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The Value Structure in Socioeconomically Less Developed European Countries Still Remains an Ellipse

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Abstract

Based on the 21-item Human Values Scale of the European Social Survey (ESS, 2002–2006), Bilsky, Janik, and Schwartz (2011) concluded that the quasi-circular model of Schwartz's value theory "fits somewhat less well in less developed societies" (p. 16). This article focuses on their mitigating quantifier "somewhat" and proposes an impartial measure to evaluate Schwartz's universality claim. European Social Survey data of four rounds 2002–2008 (33 countries, 98 samples) were analysed. Applying restricted confirmatory factor analysis (CFA), we partitioned the 21 items' variance into an acquiescence part and the two diagonal axes of growth-protection and social-personal focused values. The variance in the growth–protection axis varied between 22.0% (Austria, in 2002) and 2.0% (samples from Romania, Turkey, Ukraine, Hungary, and Slovakia remain below 5%). Within rounds across countries (respective *df* = 94), the growth–protection axis' variance strongly correlates (r = .76) with an index of socioeconomic development, aggregated from five indicators adopted from the World Bank. It also strongly correlates (r = .81) with a sample's mean member's location on the growth vs. protection value dimension. We interpret these results as a strong effect and conclude that in socioeconomically less developed countries the value structure remains elliptical or even one-dimensional. The discussion relates the results to Klages' value synthesis theory.

Keywords: universality of the value structure, European Social Survey (ESS), Restricted Confirmatory Factor Analysis (CFA)

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Introduction

In the past, values have gone in and out of fashion in various disciplines of the social sciences (Hitlin & Piliavin, 2004, for a review). According to Smith, Bond, and Kagitcibasi (2006), there are, however, two dominant approaches to cross-cultural research: emic and etic. The former searches for cultural specifics and makes no assumptions about the generality of the findings. The latter assumes that studied phenomena are comparable and universal. Schwartz and Bilsky (1987; Schwartz, 1992) introduced a quasi-circular structure of personal values and proposed the model's universality across cultures. The model, presented in Figure 1, defines compatibilities and conflicts among ten proposed value types. Their motivational concerns are listed below (Schwartz, 2006a):

- *Universalism* (UN). Understanding, appreciation, tolerance and protection of the welfare of all people and of nature;
- *Benevolence* (BE). Preservation and enhancement of the welfare of people with whom one is in frequent personal contact;

- *Conformity* (CO). Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms;
- *Tradition* (TR). Respect, commitment and acceptance of the customs and ideas that the traditional culture or religion provide for the individual;
- *Security* (SE). Safety, harmony and stability of society, of relationships and of the individual;
- *Power* (PO). Social status and prestige, control or dominance over people and resources;
- *Achievement* (AC). Personal success through demonstrating competence according to social standards;
- *Hedonism* (HE). Pleasure and sensuous gratification for oneself;
- *Stimulation* (ST). Excitement, novelty, and challenge in life;
- *Self-direction* (SD). Independent thought and choice of action, creation, exploration.

Those values that are located close to each other are also preferred jointly as guiding principles in individuals' lives, whilst opposing values were perceived as conflicting and complementary. Therefore, the value types are grouped into two orthogonal higher-order dimensions.

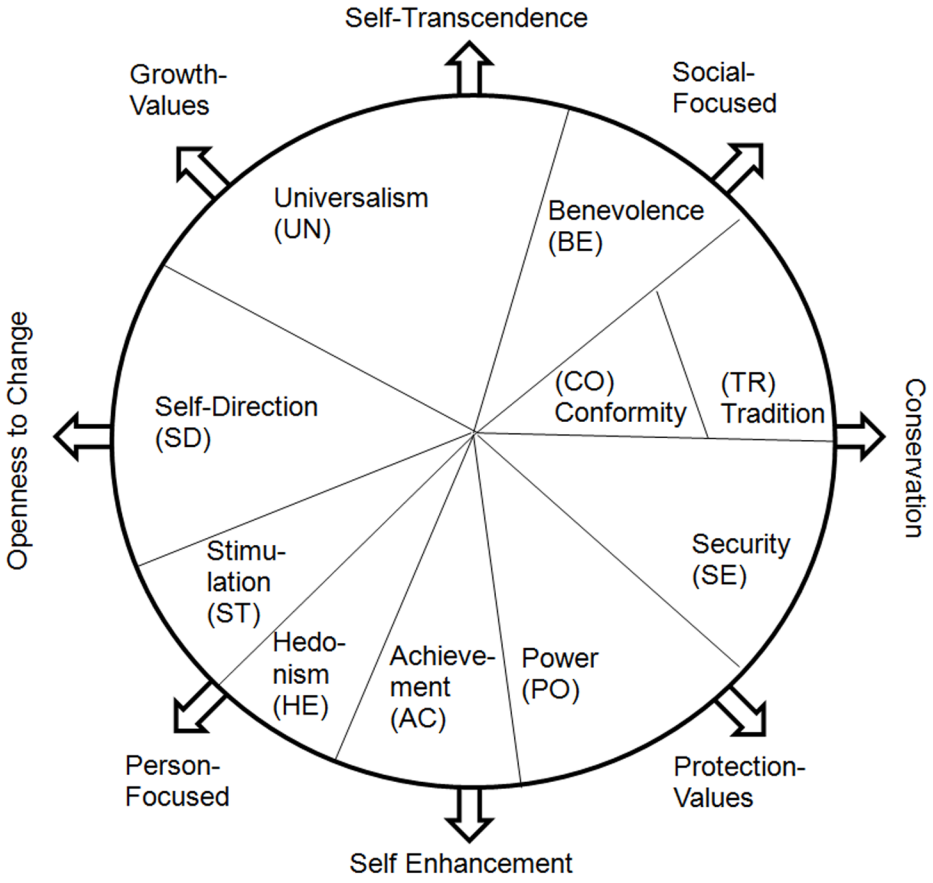

Figure 1. The Value Circle (structure of value types according to Schwartz, 1992, and diagonal axes according to Schwartz, 2006a).

Schwartz (1992) proposed the main axes of self-transcendence–self-enhancement and openness (to change)–conservation. In a circle, dimensions are allowed to rotate. The labels of diagonal axes were coined by

Schwartz (2006a) as personal vs. social values and protection vs. growth values (see also Fontaine, Poortinga, Delbeke, & Schwartz, 2008; Fischer, Milfont, & Gouveia, 2011).

Numerous papers confirmed the fit of the structure across different countries, value questionnaires and statistical procedures (e.g. Lindeman & Verkasalo, 2005; Schwartz & Boehnke, 2004; Schwartz, 2006a; Strack, 2005; Vecchione, Casconi, & Barbaranelli, 2009). A comparably smaller set of papers has criticized the model's fit to particular data sets (e.g. Hinz, Brähler, Schmidt, & Albani, 2005; Mohler & Wohn, 2005; Mohler, Rammstedt, & Wohn, 2006; Perrinjaquet, Furrer, Usunier, Cestre, & Valette-Florence, 2007). Davidov (2008) and Knoppen & Saris (2009) demonstrated the weakness of the short Human Values Scale (PVQ21, Schwartz, 2003) used in the European Social Survey (ESS, Jowell & Central Coordinating Team, 2003ff) for fitting the ten value types (the segments in Figure 1). The continuous dimensions are not affected by the segmentation problems. However, Steinmetz, Isidor, and Baeuerle (2012) recently conducted a meta-analysis based on 318 studies from around the globe, which used the PVQ or the full Schwartz Value Survey (SVS). They identified eight clusters of countries, out of which two – 'Eastern European ESS studies' and an 'Ambiguous cluster' – clearly fail to fit the quasi-circular structure. A graphical presentation of these clusters showed Universalism, Benevolence, Conformity, Tradition, and Security on one side of the structure and Power, Achievement, Hedonism, Stimulation, and Self-Direction on the other. The two country clusters showed a one-dimensional structure. We want to explore this unexpected finding systematically. We found, that within contemporary research on cross cultural assessment of values, a less perfect fit of the dimensionality of the values' structure in socioeconomically less developed countries, is a matter of serious debate:

Fontaine et al. (2008) analysed the 55 Schwartz Value Survey items in twofold samples (students / teachers) of 38 countries, using a multidimensional scaling procedure to test for structural equivalence. The configuration deviations per sample yielded a strong relation of β = -.879 to the developmental state of the country (controlled for sample type and the interaction term), which was even stronger for the teacher samples. An eyeball test showed that higher socioeconomically developed countries accentuated both diagonal axes of the circular structure, the person vs. social focus axis and the protection vs. growth axis. To control this interpretation with the raw data, Fontaine et al. (2008) constructed ad hoc scales. For the growth–protection diagonal axis they correlated the mean of 11 ipsated growth value items (e.g. broad minded) with the mean of 15 ipsated protection value items (e.g. preserving image). This growth–protection conflict within sample correlation ranged from r = -.7 to -.2 across samples and was strongly related to the country's development index (β = -.765, controlled for sample type and the interaction term).

Bilsky, Janik, and Schwartz (2011) analysed the shortened Portrait Values Questionnaire (PVQ21, Schwartz, 2003) data from three rounds of the European Social Survey (2002–2006) "with a focus on the universals in the content of human values and their structural organization"; applying confirmatory multidimensional scaling. They found, again, a strong relation of r = -.649 between a manually counted number of configuration deviations per country and the country's development index. Following the approach of Fontaine et al. (2008) of ad hoc scales, they chose five ipsated growth value items (e.g. listen to and understand different people) and seven ipsated protection value items (e.g. respect from others). The range of the growth–protection conflict was smaller within European samples (ad hoc scales within country correlations r = -.7 to -.4). Nevertheless, the within country growth–protection correlations were strongly related to a country's development index: r = -.852.

The results of the two studies set up the critical hypothesis that the less socioeconomically developed a culture is, the lower the fit of the two-dimensional structure of values, and especially the growth–protection values conflict. But, how severe might this relation be?

Already in the year 1995, Schwartz and Sagiv disclosed that the frequency of structural deviations depends on the geographical area from where the participants were pooled (Schwartz & Sagiv, 1995). That the structure is affected by socioeconomic development, nevertheless, is meanwhile repeatedly replicated with independent value instruments (Fischer, Vauclair, Fontaine, & Schwartz, 2010; Fischer et al., 2011; van de Vijver & Poortinga, 2002). The current debate, as we understand it, should focus on a consensual evaluation of the *strength* of the systematic deviances for socioeconomically less developed countries, because a value structure without a substantial growth–protection conflict would become mere one-dimensional.

Although Fontaine et al. (2008) called the variation in the growth-protection conflict their "most important finding" (p. 362), in the abstract they nevertheless concluded, in support of the model, that "the higher the level of societal development of a country, the greater the contrast between protection and growth values". Bilsky et al. (2011) once acknowledged that "the circular model fits somewhat less well in less developed societies" (p. 16) but, in the same manner, they concluded in the abstract: "Deviations […] are fewer and the contrast between protection and growth values is sharper in more developed societies". The affirmative wording seems inconspicuous. But, in our view, the reported findings and the conclusions drawn concerning the strength of the systematic deviances do not match. In other words, strong associations were found, but not more than a "somewhat" less fit was summarized.

Therefore, if the growth-protection axis is indeed less important - or even unimportant - in socioeconomically less developed countries, than the quasi-circular value structure would lose its universality. To evaluate this possibility, a quantitative measure of the growth-protection axis is needed, which leaves no room for doubt regarding the interpretation of its absolute size.

Aim of the Study

Our study first and foremost wants to propose a more direct measure for the fit of the two-dimensionality of Schwartz's value structure across countries.

The strength of the contrast between protection and growth values was measured by Fontaine et al. (2008) as well as by Bilsky et al. (2011) using a within-country correlation (Fisher's *z* transformed) of the mean of some ipsated protection value items with the mean of some ipsated growth value items. The correlations are conclusive but the potential of a confirmatory approach was not exhausted. Additionally, an artificial negative correlation can be expected for ipsated items and thus immunize a judgement on the general existence of the growth protection axis in socioeconomically less developed countries.

Given the large body of collaboratively collected knowledge on the structure of values, a more direct measure of the growth vs. protection axis' variance (as well as the person focused vs. social focused axis' variance) could be found.

We propose the estimation of the variance of both diagonal axes of the model in Figure 1 applying a restricted confirmatory factor analysis. Variance measures are commonly used and intelligible, facilitating a prospective consensual evaluation of the strength of the structural deviances for socioeconomically less developed countries.

Based on the results of the reviewed studies, we set up the critical hypothesis that the person focused vs. social focused values conflict is universal, but the growth vs. protection values conflict is not: the lower the socioeconomic development, the less pronounced the growth–protection axis variance within that culture (H1).

Society's socioeconomic development tends to encourage people to pursue growth (Bilsky et al., 2011; Schwartz & Sagie, 2000; Inglehart & Baker, 2000). From the relation of the growth-protection axis' variance to the mean location of the country's citizens on the growth-protection axis, a potential confounding factor emerges. Taken together, the variance of the growth-protection axis within a country could also be regressed on the mean location of the country`s participants on that growth-protection axis. Furthermore, the members' mean location on the growth-protection axis might mediate the path from socioeconomic development to the growth-protection axis' variance (H2).

Method

Data and Samples

Data from four rounds of the biannual European Social Survey (Jowell & Central Coordinating Team, 2003, 2005, 2007, 2009) were downloaded from the data archive and distributor of the ESS data, the Norwegian Social Science Data Services (NSD) (http://www.europeansocialsurvey.org/). The full sample includes 33 countries. As we had merged the ESS data files prior to the publication of the cumulative dataset ESS1-4e01 in February 2011 (ibidem), our file also includes data from Croatia (round 4), Iceland (round 2), Latvia (round 4), and Romania (rounds 3 and 4). The 33 countries times their participation rounds results in 98 samples.

Weighting Procedure

For analyses within samples, the design's weights were used. According to Ganninger (2007), computation of estimators of multiple rounds and multiple countries necessitates aggregation of the population weights by averaging them per country. We accounted for population weights and participation frequency when estimating the overall within samples PVQ21 correlation matrix. The latter was needed to estimate the overall empirical dimensions of the value circle, and to locate the samples' mean location on the main axes or on the diagonal axes. To account for the varying participation of the countries, the product of design weight and population weight was multiplied by a participation weight of 1/numbers of rounds a country participated in the PVQ21 assessment. To a country participating only once (e.g. Croatia, Iceland, and, regarding the PVQ21, also Italy and Luxembourg) a participating weight of 1.0 is assigned. A country participating twice (e.g. Bulgaria, Romania) receives a participating weight of 0.5. For three-round participation, the weight is 0.33 and a fully participating country receives 0.25. This weighting results in a net sample size of 65.753 cases, as would have been the case if one round with 33 countries had been conducted.

Measures

The PVQ21 (Schwartz, 2003) is a short version of a Portrayed Value Questionnaire (PVQ), which was introduced to measure values in a less abstract way than the SVS (Schwartz, 1992). Therefore, it is also applicable to respondents not used to answer questionnaires. The respondent rates how much each presented person does or does not like him or her. The wording of the 21 described portraits is adapted to the sex of the respondent (see Table A1). The rating ranges from 1 = "is very much like me" to 6 = "is not at all like me".

Country Members' Mean Importance of Growth Values

In order to estimate the mean importance of growth values per sample, and to avoid the debate about the 21 PVQ items' fit to a ten or to a seven segments structure (Davidov, 2008; Knoppen & Saris, 2009), we conducted an exploratory factor analysis of the correlation matrix of the adequately weighted data of the ipsated 21 items (similar to Dobewall & Strack, 2011).

Figure 2 depicts the factor loadings (documented in the appendix table), which follow the theoretical model (Figure 1). The two factors were saved and the means for each sample were plotted in Figure 3. To compute the sample members' means on the diagonal axes (social focused vs. person focused and growth vs. protection values), the extracted main dimensions of conservation and self-transcendence were rotated 45° via a respective ±.707 multiplier.

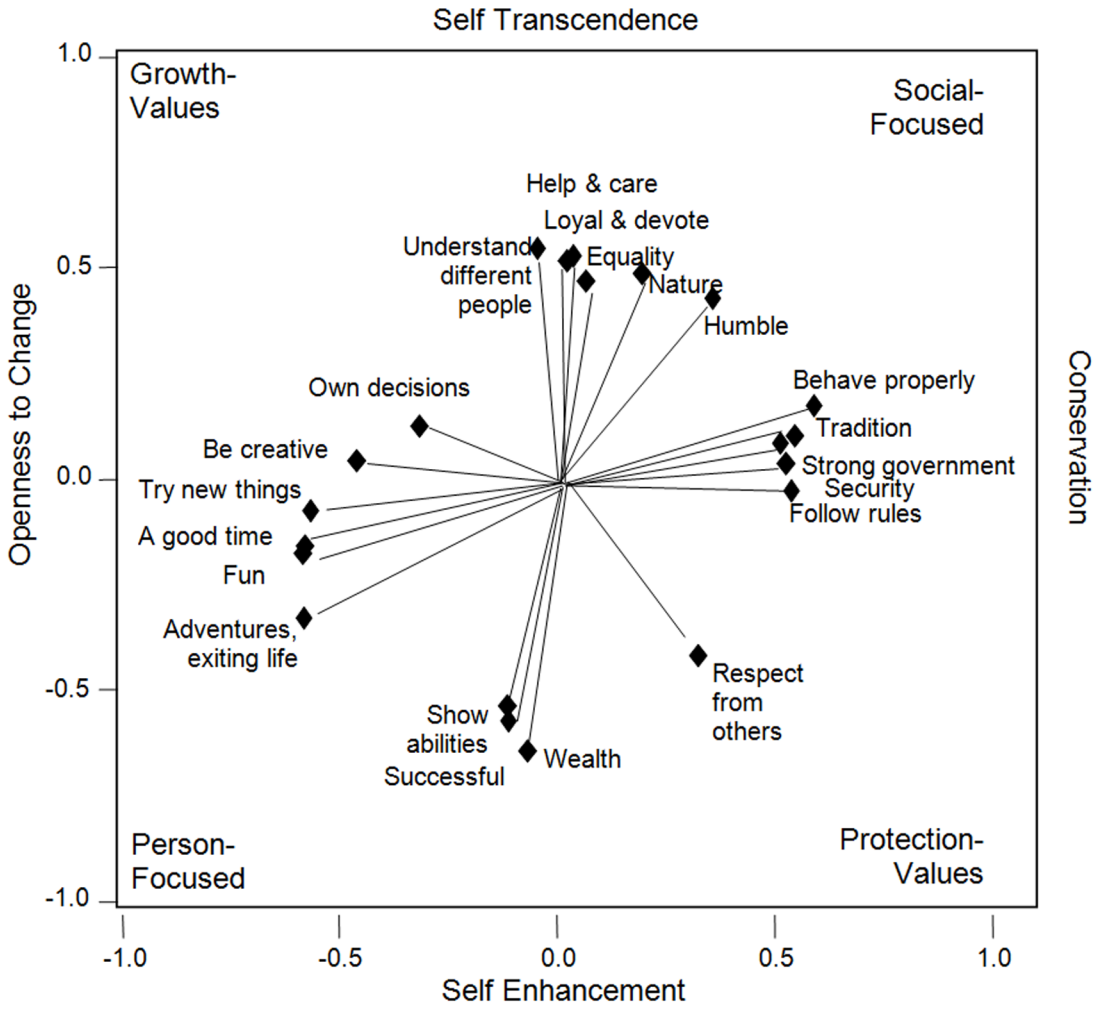

Figure 2. Factor loadings of the ipsated PVQ21 items.

The Index of Socioeconomic Development

To differentiate between the relatively homogeneous European countries, we selected five indicators from the World Bank Indicators (http://data.worldbank.org/indicator), for each of the four years the European Social Survey

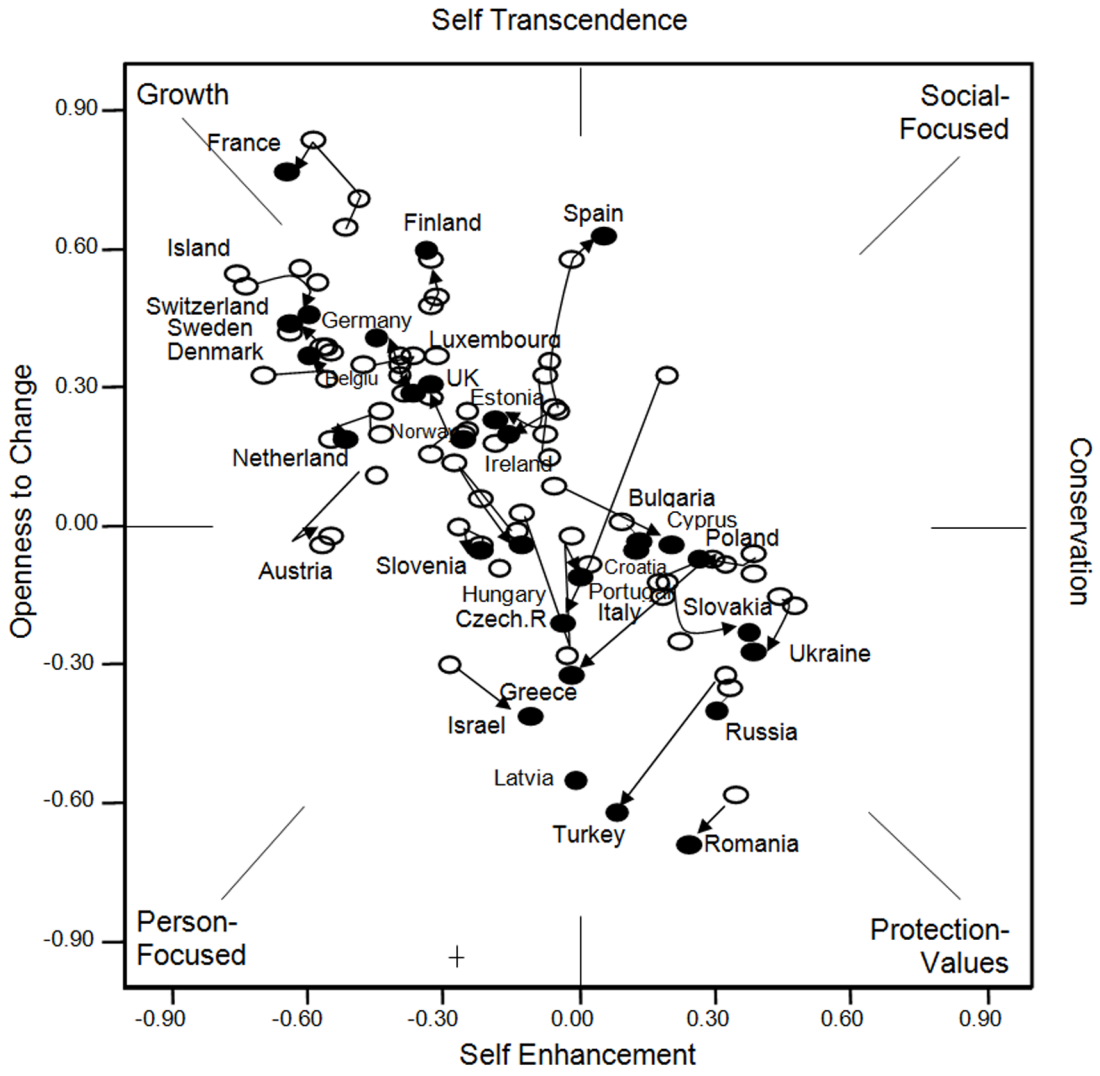

Figure 3. Location of the mean member of a sample in the value circle. Mean values per sample; axes from Figure 2; 98 samples from 33 countries; filled markers indicate ESS round 4, year 2008.

was conducted in: (1) Gross domestic product (GDP) per capita (current US$) (2) proportion of vulnerable employment (unpaid family workers and own-account workers as a percentage of total employment) (inversed), (3) proportion of seats held by women in national parliaments, (4) fixed broadband internet subscribers (per 100 people), and (5) positions in research and development (per million people). A common factor accounted for 62.11% of the total variance of the five indicators across the 98 samples; remaining eigenvalues amounted to less than 0.72. Z-standardization allowed for a consistent index of socioeconomic development (Cronbach's alpha = .846). It ranged from z = -2.01 (Turkey in ESS round 2, in 2004) to z = 2.12 (Sweden in EES round 4, in 2008). The development index correlated r = .779 with the mean members' importance of growth vs. protection values across samples (n = 98; and r = .761 within rounds, df = 94). A small correlation of r = .177 with the years of the survey validates the developmental content of the index. To account for this developmental trend, correlations of the dependent variables with the socioeconomic development index were additionally computed within the ESS rounds (df = 94).

Amount of Axes Variance Estimated by a Restricted Confirmatory Factor Analysis

In order to estimate the variance explained by a confirmatory model with three latent variables and restricted loadings, LISREL (Jöreskog & Sörbom, 1993) was used. The first latent variable assesses acquiescence applying fixed loadings of 1.0 for all 21 PVQ items. The coefficients for the loading restrictions of the second and third latent variables were derived from the correlations of the ipsated PVQ items with the models axes (Figure 2): Firstly, the loadings were rotated to match the diagonal axes and, secondly, projected onto the mathematical unit circle (see annexed table). With these fixed equations (df = 207) the amount of variance in each of the three latent variables was estimated from the raw correlations of the PVQ21 items for each of the 98 samples separately weighted by the design weight. Maximum Likelihood estimation was used and the sample sizes were set equal to 2000. The model satisfactorily fits the 98 correlation matrices with an average RMSEA = .078 (SD = .009).

Results

The confirmatory analysis estimated within sample acquiescence variance ranging from 12% (Belgium in ESS round 3, in 2006) up to 32% (Turkey in round 4, in 2008). The variance of the person focus vs. social focus value diagonal axis ranged from 10% (Turkey in round 4) to 29% (Slovakia in round 4). The variance of the growth vs. protection values diagonal axis reached a maximum of 22% for Austria in ESS round 1 (2002), but remained at a minimum of 2% for Turkey in round 4 (2008). Less than 5% of variance of the growth vs. protection axis was found in nine samples from five countries: in Hungary (round 1 and 4), Romania (round 4), Slovakia (round 4), Turkey (both participating rounds), and in Ukraine (all three participating rounds).

The three variance sources, although restricted to orthogonality within samples, correlated across samples: samples with a large acquiescence variance established only sparse variance on the critical growth-protection axis (r = -.709, see Table 1, and r = -.694 across countries within rounds; the person–social focus diagonal axis was unaffected, r < .10).

Table 1

Descriptive Statistics and Correlations (Countries Times Rounds, n = 98 Samples).

	M	*SD*	1	2	3	4	5	6	7
1 Development Index	0.00	0.78	1.000						
2 Growth-Protection Location	0.22	0.42	**.779**	1.000					
3 Personal-Social Location	-0.03	0.17	-.128	-.001	1.000				
4 Mean Rating (6: *not at all*)	2.77	0.18	.462	.414	.196	1.000			
5 ESS round (1-4, 2002-08)	2.61	1.10	.177	-.181	-.049	-.100	1.000		
6 CFA Acquiescence	18.82	3.81	**-.600**	**-.663**	-.037	-.296	.190	1.000	
7 CFA Growth vs. Protection	10.90	4.53	**.688**	**.819**	-.052	.292	-.227	**-.709**	1.000
8 CFA Person vs. Social focus	19.36	4.09	-.167	-.413	.389	.225	.088	-.009	-.258

Both within sample variance sources, the acquiescence as well as the growth vs. protection diagonal axis variance, were strongly related to the socioeconomic development index (r = -.600 and r = .688 across the 98 samples, and r = -.657 and r = .761 across countries within rounds, df = 94), as well as with the members' mean location on the growth–protection diagonal axis (pooled r = -.663 and .819, and within rounds r = -.652 and .813). Therefore, the less socioeconomically developed a country is and the closer its inhabitants are located towards the protection pole, the higher the acquiescence part in the answers to the 21 PVQ items and the less variation of members on the growth-protection axis. We accepted thus hypothesis H1.

Figure 4 impressively visualizes the dependence of the variance sources on the index of socioeconomic development as well as on the mean members' growth vs. protection location.

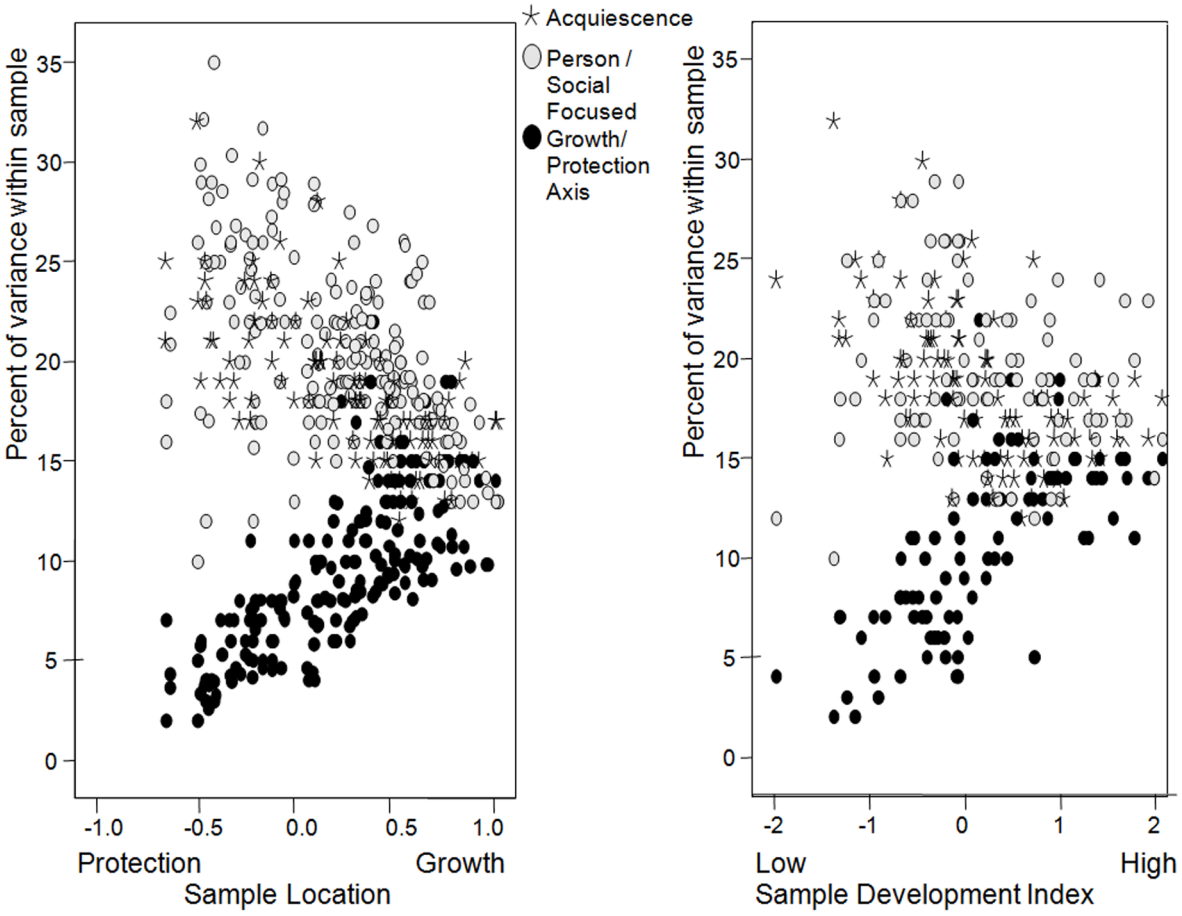

Figure 4. Plot of variance sources from CFA per sample with the mean location on the growth – protection values diagonal axis (left) and the socioeconomic development index (right).

Concerning the mediation hypothesis H2, the results are less clear. The Sobel ratio was significant (z = 6.48, se = 0.38, p < .001), a mediation was proven. But, in a hierarchical regression of the CFA variance in the growth-protection axis with the inclusion of the growth-protection location in the first step, the development index tended to add a further 0.6% of explained variance (F of change (1,95) = 1.90, p = .171). Thus, the mediation of the path from socioeconomic development to the growth-protection axis variance by the country's mean location within the circle was merely partial.

Discussion

This paper contributes to a debate on the universality of the value circle proposed by Schwartz (1992, 2011; Schwartz & Bilsky, 1987). We build on studies by Fontaine et al. (2008) and Bilsky et al. (2011) who found the conflict between growth and protection values to be less pronounced in socioeconomically less developed countries. Contrary to ours, both papers interpreted their findings as non-hazardous for the universality claim. The confirmatory

analysis presented in this paper allows no doubt about the absolute (un)importance of the growth-protection dimension in the participating European countries with a lower level of socioeconomic development.

We analysed the 21-item Human Values Scale (PVQ21) in four rounds (2002 – 2008) of the European Social Survey across 98 samples from 33 countries. The model directly estimates the variance of both diagonal axes as well as acquiescence. The results evidence a strong dependence of the growth–protection axis variance on the socioeconomic development index across samples (see Table 1). The person–social focused axis is not affected. Nine of the 98 samples, or five of the 33 countries, reached less than 5% of variance on the growth-protection axis. Given 21 items, 4.76% of variance equals an eigenvalue of 1.0. Thus, nearly a tenth of extended Europe – these samples are from Hungary, Romania, Slovakia, Turkey and Ukraine – studied by the ESS appear to miss a two-dimensionality of their value structure according to Kaiser's criteria. We played this game of numbers merely to sharpen the discussion about either the insignificance or the strength of the value structure's one-dimensional appearance in socioeconomically less developed countries. The results suggest that the conflict between social and personal focused values is indeed universal, whilst the distinction between growth and protection values is not.

Whereas consensus concerning the strength of the effect and, therefore, the rejection of the universality claim of the value circle are one outlook, the possible explanations seem less controversial. Fontaine et al. (2008) applied Schwartz's (1992) theory of underlying human problems that a society needs to solve. They tentatively interpret that inhabitants of less developed countries experience the conflict between individual growth and security values less frequently and less intensely as due to the proportion of agricultural and industrial labour force. Economically less developed, agricultural countries may not urge their members to ascertain their personal identity in between security and tolerance, or protection and growth. Also, Bilsky et al. (2011, pp. 15f) considered the value structure within a culture to be a consequence of opportunities and obligations to make and justify autonomous choices. Fischer et al. (2011) argued that growth values (e.g. preserving nature) would be interpreted, by people with limited individual resources, according to the instrumental importance in their lives (e.g. private health). These functionalist views bring to mind a Maslowian means-motives linkage.

On the one hand, a lack of socioeconomic development directly relates to lower mean importance of growth values for citizens of such countries (Schwartz & Sagie, 2000; Davidov et al., 2012), and lower country values of intellectual autonomy (Schwartz 2006b, 2011). The European countries with low means of growth value importance (right hand bottom of Figure 3), mostly pair a communist past with a weak civil society (e.g. Howard, 2002). Public participation needs inhabitants pursuing growth values.

On the other hand, within the socioeconomically lesser developed countries, the heterogeneity on that diagonal axis remained low too. Therefore the variance in the growth–protection dimension could be successfully regressed on the sample members' mean location on that axis. The associations were even stronger than for the socioeconomic development index (Table 1). The mean importance of growth vs. protection values was not used in the studies of Fontaine et al. (2008) and Bilsky et al. (2011), but both authors discussed the lesser importance of growth values on the cultural level as an explanation for the within countries' value structure. Furthermore, Schwartz (2007) explicitly used cultural level dimensions (e.g. egalitarianism) to predict the narrowness of "people's moral universe" (from universalistic over social focus values to security values). Consequentially, we applied the country member's mean of growth–protection values as a mediator of the socioeconomic development effect. A significant but incomplete mediation occurred.

However, the mean and variance relation still provides some uncertainty concerning hidden artefacts. Firstly, the growth–protection location was derived from the same data source as the axes' variance measures. We computed the location of each sample (Figure 3) based on 21 ipsated PVQ items by averaging the members' factor scores (Figure 2). Visually analogue cultural level country plots were derived by using multidimensional scaling procedures (Schwartz, 1999, pp. 36, 39; 2006b, p. 156). Thus, the differences between multidimensional scaling and factor analytical procedures should not be overrated. Similar to our approach, Vecchione et al. (2009) fitted a quasi-circular model to the ten scales of the PVQ40. They reported goodness of fit but did not look at the variance explained by the estimated latent variables.

Secondly, mean and variance relations often result from a ceiling or bottom effect. A simulated dummy respondent who always 'picked' the same numbers throughout the questionnaire is thereby located at a self-enhancement position of the value circle (conservation axis: -0.25, self-transcendence axis: -0.98, a similar location to the mean participant from Israel, Latvia, and Turkey in Figure 3). That region is inhabited by individuals from samples with a low socioeconomic development index. In samples with low socioeconomic development and low variance in the growth-protection axis, a large part of variance was explained by acquiescence (Table 1). Schwartz and Sagie (2000) did not separate the acquiescence, when they related sample means and sample standard deviations of the ten value types. Acquiescence expresses itself in homogeneous and positive correlations of the 21 items, due to participants with the tendency to rate most items equally (some respondents always pick a high, others a low number). Acquiescence reminds of the 'lack of test wiseness' hypothesis introduced by Fontaine et al. (2008) and resumed by Bilsky et al. (2011). As test wiseness is related to socioeconomic development, acquiescence additionally restricts the item variance explained by the growth-protection axis. The within subject differentiation between – per definition positive – values may become another indicator of development. Socioeconomic development (or democratization in the analysis of Schwartz & Sagie, 2000) allows some countries' members the rejection of security and protection values (see the correlations with the mean rating, row 4 in Table 1). Pursuing growth values requires disentanglement from social desirability in the sense of Schwartz et al. (1997). However, the path from socioeconomic development to growth-protection variance was stronger than that to the mean rating (Table 1).

Therefore, we return our thoughts to the model (depicted in Figure 5) with an elliptical or mere one-dimensional structure in socioeconomically less developed countries, and with the mean members' preference located near the protection values pole of the value circle, opposite to a two-dimensional structure in socioeconomically higher developed countries, and with the mean members' location near the pole of growth values.

Acceptance of this model challenges the universality of the value circle (see also Steinmetz et al., 2012; Fischer et al., 2011). Moreover, a theory might emerge, which will propose cultural pluralism as a consequence of development; pluralism not only concerning the importance of a single value type, as Schwartz and Sagie (2000) showed for a democratization index, but pluralism also in the sense of the numbers of dimensions respecting which members of a culture differ. In economically less developed countries, post-materialism seems to be, yet, needless (van de Vijver & Poortinga, 2002).

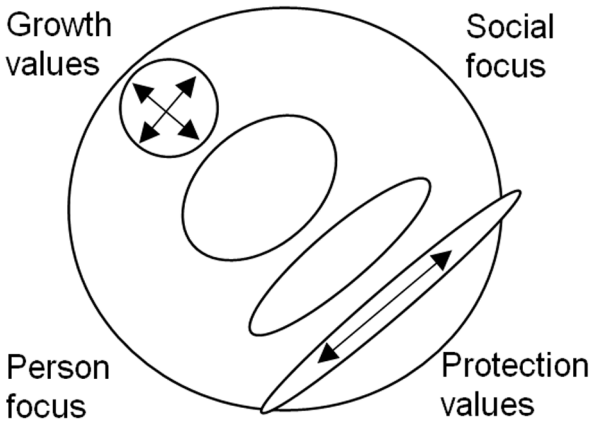

Figure 5. Schematic representation of the dimensionality of the value structure within a sample as a function of its mean location in the value circumplex.

After the historical societal segmentation became permeable and media influence homogenized world views, a new milieu differentiation based on values seems to be the result of modernization. Of the theorists studying value change, the German sociologist Helmut Klages (1984) applied this abstract rule and proposed a model of change by value synthesis. In the wording of the Schwartz's model, Klages' theory claimed that within Western cultures, some people have synthesized formerly complementary social focus values (e.g. justice) and personal focus values (e.g. self-direction). Or, when following the argumentation of Davidov et al. (2012), nature protection, as a formerly mere health related matter (protection), was synthesized with tolerance and equity values towards a universalism value cluster. A qualitative change in the value domain has occurred (cf., Fischer et al., 2011); the value synthesis is held responsible for the emergence of a second dimension in the value structure, resulting in the advent of a new region of growth values. Simultaneously, the so called third sector or civil society emerges. If this synthesis approach establishes itself, the next meander in cultural development might indeed be a synthesis of values which are, presently, still complementary in the Schwartz value circle. In some countries, a sphere of values will result. Therefore, the debate about the strength of the effect of socioeconomic development on the existence of the growth–protection axis and its consequences on theory building can become even more fascinating in future times.

References

Bilsky, W., Janik, M., & Schwartz, S. H. (2011). The structural organization of human values: Evidence from three rounds of the European Social Survey (ESS). *Journal of Cross-Cultural Psychology, 42*, 759-776. doi:10.1177/0022022110362757

Davidov, E. (2008). A cross-country and cross-time comparison of the human values measurements with the second round of the European Social Survey. *Survey Research Methods, 2*, 33-46.

Davidov, E., Dülmer, H., Schlüter, E., Schmidt, P., & Meuleman, B. (2012). Using a multilevel structural equation modeling approach to explain cross-cultural measurement noninvariance. *Journal of Cross-Cultural Psychology, 43*(4), 558-575.

Dobewall, H., & Strack, M. (2011). Cultural value differences, value stereotypes and diverging identities in intergroup conflicts: The Estonian example. *International Journal of Conflict and Violence, 5*, 211-223.

Fischer, R., Milfont, T.-L., & Gouveia, V. V. (2011). Does social context affect value structures? Testing the within-country stability of value structures with a functional theory of values. *Journal of Cross-Cultural Psychology, 42*, 253-270. doi:10.1177/0022022110396888

Fischer, R., Vauclair, C.-M., Fontaine, J. R. J., & Schwartz, S. H. (2010). Are individual-level and country-level value structures different? Testing Hofstede's legacy with the Schwartz Value Survey. *Journal of Cross-Cultural Psychology, 41*, 135-151. doi:10.1177/0022022109354377

Fontaine, J. R. J., Poortinga, Y. H., Delbeke, L., & Schwartz, S. H. (2008). Structural equivalence of the values domain across cultures: Distinguishing sampling fluctuations from meaningful variation. *Journal of Cross-Cultural Psychology, 39*, 345-365. doi:10.1177/0022022108318112

Ganninger, M. (2007). Weighting in the ESS cumulative data set: European Social Survey. Retrieved from http://ess.nsd.uib.no/ess/doc/Weighting_ESS_cumulative_data.pdf

Hinz, A., Brähler, E., Schmidt, P., & Albani, C. (2005). Investigating the circumplex structure of the Portrait Values Questionnaire (PVQ). *Journal of Individual Differences, 26*, 185-193. doi:10.1027/1614-0001.26.4.185

Hitlin, S., & Piliavin, J. A. (2004). Values: Reviving a dormant concept. *Annual Review of Sociology, 30*, 359-393. doi:10.1146/annurev.soc.30.012703.110640

Howard, M. M. (2002). The weakness of post-communist civil society. *Journal of Democracy, 13*, 157-169. doi:10.1353/jod.2002.0008

Inglehart, R., & Baker, W. E. (2000). Modernization, cultural change and the persistence of traditional values. *American Sociological Review, 65*, 19-51. doi:10.2307/2657288

Jöreskog, K. G., & Sörbom, D. (1993). *New features in LISREL 8*. Chicago: Scientific Software International.

Jowell, R., & Central Coordinating Team. (2003, 2005, 2007, 2009). *European Social Survey 2002/2003, 2004/2005, 2006/2007, 2008/2009* (Technical Reports). London: Centre for Comparative Social Surveys, City University.

Klages, H. (1984). *Wertorientierungen im Wandel* [Values in Change]. Frankfurt/Main: Campus-Verlag.

Knoppen, D., & Saris, W. E. (2009). Do we have to combine values in the Schwartz' Human Values Scale? A comment on the Davidov studies. *Survey Research Methods, 3*, 91-103.

Lindeman, M., & Verkasalo, M. (2005). Measuring values with the Short Schwartz Values Survey. *Journal of Personality Assessment, 85*, 170-178. doi:10.1207/s15327752jpa8502_09

Mohler, P. P., & Wohn, K. (2005). *Persönliche Wertorientierungen im European Social Survey* [Personal Values in the European Social Survey] (Working Report No. 2005/01). Mannheim: Zentrum für Umfragen, Methoden und Analysen (ZUMA).

Mohler, P., Rammstedt, B., & Wohn, K. (2006). The great value divide –Testing Hofstede's convergence assumption. In P. Ester, M. Braun, & P. Mohler (Eds.), *Globalization, value change, and generations* (pp. 251-272). Leiden, Netherlands: Brill.

Perrinjaquet, A., Furrer, O., Usunier, J.-C., Cestre, G., & Valette-Florence, P. (2007). A test of the quasi-circumplex structure of human values. *Journal of Research in Personality, 41*, 820-840. doi:10.1016/j.jrp.2006.10.006

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology, 25*, 1-65. doi:10.1016/S0065-2601(08)60281-6

Schwartz, S. H. (1999). Cultural value differences: Some implications for work. *Applied Psychology, 48*, 23-47. doi:10.1111/j.1464-0597.1999.tb00047.x

Schwartz, S. H. (2003). A proposal for measuring value orientations across nations. In *European Social Survey Questionnaire Development Report* (Chapter 7). Retrieved from http://www.europeansocialsurvey.org/index.php?option=com_docman&task=doc_view&gid=126&itemid=80

Schwartz, S. H. (2006a). Les valeurs de base de la personne: Théorie, mesures et applications [Basic human values: Theory, measurement, and applications] [English Ms from the author]. *Revue Francaise de Sociologie, 47*, 929-968.

Schwartz, S. H. (2006b). A theory of cultural value orientations: Explication and applications. *Comparative Sociology, 5*, 137-182. doi:10.1163/156913306778667357

Schwartz, S. H. (2007). Universalism values and the inclusiveness of our moral universe. *Journal of Cross-Cultural Psychology, 38*, 711-728. doi:10.1177/0022022107308992

Schwartz, S. H. (2011). Studying values: Personal adventure, future directions. *Journal of Cross-Cultural Psychology, 42*, 307-319. doi:10.1177/0022022110396925

Schwartz, S. H., & Bilsky, W. (1987). Toward a universal psychological structure of human values. *Journal of Personality and Social Psychology, 53*, 550-562. doi:10.1037/0022-3514.53.3.550

Schwartz, S. H., & Boehnke, B. (2004). Evaluating the structure of human values with confirmatory factor analysis. *Journal of Research in Personality, 38*, 230-255. doi:10.1016/S0092-6566(03)00069-2

Schwartz, S. H., & Sagie, G. (2000). Value consensus and importance: A cross-national study. *Journal of Cross-Cultural Psychology, 31*, 465-497. doi:10.1177/0022022100031004003

Schwartz, S. H., & Sagiv, L. (1995). Identifying culture-specifics in the content and structure of values. *Journal of Cross-Cultural Psychology, 26*, 92-116. doi:10.1177/0022022195261007

Schwartz, S. H., Verkasalo, M., Antonovsky, A., & Sagiv, L. (1997). Value priorities and social desirability: Much substance, some style. *The British Journal of Social Psychology, 36*, 3-18. doi:10.1111/j.2044-8309.1997.tb01115.x

Smith, P. B., Bond, M. H., & Kagitcibasi, C. (2006). *Understanding social psychology across cultures: Living and working in a changing world.* London: Sage.

Steinmetz, H., Isidor, R., & Baeuerle, N. (2012). Testing the circular structure of human values: A meta-analytical structural equation modelling approach. *Survey Research Methods, 6*, 61-75.

Strack, M. (2005). *Organizing diverse sets of data with the Schwartz´ Value Circle* [PowerPoint slides]. Retrieved from http://www.psych.uni-goettingen.de/de/team/strack/strack_files/Strack_2005_EASR.pdf

van de Vijver, F. J. R., & Poortinga, Y. H. (2002). Structural equivalence in multilevel research. *Journal of Cross-Cultural Psychology, 33*, 141-156. doi:10.1177/0022022102033002002

Vecchione, M., Casconi, T., & Barbaranelli, C. (2009). Assessing the circular structure of the Portrait Values Questionnaire: A confirmatory factor analysis approach. *European Journal of Psychological Assessment, 25*, 231-238. doi:10.1027/1015-5759.25.4.231

Appendix

Table A1

Loadings of ipsated items on the diagonal axes growth (vs. protection) and social (vs. personal) focus values and derived intersections of the unit circle used as restrictions in the CFA.

	Rotated loadings of the ipsated items		Projection onto the unit circle	
	Growth	**Social focus**	**Growth**	**Social focus**
1. Thinking up new ideas and being creative is important to him / her. He / She likes to do things in his / her own original way (SD).	-.362	.294	-.78	.63
2. It is important to him / her to be rich. He / She wants to have a lot of money and expensive things (PO).	.401	.501	.62	.78
3. He / She thinks it is important that every person in the world be treated equally. He / She believes everyone should have equal opportunities in life (UN).	-.291	-.380	-.61	-.79
4. It is important to him / her to show his abilities. He / She wants people to admire what he / she does (AC).	.295	.459	.54	.84
5. It is important to him / her to live in secure surroundings. He / She avoids anything that might endanger his safety (SE).	.341	-.399	.65	-.76
6. He / She likes surprises and is always looking for new things to do. He / She thinks it is important to do lots of different things in life (ST).	-.352	.453	-.61	.79
7. He / She believes that people should do what they're told. He / She thinks people should follow rules at all times, even when no one is watching (CO).	.397	-.362	.74	-.67
8. It is important to him / her to listen to people who are different from him / her. Even when he disagrees with them, he / she still wants to understand them (UN).	-.422	-.356	-.76	-.64
9. It is important to him / her to be humble and modest. He / She tries not to draw attention to him- / herself (TR).	-.054	-.557	-.10	-.99
10. Having a good time is important to him / her. He / She likes to 'spoil' him- / herself (HE).	-.303	.521	-.50	.86
11. It is important to him / her to make his / her own decisions about what he / she does. He / she likes to be free to plan and not depend on others (SD).	-.318	.133	-.92	.39
12. It is very important to him / her to help the people around him / her. He / She wants to care for their well-being (BE).	-.351	-.401	-.66	-.75
13. Being very successful is important to him / her. He / She hopes people will recognize his / her achievements (AC).	.323	.485	.55	.83

	Rotated loadings of the ipsated items		Projection onto the unit circle	
	Growth	Social focus	Growth	Social focus
14. It is important to him / her that the government insures his / her safety against all threats. He / She wants the state to be strong so it can defend its citizens (SE).	.299	-.425	.58	-.82
15. He / She looks for adventures and likes to take risks. He / She wants to have an exciting life (ST).	-.184	.642	-.28	.96
16. It is important to him / her always to behave properly. He / She wants to avoid doing anything people would say is wrong (CO).	.293	-.541	.48	-.88
17. It is important to him / her to get respect from others. He / She wants people to do what he / she says (PO).	.522	.066	.99	.13
18. It is important to him / her to be loyal to his / her friends. He / She wants to devote him- / herself to people close to him / her (BE).	-.351	-.381	-.68	-.74
19. He / She strongly believes that people should care for nature. Looking after the environment is important to him / her (UN).	-.212	-.484	-.40	-.92
20. Tradition is important to him / her. He / she tries to follow the customs handed down by his / her religion or his / her family (TR).	.310	-.459	.56	-.83
21. He / She seeks every chance he / she can to have fun. It is important to him / her to do things that give him / her pleasure (HE).	-.294	.538	-.48	.88

Note. For item's abbreviation see Figure 1 and 2.

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