

## How culture specific values relate to universal ones: Human value orientations assessed by the Austrian Value Questionnaire as compared to the Schwartz Value Survey

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The Austrian Value Questionnaire (AVQ), designed to assess culture specific values of Austrian society, was administered together with the Schwartz Value Survey (SVS), which claims to assess universal values, to a representative Austrian sample ( $N = 421$ ). Principal Components Analysis (PCA) of both questionnaires confirmed that they measure distinct dimensions. Five factors represented values from the AVQ, 3 those from the SVS. In spite of different dimensionality, we expected that each of the AVQ scales would be able to predict specific SVS scales. By use of structural equation modeling, this hypothesis was confirmed for 3 of the 5 AVQ scales. The results indicate that culture specific and universal instruments measure separable, though overlapping, value constructs.

*Key words:* human values, culture, measurement, validity, SEM

According to Schwartz (1992), human “values (1) are concepts or beliefs, (2) pertain to desirable end states or behaviors, (3) transcend specific situations, (4) guide selection or evaluation of behavior and events, and (5) are ordered by relative importance” (p. 4). In addition, Schwartz (1992) as well as Schwartz and Bilsky (1987) postulated that the content and dimensionality of values would be similar worldwide. In fact, when translating the Schwartz Value Survey (SVS) and administering it in 20 countries, Schwartz (1992) found a universal structure of values in most parts of the world. Meanwhile, this structure has been confirmed by additional analyses in 61 countries (Schwartz & Bardi, 2001).

### *The Schwartz Value Survey (SVS)*

Based on previous studies by Schwartz and Bilsky (1987, 1990), Schwartz (1992) postulated ten types of values and

operationalized them by 56 marker items. These value types were analysed by multidimensional scaling (MDS), a method which permits a two-dimensional graphical representation of similarities in a set of variables. The ten value types are:

1. *Self-Direction*: This value type includes creative and exploring aspects, a striving for autonomy and an independent way of thinking and acting.
2. *Stimulation*: In this case the motivational goals are stimulation, exciting life challenges and thrilling experiences aiming at an optimal degree of arousal.
3. *Hedonism*: This type implies the tendency to satisfy egoistic personal desires and to lead a pleasurable life.
4. *Achievement*: Values pertaining to this type demonstrate knowledge and competence in order to obtain social approval.
5. *Power*: Here, social recognition is pursued but in addition, a dominant position linked with wealth and public image is aimed at.
6. *Security*: This type of values includes individual and group aspects of safety and harmony.
7. *Conformity*: Values of this type emphasize the necessity to keep from harming or upsetting others, thus complying with social standards.
8. *Tradition*: In this case, the importance of preserving customs, culture and religion is addressed.
9. *Benevolence*: These values have a uniquely personal nature regarding the well-being of friends and family.

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The data used in this study were also used for a preliminary analysis by Renner (2003b). Part of these data was used by Renner, Salem & Al-exandrowicz (2004) and Renner & Salem (2004).

10. *Universalism*: This type has a broader focus and pertains to the protection and well-being of humanity and nature.

Each item is rated on a Likert type scale ranging from -1 (Opposed to my values) to 7 (extremely important) with regard to its importance as a personal guiding principle. The German version of the SVS was obtained from Shalom Schwartz; according to him (Personal Communication, February 16, 2001), only part of the SVS items are used on an individual level of assessment, the remaining SVS items being used on a cultural level only.

Schmitt, Schwartz, Steyer, and Schmitt (1993) reported reliabilities between .70 and .90 for the SVS scales and considerable evidence has been accumulated towards the validation of the questionnaire. For example, Schwartz, and Bardi (2001) used the SVS successfully in order to predict vocational and consumer decisions, delinquency, and religious behavior in different cultures; on the basis of the SVS, Barnea and Schwartz (1998) predicted voting decisions and Schwartz, Sagiv, and Boehnke (2000) as well as Boehnke, Fuß, and Rupf (2001) confirmed hypotheses about different kinds of worries and specific value orientations.

#### *The Austrian Value Questionnaire (AVQ)*

As values are acquired through socialisation (Scholl-Schaaf, 1975; Schwartz, 1994), they can be expected, however, to vary between one culture and another (Hofstede, 1984; Triandis, 1995). Berry, Poortinga, Segall, & Dasen (1992) have pointed out that mere translations of questionnaires rarely account for the specific facets of foreign cultures. Regarding human values, Renner, Peltzer, and Phaswana (2003) as well as Myambo and Renner (2003) have shown in comparison with Renner (2003a) that content and dimensionality of values differ considerably between western and non-western cultures. With the objective of compiling culture specific taxonomies of human values, in a number of recent studies, the Lexical Approach has been employed successfully (Aavik & Allik, 2002, for Estonia; Renner, 2003a, for Austria; Renner & Myambo, submitted, for Egypt; Renner, Peltzer, & Phaswana, 2003, for Northern Sotho, an indigenous language in the Republic of South Africa). Similarly, on a lexical basis, value related concepts like virtues (Cawley, Martin, & Johnson, 2000) and philosophical terms, so-called "isms" (Saucier, 2000) were analysed in the United States of America.

Originally based on Francis Galton's assumptions, the Lexical Approach holds that "those individual differences that are most salient and socially relevant in people's lives will eventually become encoded into their language" (John, Angleitner, & Ostendorf, 1988, p. 174). Accordingly, the Big Five factors of personality were established and replicated in many countries of the world (de Raad, 2000). On the other hand, the Lexical Approach may also be instru-

mental in detecting culture specific facets of individual differences.

Based on the Lexical Approach and starting from the German language taxonomy of values by Renner (2003a), Renner (2003b) constructed the Austrian Value Questionnaire (AVQ), designed to assess culture specific values of Austrian culture. The AVQ comprises the following scales and subscales:

*Scale 1 (Intellectualism)* consists of two subscales, Open-Mindedness (1.1) and Culture (1.2). Whereas Open-Mindedness emphasizes a broad knowledge of the world and a tolerant point of view towards foreign nations, Culture focusses on the cultural heritage of Austria. *Scale 2 (Harmony)* addresses an inner and outer equilibrium. This scale emphasizes the importance of getting on well with other people in general (2.1, Community) and one's family (2.2, Family). Subscale 2.3 (Love of Life) addresses an inner state of harmony and well-being. *Scale 3 (Religiosity)* is made up of spiritual values. Whereas Faith (3.1) comprises "fundamentalistic" values which pertain to religious duties, Grace (3.2) deals with the promise of salvation and redemption of sins. *Scale 4 (Materialism)* addresses economic concepts: Subscale 4.1 (Property) emphasizes wealth and prosperity, whereas subscale 4.2 (Success) focusses on vocational advancement. 4.3 (Hedonism) comprises self-centered values with a materialistic connotation. *Scale 5 (Conservatism)* has to do with three different facets of societal adjustment: The values subsumed by 5.1 (Nationalism) refer to a person's love to his or her home country, whereas 5.2 (Defense) pertains to one's willingness to self-defense and the defense of one's nation. Finally, subscale 5.3 (Duty) addresses concepts referring to a person's readiness to discharge his or her duties.<sup>1</sup>

The construction of the AVQ was described in detail by Renner (2003b). The basis of the questionnaire was the Austrian taxonomy of 383 nouns describing human values, which had been selected from a lexicon of the German language (for details of this procedure see Renner, 2003a). Subsequently, these terms were rated by a close to representative sample of 1165 respondents with respect to their subjective importance as values. Principal component analyses with varimax rotations of these ratings yielded five orthogonal scales and 13 subscales. On the basis of an item analysis, taking item difficulties, factor loadings and item-total correlations into account, a set of 54 marker items for the scales and subscales of the AVQ was extracted. Each

<sup>1</sup> Naming dimensions and scales always is a somewhat arbitrary task and alternative names can be discussed. For example, with respect to the somewhat negative connotation of the term "Nationalism", it has been suggested to replace the name of Scale 5.1 by "Patriotism". In order to avoid confusion, however, the original scales names which have been used in a number of previous publications pertaining to the AVQ, are retained.

item has to be rated on a 5-point Likert type scale, ranging from "Extreme Disapproval" to "Extreme Approval". Reliabilities (Cronbach's  $\alpha$ ) for the scales reach from .85 to .97, those for the subscales reach from .67 to .97 (Salem & Renner, 2004).

Salem and Renner (2004) mostly confirmed the construct validity of the AVQ by testing hypotheses about the values preferred by criterion groups (e.g. priests and nuns, students of psychology and economics etc.) as compared to the general population. Similarly, Renner (2003b) and Renner, Salem, and Alexandrowicz (2004) have shown that values as measured by the AVQ are able to predict political, religious and health related attitudes.

The culture specific approach of the Austrian Value Questionnaire is not meant to question the universal one by Schwartz and Bilsky (1987) and Schwartz (1992), but it intends to supplement universal conceptions of human values by a more differentiated procedure which takes into consideration additional facets: For example, in our opinion, the Schwartz Value Survey does not sufficiently account for religious or nationalistic values which are typical for German speaking countries as well as for the cultural heritage considered to be important to many people living there. Thus, not surprisingly, most Pearson correlations between the scales of the SVS and those of the AVQ are, although significant, not impressively high. These correlations were reported by Renner (2003b) and are shown in Table 1.

Intellectualism (AVQ scale 1) is correlated highest with Universalism and Self-Direction, and Harmony (AVQ scale

2) has its highest correlations with Conformity, Benevolence, Universalism and Security. AVQ Scale 3 (Religiosity) is correlated substantially with Tradition. For Materialism (AVQ scale 4), the highest correlations with the SVS are those with Hedonism and Achievement, and Conservatism (AVQ scale 5) is correlated highest with Conformity and Security. In order to take response sets into account, Schwartz (1992) suggested to compute partial correlations, when correlating the SVS scales with other instruments and to control for the total score obtained in the SVS. Not surprisingly, however, when using this method, even lower correlations resulted. Therefore, in Table 1, Pearson correlations are given.

Still, differences as well as similarities should be taken into consideration and, in spite of some divergences, culture specific and universal values can be expected to overlap to some degree. In the present study, therefore, by more sophisticated methods than Pearson correlations can provide, we wanted to assess, to what degree the scales of AVQ and SVS measure different or similar constructs.

Starting from the pattern of correlations given in Table 1, this study was based on the following hypotheses. First, with respect to the theoretical assumption that the AVQ measures culture specific values whereas the SVS measures universal ones, and considering the overall low level of correlations between the two instruments, we expected that the AVQ items and the SVS items would constitute separate scales when employing multivariate methods of analysis. Second, taking the few more substantial correlations between the

Table 1  
Pearson correlations of the AVQ and the SVS scales (N = 421)

	1. Intellectualism	2. Harmony	3. Religiosity	4. Materialism	5. Conservatism	1.1 Open-Mindedness	1.2 Culture	2.1 Community	2.2 Family	2.3 Love of Life	3.1 Faith	3.2 Grace	4.1 Property	4.2 Success	4.3 Hedonism	5.1 Nationalism	5.2 Defence	5.3 Duty
CONF	.11*	.28**	.25**	.12*	.33**	.10*	.10*	.27**	.24**	.17**	.25**	.23**	.10*	.11*	.10*	.31**	.21**	.30**
TRAD	.09	.14**	.45**	-.04	.28**	.08	.08	.18**	.12*	.03	.45**	.42**	-.05	-.01	-.04	.30**	.14**	.18**
BENE	.23**	.25**	.21**	.12*	.19**	.22**	.16**	.21**	.17**	.23**	.21**	.20**	.12*	.09	.10*	.15**	.12*	.22**
UNIV	.34**	.28**	.23**	.09	.18**	.32**	.28**	.21**	.20**	.27**	.22**	.23**	.05	.10*	.07	.19**	.08	.16**
SELF	.32**	.18**	.00	.27**	.06	.29**	.29**	.09	.06	.27**	-.01	.03	.18**	.27**	.22**	.04	.06	.09
STIM	.23**	.11*	-.01	.24**	.05	.22**	.18**	.06	-.06	.25**	-.02	.02	.12	.26**	.21**	.09	.02	-.05
HED	.11*	.11*	-.13*	.39**	.05	.10*	.10*	.03	-.01	.24**	-.13*	-.10*	.28**	.28**	.41**	.03	.10*	.01
ACHIE	.16**	.18**	.06	.38**	.21**	.14**	.15**	.12*	.08	.22**	.06	.05	.29**	.37**	.30**	.19**	.14**	.19**
POW	.01	.06	.10*	.28**	.23**	-.01	.05	.06	.00	.09	.09	.11*	.22**	.27**	.22**	.22**	.19**	.11*
SEC	.11*	.29**	.16**	.24**	.36**	.09	.12*	.20**	.25**	.23**	.16**	.15**	.25**	.16**	.18**	.31**	.31**	.29**

Note. \*  $p < .05$ ; \*\*  $p < .01$  (Two-tailed). CONF = Conformity, TRAD = Tradition, BENE = Benevolence, UNIV = Universalism, SELF = Self Enhancement, STIM = Stimulation, HED = Hedonism, ACHIE = Achievement, POW = Power, SEC = Security. Reprinted with permission from Renner (2003b).

two questionnaires into account and considering the meanings and content of the respective scales, we expected that each of the AVQ dimensions would be able to predict *certain* SVS value types: In detail, we hypothesized that

- Scale 1 (Intellectualism) would predict Universalism and Self-Direction (Hypothesis 2.1),
- Scale 2 (Harmony) would predict Conformity, Benevolence, Universalism and Security (Hypothesis 2.2),
- Scale 3 (Religiosity) would predict Tradition (Hypothesis 2.3),
- Scale 4 (Materialism) would predict Hedonism and Achievement (Hypothesis 2.4),
- Scale 5 (Conservatism) would predict Conformity and Security (Hypothesis 2.5).

## METHOD

### *Participants*

421 respondents, 221 women and 200 men, who were recruited by a public opinion research institute all over Austria, participated. This sample was representative for the adult population of Austria with respect to gender, age, education as well geographical aspects.

### *Measures*

The participants received the Austrian Value Questionnaire (AVQ; Renner, 2003b) as a measure of culture specific Austrian values and subsequently in the same session the Schwartz Value Survey (SVS; Schwartz, 1992) as a measure of universal values.

## RESULTS

In order to test the first hypothesis and to assess whether the two questionnaires measure similar or separated constructs we performed a principal components analysis (PCA) with Varimax rotation of both questionnaires taken together. Second hypothesis was tested by structural equation modeling (SEM) using AMOS 4.0 (Arbuckle & Wothke, 1999). Although the scales did not deviate severely from univariate normality, the assumption of multivariate normality was not fulfilled. Thus, according to West, Finch, and Curran (1995), the conventional  $\chi^2$  statistic would have underestimated model fit. Therefore, we decided in advance to assess approximate fit by Comparative Fit Index (CFI; Bentler, 1990) and Incremental Fit Index (IFI; Bollen, 1989), as these indices have been reported to yield correct estimations of model fit even in cases of severe non-normality (West et al., 1995). We determined model fit by the criteria suggested by Bentler (1990).

The scree test was employed to determine the number of components, and these were the first 15 eigenvalues: 18.3, 10.2, 7.6, 5.1, 4.1, 3.2, 2.8, 2.2, 1.9, 1.7, 1.6, 1.5, 1.4, 1.3, 1.3. Although a seven factor solution seems possible, eight factors were extracted because the eighth factor still yielded substantial loadings. A nine factor solution also was considered. In this case, however, on the ninth factor only negligible loadings were achieved. The eight factors explained a total of 53.5% of the variance. The factor loadings pertaining to eight factor solution are given in the Appendix.

As we used Varimax rotation, the factors are uncorrelated. It might be argued that an orthogonal solution cannot account well for the dimensions of the SVS as these are correlated with each other. Therefore, in the second analysis, we used Direct Oblimin rotation, in order to achieve oblique dimensions. These results, however, did not differ substantially from the orthogonal solution.

As can be seen from the Appendix, AVQ items had their highest loadings almost exclusively on Factors 1, 4, 5, 6 and 7 and respectively, only SVS items had their principal loadings on Factors 2, 3 and 8. Thus, the results of the principal component analysis suggest that AVQ and SVS measure distinct constructs, which are quite different from each other. From the table in the Appendix it is also evident that the five independent dimensions of the AVQ were replicated to a large extent. With very few exceptions, the AVQ items had their principle loadings on the expected dimensions, which clearly resemble the five AVQ scales. For the SVS, however, the dimensions found did not reflect the scales of the instrument. Factor 2 comprised values pertaining to social adjustment in a broad sense, Factor 3 mostly comprised value concepts that related to self-assertion, personal gain and economic advantage, whereas Factor 8 addressed the well-being of society as a whole.

In the next step, in order to test the predictions of our second hypothesis, for each of the AVQ dimensions, we formulated structural equation models. With respect to *Intellectualism* (AVQ scale 1), according to Hypothesis 2.1, Intellectualism was modelled as an exogenous variable, and *Open-Mindedness* (AVQ Scale 1.1), *Culture* (AVQ Scale 1.2), as well as SVS Universalism and SVS Self-Direction were modeled as endogenous variables. In that case, however, model fit was poor (CFI = 0.843; IFI = 0.844). Thus, alternatively, the measurement model shown in Figure 1 was examined. Here, Self-Direction was not included as an endogenous variable.

In this model<sup>2</sup>, all hypothesized path coefficients were significant (C. R. > 1.98), and an IFI = .904 as well as a CFI = .904 were achieved. Only two residuals were allowed to correlate as they pertained to items with almost identical wordage and meaning (Erkenntnis/understanding - Erkenntnisfähigkeit/ability to understand).

<sup>2</sup> In all the figures, for the error terms the estimated error variance is indicated

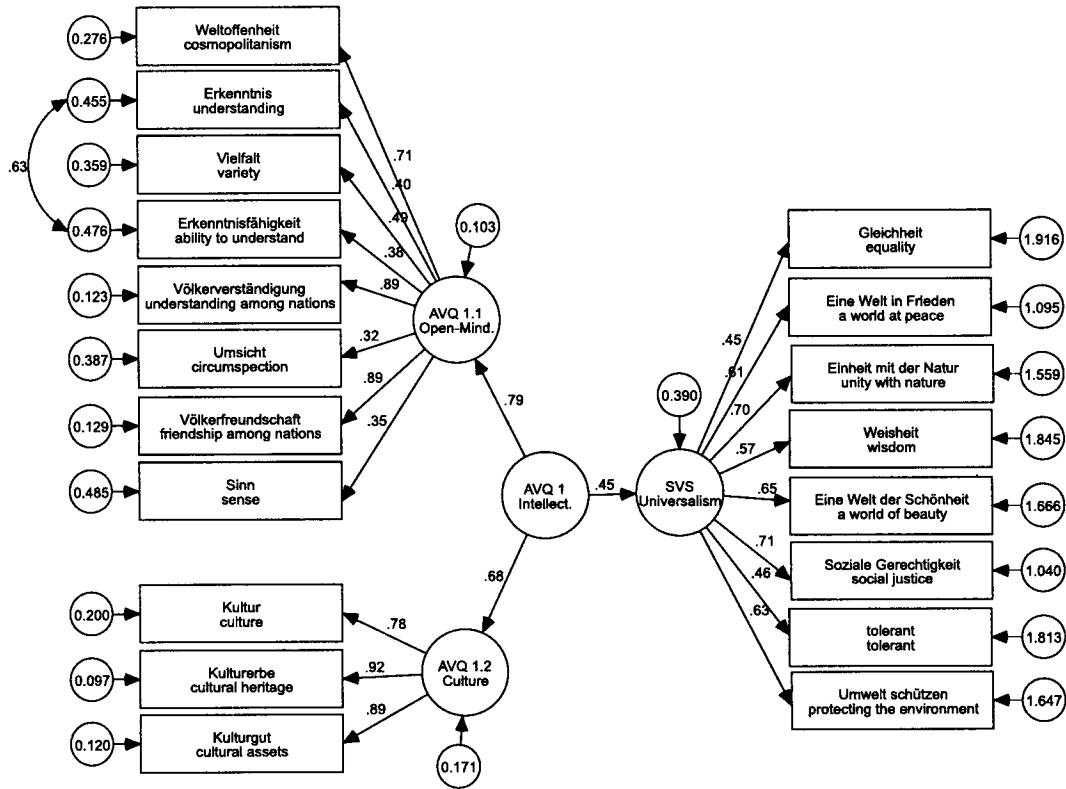


Figure 1. Structural equation model of Intellectualism (AVQ Scale 1) predicting Universalism (SVS) (Standardized Path Coefficients)

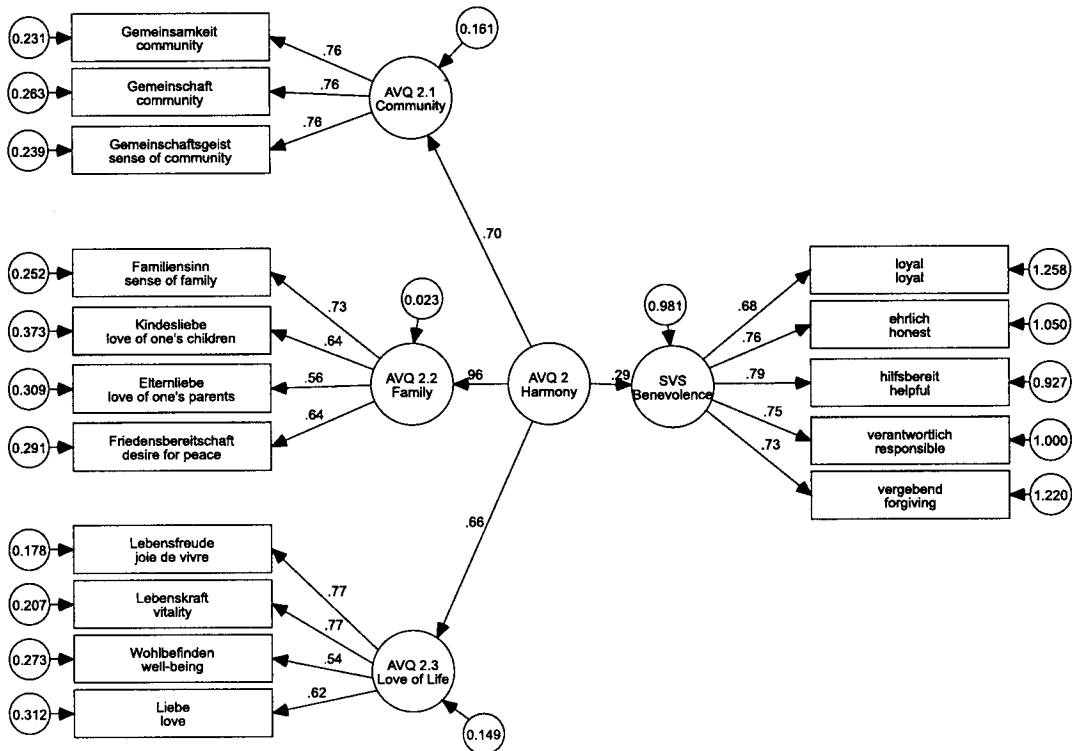


Figure 2. Structural equation model of Harmony (AVQ Scale 2) predicting Benevolence (SVS) (Standardized Path Coefficients)

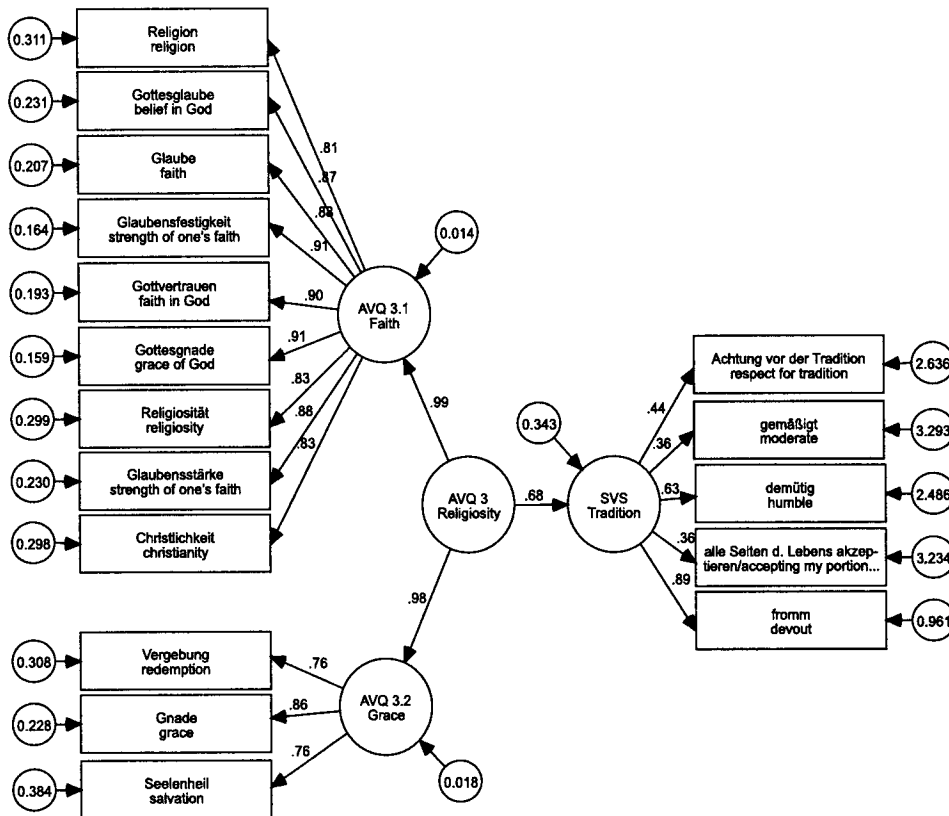


Figure 3. Structural equation model of Religiosity (AVQ Scale 3) predicting Tradition (SVS) (Standardized Path Coefficients)

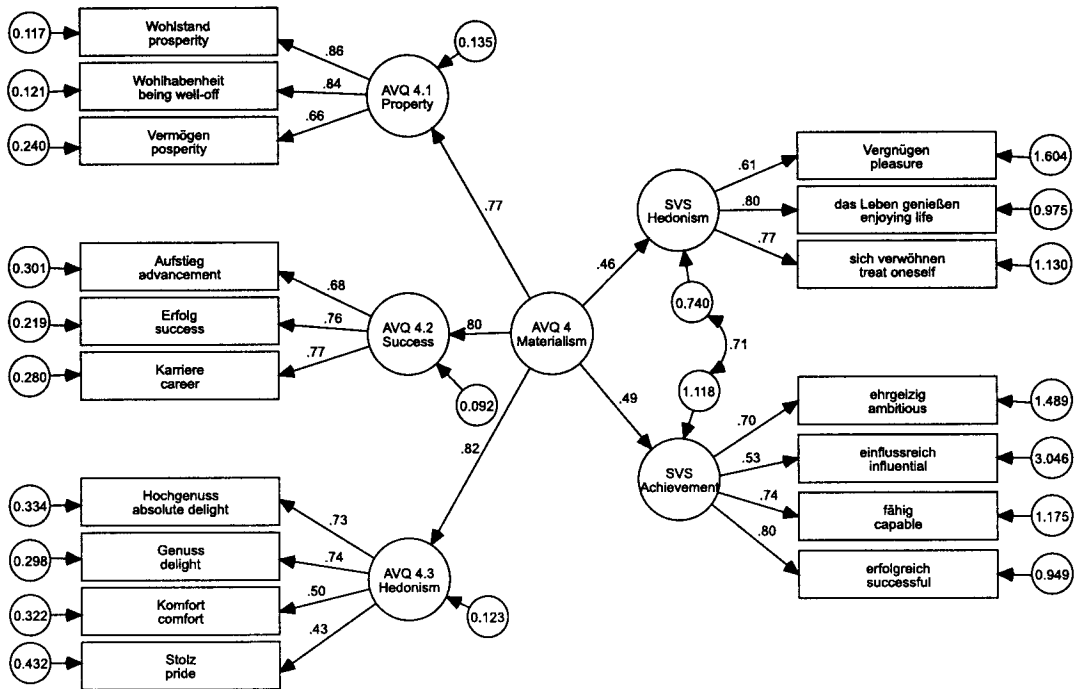


Figure 4. Structural equation model of Materialism (AVQ Scale 4) predicting Hedonism and Achievement (SVS) (Standardized Path Coefficients)

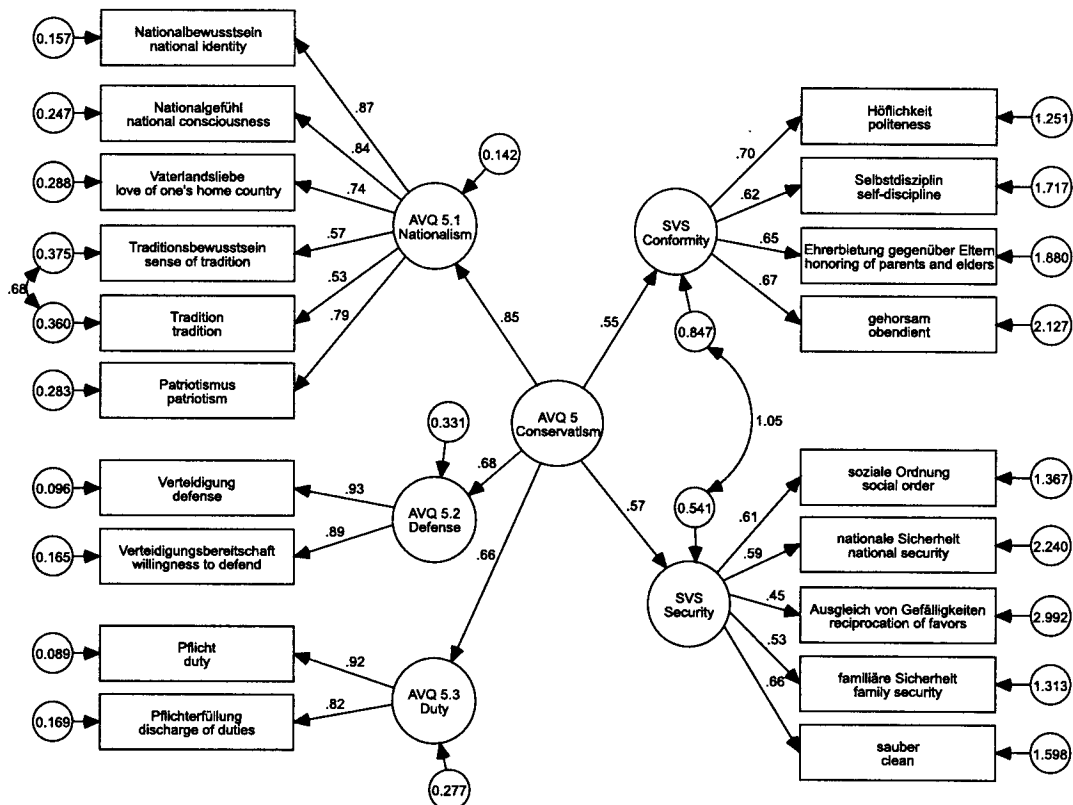


Figure 5. Structural equation model of Conservatism (AVQ Scale 5) predicting Conformity and Security (SVS) (Standardized Path Coefficients)

Hypothesis 2.2 expected that *Harmony* (AVQ Scale 2) would predict the subscales Community (2.1), Family (2.2) and Love of Life (2.3) as well as the SVS scales Conformity, Benevolence, Universalism and Security. In spite of a considerable number of modifications, the corresponding Structural Equation Model had an extremely poor fit: CFI = 0.815, IFI = 0.817. As, from our point of view, the meaning and content of AVQ Harmony best resembled to SVS Benevolence, in a next step we tested the structural equation model which is shown in Figure 2.

This model assumed that AVQ Scale 2 (Harmony) would predict SVS Benevolence. Here, approximate fit was achieved (CFI = 0.931, IFI = 0.932) and all hypothesized paths were significant.

Pertaining to *Religiosity*, in Hypothesis 2.3 we expected that AVQ Scale 3 would predict Tradition from the SVS. We tested this assumption by the structural equation model shown in Figure 3.

Again, for the hypothesized model, approximate fit was achieved (CFI = 0.902, IFI = 0.902), although exact fit could not be reached. All the path coefficients for the hypothesized paths were significant.

We had further hypothesized (Hypothesis 2.4) that AVQ Materialism would be able to predict SVS Hedonism and Achievement. The corresponding structural equation model is given in Figure 4.

With all hypothesized paths being significant, for this model approximate fit could also be achieved after one modification (CFI = 0.911, IFI = 0.912). The two structural error terms, those related to latent SVS Hedonism and Achievement constructs, were allowed to correlate. Improvement of the model after inclusion of this path indicates the existence of significant residual covariance between the two latent variables not explained by AVQ Materialism construct.

With respect to Hypothesis 2.5, we expected that AVQ Conservatism would be able to predict SVS Conformity and Security. The corresponding structural equation model is shown in Figure 5.

All hypothesized paths were significant, but again some modifications were necessary in order to achieve approximate fit (CFI = 0.908, IFI = 0.908). The items Traditionsbewusstsein/sense of tradition and Tradition/tradition, whose error terms had to be allowed to correlate, are almost identical in their meanings.

## DISCUSSION

By confirming Hypothesis 1 we have shown that both questionnaires measure different constructs and the overall structures of values obtained by the AVQ and the SVS differ to a considerable extent. This result is in line with our theoretical assumption that the SVS accounts for universal, whereas the AVQ does so for culture specific values of Austrian society.

On the other hand, the similar meaning and content of some AVQ and SVS scales as well as the significant Pearson correlations between them suggested that it should be possible to predict the test scores of certain SVS scales from the AVQ. This second hypothesis was confirmed by testing structural equation models for three of the five AVQ scales: According to Hypothesis 2.3, AVQ Religiosity predicted SVS Tradition: People who believe in God, who are religious and have a strong faith and who are likely to believe in redemption of sins and salvation, can be expected to have "respect for tradition", to be "moderate", "humble" and "devout" and to accept their "portion in life". Still, AVQ Scale 3 emphasizes religious issues, which are expressed by German nouns in a culture specific way. SVS Tradition, on the other hand, focusses on societal adjustment in general; thus, the two scales are related but by no means identical. Similarly, by confirming Hypothesis 2.4, we have shown that AVQ Materialism predicted SVS Hedonism and Achievement: People who emphasize "prosperity", "success" and "delight" probably will also be in favor of "enjoying life", having "pleasure" and being "influential". Hypothesis 2.5 was also confirmed, as AVQ Conservatism predicted SVS Conformity and Security: Endorsing values like "national identity" and "patriotism", "defense" and "duty", goes along with favoring "self-discipline", "national security" and being "obedient". As opposed to the universal values Conformity and Security in the SVS, however, the corresponding AVQ scales, especially 5.1 Nationalism, deal with facets of values which are typical of German speaking countries. In German speaking society, items like "Nationalgefühl" (national consciousness) or "Vaterlandsliebe" (love of one's home country), typically are endorsed by people who adhere to a right-wing ideology, which does not apply to the same extent to English speaking countries or non-Western cultures.

Hypotheses 2.1 and 2.2 were not confirmed, but Intellectualism (AVQ Scale 1) predicted SVS Universalism. Thus, people who are in favor of "cosmopolitanism", "friendship among nations" and "culture", also tend to emphasize "a world at peace", "tolerant" and "protecting environment". However, contrary to expectations, Intellectualism did not predict Self-Direction, and values like "freedom", "creativity" or "independent" pertain to a different construct. Similarly, Harmony (AVQ Scale 2) predicted SVS Benevolence, but not SVS Conformity, Universalism and Security.

We respect to model fit, in none of the models exact fit was achieved. As outlined above, this may be due to the fact the assumption of multivariate normality was not fulfilled. As can be seen from all the figures, quite clearly in the case of the SVS error variances are considerably larger than in the case of the AVQ. This may be explained by the fact that the AVQ has been constructed specifically for Austrians on a factor-analytic basis, while the SVS is only the German translation of the original English version. Thus, compared to the original SVS sample, many concepts may have been understood in a somewhat different way by the Austrian participants.

Of course, when interpreting the results it should be taken into account that, in some cases, the relevant path coefficients are quite low, although overall model fit can be deemed acceptable. For example, as shown in Figure 2, Harmony predicted Benevolence, but the path coefficient was only .29, suggesting only a small degree of conceptual similarity of the concepts investigated.

The same phenomenon, error variances being considerably larger for the SVS items than for the AVQ items was observed with respect to the models pertaining to hypotheses 2.1 and 2.2, which yielded extremely poor fit. Although the path coefficients leading from the exogenous to the endogenous variables were significant in these cases, the models as a whole were unacceptable and thus the hypotheses were rejected.

Considering differences as well as similarities, the results obtained for Hypotheses 1 and 2 suggest that universal values, as measured by the SVS, and culture specific ones, as measured by the AVQ, differ with respect to some facets and have other aspects in common. It should be kept in mind, however, that structural equation modeling only suggests that certain concepts can be predicted from others. As we have shown by item examples, this does not mean, however, that the concepts in question are highly similar. On the contrary, in spite of some overlap between the culture specific and the universal measure, both pertain to separable, distinct facets of human values.

This study mostly confirmed the factorial validity of the Austrian Value Questionnaire. As far as principal components analysis (PCA) is concerned, in the present sample, with the exception of Scale 2.3 (Love of Life) and two items pertaining to Scale 1.1 (Open-Mindedness), all other items had their highest loadings on the expected dimensions. In accordance with Spini (2003), who mostly replicated the SVS dimensions by SEM in student samples from 21 countries, the structural equation models in the present study indicated factorial validity of the SVS scales employed. By PCA, however, mixed results were obtained, whereas Gendreau, Dupont and Schwartz (1992) had mostly confirmed Schwartz and Bilsky's (1987) value dimensions by PCA in a Swiss student sample. One possible explanation might be that Schwartz (1992) had also used student and teacher



samples, whereas in the present study a representative sample of the population was employed. Renner (2003b) has outlined on the basis of empirical data that value concepts may be understood differently by respondents with high vs. low educational levels, and more research in this respect is advocated.

Altogether, the results suggest that it makes sense to differentiate culture specific values from universal ones. As culture specific values reflect to some degree the universal ones, and vice versa, not surprisingly, there is some overlap in their meanings and content. Still, with respect to their different dimensional structure, they are distinct theoretical constructs and should be operationalized separately.

## REFERENCES

- Aavik, T., & Allik, J. (2002). The structure of Estonian personal values: A lexical approach. *European Journal of Personality, 16*, 221-235.
- Arbuckle, J. L., & Wothke, W. (1999). *Amos 4.0 user's guide*. Chicago: Smallwaters Corporation.
- Barnea, M. F., & Schwartz, S. H. (1998). Values and voting. *Political Psychology, 19*, 17-40.
- Bentler, P. M. (1990). On the fit of models to covariances and methodology to the bulletin. *Psychological Bulletin, 112*, 400-404.
- Berry, J. W., Poortinga, Y. H., Segall, M. H., & Dasen, P. R. (1992) *Cross-cultural psychology. Research and applications*. Cambridge, MA: Cambridge University Press.
- Boehnke, K., Fuß, D., & Rupf, M. (2001). Values and well-being: The mediating role of worries. In P. Schmuck & K. M. Sheldon (ed.) *Life goals and well-being. Towards a positive psychology of human striving* (pp. 85-101). Seattle u.a.: Hogrefe.
- Bollen, K. A. (1989). A new incremental fit index for general structural equation models. *Sociological Methods and Research, 17*, 303-316.
- Cawley, M. J., Martin, J. E., & Johnson, J. A. (2000). A virtues approach to personality. *Personality and Individual Differences, 28*, 997-1013.
- De Raad, B. (2000). *The Big Five personality factors*. Seattle: Hogrefe.
- Gendre, F., Dupont, J. B., & Schwartz, S. H. (1992). Structure du questionnaire de valeurs de Schwartz [Structure of the Schwartz questionnaire for values]. *Schweizerische Zeitschrift für Psychologie, 51*, 128-134.
- Hofstede, G. (1984). *Culture's consequences. International differences in work related values*. (2nd ed.). Beverly Hills, CA: Sage.
- John, O. P., Angleitner, A., & Ostendorf, F. (1988). The lexical approach to personality: a historical review of trait taxonomic research. *European Journal of Personality, 2*, 171-203.
- Myambo, K., & Renner, W. (2003). Human values in Egypt: A lexical approach. In C. Harb (Chair) Comparative social psychological studies in the Middle East. *Symposium presented under the auspices of the International Association for Cross-Cultural Psychology*. Middle East/North Africa Regional Conference of Psychology, Dubai, United Arab Emirates, 13<sup>th</sup> to 18<sup>th</sup> December 2003.
- Renner, W. (2003a). Human values: A lexical perspective. *Personality and Individual Differences, 34*, 127-141.
- Renner, W. (2003b). A German value questionnaire developed on a lexical basis: Construction and steps toward a validation. *Review of Psychology, 10*, 107-123.
- Renner, W., & Myambo, K. (submitted). Value dimensions in Egyptian society: A lexical analysis.
- Renner, W., Peltzer, K., & Phaswana, M. G. (2003). The structure of values among Northern Sotho speaking people in South Africa: A lexical study. *South African Journal of Psychology, 33*, 103-108.
- Renner, W., & Salem, I. (2004). Unterschiede zwischen Wertorientierungen nach Geschlecht, Alter, Berufsgruppe, Parteienpräferenz und Bundesland: Ergebnisse der Standardisierung des Österreichischen Wertfragebogens [Differences of value orientations by gender, age, profession, preference for political parties and county: Results of the standardization of the Austrian Value Questionnaire]. *ZA-Informationen, 54*, 89-112.
- Renner, W., Salem, I., & Alexandrowicz, R. (2004). Human values as predictors for political, religious and health related attitudes: A structural equation approach to validate the Austrian Value Questionnaire (AVQ). *Social Behavior and Personality, 32*, 477-490.
- Salem, I., & Renner, W. (2004). Do human values reflect job decisions, and prosocial and antisocial behavior? A contribution towards validating the Austrian Value Questionnaire by group comparisons. *Psychological Reports, 94*, 995-1008.
- Saucier, G. (2000). Isms and the structure of social attitudes. *Journal of Personality and Social Psychology, 78*, 323-331.
- Schmitt, M. J., Schwartz, S., Steyer, R., & Schmitt, T. (1993). Measurement Models for the Schwartz Values Survey. *European Journal of Psychological Assessment, 9*, 107-121.
- Scholl-Schaaf, M. (1975). *Werthaltung und Wertsystem. Ein Plädoyer für die Verwendung des Wertkonzeptes in der Sozialpsychologie* [Values and value system. A plea for the use of the value concept in social psychology]. Bonn: Bouvier.
- 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.
- Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values? *Journal of Social Issues*, 50, 19-45.
- Schwartz, S. H., & Bardi, A. (2001). Value hierarchies across cultures. Taking a similarities perspective. *Journal of Cross-Cultural Psychology*, 32, 268-290.
- Schwartz, S. H., & Bilsky, W. (1987). Toward a universal psychological structure of human values. *Journal of Personality and Social Psychology*, 53, 550-562.
- Schwartz, S. H., & Bilsky, W. (1990). Toward a theory of the universal content and structure of values: Extensions and cross-cultural replications. *Journal of Personality and Social Psychology*, 58, 878-891.
- Schwartz, S. H., Sagiv, L., & Boehnke, K. (2000). Worries and values. *Journal of Personality*, 68, 309-346.
- Spini, D. (2003). Measurement equivalence of 10 value types from the Schwartz Value Survey across 21 countries. *Journal of Cross-Cultural Psychology*, 34, 3-23.
- Triandis, H. C. (1995). *Individualism and collectivism*. Boulder, CO: Westview Press.
- West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with nonnormal variables: Problems and remedies. In R. H. Hoyle (ed.) *Structural equation modeling. Concepts, issues, and applications* (pp. 56-75). Thousand Oaks, CA: Sage.

## APPENDIX

Factor loadings of AVQ (a) and SVS (s) items in combined factor analysis of both questionnaires (loadings exceeding .30 are shown in bold type)

German value term	English translation	Scale	1	2	3	4	5	6	7	8
a18 Gottesgnade	grace of God	3.1	.90	.05	.02	.11	-.02	.04	.04	.04
a14 Glaubensfestigkeit	strength of one's faith	3.1	.89	.04	.03	.14	-.05	.01	.09	.04
a19 Gottvertrauen	faith in God	3.1	.88	.06	-.01	.11	-.03	.06	.02	.04
a17 Gottesglaube	belief in God	3.1	.87	.08	-.08	.08	-.06	.06	.04	.05
a15 Glaubensstärke	strength of one's faith	3.1	.87	.09	.05	.15	-.01	.00	.06	.01
a13 Glaube	faith	3.1	.85	.04	.02	.09	-.09	.07	.11	.04
a2 Christlichkeit	Christianity	3.1	.83	.05	.01	.12	.03	.06	.08	.07
a36 Religiosität	religiosity	3.1	.83	.01	.03	.08	-.07	.10	.12	.06
a16 Gnade	grace	3.2	.82	.05	.08	.10	-.08	.08	.07	.02
a35 Religion	religion	3.1	.81	.01	-.04	.09	-.01	.13	.18	.05
a37 Seelenheil	salvation	3.2	.75	.03	.10	.03	-.01	.15	.13	.01
a44 Vergebung	redemption	3.2	.74	.01	-.04	.15	-.05	.18	.10	.07
s51 fromm	devout	Trad	.61	.36	.21	.17	-.21	-.09	.07	.09
s45 ehrlich	honest	Bene	.04	.77	-.14	-.01	.08	-.02	.10	.15
s52 verantwortlich	responsible	Bene	.14	.75	.03	.11	.11	.08	.04	.11
s56 sauber	clean	Sec	.02	.75	-.03	.18	.09	-.15	.06	.17
s49 hilfsbereit	helpful	Bene	.11	.71	-.07	.07	-.13	.12	.13	.19
s33 loyal	loyal	Bene	.04	.71	.06	.04	.04	.11	.05	.14
s55 erfolgreich	successful	Achie	-.02	.70	.18	.05	.30	.10	.02	.09
s54 vergebend	forgiving	Bene	.19	.70	.04	.07	-.14	.15	.10	.15
s41 eigene Ziele wählen	choosing own goals	Self	.01	.68	.18	-.09	.25	.12	-.06	.09
s43 fähig	capable	Achie	-.04	.67	.19	.00	.22	.15	-.02	.10
s35 tolerant	broad-minded	Univ	.02	.65	.10	-.07	-.06	.33	.03	.04
s34 ehrgeizig	ambitious	Achie	.02	.62	.29	.14	.24	-.11	.03	-.05
s40 ehrerbietig gegenüber Eltern und älteren Menschen	honoring parents and elders	Conf	.19	.61	.04	.19	-.13	-.07	.11	.22

s31 unabhängig	independent	Self	-.16	.61	.22	-.07	.12	.14	-.14	.14
s38 Umwelt schützen	protecting the environment	Univ	.09	.60	.16	.05	-.14	.12	.06	.25
s46 in der Öffentlichkeit Ansehen bewahren	preserving my public image	Pow	.13	.58	.32	.13	.10	-.18	.09	.01
s44 alle Seiten des Lebens akzeptieren	accepting my portion in life	Trad	.07	.57	.21	-.03	-.02	-.03	.18	.03
s57 sich verwöhnen	treat oneself	Hed	-.10	.56	.31	-.03	.25	.04	-.08	.06
s47 gehorsam	obedient	Conf	.12	.55	.25	.29	-.08	-.24	.17	.13
s50 das Leben genießen	enjoying life	Hed	-.20	.52	.34	-.06	.28	.07	-.06	.06
s53 neugierig	curious	Self	.03	.46	.36	-.02	.02	.17	-.07	.06
s32 gemäßigt	moderate	Trad	.16	.37	.34	.10	-.09	-.05	-.09	.01
s27 Autorität	authority	Pow	.06	.06	.73	.13	.10	-.11	.07	.13
s25 ein abwechslungsreiches Leben	a varied life	Stim	.02	.17	.68	-.12	.13	.22	-.04	.16
s39 einflussreich	influential	Achie	.09	.32	.65	.06	.12	-.04	.00	-.05
s37 wagemutig	daring	Stim	-.03	.25	.64	.01	.02	.17	-.04	-.17
s12 Reichtum	wealth	Pow	-.01	.16	.64	.02	.30	-.16	-.11	.11
s3 soziale Macht	social power	Pow	.07	.02	.63	.22	.07	-.09	-.12	.01
s4 Vergnügen	pleasure	Hed	-.07	.21	.59	-.11	.36	-.02	.00	.14
s15 Ausgleich von Gefälligkeiten	reciprocation of favors	Sec	.01	.13	.55	.19	-.12	-.07	.15	.24
s9 Ein anregendes Leben	an exciting life	Stim	-.10	.14	.52	-.16	.18	.30	-.02	.23
s29 eine Welt der Schönheit	a world of beauty	Univ	.10	.20	.49	.14	-.12	.26	-.01	.41
s26 Weisheit	wisdom	Univ	.12	.18	.47	-.03	.01	.27	.03	.35
s16 Kreativität	creativity	Self	-.04	.23	.45	-.02	-.02	.35	.03	.32
s36 demütig	humble	Trad	.33	.32	.39	.11	-.29	-.06	.14	-.08
s20 Selbstdisziplin	self-discipline	Conf	.06	.32	.37	.17	-.06	-.07	.21	.33
a32 Patriotismus	patriotism	5.1	.16	.03	.05	.76	.13	.05	.05	.02
a30 Nationalbewusstsein	national identity	5.1	.20	.01	.08	.76	.14	.03	.04	.05
a31 Nationalgefühl	national consciousness	5.1	.15	.01	.12	.74	.18	-.06	.05	.03
a46 Verteidigung	defense	5.2	.04	.07	-.02	.70	.21	.05	-.10	.10
a43 Vaterlandsliebe	love of one's home country	5.1	.27	.04	.07	.69	.08	.08	.13	.01
a47 Verteidigungsbereitschaft	willingness to defend	5.2	.05	.05	.04	.69	.19	.01	-.11	.02
a41 Traditionsbewusstsein	sense of tradition	5.1	.26	.01	.13	.59	.04	.31	.24	-.03
a33 Pflicht	duty	5.3	.08	.12	-.06	.59	.11	.06	.28	.11
a40 Tradition	tradition	5.1	.21	.06	.05	.57	.05	.31	.23	-.03
a34 Pflichterfüllung	discharge of duties	5.3	.09	.15	-.09	.51	.15	-.04	.33	.06
s18 Achtung vor der Tradition	respect for tradition	trad	.15	.22	.27	.39	-.24	-.05	.14	.32
a54 Wohlstand	prosperity	4.1	-.07	.06	-.01	.20	.75	.02	.05	.16
a53 Wohlhabenheit	being well-off	4.1	.00	.05	-.03	.16	.73	.04	.05	.09
a45 Vermögen	fortune	4.1	-.05	.09	.06	.24	.65	.08	.07	.00
a21 Karriere	career	4.2	-.09	.08	.24	.21	.56	.23	.06	-.15
a4 Erfolg	success	4.2	.01	.16	.17	.09	.54	.20	.18	-.16
a23 Komfort	comfort	4.3	-.21	-.03	.07	.22	.53	.15	-.05	.02
a1 Aufstieg	advancement	4.2	.02	.06	.12	.11	.51	.18	.18	-.08
a20 Hochgenuss	absolute delight	4.3	-.10	.11	.25	.14	.45	.05	.21	-.13
a12 Genuss	delight	4.3	-.18	.05	.24	.04	.44	.09	.34	-.12
a28 Lebenskraft	vitality	2.3	-.07	.08	.10	.02	.43	.29	.35	.22
a52 Wohlbefinden	well-being	2.3	.01	.07	-.09	.05	.41	.26	.24	.25
a39 Stolz	pride	4.3	-.04	.10	-.02	.29	.39	.07	.34	-.05
a27 Lebensfreude	joie de vivre	2.3	.02	.08	.05	.02	.38	.31	.31	.27
a25 Kulturerbe	cultural heritage	1.3	.10	.05	.03	.22	.09	.70	.05	.09
a49 Völkerfreundschaft	friendship among nations	1.1	.17	.09	-.03	-.14	.10	.70	.13	.08
a50 Völkerverständigung	understanding among nations	1.1	.13	.04	.03	.25	.07	.69	.07	.10
a26 Kulturgut	cultural assets	1.3	.16	.13	-.08	-.12	.06	.69	.14	.13
a51 Weltoffenheit	cosmopolitanism	1.1	.03	.02	-.04	-.04	.10	.69	.16	.06
a24 Kultur	culture	1.3	.04	.03	.08	.21	.15	.67	.05	.08

a48 Vielfalt	variety	1.1	-.05	.08	.00	.11	.25	.56	.07	.09
a5 Erkenntnis	understanding	1.1	.24	.03	.11	.07	.09	.47	.23	-.11
a6 Erkenntnisfähigkeit	ability to understand	1.1	.16	-.01	.09	-.04	.14	.44	.33	-.09
a9 Gemeinsamkeit	community	2.1	.13	.06	.07	.10	.06	.11	.72	.08
a11 Gemeinschaftsgeist	sense of community	2.1	.17	.10	-.08	.15	.04	.24	.64	-.03
a8 Friedensbereitschaft	desire for peace	2.2	.07	.08	-.11	.00	.09	.16	.63	.18
a10 Gemeinschaft	community	2.1	.21	.10	.12	.13	-.03	.18	.61	-.09
a7 Familiensinn	sense of family	2.2	.24	.01	-.14	.11	.21	-.05	.58	.20
a22 Kindesliebe	love of one's children	2.2	.16	-.01	-.17	.00	.32	.01	.46	.31
a42 Umsicht	circumspection	1.1	.15	.01	.05	.21	.15	.28	.44	.03
a29 Liebe	love	2.3	-.04	.05	.00	-.05	.39	.15	.43	.15
a3 Elternliebe	love of one's parents	2.2	.24	.04	-.02	.07	.22	.08	.39	.18
a38 Sinn	sense	1.1	.20	.02	.04	.05	.21	.31	.34	.11
s17 eine Welt in Frieden	a world at peace	Univ	.09	.32	-.03	.04	.02	.07	.07	.64
s30 Soziale Gerechtigkeit	social justice	Univ	.11	.26	.09	.05	-.19	.21	.05	.63
s22 Familiäre Sicherheit	family security	Sec	.05	.26	.02	.03	.19	-.06	.21	.60
s8 soziale Ordnung	social order	Sec	.08	.24	.15	.23	.02	.06	.05	.60
s1 Gleichheit	equality	Univ	.00	.08	.14	-.09	.06	.18	.03	.52
s24 Einheit mit der Natur	unity with nature	Univ	.11	.26	.29	.11	-.20	.13	.15	.50
s11 Höflichkeit	politeness	Conf	.09	.33	.18	.16	.06	.00	.20	.47
s13 nationale Sicherheit	national security	Sec	.08	.19	.29	.33	.22	-.20	-.08	.44
s5 Freiheit	freedom	Self	-.04	.25	.15	-.08	.22	.26	.04	.39