A STUDY OF VALUES AMONG ADOLESCENTS: ASSESSING TERMINAL AND INSTRUMENTAL VALUE SYSTEMS AND ORIENTATIONS

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The aim of this study was to examine the structure of adolescents' terminal and instrumental values by using modified Rokeach Value Survey. The investigation was carried out with a sample of 311 fourteen-year-old adolescents. The subjects rated the importance of each value on a seven point scale, and they also chose the first five most important values. Both techniques provided similar results in terms of ordering the relative importance of value choices. The ratings of 18 terminal and 18 instrumental values were subjected to factor analyses. Instrumental values reflecting morality/self-restriction, competence, independence and benevolence were identified. Terminal values were comprised of hedonism/gratification, social/security and self-actualization value factors. Based on the factor solutions, terminal and instrumental values subscales were constructed and their correlations with measures of intelligence, school achievement and prosocial behaviour were examined. The findings suggest that value types differ in the extent to which they endorse interpersonal or other-directed focus in comparison to self-directed or achievement-oriented focus.

A value system is an enduring organization of beliefs concerning preferable modes of conduct or end-states of existence along a continuum of relative importance (Rokeach, 1973). Values serve as standards that guide ongoing activities, judgement and evaluation of ourselves and other people. Values also have a strong motivational component and they serve adjustive, ego-defensive, knowledge, and self-actualizing functions. A survey of personal values gives an indication of important needs, motivation and social cognitions of in-

dividuals and groups. The Rokeach Value Survey (RVS) consists of 18 terminal and 18 instrumental values. Terminal values are concerned with 'end- states of existence' and instrumental values are concerned with 'modes of conduct'. According to Rokeach (1973), instrumental and terminal values represent two separate, yet functionally connected systems. Terminal values may be classified as personal or social, i.e. self-centered or society-centered. Similarly, there are two kinds of instrumental values – moral values that have interpersonal focus and competence values that have personal focus. Johnston (1995) examined the underlying subset of values in RVS using nonmetric multidimensional scaling with a sorting task. The results indicated that individualism-achievement and collectivism-affiliation are the underlying dimensions of the RVS for both the terminal and instrumental values. Past research encountered difficulties identifying a meaningful and consistent subset of factors in RVS, very likely due to the ordinal, ipsative nature of RVS data, which are not suited for factor analysis (see Johnston, 1995).

Rokeach (1973) points out that values are often thought to be inherently comparative and competitive, and thus the ranking approach to measuring values fits with the conceptualization of values. However, the ranking approach has a number of practical drawbacks: rankings are often difficult for respondents (especially for younger ones), this technique is time-consuming and usually requires use of a visual aid, and finally this procedure does not permit conventional statistical techniques in the analysis of the latent structure of data. Rating scales are easy to present to respondents, but ratings of values tend to fall within a rather restricted range of available scale points. The research comparing rankings and ratings adapted from RVS suggests that rating and ranking techniques may be interchangeable for the purpose of measuring aggregate preference ordering (see Alwin & Krosnick, 1985).

OBJECTIVES

The first objective in the current investigation was to examine hierarchies of adolescents' terminal and instrumental values by a modified Rokeach Value Survey and to compare the results obtained with a rating technique and reduced-ranking technique.

The second objective in this study was to examine the latent structure of terminal and instrumental values and the relationships between the latent dimensions and theoretically relevant variables. It was predicted that intelligence and school success might be correlated with competence and achievement oriented values which have more personal focus. The measure of prosocial behaviour was included in this study because similar behaviours are manifestations of broad prosocial value orientation (Staub, 1978; 1980) and an affiliative dimension of human nature (Aronoff & Wilson, 1985).

METHODS

Subjects

The sample comprised of 311 fourteen-year-old adolescents. There were 174 girls and 137 boys attending 8th (last) grade of various primary schools. Subjects were administered various psychological tests as a part of a regular vocational counseling procedure of pupils at the end of primary school. Instruments used for the purpose of this study (RVS and the Altruism Scale) were also applied.

Measures

A modified Rokeach Value Survey (1973) has been used to measure instrumental and terminal values. Subjects were presented with two lists of 18 alphabetically arranged values, with a brief definition in parenthesis. The subjects rated the importance of each value on a seven-point rating scale ranging from 'not at all important to me' (1) to 'extremely important to me' (7). After completing each list subjects chose the five values that were the most important for them.

The Altruism Scale (Raboteg-Šarić, 1993) has been used as a measure of prosocial behaviour. It is a 17 item scale which has an easy to administer, self-report format. Respondents are instructed to rate the frequency with which they have engaged in the prosocial behaviours using the categories 'never' (0), 'once' (1), 'a few times' (2), 'often' (3) and 'very often' (4). Items describe instances of low-cost, everyday prosocial behaviours such as: offering some help to neighbours, borrowing classnotes to a friend, sharing a sandwich with someone in the group when hungry, etc. The internal consistency of the scale (Cronbach alpha) for this sample of subjects is 0.79.

The Problem Test (Bujas, Stipetić & Kolesarić, 1966) has been used as a measure of intelligence. It has been standardized for the Croatian population of primary school and high school students. It measures 'sensitivity to problems' and 'ability to manipulate with verbal symbols'.

RESULTS AND DISCUSSION

Hierarchies of values

The mean ratings for each value and the percentage of subjects choosing a particular value among the five most important to them are presented in Tables 1 and 2 for terminal and instrumental values, respectively. Tables 1 and 2 show that the reduced-ranking technique produced a sharper distinction among the various values. The ratings tend to be somewhat skewed, with the bulk of subjects responding positively, as suggested in the existing literature.

Table 1
Descriptive statistics for ratings of terminal values and the percentage of subjects ranking a value among the five most important (N=311)

VALUE	%	Rank	M	SD	Rank
a world at peace	67.8	1	6.69	.71	1
happiness	53.4	2	6.49	.81	4.5
freedom	53.1	3	6.53	.92	3
family security	48.6	4.5	6.49	.82	4.5
true friendship	48.6	4.5	6.55	.84	2
mature love	34.7	6	6.22	1.08	6
equality	34.1	7	6.14	1.14	7
a comfortable life	26.0	8	6.04	1.09	8.5
wisdom	23.5	9	6.04	1.07	8.5
self-respect	18.3	10	5.76	1.39	12
an exciting life	18.0	11	5.59	1.34	13
national security	14.5	12.5	6.03	1.14	10
inner harmony	14.5	12.5	5.94	1.15	11
pleasure	14.1	14	5.55	1.37	14
social recognition	12.5	15	5.09	1.36	17
a world of beauty	6.4	16	5.52	1.29	15
salvation	5.5	17.5	3.82	1.93	18
a sense of accomplishment	5.5	17.5	5.38	1.18	16

Table 2
Descriptive statistics for ratings of instrumental values and the percentage of subjects ranking a value among the five most important (N=311)

VALUE	%	Rank	M	SD	Rank
honest	64.3	1	6.52	.77	1
capable	43.1	2	6.22	.98	2
ambitious	40.8	3	5.95	1.11	9
independent	40.2	4	6.08	1.16	6
cheerful	37.3	5.5	6.17	1.02	3.5
helpful	37.3	5.5	5.99	1.14	8
logical	29.3	7	6.14	.95	5
clean	28.0	8	6.01	1.09	7
polite	26.7	9	5.94	1.17	10.5
loving	25.4	10	6.17	.90	3.5
responsible	20.6	11	5.92	1.12	12.5
intellectual	19.9	12	5.94	1.02	10.5
imaginative	19.3	13	5.68	1.16	15
courageous	17.0	14	5.81	1.21	14
self-controlled	15.1	15	5.92	1.16	12.5
forgiving	13.5	16	5.63	1.29	17
obedient	10.3	17	5.59	1.36	18
broadminded	4.8	18	5.64	1.19	16

The rank-order of values in terms of their relative importance as measured by different techniques is similar. The Spearmen rank-order correlation between the mean ratings and reduced-ranking scores is higher (0.96) for the terminal values list than for the instrumental values list (0.88), probably due to the fact that terminal values are generally more stable than instrumental values.

Factor structure

A principal component analysis with Varimax rotation on the 18 terminal values items was performed to identify empirically the grouping of the items. Five components with eigen values greater than one emerged from the analysis accounting for 50.6% of the total variance. Table 3 shows factor loadings on the terminal values scale.

Table 3
Factor Loadings on Terminal Values Scale

VALUE	FAC1	FAC2	FAC3	FAC4	FAC5
pleasure	.75	.02	-.08	.30	-.01
comfortable life	.66	-.09	.19	-.11	-.14
happiness	.62	-.01	-.03	-.06	.29
exciting life	.61	.07	.05	.24	.05
world of beauty	.48	.23	.22	-.12	.14
equality	.08	.79	-.04	-.04	-.03
world at peace	-.08	.76	-.14	.01	.06
nation. security	.02	.63	.23	-.08	.16
family security	.07	.47	.24	.25	.02
freedom	.24	.35	.19	-.31	.08
accomplishment	.01	.01	.76	-.01	.33
self-respect	.04	-.06	.75	.08	-.01
wisdom	.11	.20	.56	.09	-.12
soc. recognit.	.20	.14	.39	.35	-.38
salvation	.10	.01	.07	.74	.01
mature love	.05	-.06	.13	.55	.40
true friendship	.11	.16	-.03	.22	.68
inner harmony	.20	.18	.43	-.11	.55

Note: factor loadings >0.40 are underlined

Interpretation of factors was based on Rokeach's discussion (1973) on values structure and content as well as on a comprehensive typology of the different types of value content developed by Schwartz (1992).

The first factor, which accounts for 17.9 % of the total variance has substantial loadings on value items reflecting seeking pleasure or immediate gratifica-

tion (pleasure, a comfortable life, happiness) and stimulation (an exciting life). This factor was labelled hedonism/gratification.

Factor II, accounting for 10.6% of variance, involved all the social values. Some of them are universal, reflecting appreciation and protection for the welfare of all people (equality, a world at peace), others reflect the need for safety and stability of society (national security, family security). This factor was labelled social/security values.

Factor III accounts for 8.7% of variance and is labelled self-actualization/ self-enhancement. It involves values whose function is to mantain and enhance/ self-esteem and growth needs (accomplishment, self-respect, wisdom).

Factor IV accounts for 7% of variance and has substantial loadings on only two items reflecting spiritual/self-transcendence values ('salvation','mature love').

The final factor accounts for 6.5% of variance and has the highest loadings on two items reflecting the need for harmony with the self and close persons ('true friendship' and 'inner harmony').

A principal component analysis with Varimax rotation on the 18 instrumental values items was also performed. Five factors were extracted which account for 57.7% of the total variance (25.7%, 10.4%, 8.3%, 7.2% and 6.1%, respectively). Table 4. shows factor loadings on the Instrumental Values Scale.

Table 4
Factor Loadings on the Instrumental Values Scale

VALUE	FAC1	FAC2	FAC3	FAC4	FAC5
obedient	.75	.00	-.05	.30	.10
helpful	.73	.18	.26	.03	-.07
honest	.57	.03	.15	.02	.43
polite	.54	.47	-.24	.10	.19
capable	-.02	.72	-.11	.30	.10
logical	.03	.69	.25	-.02	.06
intellectual	.24	.66	.26	-.10	.06
self-controlled	.40	.44	.10	.13	.09
courageous	.09	.15	.73	.07	-.01
independent	-.08	.04	.68	.12	.24
responsible	.38	.06	.65	.13	.06
imaginative	-.16	.40	.46	.24	-.01
cheerful	-.01	.00	.12	.75	.22
loving	.22	.14	.16	.72	.00
broad-minded	.28	.26	.27	.59	-.19
forgiving	.51	-.06	-.05	.52	-.04
ambitious	-.03	.11	.14	-.03	.80
clean	.39	.15	.00	.20	.59

Note: factor loadings >0.40 are underlined

The first factor appears to be a morality/self-restriction dimension. Items with substantial loadings on this factor (obedient, helpful, honest, polite) include other-directed values and deal with self-constriction or conformity, i.e. restraint of actions and impulses likely to harm others and taking into account the welfare of other people.

Factor II was labelled competence because it includes items reflecting concern with demonstrating competence (capable, logical, intellectual, self-controlled) in accordance with social standards.

Factor III appears to be independency. It involves self-directed values (courageous, independent, responsible, imaginative) emphasizing independent thought and action and openess to change.

Factor IV involves other-centered values which reflect understanding and appreciation of others, concern for perservation of good interpersonal relations ('broadminded','forgiving') and benevolence ('cheerful','loving'). This factor was labelled benevolence/interpersonal harmony.

Factor V is difficult to interpret because it includes only two items ('ambitious' and 'clean').

The intercorrelations between terminal values factor scores and instrumental values factor scores are presented in Table 5. Only the first three terminal values factors and the first four instrumental values factors, which endorse more items and can be meaningfully interpreted, are included in the analysis.

Table 5
Correlations between terminal and instrumental values factor scores

Terminal Values	Instrumental values			
	Morality/ self restriction	Competence	Independence	Benevolence
Hedonism/gratification	.02	.02	.08	.45***
Social/security	.44***	.06	.05	.02
Self-actualization	.03	.33***	.37***	.05

***p<.001

Significant correlations were found for those value types which represent similar goals and type of motivation. This finding is in accordance with Shwartz's notion that certain value types have similar behavioral implications and are compatible with each other, while others are in conflict with one another. For example, actions that express conformity values (e.g. politeness) are likely to be compatible with actions that express security values(e.g. social order). Both sets of actions contribute to compatible states of interpersonal harmony and obedience to social norms (Schwartz, 1992; Bilsky & Schwartz, 1994). Similar-

ly, in this research significant positive correlation was found between 'social/ security' terminal values factor and 'morality/self-restriction' instrumental values factor. Terminal values reflecting growth needs were significantly positively related to instrumental values emphasizing competence and independent thought and action. Significant positive correlation was also found between 'benevolence and interpersonal harmony' instrumental values factor and 'hedonism/gratification' terminal values factor although the first one is more other-directed, while the second one is more self-directed. However, both value types seem to reflect the motivation to achieve pleasure through intrapersonal and interpersonal harmony.

Relationships between values subscales and other selected measures

Based on the factor solutions three terminal and four instrumental values subscales were constructed. Two terminal values ('freedom' and 'social recognition') with loadings of less than 0.40 and corrected item-total correlations of less than 0.30 were not included into the final version of subscales.

Table 6

Correlations between value subscales scores and other selected measures

SCALE (No. of items)	Intelligence	School grades	Prosocial behaviour	M	SD	Cronbach alpha
Terminal values						
Hedonism/gratificat. (5)	-.18**	-.01	.10	29.19	3.83	.64
Social/security (4)	-.19***	-.07	.19***	25.35	2.67	.63
Self-actualization (3)	.05	.16**	.13*	17.17	2.73	.60
Instrumental values						
Moral/self-restriction (4)	-.23***	-.05	.31***	24.04	3.26	.69
Competence (4)	.02	19***	.17**	24.21	2.86	.64
Independency (4)	.16**	.22***	.12	23.49	3.26	.65
Benevolence (4)	-.09	-.01	.28***	23.61	3.20	.69

*$p<0.05$; **$p<0.01$; ***$p<0.001$

Table 6 shows means, standard deviations and Cronbach's alphas of the three terminal values and the four instrumental values subscales. The construct validity of value subscales was examined by assessing their correlations with intelligence test scores, school achievement (school grades at the end of a school year) and prosocial behaviour. It was expected that value types having an interpersonal, collective or affilliative focus would show a different pattern of relationships with the selected variables comparing to the value types with individual or achievement-oriented focus. Significant positive correlations were found between school achievement and 'self-actualization', 'competence' and

'independency' factors. Prosocial behaviour showed significant correlations with five of the seven value types.The correlations are in the expected direction, the highest being with 'moral/self-restriction', 'benevolence' and 'social/security' values. Intelligence showed negative correlations with 'social/security' and 'moral/self-restriction' values and positive with an 'independency' value type. Such a different pattern of correlations suggests that this aspect of personality might better differentiate between underlying higher-order value dimensions. The results of cross-cultural studies conducted by Schwartz and his colleagues support the notion of universals in the content and structure of human values. Their findings strongly support the existence of two underlying dimensions that organize value systems. The first dimension opposes values emphasizing own independent thought and action and favouring change to those emphasizing submissive self-restriction, preservation of traditional practices and protection of stability. The second dimension opposes values emphasizing acceptance of others as equal and concern for their welfare to those emphasizing the pursuit of one's own relative success and dominance over others (Schwartz, 1992; Bilsky&Schwartz, 1994).

Gender differences

Overall, no significant gender differences were found between the results of boys and girls on instrumental and terminal values subscale scores. The only marginally significant difference was found on the 'Social/security' value subscale (F=4.02; p=0.05) with this value orientation being more important for the girls.

CONCLUSIONS

The modified Rokeach Value Survey was applied in this study, with the ratings of importance of each value. The ratings and the reduced-ranking procedures produced similar results in terms of ordering the relative importance of values choices in the sample of adolescents.

Based on the results of factor analyses several value subtypes were identified. The most meaningful and interpretable factors were 'Hedonism/gratification', 'Social/security values' and 'Self-actualization' for the terminal values ratings and 'Moral/self-restriction', 'Competence', 'Independence' and 'Benevolence/ Interpersonal harmony' for instrumental values ratings. The correlations between the terminal and instrumental subscales and subjects' prosocial behaviour, intelligence and school achievement suggest that value types differ in the extent to which they endorse interpersonal, affiliative or other-directed focus in comparison to self-directed or achievement-oriented focus.

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ISPITIVANJE SUSTAVA TERMINALNIH I INSTRUMENTALNIH VREDNOTA ADOLESCENATA

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U radu se opisuju rezultati ispitivanja sustava vrednota adolescenata uporabom modificirane Rokeacheve ljestvice terminalnih i instrumentalnih vrednota. U ispitivanju je sudjelovalo 311 adolescenata prosječne dobi 14 godina. Uz procjenu važnosti svake vrednote na skali od sedam stupnjeva, ispitanici su birali i pet najvažnijih vrednota. Hijerarhijski sustav instrumentalnih i terminalnih vrednota, utvrđen postupkom rangiranja i procjenjivanja, nije se znatno razlikovao. Na temelju rezultata faktorske analize procjena važnosti pojedinih vrednota konstruirane su podljestvice za mjerenje različitih tipova terminalnih ('hedonizam', 'samoaktualizacija' i 'socijalne vrednote') i instrumentalnih vrednota ('moralnost/samokontrola', 'sposobnost', 'nezavisnost' i 'dobrohotnost /interpersonalni sklad'). Utvrđene su korelacije između pojedinih tipova vrednota te između ljestvica za mjerenje vrednota, inteligencije, školskog uspjeha i prosocijalnog ponašanja. Rezultati ukazuju na to da određeni tipovi vrednota u najširem smislu odražavaju afilijativnost i usmjerenost na druge, a za ostale je vrednote karakteristična usmjerenost na sebe i vlastiti razvoj.

UNTERSUCHUNG DES SYSTEMS ENDGÜLTIGER UND INSTRUMENTALER WERTE BEI ADOLESZENTEN

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Vorliegende Studie bringt die Ergebnisse einer Untersuchung, die anhand der Rokeache-Skala endgültiger (terminaler) und instrumentaler Werte das Wertesystem von Adoleszenten ermitteln sollte. An der Umfrage nahmen insgesamt 311 Jugendliche im Durchschnittsalter von 14 Jahren teil. Die Befragten mußten mittels einer 7-stufigen Skala die einzelnen Werte einstufen und außerdem eine Rangliste der fünf für sie wichtigsten Werte aufstellen. Die hierarchische Anordnung der instrumentalen und endgültigen Werte, die so durch Rangieren und Einschätzung ermittelt wurde, zeigte in den einzelnen Fällen nur geringfügige Abweichungen. Aufgrund einer Faktorenanalyse zur Einschätzung der einzelnen Werte wurden Unterskalen konstruiert, um verschiedene Typen endgültiger Werte ('Hedonismus', 'Selbstverwirklichung' und 'soziale Werte') sowie instrumentaler Werte ('Moralität/Selbstkontrolle', 'Fähigkeit', 'Unabhängigkeit' und 'Gutwilligkeit/zwischenmenschliche Harmonie') zu messen. Man stellte fest, daß Korrelationen bestehen zwischen den einzelnen Wertetypen sowie zwischen den bestehenden Skalen zur Messung von Werten, Intelligenz, Schulerfolg und prosozialem Verhalten. Die ermittelten Resultate besagen, daß bestimmte Wertetypen im weitesten Wortsinn miteinander affiliiert und aufeinander ausgerichtet sind, während für andere Werte die Ausrichtung auf sich selbst und die eigene Entwicklung charakteristisch sind.