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CULTURAL VALUES IN TRANSITION ENVIRONMENT – ASSESSMENT BASED ON INTERNATIONAL SOCIAL SURVEY PROGRAMME DATA

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Abstract

The differences in economic development across transition countries are sometimes attributed to the extent of interaction between institutions of capitalism and prevailing culture. This study provides a first step towards empirical investigation of this issue. By examining values in CEE countries at the outset of transition (in years 1991, 1993 and 1994) and testing for the presence of the change in years 1998, 2001 and 2002, I assess the hypotheses developed by Schwartz, Bardi and Bianchi (2000). Contrary to their expectations, I find that there is no general inclination towards *security*, *conformity* and *tradition* values at the beginning of transition. On the other hand, with ongoing transition, there is a general tendency towards *self-direction*, *hedonism*, *universalism*, and *achievement* values as hypothesized.

Keywords: transition, cultural values, Schwartz human values scale *JEL Classification*: O15, Z10, Z19

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I Introduction

Culture, as it is understood throughout most of the literature cited in this paper, is defined as a set of patterns of thinking, feeling and potential acting shared by people within the same social environment (Hofstede 1980, 1997) or as "every day practices, symbols and rituals that can be been by an outside observer" (Schwartz & Bardi 1997). One of the concepts identifying the differences among cultural patterns is the concept of *values*¹. Values are the tendencies of the members of society to judge what is good or bad, what should and should not be done, what is natural or not natural, rational or irrational, and so on (Schwartz 1992, Hofstede 1997)².

Cultural change is assumed to be very slow. However, sociologists admit there may be circumstances under which the cultural values are prone to faster change, such as when a significant event occurs (Dahl 1998). An example of such an event is the collapse of communism in the countries of Central and Eastern Europe (CEE) in 1989. A subsequent change in the political and economic system brought about the establishment of new institutions³. Much of the theoretical literature that actually deals with the issue of culture in the context of transition countries refers to the importance of the interconnection between the new institutional arrangement in CEE and the prevailing values. Moreover, the differences in economic development among transition countries are sometimes attributed to interaction between capitalist institutions and values (Pejovich 2003).

¹ Most of empirical literature dealing with culture is based on the concept of values. Therefore, from now on I will use the term *values* or *cultural values* instead of a broader term *culture*.

 $^{^{2}}$ Hofstede (1980) and Schwartz (1992) develop two systems according to which values can be classified. Besides sociological surveys these systems represent the usual tool for empirical comparison across cultures. For a broader discussion see section III.

³ I will understand institutions as the formal rules and arrangements which we encounter in everyday life (schools, private companies, banks, judiciary, political parties).

This research empirically investigates prevailing values in transition countries and examines the presence of change in values over time using data from International Social Survey Programme (ISSP)⁴. The role of institutions is not investigated neither any causal relationship is examined. Rather, this paper should be considered as an objective evaluation of values prevailing in transition countries and should be considered as a first step to potentially more fruitful research.

The paper is organized as follows. In the next section I provide some insight into the sociological view of the transition process and its relation to culture and institutions. I introduce a Schwartz's system of values, which is used in this paper as a tool for examining value preferences in transition countries. In section *III* and *IV* I introduce a methodological approach used in this paper and provide some basic information regarding data used. In section *V*, results are I summarized. Section *VI* concludes.

II Literature Review

Cultural change in the context of transition countries

Since 1989, the countries of Central and Eastern Europe have undergone striking changes. The shift of economic system away from central planning towards the market economy and the shift of regime from communism towards capitalism have taken place practically immediately after the revolution in 1989. Market prices replaced fixed prices, the capital market was established and later on the laws and norms of the European Union were approved. All of the latter represent the examples of the institutions that arose. Is there any relationship between the new institutional

⁴ The comparison will be done on a country-by-country basis. This approach is based on the assumption that the CEE countries are not homogeneous and the trends of change may not be common.

arrangement and the prevailing values in CEE countries? According to many sociologists, the answer is yes. The following paragraph provides a deeper inside.

In their 1998 book Making Capitalism without Capitalists (1998), Szelényi, Eyal and Townsley suggest that what is missing most from Central European capitalism are capitalists themselves. In particular, while many of the institutions essential to market capitalism were established, the meaningful class of property owners that is crucial in a western understanding of capitalism is missing. According to Sztompka (1996) the problem of functioning of capitalist institutions follows from incompatibility between the prevailing values in the former communist countries and "western" values. Specifically, he argues that the prevailing values in CEE can be characterized by a suspicion towards authorities, preferring security, relaying on governmental support and self-unresponsiveness, while the values in the western countries are generally opposite. Sztompka suggests that an involvement in the operation of new institution shapes culture, or in author's own words: "Institutions are one of the most important forces shaping prevailing culture." (p. 117). Pejovich (2003) advocates a need for harmony between culture and operating institutions using an "interaction thesis" which basically states that the wealth of society increases and the transaction costs of transition decrease as the institutions prevailing in the society correspond to prevailing informal rules. Accordingly, the differences among the transition countries can be attributed to the extent that the newly established formal institutions of capitalism interact with the prevailing culture. His argumentation is based on the assumption that capitalism is based on culture with emphasis on individualism, whereas the Central and Eastern European cultures are based on collectivism.

The work of abovementioned authors provides a motivational background for a research regarding the presence of cultural change in transition countries. Basically, one can expect that new institutional environment has some impact on the values prevailing in the societies of transition countries, plus the interaction between values and institutions is likely to influence the advancement of transition. However, in the first step we should probably investigate the differences in values across countries and in order to be able to do this, a system is needed according to which the cultural values can be measured. In the following paragraph I deal with cultural differentiation developed by Shalom Schwartz (1992).

Assessing values

When assessing values, it is possible to adopt one of the systems of values already developed⁵. In the following, I will deal with the system developed by Shalom Schwartz, since this system was tested by data coming from 67 countries and there exist a variety of replication studies supporting Schwartz's division⁶. The value questionnaire developed by Schwartz was recently introduced as a regular part of European Social Survey (ESS)⁷. The abovementioned facts lead me to a belief that Schwartz value system is a robust system and should be used as a benchmark for division of ISSP items in my work.

⁵ Schwartz (1992), Hofstede (1980), Rokeach (1973)

⁶ See e.g. Bilsky and Koch (1996) or Bilsky & Jehn (1999)

⁷ Thereby, a problem related to the validity of the Schwartz's previous results stemming from usage of non-representative samples is addressed. In ESS, the questionnaires are distributed to the representative samples of populations, while previously, Schwartz's used international samples of teachers. In 2005, using data obtained from ESS and older data, Schwartz's concludes that the correlations of results based on these two samples are of around 90%.

Schwartz human values scale (1992) identifies ten motivationally distinct value orientations that people in all cultures recognize. These values are derived from needs of individuals as biological organisms, needs to coordinate social interaction, and survival and welfare needs of groups. In *Table 1*, these value orientations are summarized together with their central motivational goal and examples of specific value items. For instance, a conformity value was derived from the prerequisite of interaction and of group survival. In order for interaction to proceed smoothly and for groups to survive, individuals must restrain actions that might hurt others.

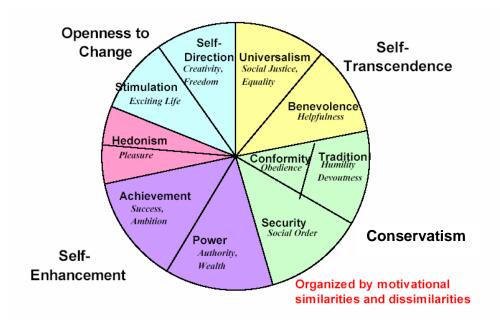
Table 1Schwarz system of values

Value dimensions	Description	Examples of value items
Openness to Change		
Self-direction	Independent thought and action-choosing, creating, exploring.	Creativity, Freedom, Independent, Curious
Stimulation	Excitement, novelty, and challenge in life.	Daring, a Varied Life, an Exciting Life
Conservation		
Security	Safety, harmony and stability of society, of relations, of relationships, and of self.	Family Security, National Security, Social Order, Clean
Conformity	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms.	Politeness, Obedient, Honoring Parents and Elders
Tradition	Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide the self.	Humble, Devout, Respect for Tradition
Self-Enhancement		
Power	Social status and prestige, control or dominance over people and resources.	Social Power, Authority, Wealth
Achievement	Personal success through demonstrating competence according to social standards.	Successful, Ambitious, Influential
Self-Transcendence		
Universalism	Understanding, appreciation, tolerance and protection for the welfare of all people and for nature.	Broadminded, Social Justice, Equality, Protecting the Environment
Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact.	Helpful, Honest, Forgiving
Hedonism	Pleasure and sensuous gratification for oneself.	Pleasure, Enjoying Life

An advantage of Schwartz's system is that it involves a dynamic relationship among the values. While some values may be "in conflict", i.e., the pursuit of such values together

may be incompatible, the pursuit of others may be compatible⁸. A relationship among the particular values is depicted in the Figure 1. The closer any two values in either direction around the circle, the more similar are their underlying motivations. The more distant any two values, the less similar are their underlying motivations.

Figure 1 Schwarz's system of values – a dynamic relationship



Values in transition countries – state of literature

There is not a lot of empirical literature dealing with the change in values in transition countries. The three sources I will summarize here, most probably provide the only closely relevant basis for my research.

⁸ For example, benevolence values may be incompatible with the achievement values – preservation and enhancement of the welfare of others is likely to be in conflict with seeking personal success. On the other hand, the pursuit of achievement values may be compatible with the pursuit of power values - seeking personal success may be accompanied by seeking control and dominance over others.

Hypothesizing about the change in values as a response to the collapse of communism and all subsequent institutional changes requires some assumptions about the state of values in CEE at the beginning of transition. The comparison of western and eastern values at the beginning of 90's is a subject of work by Broek and Moor (1994). They hypothesize that Eastern Europeans should be more traditional and less individualized than the Western Europeans. They classify the countries of Eastern European Values Survey in years 1990-91 they do not find much support for their expectations, except for the values in the work domain.

The difference between eastern and western cultural values is also elaborated on by Schwartz and Bardi (1997). Contrary to Broek and Moor, they show that the adaptation to the communist rule in Eastern Europe must have lead to the differences in value priorities between Eastern and Western Europe. In order to obtain a support for this claim, they conduct a comparison of the values in Eastern and Western Europe, plus the comparison between the group of three countries (Bulgaria, Russia and Georgia) and the rest of Eastern Europe, since they assume the communist regime in this group was stronger compared to other countries. Based on the samples of teachers and students from each country who completed the Schwartz value survey (1992) in years 1989-1993, the authors conclude that their hypotheses are confirmed by the results. The authors take into consideration the other possible explanations for the observed differences such as economic level, religion, historical aspects or development in the western countries. However they reject all of these. Schwartz and Bardi also refer to Broek and Moor, and explain the contrast findings by a different nature of European Social Survey data. Moreover, they proclaim that a closer examination of the Broek and Moor's study reveals an actual consistency with their findings. To summarize, the analysis of Schwartz and Bardi provides a solid ground for assessing the impact of new political and economic system in the transition countries after the fall of communism.

Following the previous work of Schwartz and Bardi; Schwartz, Bardi and Bianchi (2000) are most likely the first who use the empirical data to assess value changes after the collapse of communism. Their interest is based on the assumption that "adaptation to life circumstances is important for value formation" (p.218). They hypothesize that the values should move away from security, conformity and tradition towards stimulation, self-direction, hedonism, universalism, benevolence, and achievement. More details concerning derivation of these hypotheses are provided below. Despite the authors conclude that the cultural values may be immune to major political and economical changes, they point out that the data availability up to year 1997 for some countries may not be sufficient for cultural change to reveal. I see two main problems related to methodology used by Schwartz, Bardi and Bianchi. The first one is that they treat CEE countries as one group. However, a likely heterogeneity of CEE countries prior transition together with a different character of transition process in each country does not allow for merging them into one group. The second problem relates to an analytical tool they use to assess the change. They use only the tests for equality of two means. For the purpose of assessing a cultural change, I find the usage of means, which is the methodological approach not only in the study of Schwartz, Bardi and Bianchi but in all abovementioned literature, quite problematic. Usage of the means essentially consists of computing the means of the answers to the (group of) questions in questionnaires across nation sample. These means are then compared across country or time dimension using the tests for equality of two means. This approach is appropriate and most likely inevitable when making comparison across larger number of nations but may not be the best solution when assessing the change within one nation, since the distribution of answers may often change without a change in its mean. A methodological approach which overcomes such difficulties is the one based on the comparison of two discrete distributions.

Values in transition countries - Hypotheses

As stated earlier, one has to have a theoretical benchmark when doing an empirical work, in order to assess the appropriateness of the results. This part closely follows Schwarz, Bardi (1997) and Schwartz, Bardi and Bianchi (2000) and should enable a reader to become more familiar with their hypotheses employed in this work⁹.

The economic, political and social environment in the countries under communist regime had several distinguished features. These include: strict rules and many restrictions; assurance of having a job, accommodation and different benefits for everyone; lower responsibility for own actions; an inexistence of rewarding higher effort or initiatives, instead a principle of equal reward; a low level of interpersonal trust (existence of state informants among fellow-workers, fellow-students). These characteristics presumably affected the values prevailing in communist societies through the process of adaptation. Basically, people increased or decreased an importance of the specific values in a way that enabled them to live reasonably in their living environment.

Conservative values (security, conformity and *tradition*) include specific values like obedience, self-discipline or social order. These values have been naturally pursued

⁹ Since Schwartz uses two classifications for the value system and in the abovementioned work he uses the second one not used in this paper, I will transform it into the classification used in this paper.

in communist countries in order to live an "easier" life in an environment full of constraints. Although the general level of trust was low, an interpersonal trust within a small group of friends or family persisted. Therefore the *security* values emphasizing a smooth relationship within the solidarity group were important.

People generally attempted to live safely and yearn for satisfaction. In order to achieve it under communist regime, people must have seen the communist system as legitimate at least to a certain degree. An acceptance of a distribution of roles and distribution of resources is in accordance with emphasizing the *power* values.

Communist environment was characterized by a threat of punishment for a behavior that was not explicitly approved. The actions performed by people were restrained, particularly the initiatives and risky actions. As a result, the citizens of the communist countries attributed less importance to *self-direction* values. Similarly, *stimulation* and *hedonism* values (exciting life, enjoying life and pleasure) were suppressed by the system. These values were given a lesser emphasis also due to certainty of basically equal living standards, due to a failure to reward a higher effort and better performance.

The same reasons undermined the importance of *achievement* values. The values like ambition or success were not pursued by people, since there were no benefits associated with them. Moreover, *achievement* values involve active self-assertion, an eligibility of an individual to succeed and getting ahead, and attempts to change the status quo, therefore these values were even dangerous to pursue in the communist environment.

Universalism and *benevolence* values like honesty, loyalty or social justice are based on an expectation of reciprocating behavior and are not in compliance with a high

risk of being exploited as was the case in the communist countries. Hence, these values should have been downgraded in the communist countries. This is supported also by the fact that people put less effort to promote the welfare of society as a result of the certainties provided by the state. This contrasts *benevolence* values where an individual is voluntarily committed to pursue the welfare of others.

A new, democratic system should have brought about the changes to the prevailing value system. As an adaptive response to opportunities and new systems of rewarding, the values prevailing in the former communist countries should have changed slowly and a new system should be characterized by less importance of *conservatism* and *power* values and more importance to values belonging to *openness-to-change* dimension, *self-transcendence* values, and *achievement* values. Of course, the extent of expected change may vary across the particular countries. For example, the citizens of those countries, in which bad social situation still persists, may still put a relatively same importance to the specific value domains as a result of insecure, unfair and unpredictable living environment.

To summarize, I will hypothesize a general change in the emphasized values in all countries inspected. The expected shift of an old value system should be in a direction proposed by Schwartz, Bardi and Bianchi (2000), i.e. away from pursuing *security, conformity, tradition,* and *power* values towards pursuing *stimulation, selfdirection* and *hedonism; universalism* and *benevolence,* and *achievement* values.

III Methodology

The answers concerning value change are obtained using ISSP surveys that are repeatedly administered over a several-year period. For several reasons it is not possible to utilize all items¹⁰ in such surveys. Firstly, not all items are presented in both, older and newer survey. Secondly, out of those items present in both surveys, I was unable to attach Schwartz's value to all of them. I left out such items. The list of the items used, as well as the value dimension attached to each item are reported in the Appendix.

The questions attached to the same value form a theoretically homogenous group. I perform the test of homogeneity of distributions within a group, where the homogenous pattern of outcomes should point to some cultural tendency of a society.

As an evaluation approach for this study, a Chi-squared test of homogeneity of sample distributions is used. The test enables to assess whether the distribution of the answers to the questions are statistically indistinguishable over the period of time between the two surveys.

Generally, to conduct the test, one needs to have $I \ge 2$ independent random samples of size $n_1, n_2, ..., n_1$. The variable of interest takes on values which fit into Jdisjoint categories. In the case of this paper, the random samples are represented by the year a survey is conducted in and the categories are represented by the options attached to each answer. In the *contingency* table below, n_{ij} denotes the total number of times when value of a variable in *i*-th sample falls into category *j*, where i=1,...,I, and j=1,...,J. Particularly, for this study, n_{ij} denotes number of people who answered a specific question in year *i* by choosing the option *j*. A null hypothesis H_0 is stated as follows: all samples i=1,...I are from the same distribution. Under the null hypothesis, the test statistic

¹⁰ I will ise the terms "item" and "question" interchangeably when referring to surveys.

$$\chi^{2} = \sum_{i=1}^{I} \sum_{j}^{J} \frac{\left(n_{ij} - \frac{1}{n}n_{i.}n_{.j}\right)^{2}}{\frac{1}{n}n_{i.}n_{.j}} = n \sum_{i=1}^{I} \sum_{j}^{J} \frac{n_{ij}^{2}}{n_{i.}n_{.j}} - n$$

has a chi-square distribution with (I-1)(J-1) degrees of freedom.

Sample	Category							
Sample	1	2		J		J	Total	
1	<i>n</i> ₁₁	<i>n</i> ₁₂		n_{1j}		N_{1J}	$n_{1.}$	
2	<i>n</i> ₂₁	<i>n</i> ₂₂		n_{2j}		N_{2J}	<i>n</i> ₂ .	
i	<i>ni</i> 1	<i>n</i> _{<i>i</i>2}		n _{ij}		n _i	<i>n</i> _{<i>i</i>.}	
				•••				
Ι	<i>n</i> ₁₁	n_{I2}		n _{Ii}		n _{IJ}	<i>n</i> _{<i>I</i>.}	
Total	<i>n</i> .1	<i>n</i> .2		n _{.i}	•••	<i>n</i> . <i>J</i>	N	

The test of homogeneity of sample distributions was applied to original samples, and various sub-samples in order to control for age, education, religiosity and gender. Due to the low number of observation available, a detailed matching was not performed- at most the two of abovementioned factors are controlled for: age, as a primary variable, and one of the following: gender, religiosity as represented by frequency of church attendance and education. Based on obtained outcomes, conclusion about changing distribution of the answers (and hence, indirectly, about the change of values in the society) is derived. It should be noted that there is not any exact, rigorous procedure used in order to obtain final results. This is not possible because of large number of tests performed. Therefore, final statements about presence / non-presence of a change in values are made only when almost all tests within various sub-samples point to statistically significant / insignificant change (on 5% level of significance). The large number of test performed is also a reason why not all statistical reports are incorporated into this paper. However, they are available upon request.

IV Data

For the purpose of this study I use the data coming from International Social Survey Programme. Specifically I use the modules on Religion, Environment and Family and Changing Gender Roles, since these modules have been administrated twice within a particular period in time. (See Table...)

Survey	Years	Transition countries surveyed in both years
Religion I, II	1991, 1998	Hungary, Slovenia, Poland, Russia
Environment I, II	1993, 2000	Slovenia, Russia, Czech Republic, Bulgaria
Family and Changing Gender Roles II, III	1994, 2002	Hungary, Slovenia, Russia, Czech Republic

Since the questionnaires in the surveys are not composed based on value theory, but rather they address specific life domains, values have to be inferred from the items. Therefore, I divide individual items into groups corresponding to Schwartz's values division based on my own judgment. This is the main weakness of this paper. There exists a non-zero probability of wrong classification especially when one takes into account diversity of a human being, which may lead to different understanding of the same question by different individual. Moreover, it is highly probable that the answers are dependent on the specific conditions¹¹. Hence, the results of this study are reported

¹¹ Example: On the whole, do you think it should or should not be the government's responsibility to provide a job for everyone who wants one? (International Social Survey Programme, Religion, 1991, 1998). The answer to this question should reveal one's preferences regarding security, or equality, but it actually depends on work status of the questioned person.

with awareness of potential bias and error stemming from assignment of a value to a question based on my personal judgement.

V Results

In this section I investigate two main questions. First, it is possible, in investigated transition countries, to observe an inclination to *security*, *conformity* and *tradition* values in the distribution of answers in years 1991, 1993 and 1994 as assumed theoretically by Schwartz? And second, it is possible to conclude, based on data from 1998, 2000 and 2002 that there is a general tendency to move towards *stimulation*, *self-direction*, *hedonism*, *universalism*, *benevolence*, and *achievement* values?

1. Religion (1991-1998)

The individual items, that were included in both years and to which a value according to a Schwartz's system was attached, are summarized in *Table A.1.1*. in *Appendix*. Value opposition examined by the listed items is heterogeneous, despite entailing mainly *conservatism* vs. *openness to change* dimensions.

The prevalence of values across Hungary, Poland and Slovenia that were involved in both, 1991 and 1998 ISSP surveys is homogenous (*Tables A.1.2.b.* – *A.1.4.b.*). Particularly, respondents express preference for *security/conformity* values by prevailing belief that government should provide job for everyone willing to work and reduce income differences (V5, V6). Values belonging to dimension of *conservatism* – *conformity/tradition* prevail across Hungary, Poland and Slovenia also in the case of items V10 and V11 (judgment about sexual relationship of a married person with other than his or her spouse being wrong and about a sexual relationship between two adults of the same sex). On the other hand, when asked about appropriateness of sexual relationship before marriage (V9), respondents uniformly consider this as appropriate which is not in accordance with pursuing tradition values. Surprisingly, mostly tolerant are the respondents (even in Poland) with respect to agreement with abortion in the case of a strong chance of a serious defect in baby as well as in the case of a very low income family $(V14, V15)^{12}$. Question V16, V17 address the appropriate role of a woman in a household. The answers indicate that in all three considered countries, *conformity/tradition* values prevail as most respondents think that a husband should earn money and wife should look after the home and the family; and that family life suffers while woman has a full time job.

The questions V18 and V19 are interesting because they address the issue of honesty towards government with respect to taxes and benefits. According to the responses, in all countries dishonesty is considered to be a wrong thing. However, such an outcome may also be implied by answering dishonestly or by the fact that people in general may consider such a behavior as wrong, but that does not have to reflect their real behavior. Regarding the role of religious leaders on decisions of voters and on government decisions, respondents in Poland, Hungary and Slovenia prefer no influence (V27, V29). Contrary to the Schwartz's theorizing, people in transition countries appear to be confident with respect to the control over their lives (V41, V45 and V46).

Tables A.1.2.a. – A.1.4.a. contain the statistics and the rejection levels (if any) of null hypothesis of no change in distribution across time for sub-samples based on various criteria. It is clear that in all three countries, there is high occurrence of rejection when looking on statistics based on full sample, but it is less so once looking at other

¹² In the case of item V15- abortion in the case of very low income family, Polish do not in majority accept it, but those who hold the opposite opinion do not constitue a majority.

sub-samples. More detailed division- based on testing 10-years age groups across time sorted based on gender, education and/or church attendance (not reported in this paper as outlined in *Section III*) in Poland and Slovenia does not offer any patterns or differences between men and women, people with at most secondary education and the rest, as well as between frequent attendants of religions services and those who attend churches less often than once a month. In the case of Hungary, higher educated and not religious people appear to have more stable value preferences

Taking into account all results across various tested sub-groups, abovementioned outcomes, the occurrence of change in answers' distributions is confirmed mainly in the case of Hungary, followed by Slovenia and then Poland. When considering the items of which distribution in 1998 is statistically different from the one in 1991, common to all (or at least two) countries, there is a stronger disagreement with respect to the role of religious leaders on decisions of voters and on government decisions (movement towards stronger universalism values) and less stronger confidence in an "appropriate" role of the woman in the household (item V16). On the other hand respondents express stronger preference for security/conformity values as represented by desirability of a government to provide job for everyone willing to work and to reduce income differences (V5, V6).

Putting up together results for ISSP modules of Religion 1991 and 1998, one can find a striking similarity between the countries with respect to the answers to the questions in the questionnaire in 1991, as well as the direction of the significant change in the distribution of answers in 1998. Nevertheless, the *security* values as expressed by relying on government with respect to providing jobs and reducing income differences become stronger over time.

2. Environment (1993-2000)

It turns out to be a difficult task to attach environmental item a value from Schwartz's system of values. This is due mainly to the fact that the answers to most questions depend not only on environmental awareness but also on individual's knowledge of a given environmental problem. Moreover, values attached to the questions V5-V22 have to be taken with caution since attachment was difficult due to generality of the questions. For example, in item V6 (about government responsibility to reduce income differences between rich and poor) it is not clear, whether the aspect of equality or the aspect of government responsibility prevails in individual respondent's case. Therefore, *Table A.2.1.* summarizing value assignment has to be considered with caution.

Prevalence of values is examined for 3 transition countries included in both Environment modules: Bulgaria, Czech Republic and Slovenia. The following outcome can be inferred from Tables A.2.2.b. - A.2.4.b in *Appendix*.

When elaborating on *universalism-hedonism* opposition as represented by items V41-V50, i.e. by how much people consider various sources of pollution as dangerous, clearly, *universalism* values prevail. That is, majority of respondents consider pollution caused by cars, industry, chemicals used in farming and pollution of rivers and lakes in general as dangerous. Similarly, an opinion that a rise in world's temperature is dangerous prevails (V52). Also, respondents mostly agree that everything we do in a modern life harms the environment (V14). Finally, most respondents in all 3 countries believe that they do what is right for environment even if it is somehow difficult (V28). Even though, when it comes to willingness to pay higher prices, taxes or cutting a standard of living (items V24, V25, V26), homogenous preference of *universalism* in

universalism-hedonism opposition items no longer applies. Only Slovenians are mostly willing to suffer economically which contrasts Czechs who are mostly unwilling to do so. In Bulgaria, in 1993, the answers to this type of questions are evenly distributed, and unwillingness prevailed with respect to cutting a standard of living.

Items V54, V55 addressing a desired role of government in making people/businesses care about environment reveal that most people in all 3 countries prefer passing laws rather than letting people/businesses decide on their own.

A homogenous pattern across examined countries prevails also with respect to items V5 (private enterprises represent the best way to solve economic problems for most respondents) and V6 (it is government responsibility to reduce income differences between rich and poor). The latter one provides the expected result because of a longlasting history of communism with its emphasis on equality.

The answers to the rest of the questions do not exhibit similarities across nations (see specific tables for details).

Tables A.2.2.a. – *A.2.4.a.* contain the statistics and the rejection levels (if any) of null hypothesis of no change in distribution across time. In Bulgaria, most items within most subgroups exhibit a statistically significant change in distribution of answers between 1994 and 2002. When looking at tables based on Czech and Slovenian data one can notice much lower occurrence of null hypothesis rejection. The results following from examining the specific effects of gender, education and/or church attendance within 10-year age-groups (not reported in this paper) are the following:

The effect of age:

By investigating the results for the Czech Republic, one observes the pattern of younger generations changing their beliefs in more cases compared to older generations. Similarly, a slight tendency towards stability of beliefs is observed as moving from younger to older Slovenian cohorts. On the other hand, there are no age effects observed for Bulgaria.

The effect of education

There is no visible effect of education on data from any examined country.

The effect of church attendance

When considering division according to church attendance, Czechs who attend church more than once a month exhibit high level of stability of their values and beliefs. This observation is, however, supported by very low number of observations (because of low extent of religiosity in the Czech Republic). Also, when looking at the statistics of the tests based on Slovenian data, more frequent church attendance implies less frequent rejection of the null hypothesis of no change in the distribution of answers.

The effect of gender

When considering men and women separately within age groups, the most items in which distribution is significantly different between 1993 and 2000, based on the Czech data, can be found in the subgroups of the youngest women and the oldest men. Considering other two countries, no consistent pattern with respect to value change according to gender can be found.

Taking into account abovementioned outcomes, the occurrence of change in answers' distributions is confirmed mainly in the case of Bulgaria (see *Table A.2.2.b.*). Inspection of the distributions' changes suggests that stronger emphasis is being given

on universalism, self-direction and hedonism values. This fact does not contradict theoretical predictions of Schwartz and others. On the other hand, in the case of Slovenia and the Czech Republic, *no statistically significant change* is obtained in lot of questions. However prevailing beliefs themselves differ in the Czech Republic and Slovenia (items V17, V22, V24-V26).

3. Family and Changing Gender Roles (1994-2002)

To most items belonging to ISSP modules in 1994-2002 I assign self-direction vs. tradition and universalism vs. tradition opposition (see *Table A.3.1.*). However, it is questionable to which extent this assignment applies to transition countries, since, for example, communist regime may have changed a traditional role of a woman in the sense of appropriateness of her work. To see the actual state, 5 transition countries included in Family and Gender Roles (Slovenia, Poland, Hungary, Czech Republic and Bulgaria) are examined in 1995. The similarity of prevailing (assigned) values among the countries is reported in *Table A.3.2.b.-A.3.6.b.* in *Appendix*.

To summarize prevalence of beliefs in 1994, majority of respondents think that a working mother can establish as good relationship with her children as a mother who doesn't work (V4); pre-school children and family suffer when a woman works and that what a woman really wants is home and children (V5, V6, V7). On the other hand, most respondents think that having a job is a best way for a woman being independent person (V9) and that there should be an equality when concerning man's and woman's contribution to household's income and woman working while there are no children or after children leave home (V11, V15, V18). This does not apply when there is a preschool child present in the household (V16). Traditional values uniformly prevail in 5

examined countries also when taking into consideration happiness of married people compared to single ones (V19). However, these values are not such strong to prevail when concerning bad marriage to be better than no marriage at all (V22). There is again no controversy among considered nations in prevalence of a traditional opinion of desirability of having children once married (V23). In contrast, more favorable opinions prevail about living together outside or before marriage, as well as about divorce being a good thing when a couple cannot work out marriage problems (V25, V26, V27). Lastly, there is unanimity about watching children grow up to be a life's greatest joy (V29). Overall, it appears that traditional role of a woman applies when there are children in the household, otherwise she should be working. Also, concerning a couple living together, unless the children are explicitly mentioned, respondents in the surveys are tolerant.

The only questions to which the majority of answers differ among the nations considered are the following three: V8 (being a housewife as fulfilling as working for pay), V17 (Whether woman should work after the youngest child starts school) and V24 (One parent being able to bring up a child as well as two parents together). The latter one is worth mentioning, since only in Poland, a traditional catholic country, universalism values prevail as opposed to other countries.

The basic group of tests for homogeneity of distributions is reported in *Tables A.3.2.a.* - *A.3.6.a* in *Appendix*. In Bulgaria, most items within most subgroups exhibit a statistically significant change in distribution of answers between 1994 and 2002. The same, albeit to a lesser extent, applies to Hungary. When taking into account other three countries, the frequency of null hypothesis rejection is lower, and there are numerous items, in which H0 is rejected when considering whole sample, but not rejected when

considering other sub-samples. Taking into account also the results stemming from examination of the specific effects of gender, education and/or church attendance within 10-year age-groups, the following is concluded¹³.

The effect of age:

In the Czech Republic, younger people are those whose values change, even when additionally controlling for gender, education and church attendance. This is apparent especially when comparing the youngest age groups (age 18-27 and 28-37 in 1994) to the oldest one (58-67 in 1994). In Poland and Slovenia, the oldest age group (58-67) does not exhibit almost any change in values. In Hungary, paradoxically, the youngest age group exhibits a change in the answers' distributions least often.

The effect of education

In Bulgaria, respondents with less than secondary education exhibit more stable values within the examined 8-year interval compared to those with higher education. The effect is diminishing with older age groups. In Hungary, on the other hand, there seems to be an effect of lower attained education on higher occurrence of change in values, however, only in groups of older respondents (48-57 and 58-67).

The effect of church attendance

Frequent church attendants in the Czech Republic appear to have more stable beliefs compared to those attending church rarely or never, however, the low numbers of observations undermine this result. On the other hand, in Poland, when considering those who report that they attend religious services at least once a month, an evaluation

¹³ The tests performed on specific age subgroups and consequently on gender, education and religiosity are not reported in details for the reasons stated in the Methodology section and can be provided upon requests.

of their answers' distributions demonstrates higher frequency of rejecting null hypothesis of no change, compared to those reporting less frequent church attendance.

The effect of gender

In the module Family and Changing Gender Roles, there is not any consistent pattern or difference between men and women once controlling for age in any considered country.

The final outcomes of extensive testing are reported in Tables 3.2.b.-3.6.b. As shown there, in Slovenia, Poland and the Czech Republic, a *non-presence* of change in answers' distribution" is concluded more often than a *presence* of change. And in the case of lot of items, the tests are inconclusive. The situation is different when taking into consideration Hungary and, especially, Bulgaria. While in Hungary, examined distributions in 2002 (proved to be significantly different from the ones in 1994) show a slight movement towards values as hypothesized in *Section V* (with exception of items V25, V27), in Bulgaria a "direction" of a movement in values is hard to determine. Rather, there appears to be a tendency for people to express less "extreme" opinions¹⁴.

In general, under assumption of true value assignment, a value change in 5 considered countries, if any, is towards more emphasis on self-direction and universalism values, as expected.

VI Conclusion

There is a general consensus among sociologists that new institutions established in transition countries after 1989 are not "compatible" with prevailing cultural values in

¹⁴ Extreme- in the sense of choosing strong agreement or disagreement

these countries. A natural question that arises is whether some form of adaptation occurs, i.e. whether there is possible to observe a change in cultural values under the influence of new institutional environment. Schwartz, Bardi and Bianchi (2000) deal with this issue. However, they use data only up to year 1997, divides CEE countries into two homogeneous groups and most importantly, uses a standard tool of cross-cultural studies- a mean analysis. In my research I examine the most recent data, treat each transition country separately and instead of the mean analysis I employ more appropriate econometric tools, namely the test for the homogeneity of sample distributions. However, the results obtained by this study are far from clear. The hypotheses concerning values prevailing in CEE at the beginning of transition proved to be true only partially. This may be, to some extent, caused by inappropriate assignment of values to the evaluated survey question. There is, nevertheless, a high level of similarity among countries regarding prevailing values at the outset of transition.

The results concerning value change are more in accordance with hypotheses. Once a statistical significance is confirmed by tests performed by most sub-samples, evaluation of a change in distribution of answers is likely to point to increased *selfdirection, hedonism, universalism* and/or *achievement*. Because of diversity of the results it is hard to provide an interpretation. I do not elaborate on the question of causality either. I may only hypothesize that a new institutional environment is the force driving such outcome, especially when one considers that culture changes very slowly unless some abrupt change in environment like the collapse of communism takes place.

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Appendix

Table 1.1.Values assigned to items.Religion.

Number		Value opposition	Dimension opposition
	Whether it should be the government resposibility to provide job for everyone who	Security/Conformity vs.	Conconvation vo. Opoppose to
V5	wants one	Self-direction	Conservatism vs. Openness to Change
V5		Sell-direction	Change
	Whether it should be the government	'Security/Conformity vs.	Conservatism vs. Openness to
V6	resposibility to reduce income differences	Self-direction	Change
10			
	Wrong or not wrong to have sexual	Tradition vs. Self-	Conservatism vs. Openness to
V9	relationship before marriage	Direction	Change
	Wrong or not wrong for a married person to		
	have sexual relatioship with other than his	Conformity/Tradition vs.	Conservatism vs. Openness to
V10	wife or husband	Self-direction/Hedonism	Change
110			Conservatism vs. Self-
	Wrong or not wrong a sexual relationship	Conformity/Tradition vs.	Transcendence/Openness to
V11	between two adults of the same sex	Universalism/Hednonism	Change
	Wrong or not wrong: abortion if a strong	Tradition/Power vs. Self-	Conservatism vs. Openness to
V14	chance of a serious defect in baby	Direction	Change
	Wrong or not wrong: abortion if a very low		Ŭ Ŭ
	income family that cannot afford more	Tradition/Power vs. Self-	Conservatism vs. Openness to
V15	children	Direction	Change
	Agree or not: a husband's job is to earn	Conformity/Tradition vs.	Conservatism vs. Self-
	money and wife's job is to look after the	Achievement/Self-	Enhancement/Openness to
V16	home and the family	Direction	Change
	Agree or not: family life suffers when a	Conformity/Tradition vs.	Conservatism vs. Openness to
V17	woman has a full time job	Self-direction	Change
	Not wrong or wrong: a taxpayer not reporting		
	all his income in order to pay less income		Self-Enhancement vs. Self-
V18	taxes	Power vs. Universalism	Transcendence
	Not wrong or wrong: giving the government		
	incorrect information to get benefits not		Self-Enhancement vs. Self-
V19	entitled to get	Power vs. Universalism	Transcendence
	Agree or disagree: religious leaders should		
	not try to influence how people vote in the		Self-Transcendence vs. Self-
V27	elections	Universalism vs. Power	Enhancement
	Agree or disagree: religious leaders should		Self-Transcendence vs. Self-
V29	not try to influence government decisions	Universalism vs. Power	Enhancement
	Agree or disagree: There is a little that	Tradition vs.	Conservatism vs. Self-
	people can do to change the course of their	Achievement/Self-	Enhancement/Openness to
V41	lives	Direction	Change
	Agree or disagree: life is only meaningful if	Self-Direction vs.	Openness to Change vs.
V45	you provide meaning yourself	Tradition	Conservatism
	Agree or disagree: we each make our own	Self-Direction vs.	Openness to Change vs.
V46	fate	Tradition	Conservatism

Table 1.2. a.Chi-squared tests for homogeneity of distributions. Levels of significance.*Religion.* Poland.

			Basic						
Question	Original	Weighted	screening	EDUC 1	EDUC 2	EDUC 3	Males	Females	CHURCH
V5	13.27 ¹	9.86 ⁵	6.65 ¹⁰	13.16 ¹	6.74 ¹⁰	6.60 ¹⁰	5.42	9.73 ⁵	7.75 ¹⁰
V6	210.27 ¹	179.84 ¹	172.08 ¹	139.14 ¹	55.98 ¹	17.47 ¹	85.12 ¹	100.33 ¹	118.92 ¹
V9	4.96	2.63	4.36	2.58	1.62	6.03	4.08	0.62	2.91
V10	12.11 ¹	11.30 ⁵	9.70 ⁵	17.85 ¹	5.44	3.14	6.74 ¹⁰	5.18	6.80 ¹⁰
V11	3.90	0.17	2.11	0.84	0.95	4.77	2.12	1.49	0.71
V14	27.74 ¹	20.18 ¹	15.70 ¹	15.12 ¹	6.28 ¹⁰	2.51	8.38 ⁵	13.33 ¹	28.70 ¹
V15	24.69 ¹	20.10 ¹	15.97 ¹	11.71 ¹	7.73 ¹⁰	2.47	8.63 ⁵	12.64 ¹	21.43 ¹
V16	25.07 ¹	35.53 ¹	27.86 ¹	7.14	21.43 ¹	27.06 ¹	26.44 ¹	16.19 ¹	26.27 ¹
V17	23.80 ¹	32.36 ¹	26.08 ¹	14.87 ¹	31.57 ¹	28.78 ¹	45.06 ¹	4.31	22.42 ¹
V18	15.69 ¹	21.95 ¹	15.66 ¹	21.12 ¹	4.96	3.29	17.97 ¹	8.11 ⁵	21.69 ¹
V19	9.05 ⁵	7.07 ¹⁰	6.81 ¹⁰	9.27 ⁵	0.58	2.99	11.32 ⁵	5.92	3.76
V27	37.71 ¹	44.64 ¹	34.51 ¹	30.76 ¹	20.37 ¹	7.63	27.74 ¹	19.12 ¹	29.57 ¹
V29	59.75 ¹	79.19 ¹	70.65 ¹	50.97 ¹	30.48 ¹	14.62 ¹	70.23 ¹	20.33 ¹	51.35 ¹
V41	3.31	8.11 ¹⁰	17.23 ¹	7.24	7.10	7.43	14.62 ¹	3.39	3.85
V45	19.37 ¹	17.09 ¹	19.04 ¹	10.34 ⁵	9.21 ¹⁰	5.10	15.13 ¹	4.47	13.57 ¹
V46	9.68 ⁵	8.88 ¹⁰	8.20 ¹⁰	7.64	6.74	10.65 ⁵	5.09	5.67	7.11

EDUC1...respondents with lower than secondary education

EDUC2...respondents with at most secondary education

EDUC3...respondents with higher than secondary education

CHURCH...respondent attending religious services at least once a month

Table 1.2.b.

Evaluation. *Religion*. Poland.

	Country:		Pola	nd
			Stat.	
Q	Value opposition	1991 - prevailing value	sig.	Evaluation
V5	Security/Conformity vs. Self-direction	security/conformity	no	
V6	'Security/Conformity vs. Self-direction	security/conformity	yes	stronger security/conformity
V9	Tradition vs. Self-Direction	self-direction	no	
V10	Conformity/Tradition vs. Self- direction/Hedonism	conformity/tradition	no	
V11	Conformity/Tradition vs. Universalism/Hednonism	conformity/tradition	no	
V14	Tradition/Power vs. Self-Direction	self-direction		
V15	Tradition/Power vs. Self-Direction	none		
V16	Conformity/Tradition vs. Achievement/Self-Direction	conformity/tradition	no	
V17	Conformity/Tradition vs. Self-direction	conformity/tradition		
V18	Power vs. Universalism	universalism		
V19	Power vs. Universalism	universalism	no	
V27	Universalism vs. Power	universalism		
V29	Universalism vs. Power	universalism	yes	stronger universalism
V41	Tradition vs. Achievement/Self-Direction		no	
V45	Self-Direction vs. Tradition	self-direction	no	
V46	Self-Direction vs. Tradition	self-direction	no	

Table 1.3. a.Chi-squared tests for homogeneity of distributions. Levels of significance.*Religion.* Hungary.

			Basic						
Question	Original	Weighted	screening	EDUC 1	EDUC 2	EDUC 3	Males	Females	CHURCH
V5	14.72 ¹	20.24 ¹	17.24 ¹	17.36 ¹	3.68	2.57	8.76 ⁵	17.60 ¹	6.86 ⁵
V6	34.08 ¹	21.46 ¹	27.45 ¹	8.26 ⁵	23.68 ¹	10.57 ⁵	9.26 ⁵	12.51 ¹	5.74
V9	9.07 ⁵	23.24 ¹	9.70 ⁵	27.62 ¹	7.03 ¹⁰	12.13 ¹	7.04 ¹⁰	21.82 ¹	4.38
V10	19.33 ¹	7.80 ¹⁰	8.84 ⁵	1.30	19.03 ¹	26.25 ¹	1.56	10.01 ⁵	1.57
V11	64.55 ¹	75.42 ¹	67.61 ¹	43.03 ¹	31.43 ¹	3.91	7.59 ¹⁰	90.01 ¹	11.38 ¹
V14	30.73 ¹	42.09 ¹	42.77 ¹	30.21 ¹	13.15 ¹	2.85	35.72 ¹	11.58 ¹	3.14
V15	11.31 5	7.39 ¹⁰	9.94 ⁵	1.82	9.27 ⁵	20.08 ¹	7.76 ¹⁰	4.17	4.86
V16	135.54 ¹	162.80 ¹	130.44 ¹	151.09 ¹	17.09 ¹	5.35	71.91 ¹	94.21 ¹	30.51 ¹
V17	112.37 ¹	117.13 ¹	94.82 ¹	104.55 ¹	18.40 ¹	1.27	44.15 ¹	77.88 ¹	35.74 ¹
V18	34.56 ¹	34.79 ¹	29.70 ¹	28.48 ¹	9.44 ⁵	4.61	13.40 ¹	34.22 ¹	21.15 ¹
V19	5.01	7.80 ¹⁰	5.37	5.33	3.43	2.79	1.65	8.88 ⁵	5.67
V27	82.70 ¹	86.00 ¹	79.81 ¹	77.72 ¹	15.46 ¹	2.63	50.97 ¹	40.35 ¹	3.19
V29	83.35 ¹	80.64 ¹	79.35 ¹	62.11 ¹	23.53 ¹	9.20 ⁵	44.24 ¹	36.81 ¹	16.60 ¹
V41	101.08 ¹	108.97 ¹	100.67 ¹	75.87 ¹	31.51 ¹	16.16 ¹	75.46 ¹	42.55 ¹	18.62 ¹
V45	97.57 ¹	91.43 ¹	97.02 ¹	57.88 ¹	40.35 ¹	18.28 ¹	49.99 ¹	42.98 ¹	18.54 ¹
V46	49.79 ¹	41.05 ¹	38.49 ¹	33.85 ¹	10.97 ⁵	2.82	20.56 ¹	22.26 ¹	2.66

EDUC1...respondents with lower than secondary education

EDUC2...respondents with at most secondary education

EDUC3...respondents with higher than secondary education

CHURCH...respondent attending religious services at least once a month

Table 1.3.b.

Evaluation.

Religion. Czech Republic.

	Country:		Hung	ary
			Stat.	
Q	Value opposition	1991 - prevailing value	sig.	Evaluation
V5	Security/Conformity vs. Self-direction	security/conformity	no	
V6	'Security/Conformity vs. Self-direction	security/conformity	yes	stronger security/conformity
V9	Tradition vs. Self-Direction	self-direction	no	
V10	Conformity/Tradition vs. Self- direction/Hedonism	conformity/tradition	no	
V11	Conformity/Tradition vs. Universalism/Hednonism	conformity/tradition	yes	towards universalism/hedonism
V14	Tradition/Power vs. Self-Direction	self-direction		
V15	Tradition/Power vs. Self-Direction	self-direction		
V16	Conformity/Tradition vs. Achievement/Self-Direction	conformity/tradition	yes	towards achievement/self- direction
V17	Conformity/Tradition vs. Self-direction	conformity/tradition	yes	towards achievement/self- direction
V18	Power vs. Universalism	universalism		
V19	Power vs. Universalism	universalism	no	
V27	Universalism vs. Power	universalism	yes	stronger universalism
V29	Universalism vs. Power	universalism	yes	stronger universalism
V41	Tradition vs. Achievement/Self-Direction	none	yes	towards achievement/self- direction
V45	Self-Direction vs. Tradition	self-direction	yes	towards tradition
V46	Self-Direction vs. Tradition	self-direction		

Table 1.4.a.Chi-squared tests for homogeneity of distributions. Levels of significance.*Religion.* Slovenia.

		Basic					
Question	Original	screening	EDUC 1	EDUC 2	EDUC 3	Males	Females
V5	71.00 ¹	75.44 ¹	38.35 ¹	27.50 ¹	26.96 ¹	38.40 ¹	35.45 ¹
V6	55.99 ¹	61.99 ¹	15.68 ¹	31.60 ¹	39.98 ¹	38.65 ¹	19.74 ¹
V9	0.98	2.67	2.14	4.02	3.79	12.84 ¹	4.15
V10	70.31 ¹	63.65 ¹	23.91 ¹	37.00 ¹	27.11 ¹	44.35 ¹	28.54 ¹
V11	34.08 ¹	17.33 ¹	9.86 ⁵	40.17 ¹	0.82	3.97	37.34 ¹
V14	13.41 ¹	14.61 ¹	14.94 ¹	1.21	1.69	15.99 ¹	2.21
V15	26.25 ¹	25.69 ¹	10.96 ⁵	15.65 ¹	20.89 ¹	26.11 ¹	3.96
V16	44.77 ¹	26.66 ¹	21.94 ¹	73.82 ¹	1.80	19.98 ¹	31.55 ¹
V17	16.80 ¹	6.44	0.82	40.52 ¹	2.20	4.58	15.79 ¹
V18	38.41 ¹	49.60 ¹	17.38 ¹	18.15 ¹	15.17 ¹	6.36 ¹⁰	44.13 ¹
V19	7.83 ⁵	13.06 ¹	2.99	5.45	7.07 ¹⁰	1.82	7.27 ¹⁰
V27	167.74 ¹	154.25 ¹	71.80 ¹	124.10 ¹	34.01 ¹	81.19 ¹	91.19 ¹
V29	128.83 ¹	123.52 ¹	61.19 ¹	91.15 ¹	26.21 ¹	56.58 ¹	74.89 ¹
V41	18.43 ¹	11.23 ⁵	6.20	43.71 ¹	5.77	3.73	24.17 ¹
V45	19.14 ¹	18.27 ¹	8.08 ¹⁰	21.62 ¹	5.24	13.62 ¹	9.27 ¹⁰
V46	10.51 ⁵	10.78 ⁵	5.32	8.31 ¹⁰	4.96	6.62	8.72 ¹⁰

EDUC1...respondents with lower than secondary education

EDUC2...respondents with at most secondary education

EDUC3...respondents with higher than secondary education

Table 1.4.b.

Evaluation.

Religion. Slovenia.

	Country:	Slovenia					
Q	Value opposition	1991 - prevailing value	Stat. sig.	Evaluation			
V5	Security/Conformity vs. Self-direction	security/conformity	yes	stronger security/conformity			
V6	'Security/Conformity vs. Self-direction	security/conformity					
V9	Tradition vs. Self-Direction	self-direction	no				
V10	Conformity/Tradition vs. Self- direction/Hedonism	conformity/tradition	yes	stronger conformity/tradition			
V11	Conformity/Tradition vs. Universalism/Hednonism	conformity/tradition					
V14	Tradition/Power vs. Self-Direction	self-direction	no				
V15	Tradition/Power vs. Self-Direction	self-direction	no				
V16	Conformity/Tradition vs. Achievement/Self-Direction	polarity	yes	achievement/self- direction			
V17	Conformity/Tradition vs. Self-direction	conformity/tradition	no				
V18	Power vs. Universalism	universalism					
V19	Power vs. Universalism	universalism	no				
V27	Universalism vs. Power	universalism	yes	stronger universalism			
V29	Universalism vs. Power	universalism	yes	stronger universalism			
V41	Tradition vs. Achievement/Self-Direction		no				
V45	Self-Direction vs. Tradition	self-direction					
V46	Self-Direction vs. Tradition	self-direction					

Table 2.1.Values assigned to items.Environment.

Number	Question	Value opposition	Dimension opposition
V5	Agree or Disagree: private enterprise being the best way to solve the economic problems	self-direction vs. tradition	openness to change vs. conservatism
V6	Agree or Disagree: it is government responsibility to reduce income differences between rich and poor	universalism/traditio n vs. self-direction	trascendence/conservatis m vs. openness to change
V12	Agree or Disagree: modern science will solve environmental problems without bringing significant changes to our lives	stimulation vs. tradition/conformity	openness to change vs. conservatism
V14	Agree or Disagree: almost everything we do in a modern life harms the environment	universalism vs. hedonism	self-trascendence vs. self- enhancement
V17	Agree or Disagree: people worry too much about human progress harming the environment	universalism	self-trascendence vs. self- enhancement
V22	Agree or Disagree: economic growth always harms the environment	n vs. stimulation/achieve ment	self- trascendence/conservatis m vs. self-enhancement
V24	How much willing to pay higher prices in order to protect environment: from very willing to very unwilling	universalism vs. hedonism	self-trascendence vs. self- enhancement
V25	How much willing to pay higher taxes in order to protect environment: from very willing to very unwilling	universalism vs. hedonism	self-trascendence vs. self- enhancement
V26	How much willing to cut standard of living in order to protect environment: from very willing to very unwilling	universalism vs. hedonism	self-trascendence vs. self- enhancement
V28	Respondent agrees or disagrees that he/she is doing what is right for environment even if it is somehow difficult	universalism vs. hedonism	self-trascendence vs. self- enhancement
V41	To what extent is dangerous air pollution caused by cars in general: from extremely dangerous to not dangerous at all	universalism vs. hedonism	self-trascendence vs. self- enhancement
V42	To what extent is dangerous air pollution caused by cars for respondent and his/her family: from extremely dangerous to not dangerous at all	universalism vs. hedonism	self-trascendence vs. self- enhancement
V46	To what extent is dangerous air pollution caused by industry in general: from extremely dangerous to not dangerous at all	universalism vs. hedonism	self-trascendence vs. self- enhancement
V48	To what extent is dangerous pesticides and chemicals used in farming in general: from extremely dangerous to not dangerous at all	universalism vs. hedonism	self-trascendence vs. self- enhancement
V50	To what extent is dangerous pollution of rivers, lakes and streams in general: from extremely dangerous to not dangerous at all	universalism vs. hedonism	self-trascendence vs. self- enhancement
V52	To what extent is dangerous a rise in the world's temperature caused by the "greenhouse effect" in general: from extremely dangerous to not dangerous at all	universalism vs. hedonism	self-trascendence vs. self- enhancement
V54	Government role in making people care about the environment: should let people decide or pass laws	self-direction vs. conformity/power	openness to change vs. conservatism/self- enhancement
V55	Government role in making business care about the environment: should let businesses decide or pass laws	self-direction vs. conformity/power	openness to change vs. conservatism/self- enhancement

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Table 2.2. a.Chi-squared tests for homogeneity of distributions. Levels of significance.Environment. Bulgaria.

		Basic					
Question	Original	screening	EDUC 1	EDUC 2	EDUC 3	Males	Females
V5	45.61	41.79 ¹	18.27 ¹	37.45 1	11.73 ి	33.54 ¹	20.57
V6	90.82 ¹	83.94 ¹	15.90 ¹	59.28 ¹	10.83 ⁵	73.26 ¹	23.86
V12	79.15 ¹	71.53 ¹	29.55 ¹	55.60 ¹	30.23 ¹	35.48 ¹	50.81
V14	76.47 ¹	74.82 ¹	25.23 ¹	53.40 ¹	17.44 ¹	39.58 ¹	44.59
V17	166.61 ¹	158.88 ¹	47.61 ¹	117.11 ¹	40.25 ¹	90.10 ¹	82.28
V22	84.17 ¹	69.44 ¹	14.67 ¹	69.73 ¹	37.57 ¹	45.52 ¹	41.46
V23	19.21 ¹	14.12 ¹	18.14 ¹	6.54 ⁵	8.67 ⁵	15.29 ¹	8.31
V24	119.64 ¹	124.18 ¹	51.30 ¹	120.28 ¹	64.63 ¹	56.04 ¹	65.40
V25	135.86 ¹	130.50 ¹	41.21 ¹	134.56 ¹	61.79 ¹	67.34 ¹	72.74
V26	139.25 ¹	134.20 ¹	30.22 ¹	142.79 ¹	64.71 ¹	74.34 ¹	69.49
V28	170.68 ¹	152.63 ¹	90.21 ¹	101.89 ¹	35.84 ¹	78.12 ¹	93.11
V41	9.85 ⁵	9.42 ¹⁰	9.11 ¹⁰	5.33	4.03	4.14	6.63
V42	31.81 ¹	27.48 ¹	12.20 ⁵	18.21 ¹	15.80 ¹	15.92 ¹	19.28
V46	28.95 ¹	28.02 ¹	11.43 ⁵	21.31 ¹	8.44	9.11 ¹⁰	23.95
V48	13.02 ⁵	10.78 ⁵	9.00 ¹⁰	6.55	2.63	9.02 ¹⁰	7.24
V50	43.18 ¹	40.02 ¹	11.38 5	39.51 ¹	19.80 ¹	26.85 ¹	21.13
V52	23.43 ¹	22.55 ¹	6.94	21.83 ¹	15.95 ¹	13.41 ¹	10.94
V54	2.01	2.22	3.14 ¹⁰	0.55	1.92	5.67 ⁵	0.11
V55	4.66 ⁵	3.91 ⁵	4.50 ⁵	1.34	3.00	6.61 ⁵	0.32

EDUC1...respondents with lower than secondary education

EDUC2...respondents with at most secondary education

EDUC3...respondents with higher than secondary education

Table 2.2.b.

Evaluation.

Environment. Bulgaria.

	Country:	Bulgaria				
			Stat.			
Q	Value opposition	1993 - prevailing value	sig.	Evaluation		
				slightly stronger self-		
V5	self-direction vs. tradition	self-direction	yes	direction		
V6	universalism/tradition vs. self-direction	universalism/tradition	yes	towards self-direction		
V12	atimulation vo tradition/conformity	stimulation		towards		
	stimulation vs. tradition/conformity	universalism	yes	tradition/conformity towards hedonism		
V14			yes			
V17	hedonism/power vs. universalism	hedonism/power	yes	towards universalism		
	universalism/tradition vs.			**		
V22	stimulation/achievement	universalism/tradition	yes			
V24	universalism vs. hedonism	none	yes	towards hedonism		
V25	universalism vs. hedonism	none	yes	towards hedonism		
V26	universalism vs. hedonism	hedonism	yes	stronger hedonism		
V28	universalism vs. hedonism	universalism	yes	towards hedonism		
V41	universalism vs. hedonism	universalism				
V42	universalism vs. hedonism	universalism				
V46	universalism vs. hedonism	universalism				
V48	universalism vs. hedonism	universalism	no			
V50	universalism vs. hedonism	universalism				
V52	universalism vs. hedonism	universalism				
V54	self-direction vs. conformity/power	conformity/power	no			
V55	self-direction vs. conformity/power	conformity/power	no			

**...a movement of distribution towards center

Table 2.3. a.Chi-squared tests for homogeneity of distributions. Levels of significance.Environment. Czech Republic.

		<u> </u>						
.	<u>.</u>	Basic						
Question	Original	screening	EDUC 1	EDUC 2	EDUC 3	Males	Females	CHURCH
V5	19.35 ¹	21.79 ¹	9.46 ¹⁰	11.92 ⁵	10.52 ⁵	11.85 ⁵	13.15 ⁵	4.73
V6	17.75 ¹	12.33 ⁵	12.06 ⁵	5.87	8.14 ¹⁰	7.85 ¹⁰	15.82 ¹	5.85
V12	33.12 ¹	27.69 ¹	8.92 ¹⁰	31.63 ¹	8.99 ¹⁰	14.93 ¹	20.73 ¹	7.62
V14	8.73 ¹⁰	10.02 ⁵	8.75 ¹⁰	4.35	9.69 ⁵	6.83	5.64	3.73
V17	26.43 ¹	23.52 ¹	16.65 ¹	11.21 ⁵	4.10	30.21 ¹	10.97 ⁵	8.81 ¹⁰
V22	57.44 ¹	52.93 ¹	40.34 ¹	19.61 ¹	10.58 ⁵	21.36 ¹	39.73 ¹	7.97 ¹⁰
V23	23.38 ¹	21.89 ¹	14.48 ¹	9.61 ¹	3.85	5.52 ¹⁰	30.90 ¹	3.50
V24	24.57 ¹	29.62 ¹	22.03 ¹	10.27 5	4.96	17.10 ¹	11.15 5	9.99 5
V25	25.55 ¹	26.44 ¹	20.59 ¹	10.18 ⁵	6.44	6.78	22.53 ⁵	13.07 5
V26	10.62 ⁵	11.87 5	6.06	8.12 ¹⁰	2.00	1.60	13.49 ¹	3.31
V28	5.00	6.08	4.25	3.69	1.30	5.30	5.34	5.10
V41	29.63 ¹	24.80 ¹	9.91 ⁵	30.15 ¹	11.47 5	12.45 ⁵	18.14 ¹	4.71
V42	24.92 ¹	22.17 ¹	14.96 ¹	11.03 ⁵	5.91	11.13 ⁵	15.44 ¹	1.48
V46	6.27	8.37 ¹⁰	6.46	4.69	4.36	4.77	3.67	5.95
V48	12.24 ⁵	9.96	9.27 ¹⁰	8.49 ¹⁰	7.72	10.24 ⁵	4.32	2.53
V50	40.79 ¹	40.50 ¹	26.19 ¹	16.02 ¹	2.64	13.69 ¹	33.36 ¹	17.17 ¹
V52	7.62	7.19	5.28	5.45	6.20	6.97	4.60	1.40
V54	14.50 ¹	13.63 ¹	9.39 ¹	7.25 ¹	0.59	10.84 ¹	4.69 ⁵	3.98 ⁵
V55	0.27	0.47	0.64	0.27	1.06	0.86	2.29	1.77

EDUC1...respondents with lower than secondary education

EDUC2...respondents with at most secondary education

EDUC3...respondents with higher than secondary education

Table 2.3.b.

Evaluation.

Environment. Czech Republic.

	Country:	Czech Republic				
			Stat.			
Q	Value opposition	1993 - prevailing value	sig.	Evaluation		
V5	self-direction vs. tradition	self-direction	no			
V6	universalism/tradition vs. self-direction	universalism/tradition	no			
V12	stimulation vs. tradition/conformity	tradition/conformity				
V14	universalism vs. hedonism	none				
V17	hedonism/power vs. universalism	universalism				
	universalism/tradition vs.	stimulation/achieveme				
V22	stimulation/achievement	nt				
V24	universalism vs. hedonism	hedonism				
V25	universalism vs. hedonism	hedonism	no			
V26	universalism vs. hedonism	hedonism	no			
V28	universalism vs. hedonism	universalism	no	towards hedonism		
V41	universalism vs. hedonism	universalism				
V42	universalism vs. hedonism	universalism				
V46	universalism vs. hedonism	universalism				
V48	universalism vs. hedonism	universalism	no			
V50	universalism vs. hedonism	universalism				
V52	universalism vs. hedonism	universalism	no			
V54	self-direction vs. conformity/power	conformity/power				
V55	self-direction vs. conformity/power	conformity/power	no			

Table 2.4.a.

Chi-squared tests for homogeneity of distributions. Levels of significance.
<i>Environment</i> .Slovenia.

Question	Original	Basic screening	EDUC 1	EDUC 2	EDUC 3	Males	Females	CHURCH
V5	16.96 ¹	10.25 5	6.25	13.24 ¹	2.99	9.49 5	14.70 ¹	12.21 5
V6	28.88 1	30.24 ¹	3.65	17.69 ¹	22.44 ¹	12.66 5	18.73 ¹	8.02 ¹⁰
V12	13.75 ¹	12.97 ⁵	0.75	11.44 5	6.14	14.23 ¹	4.08	3.43
V14	6.09	3.44	4.23	12.26 5	1.01	2.52	5.12	1.21
V17	21.07 ¹	13.69 ¹	14.84 ¹	20.69 ¹	7.67	11.19 ⁵	13.13 5	5.00
V22	24.17 ¹	12.79 ⁵	6.74	30.27 ¹	5.61	12.97 ⁵	15.57 ¹	8.12 ¹⁰
V23	3.68	5.01 ¹⁰	1.82	14.88 ¹	3.60	2.65	1.83	4.44
V24	9.74 ⁵	10.66 ⁵	12.52 ⁵	6.46	0.53	3.81	13.62 ¹	13.57 ¹
V25	19.10 ¹	23.49 ¹	17.95 ¹	5.85	2.87	6.57	14.35 ¹	4.65
V26	5.04	5.27	7.68	6.80	4.73	1.10	10.52 ⁵	3.29
V28	8.79 ¹⁰	11.07 ⁵	3.93	6.17	7.79 ¹⁰	6.33	5.11	5.03
V41	125.03 ¹	105.96 ¹	56.57 ¹	76.03 ¹	31.42 ¹	64.46 ¹	64.39 ¹	22.51 ¹
V42	46.64 ¹	41.82 ¹	26.15 ¹	24.18 ¹	7.94 ¹⁰	19.25 ¹	31.66 ¹	22.37 ¹
V46	4.07	2.09	2.67	3.59	3.58	4.74	5.51	3.31
V48	84.08 ¹	87.22 ¹	24.96 ¹	71.12 ¹	32.48 ¹	44.71 ¹	43.27 ¹	23.05 ¹
V50	3.92	3.43	8.03 ¹⁰	1.94	5.26	6.36	3.21	9.18 ¹⁰
V52	4.26	3.79	0.88	3.36	2.17	3.71	1.69	3.51
V54	14.26 ¹	11.17 ¹	8.92 ¹	1.36	1.86	8.35 ¹	5.99 ⁵	4.79 ⁵
V55	4.43 ⁵	6.21 ⁵	1.99	0.10	0.05	1.99	2.18	0.46

EDUC1...respondents with lower than secondary education

EDUC2...respondents with at most secondary education

EDUC3...respondents with higher than secondary education

CHURCH...respondent attending religious services at least once a month

Table 2.4.b.

Evaluation.

Environment. Slovenia.

	Country:	Slovenia				
			Stat.			
Q	Value opposition	1993 - prevailing value	sig.	Evaluation		
V5	self-direction vs. tradition	self-direction	no			
V6	universalism/tradition vs. self-direction	universalism/tradition				
V12	stimulation vs. tradition/conformity	tradition/conformity				
V14	universalism vs. hedonism	universalism	no			
V17	hedonism/power vs. universalism	hedonism/power	no			
	universalism/tradition vs.					
V22	stimulation/achievement	universalism/tradition	no			
V24	universalism vs. hedonism	universalism	no			
V25	universalism vs. hedonism	universalism	no			
V26	universalism vs. hedonism	universalism	no			
V28	universalism vs. hedonism	universalism	no			
V41	universalism vs. hedonism	universalism	yes	stronger universalism		
V42	universalism vs. hedonism	none				
V46	universalism vs. hedonism	universalism	no			
V48	universalism vs. hedonism	universalism				
V50	universalism vs. hedonism	universalism	no			
V52	universalism vs. hedonism	universalism	no			
V54	self-direction vs. conformity/power	conformity/power	no			
V55	self-direction vs. conformity/power	conformity/power	no			

Table 3.1.Values assigned to items.Family and Changing Gender Roles.

Number	Question	Value opposition	Dimension oppositio
	Agree or disagree: both working and non-working mothers	universalism vs.	self-trascendence
V4	can establish good relationship with their children	tradition	vs.conservatism
	Agree or disagree: a pre-school child is likely to suffer if	tradition vs.	conservatism vs. self-
V5	his/her mom does work	universalism	transcendence
	Agree or disagree: a family suffers if a woman has a full	tradition vs.	conservatism vs. self-
V6	time job	universalism	transcendence
	Agree or disagree: job is all right, but what women really	tradition vs. self-	conservatism vs.
V7	want is home and children	direction	openness to change
	Agree or disagree: being a housewife is as fulfilling as	universalism vs.	self-transcendence vs.
V8	working for pay	achievement	self-enhancement
	Agree or disagree: having a job is a best way for woman to	self-direction vs.	openness to change ve
V9	be an independent person	tradition	conservatism
	Agree or disagree: both man and woman should contribute	self-direction vs.	openness to change ve
V11	to the household income	tradition	conservatism
	Work full time, part time, or not at all: Should woman work	self-direction vs.	openness to change v
V15	after marriage, before there are children?	tradition	conservatism
	Work full time, part time, or not at all: Should woman work	self-direction vs.	openness to change v
V16	when there is a child of a pre-school age?	tradition	conservatism
	Work full time, part time, or not at all: Should woman work	self-direction vs.	openness to change v
V17	after the youngest child starts school?	tradition	conservatism
	Work full time, part time, or not at all: Should woman work	self-direction vs.	openness to change v
V18	after the children leave home?	tradition	conservatism
	Agree or Disagree: Married people are generally happier	tradition vs.	conservatism vs. self-
V19	than unmarried.	universalism	transcendence
	Agree or Disagree: It si better to have a bad marriage than	tradition vs.	conservatism vs. self-
V22	no marriage at all.	universalism	transcendence
	Agree or Disagree: People who want to have children	tradition vs.	conservatism vs. self-
V23	should get married.	universalism	transcendence
	Agree or Disagree: One parent can bring up a child as well	universalism vs.	self-transcendence vs.
V24	as two parents together	tradition	conservatism
	Agree or Disagree: OK to live together without intentions to	universalism vs.	self-transcendence vs.
V25	get married.	tradition	conservatism
-	Agree or Disagree: Good idea for a couple intending to get	universalism vs.	self-transcendence vs.
V26	married to live together first.	tradition	conservatism
	Agree or Disagree: Divorce is a best solution for a couple	universalism vs.	self-transcendence vs.
V27	that does not seem to be able to work out marriage	tradition	conservatism
	Agree or Disagree: Watching children grow up is a life's	tradition vs.	conservatism vs. self-

Table 3.2. a.

Chi-squared tests for homogeneity of distributions. Levels of significance.	
Family and Changing Gender Roles. Bulgaria.	

			Basic					
Question	Original	Weighted	screening	EDUC 1	EDUC 2	EDUC 3	Males	Females
V4	200.31 ¹	186.20 ¹	168.26 ¹	48.76 ¹	157.08 ¹	83.97 ¹	71.92 ¹	125.21 ¹
V5	225.02 ¹	216.20 ¹	193.98 ¹	58.10 ¹	170.12 ¹	78.79 ¹	85.34 ¹	136.00 ¹
V6	276.96 ¹	272.13 ¹	249.61 ¹	76.55 ¹	212.87 ¹	85.60 ¹	108.90 ¹	167.35 ¹
V7	218.16 ¹	225.35 ¹	213.26 ¹	85.17 ¹	135.16 ¹	42.50 ¹	69.68 ¹	166.15 ¹
V8	255.96 ¹	248.51 ¹	238.55 ¹	67.70 ¹	198.78 ¹	83.96 ¹	102.92 ¹	151.59 ¹
V9	106.89 ¹	102.71 ¹	100.86 ¹	35.55 ¹	74.59 ¹	33.50 ¹	43.99 ¹	60.62 ¹
V11	356.14 ¹	362.96 ¹	359.42 ¹	138.24 ¹	224.03 ¹	61.84 ¹	167.65 ¹	191.31 ¹
V15	11.18 ¹	7.74 5	12.20 ¹	1.54	9.69 ¹	17.11 ¹	1.95	7.01 5
V16	93.00 ¹	91.59 ¹	95.38 ¹	30.26 ¹	59.56 ¹	18.85 ¹	26.01 ¹	72.89 ¹
V17	38.32 ¹	34.05 ¹	35.03 ¹	9.59 ¹	23.42 ¹	12.63 ¹	6.30 ⁵	34.44
V18	12.65 ¹	11.31 ¹	17.05 ¹	4.41	7.35 5	9.90 ¹	4.08	9.79
V19	164.75 ¹	172.99 ¹	141.81 ¹	53.35 ¹	111.41 ¹	33.84 ¹	61.84 ¹	114.46 ¹
V22	325.80 ¹	331.71 ¹	323.72 ¹	99.59 ¹	233.29 ¹	78.61 ¹	148.58 ¹	191.71 ¹
V23	215.30 ¹	234.25 ¹	218.68 ¹	75.51 ¹	148.34 ¹	44.51 ¹	84.86 ¹	159.68 ¹
V24	212.29 ¹	198.31 ¹	189.48 ¹	37.95 ¹	186.95 ¹	55.28 ¹	99.11 ¹	100.08 ¹
V25	339.47 ¹	350.29 ¹	321.05 ¹	96.46 ¹	252.49 ¹	77.53 ¹	138.58 ¹	216.50 ¹
V26	313.63 ¹	309.95 ¹	294.55 ¹	78.33 ¹	251.07 ¹	93.34 ¹	143.00 ¹	165.36 ¹
V27	163.96 ¹	167.26 ¹	154.48 ¹	46.34 ¹	126.89 ¹	40.54 ¹	94.59 ¹	76.49
V29	61.49 ¹	56.04 ¹	52.33 ¹	22.20 ¹	34.18 ¹	8.16 ¹⁰	13.62 ¹	62.30 ¹

Basic screening...sample obtained after dropping out non-matching observations based on maximum and minimum ages in samples

EDUC1...respondents with lower than secondary education

EDUC2...respondents with at most secondary education

EDUC3...respondents with higher than secondary education

Table 3.2.b.

Evaluation.

Family and Changing Gender Roles. Bulgaria.

	Country:	Bulgaria				
		1994 - prevailing	Stat.			
Q	Value opposition	value	sig.	Evaluation		
V4	universalism vs. tradition	universalism	yes	**		
V5	tradition vs. universalism	tradition	yes	**		
V6	tradition vs. universalism	tradition	yes	**		
V7	tradition vs. self-direction	tradition	yes	**		
V8	universalism vs. achievement	universalism	yes	**		
V9	self-direction vs. tradition	self-direction	yes	**		
V11	self-direction vs. tradition	self-direction	yes	**		
V15	self-direction vs. tradition	self-direction	no			
V16	self-direction vs. tradition	tradition	yes	towards self-direction		
V17	self-direction vs. tradition	none				
V18	self-direction vs. tradition	self-direction				
V19	tradition vs. universalism	tradition	yes	**		
V22	tradition vs. universalism	universalism	yes	**		
V23	tradition vs. universalism	tradition	yes	**		
V24	universalism vs. tradition	tradition	yes	**		
V25	universalism vs. tradition	universalism	yes	**		
V26	universalism vs. tradition	universalism	yes	**		
V27	universalism vs. tradition	universalism	yes	**		
V29	tradition vs. universalism	tradition				

**...a movement of distribution towards center

Table 3.3. a.Chi-squared tests for homogeneity of distributions. Levels of significance.Family and Changing Gender Roles.Czech Republic.

0	O rdering I	Basic				Malaa	Familia	
Question		screening	EDUC 1	EDUC 2	EDUC 3	Males	Females	CHURCH
V4	204.21 ¹	172.92 ¹	109.49 ¹	98.36 ¹	98.36 ¹	94.44 ¹	101.56 ¹	27.90 ¹
V5	5.80	6.48	3.91	4.22	4.22	0.70	8.65 ¹⁰	8.64 ¹⁰
V6	15.54 ¹	12.69 ⁵	11.18 ⁵	10.43 ⁵	10.43 ⁵	9.67 ⁵	11.19 ⁵	3.01
V7	7.15	7.47	2.45	5.94	5.94	4.65	9.76 ⁵	1.60
V8	18.22 ¹	22.56 ¹	0.33	35.63 ¹	35.63 ¹	15.21 ¹	7.82 ¹⁰	1.51
V9	33.18 ¹	29.04 ¹	17.31 ¹	20.64 ¹	20.64 ¹	14.67 ¹	24.62 ¹	11.03 ⁵
V11	28.70 ¹	22.97 ¹	12.60 ⁵	13.71 ¹	13.71 ¹	12.78 5	16.60 ¹	8.38 ¹⁰
V15	25.61 ¹	20.89 ¹	10.30 ¹	17.70 ¹	17.70 ¹	16.42 ¹	7.43 5	8.41 ⁵
V16	75.25 ¹	72.67 ¹	33.54 ¹	42.61 ¹	42.61 ¹	34.69 ¹	36.26 ¹	26.16 ¹
V17	3.28	0.62	2.42	7.24 5	7.24 5	0.97	3.04	3.73
V18	27.81 ¹	22.31 ¹	11.98 ¹	15.69 ¹	15.69 ¹	18.73 ¹	9.80 ¹	2.52
V19	7.14	2.96	9.12 ¹⁰	2.05	2.05	1.95	7.27	8.37 ¹⁰
V22	46.05 ¹	56.08 ¹	18.98 ¹	24.85 ¹	24.85 ¹	30.27 ¹	21.00 ¹	10.75 ⁵
V23	55.85 ¹	37.63 ¹	34.47 ¹	30.42 ¹	30.42 ¹	21.40 ¹	37.23 ¹	4.63
V24	124.74 ¹	123.94 ¹	64.77 ¹	54.18 ¹	54.18 ¹	46.87 ¹	69.56 ¹	15.58 ¹
V25	24.61 ¹	22.32 ¹	10.84 ⁵	23.77 ¹	23.77 ¹	10.24 ⁵	22.95 ¹	4.58
V26	26.53 ¹	21.73 ¹	20.18 ¹	13.39 ¹	13.39 ¹	12.42 ⁵	17.88 ¹	5.93
V27	18.60 ¹	14.66 ¹	5.83	16.08 ¹	16.08 ¹	13.11 ⁵	6.32	24.84 ¹
V29	19.93 ¹	28.28 ¹	5.94	15.11 ¹	15.11 ¹	5.66	11.49 ⁵	3.50

EDUC1...respondents with lower than secondary education

EDUC2...respondents with at most secondary education

EDUC3...respondents with higher than secondary education

CHURCH...respondent attending religious services at least once a month

Table 3.3.b.

Evaluation.

Family and Changing Gender Roles. Czech Republic.

	Country:		Czech Republic				
Q	Value opposition	1994 - prevailing value	Stat. sig.	Evaluation			
V4	universalism vs. tradition	none	yes	towards universalism			
V5	tradition vs. universalism	tradition	no				
V6	tradition vs. universalism	tradition	no				
V7	tradition vs. self-direction	tradition	no				
V8	universalism vs. achievement	achievement					
V9	self-direction vs. tradition	self-direction					
V11	self-direction vs. tradition	self-direction	no				
V15	self-direction vs. tradition	self-direction	no				
V16	self-direction vs. tradition	tradition	yes	towards self-direction			
V17	self-direction vs. tradition	none	no				
V18	self-direction vs. tradition	self-direction					
V19	tradition vs. universalism	tradition	no				
V22	tradition vs. universalism	universalism					
V23	tradition vs. universalism	tradition					
V24	universalism vs. tradition	tradition	yes	towards universalism			
V25	universalism vs. tradition	universalism					
V26	universalism vs. tradition	universalism					
V27	universalism vs. tradition	universalism	no				
V29	tradition vs. universalism	tradition					

Table 3.4. a.Chi-squared tests for homogeneity of distributions. Levels of significance.Family and Changing Gender Roles. Hungary.

			Basic						
Question	Original	Weighted	screening	EDUC 1	EDUC 2	EDUC 3	Males	Females	CHURCH
V4	82.60 ¹	77.39 ¹	68.14 ¹	55.48 ¹	39.28 ¹	16.54 ¹	40.21 ¹	48.36 ¹	36.25 ¹
V5	94.71 ¹	89.68 ¹	74.43 ¹	63.37 ¹	21.63 ¹	14.24 ¹	60.50 ¹	31.34 ¹	36.50 ¹
V6	65.72 ¹	63.41 ¹	48.61 ¹	41.49 ¹	15.91 ¹	9.41 ¹⁰	39.92 ¹	30.71 ¹	35.61 ¹
V7	77.93 ¹	81.94 ¹	64.30 ¹	68.22 ¹	14.23 ¹	12.35 ⁵	51.85 ¹	31.64 ¹	57.12 ¹
V8	26.25 ¹	23.91 ¹	14.68 ¹	14.01 ¹	6.83	1.94	16.56 ¹	13.88 ¹	34.78 ¹
V9	40.70 ¹	43.44 ¹	48.37 ¹	30.12 ¹	39.55 ¹	15.07 ¹	31.33 ¹	13.74 ¹	23.77 ¹
V11	48.73 ¹	50.49 ¹	48.64 ¹	31.94 ¹	43.02 ¹	25.31 ¹	23.42 ¹	28.51 ¹	20.59 ¹
V15	71.89 ¹	77.58 1	68.10 ¹	44.10 ¹	29.57 ¹	21.76 ¹	46.47 ¹	30.12 ¹	18.11 ¹
V16	74.59 ¹	72.08 ¹	60.88 ¹	43.37 ¹	20.90 ¹	11.46 ¹	35.24 ¹	37.80 ¹	24.15 ¹
V17	97.18 ¹	105.85 ¹	73.20 ¹	74.84 ¹	26.86 ¹	15.54 ¹	64.70 ¹	40.69 ¹	30.54 ¹
V18	113.41 ¹	127.36 ¹	106.97 ¹	70.40 ¹	54.41 ¹	30.70 ¹	81.29 ¹	44.94 ¹	28.39 ¹
V19	72.87 ¹	62.21 ¹	53.71 ¹	47.42 ¹	19.66 ¹	8.19 ¹⁰	26.83 ¹	37.20 ¹	14.31 ¹
V22	19.14 ¹	23.04 ¹	25.40 ¹	16.07 ¹	6.66	14.48 ¹	17.78 ¹	6.93	6.03
V23	79.89 ¹	91.16 ¹	61.70 ¹	61.37 ¹	22.08 ¹	11.19 ⁵	37.44 ¹	56.58 ¹	68.93 ¹
V24	21.13 ¹	26.09 ¹	21.61 ¹	14.97 ¹	28.07 ¹	17.14 ¹	19.55 ¹	10.30 ⁵	11.18 ⁵
V25	47.69 ¹	44.82 ¹	43.72 ¹	30.96 ¹	13.43 ¹	6.03	11.04 ⁵	38.75 ¹	28.44 ¹
V26	69.90 ¹	76.27 ¹	60.89 ¹	59.05 ¹	11.26 ⁵	8.18 ¹⁰	25.26 ¹	54.58 ¹	41.28 ¹
V27	63.26 ¹	61.66 ¹	52.25 ¹	44.46 ¹	13.97 ¹	3.97	20.81 ¹	44.17 ¹	34.03 ¹
V29	17.75 ¹	21.77 ¹	11.19 ⁵	20.92 ¹	3.70	6.13	21.50 ¹	4.89	21.80 ¹

EDUC1...respondents with lower than secondary education

EDUC2...respondents with at most secondary education

EDUC3...respondents with higher than secondary education

CHURCH...respondent attending religious services at least once a month

Table 3.4.b.

Evaluation.

Family and Changing Gender Roles. Hungary.

	Country:	Hungary				
Q	Value opposition	1994 - prevailing value	Stat. sig.	Evaluation		
V4	universalism vs. tradition	universalism	yes	stronger universalism		
V5	tradition vs. universalism	tradition	-			
V6	tradition vs. universalism	tradition				
V7	tradition vs. self-direction	tradition	yes	towards self-direction		
V8	universalism vs. achievement	universalism	no			
V9	self-direction vs. tradition	none				
V11	self-direction vs. tradition	self-direction				
V15	self-direction vs. tradition	self-direction	yes	stronger self-direction		
V16	self-direction vs. tradition	tradition	yes	stronger self-direction		
V17	self-direction vs. tradition	tradition				
V18	self-direction vs. tradition	self-direction	yes	stronger self-direction		
V19	tradition vs. universalism	tradition	yes	towards universalism		
V22	tradition vs. universalism	universalism	no			
V23	tradition vs. universalism	tradition	yes	towards universalism		
V24	universalism vs. tradition	tradition				
V25	universalism vs. tradition	universalism	yes	towards tradition		
V26	universalism vs. tradition	universalism				
V27	universalism vs. tradition	universalism	yes	towards tradition		
V29	tradition vs. universalism	tradition	no			

Table 3.5. a.

Chi-squared tests for homogeneity of distributions. Levels of significance.

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			Basic						
Question	Original	Weighted	screening	EDUC 1	EDUC 2	EDUC 3	Males	Females	CHURCH
V4	32.84 ¹	35.00 ¹	21.32 ¹	19.55 ¹	17.65 ¹	3.18	19.63 ¹	27.65 ¹	26.51
V5	50.06 ¹	53.07 ¹	31.21 ¹	21.89 ¹	30.38 ¹	7.94 ¹⁰	25.07 ¹	29.37 ¹	41.03
V6	47.30 ¹	43.89 ¹	28.14 ¹	16.64 ¹	29.56 ¹	9.29 ¹⁰	21.30 ¹	24.45 ¹	37.88
V7	55.94 ¹	65.25 ¹	35.19 ¹	19.42 ¹	33.51 ¹	16.91 ¹	30.87 ¹	36.97 ¹	59.15
V8	20.69 ¹	26.36 ¹	20.34 ¹	27.44 ¹	3.02	4.26	11.89 ⁵	16.00 ¹	33.25
V9	37.00 ¹	42.56 ¹	35.93 ¹	27.55 ¹	25.47 ¹	14.28 ¹	28.05 ¹	22.49 ¹	33.43
V11	111.52 ¹	128.46 ¹	103.09 ¹	48.28 ¹	99.39 ¹	46.25 ¹	69.48 ¹	62.28 ¹	91.11
V15	39.37 ¹	41.02 ¹	42.73 ¹	23.49 ¹	8.90 ⁵	1.00	27.87 ¹	14.03 ¹	28.87
V16	98.04 ¹	93.93 ¹	72.36 ¹	24.65 ¹	61.03 ¹	31.44 ¹	43.74 ¹	50.55 ¹	73.44
V17	78.80 ¹	91.77 ¹	56.60 ¹	25.41 ¹	55.48 ¹	39.73 ¹	34.92 ¹	59.66 ¹	68.41
V18	68.08 ¹	73.22 ¹	64.25 ¹	37.74 ¹	34.02 ¹	15.81 ¹	39.80 ¹	37.41 ¹	45.69
V19	29.86 ¹	31.50 ¹	13.89 ¹	14.13 ¹	18.05 ¹	17.00 ¹	7.04	31.23 ¹	23.01
V22	8.93 ¹⁰	7.14	6.61	4.87	4.42	8.01 ¹⁰	6.72	8.36 ¹⁰	10.75
V23	13.56 ¹	21.91 ¹	10.73 ⁵	7.27	9.00 ¹⁰	4.90	11.69 ⁵	17.81 ¹	10.17
V24	27.18 ¹	27.65 ¹	24.94 ¹	21.93 ¹	9.05 ¹⁰	7.21	20.75 ¹	9.81 ⁵	21.59
V25	41.38 ¹	50.55 ¹	35.14 ¹	30.42 ¹	15.46 ¹	4.21	18.92 ¹	37.92 ¹	37.92
V26	41.76 ¹	42.75 ¹	25.19 ¹	27.14 ¹	9.92 ⁵	4.79	18.96 ¹	25.45 ¹	27.54
V27	40.72 ¹	41.29 ¹	60.56 ¹	40.00 ¹	6.30	3.22	19.58 ¹	31.06 ¹	32.68
V29	14.38 ¹	18.05 ¹	28.41 ¹	10.84 ⁵	12.58 ⁵	2.02	14.10 ¹	5.64	13.95

Family and Changing Gender Roles. Poland.

EDUC1...respondents with lower than secondary education

EDUC2...respondents with at most secondary education

EDUC3...respondents with higher than secondary education

CHURCH...respondent attending religious services at least once a month

Table 3.5.b.

Evaluation.

Family and Changing Gender Roles. Poland.

	Country:	Poland				
Q	Value opposition	1994 - prevailing value	Stat. sig.	Evaluation		
V4	universalism vs. tradition	universalism	no			
V5	tradition vs. universalism	tradition				
V6	tradition vs. universalism	tradition				
V7	tradition vs. self-direction	tradition				
V8	universalism vs. achievement	universalism				
V9	self-direction vs. tradition	self-direction				
V11	self-direction vs. tradition	self-direction				
V15	self-direction vs. tradition	self-direction				
V16	self-direction vs. tradition	tradition				
V17	self-direction vs. tradition	tradition	yes	towards self-direction		
V18	self-direction vs. tradition	self-direction	yes	stronger self-direction		
V19	tradition vs. universalism	tradition	no			
V22	tradition vs. universalism	universalism	no			
V23	tradition vs. universalism	tradition	no			
V24	universalism vs. tradition	universalism				
V25	universalism vs. tradition	universalism				
V26	universalism vs. tradition	universalism	no			
V27	universalism vs. tradition	universalism				
V29	tradition vs. universalism	tradition				

Table 3.6. a.

Chi-squared tests for homogeneity of distributions. Levels of significance. *Family and Changing Gender Roles*. Slovenia.

		Basic						
Question	Original	screening	EDUC 1	EDUC 2	EDUC 3	Males	Females	CHURCH
V4	45.17 ¹	29.97 ¹	15.91 ¹	45.86 ¹	9.41 ¹⁰	17.01 ¹	45.17 ¹	15.12
V5	43.76 ¹	18.88 ¹	21.71 ¹	47.82 ¹	12.71 ⁵	12.03 ⁵	43.76 ¹	12.04
V6	36.44 ¹	14.80 ¹	7.52	60.09 ¹	9.72 ⁵	10.71 ⁵	36.44 ¹	5.33
V7	6.38	1.66	4.47	18.19 ¹	1.13	6.49	6.38	5.55
V8	8.27 ¹⁰	8.17 ¹⁰	5.02	15.54 ¹	3.34	7.97 ¹⁰	8.27 ¹⁰	6.77
V9	21.20 ¹	24.48 ¹	6.70	15.39	3.14	14.84 ¹	21.20 ¹	7.26
V11	14.31 ¹	13.94 ¹	17.85 ¹	4.03	2.47	3.46	14.31 ¹	6.65
V15	50.26 ¹	39.98 ¹	31.97 ¹	33.16 ¹	5.20 ¹⁰	41.01 ¹	50.26 ¹	10.95
V16	149.11 ¹	127.43 ¹	58.61 ¹	118.91 ¹	18.64 ¹	47.50 ¹	149.11 ¹	62.95
V17	62.46 ¹	43.04 ¹	29.56 ¹	69.16 ¹	13.19 ¹	27.73 ¹	62.46 ¹	28.54
V18	38.80 ¹	32.48 ¹	22.31 ¹	26.70 ¹	7.28 ⁵	26.25 ¹	38.80 ¹	19.86
V19	8.22 ¹⁰	3.35	6.57	5.20	0.47	2.97	8.22 ¹⁰	2.63
V22	7.46	15.42 ¹	3.73	2.08	4.47	3.84	7.46	7.29
V23	8.12 ¹⁰	2.36	8.48 ¹⁰	12.96 ⁵	3.70	2.95	8.12 ¹⁰	4.37
V24	4.29	2.50	2.74	6.94	2.53	5.09	4.29	3.01
V25	42.24 ¹	19.93 ¹	33.67 ¹	38.97 ¹	5.34	12.00 ⁵	42.24 ¹	9.48 ¹
V26	42.28 ¹	20.61 ¹	37.77 ¹	32.40 ¹	3.38	17.53 ¹	42.28 ¹	15.92
V27	2.96	0.37	2.30	3.55	6.98	1.02	2.96	2.98
V29	14.00 ¹	19.74 ¹	3.23	9.21 ⁵	5.74	8.80 ¹⁰	14.00 ¹	3.40

EDUC1...respondents with lower than secondary education

EDUC2...respondents with at most secondary education

EDUC3...respondents with higher than secondary education

CHURCH...respondent attending religious services at least once a month

Table 3.6. b.

Evaluation.

Family and Changing Gender Roles. Slovenia.

	Country:	Slovenia				
		1994 - prevailing	Stat.			
Q	Value opposition	value	sig.	Evaluation		
V4	universalism vs. tradition	universalism				
V5	tradition vs. universalism	tradition				
V6	tradition vs. universalism	tradition	no			
V7	tradition vs. self-direction	tradition	no			
V8	universalism vs. achievement	none	no			
V9	self-direction vs. tradition	self-direction	no			
V11	self-direction vs. tradition	self-direction	no			
V15	self-direction vs. tradition	self-direction				
V16	self-direction vs. tradition	tradition	yes	towards self-direction		
V17	self-direction vs. tradition	self-direction				
V18	self-direction vs. tradition	self-direction				
V19	tradition vs. universalism	tradition	no			
V22	tradition vs. universalism	universalism	no			
V23	tradition vs. universalism	none	no			
V24	universalism vs. tradition	tradition	no			
V25	universalism vs. tradition	universalism				
V26	universalism vs. tradition	universalism				
V27	universalism vs. tradition	universalism	no			
V29	tradition vs. universalism	tradition				

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