and found that high openness to change values and low conservation values are associated with higher LS in more vulnerable and instable countries, marked, at least in the present sample, by being more oriented toward Embeddedness (Schwartz, 2006). The role of cultural values, however, needs to be further examined in samples including such less-developed countries that have not recently undergone the rapid social changes characteristic of former communist countries. Also pointing to the importance of a more heterogeneous sample of countries, cross-country agreement on the relative importance of the 10 basic values is very high in the ESS sample (Fischer & Schwartz, 2011). This could explain why Schwartz's cultural values dimensions failed, in the prediction of LS, to add to the predictive power of the HDI. Furthermore, the value-environment fit hypothesis should in future research be more directly examined by matching individual-level values with the cultural aggregate of these values.

The relations between values and LS emerged more consistently and strongly in low HDI countries. Two possible and related explanations may be put forward. First, the stronger relations between values and LS that emerged in former communist countries could be related to the tightness versus looseness cultural dimension. This dimension opposes countries that have many strong norms and a low tolerance of deviant behavior with those that have weak social norms and a high tolerance of deviant behavior. In terms of the tight versus loose dimension, Eastern European countries are the loosest countries in the world, whereas Western and Northern European countries are much tighter (e.g., Bulgaria, which ranked second lowest in HDI in the present study, was ranked highest in looseness in a 33-nation study, whereas Norway, ranked highest in HDI, was among the tightest nations, second only to Eastern Asia countries; Gelfand et al., 2011). As suggested by Roccas and Sagiv (2010), values may guide behavior more strongly in loose cultures, and this may in part explain why values are more strongly related to LS in

Eastern Europe. However, the cultural dimension of tightness versus looseness, although potentially helpful in explaining cross-cultural differences in the relative strength of associations between values and well-being, would be hard-pressed to account for the sign reversals found for instance, for universalism and achievement.

Another possible explanation builds on the result of Fischer and Boer (2011), according to which economic development brings greater well-being because it increases autonomy. The greater freedom of choice that people in highly developed nations encounter could allow individuals to choose those environments that they themselves feel are the most satisfying—those adhering to conservation values and those adhering to openness to change values may find ample opportunities to nurture their values. The freedom or opportunity to pursue any value could make the overall associations of values and LS weaker. Within-country analyses discriminating individuals living in different regions (e.g., big cities or small towns) could shed more light into these questions.

Limitations and Conclusions

One objection to our results could be the generally small effects values appear to have on LS. However, even if the effects are small, they compare quite favorably with other effects found in the literature on LS. A series of meta-analyses (Richard, Bond, & Stokes-Zoota, 2003), based on hundreds of studies, revealed that LS has most frequently been linked to amount of social activity, ethnicity, marital status, and gender, with effect sizes ranging from $r = .00$ (gender) to $r = .15$ (social activity).

Other limitations of the present study should also be acknowledged. First, the presented research is correlational in nature. Longitudinal studies would provide clearer evidence on causal relations between values and LS. However, we believe that the causality may be in the direction from values to LS. Values, although they do change (Bardi, Lee, Towfigh, & Soutar, 2009; Lönnqvist et al., 2011; Lönnqvist, Jasinskaja-Lahti, & Verkasalo, 2013), appear to be much more stable than is LS.

Another limitation refers to the specific characteristics of the HDI index, our country-level moderator. This index correlates highly with cultural values and wealth. Future analyses, conducted with a larger set of countries, could attempt to pry apart the effects of wealth and cultural value orientations. Although our analyses do not allow us to determine the relative importance of the various constituents of development, it is noteworthy that country-level value orientations did not predict LS when considered in conjunction with the HDI. Consistent with previous findings (Diener et al., 2012), this could be interpreted as implying the importance of the more material aspects of development for LS. Also regarding the HDI, another limitation was that all of the countries in our sample were high HDI countries. Including low HDI countries (e.g., developing countries with an HDI below .50) would be important in future studies.

As a final limitation and potential direction for future research, we wish to emphasize that reporting high satisfaction (“feeling good”) is not enough to account for the complex nature of personal well-being (cf. Nave, Sherman, & Funder, 2008). More specifically, several researchers (for a review, see Biswas-Diener, Kashdan & King, 2009) have called for an integration of hedonic and eudaimonic conceptions of well-being. Functioning well is generally defined in terms of fulfilling basic needs (Ryan & Deci, 2001), having positive interpersonal relations, autonomy, purpose, self-acceptance, and mastery (Ryff & Keyes, 1995). According to the present study, a perspective on human health and well-being which is deeply integrative should also include personal values as the link between individuals and the societies in which they function.

We started out by noting that SWB measures are presently being advocated as aids to inform public policy. This may not be entirely straightforward, as illustrated by our result regarding the

associations between personal values and well-being. Those personal values that contribute to personal well-being by helping people cope with and adjust to the system in the short term (e.g., achievement values in low HDI countries) might in the long run prove a poor strategy, as the happiest countries in the world, arguably suitable to be considered model societies, appear to be those in which self-enhancement values are negatively related to happiness.

Acknowledgements

We thank the anonymous reviewers who commented on this manuscript, Prof. Klaus Helkama and Prof. Shalom Schwartz for their comments on earlier presentations of this work, and Dr. Henrik Dobewall for his information and help with the European Social Survey.

Declaration of Conflicting Interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was supported by the Academy of Finland Research Grant 127641 and in part by The Finnish Doctoral Program in the Social Sciences Grant (SOVAKO).

Notes

1. A cultural emphasis on Autonomy encourages individual to cultivate and express their own preferences, feelings, ideas, and abilities. Opposite to Autonomy is Embeddedness, which emphasizes maintaining the status quo and restraining actions that might disrupt in-group solidarity or the traditional order. Also regulating the focus between self- and other-concern is the cultural value dimension of Egalitarianism versus Hierarchy. In egalitarian countries people are socialized to consider one another as moral equals and are expected to act for the benefit of others as a matter of choice. In hierarchical cultures the unequal distribution of power, roles, and resources is seen as legitimate and even desirable.
2. Neither data collectors, nor the data distributor (Norwegian Social Science Data Services) are responsible for the analysis or interpretation of results presented in this article.
3. Scores were obtained directly from S. H. Schwartz's data from Israel Social Sciences Data Center on May 2, 2006.
4. The results were virtually identical when we used group-mean centering for individual-level variables instead of grand mean centering.
5. The within-country correlations using raw data also showed a similar pattern of associations in high versus low HDI (Human Development Index) countries.

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