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**PUBLIC SUPPORT FOR THE
RIGHT TO EUTHANASIA: THE
COMPETING ROLES OF VALUES
AND RELIGIOSITY ACROSS 35
NATIONS**

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The determination of moral views has been frequently reduced to the effects of religiosity, although the effect of human values was acknowledged. This paper attempts to answer the question whether traditional religiosity is still the major regulator of moral attitudes and whether non-religious values have an independent impact. This is studied using attitudes toward euthanasia as a representative case of moral attitudes, since it is still widely discussed. At first, five hypotheses regarding the justifiability of euthanasia are reformulated regarding religiosity, the values of autonomy and vulnerability. The multilevel analysis of the data from the 5th wave of World Values Survey showed that across 35 countries both traditional religiosity and human values have significant and independent impacts on the recognition of the right to euthanasia. Multilevel path analysis demonstrated that the effect of religiosity is partially mediated by the both values of autonomy and conservative ones. In addition, as a result of the low level of general public awareness of the topic, different kinds of capital have an inconsistent impact. We conclude with a discussion of the competing and additive roles of religiosity and the values of autonomy as modern regulators of public moral attitudes.

JEL Classification: A13.

Keywords: moral attitudes, euthanasia, basic values, World Values Survey, multilevel path analysis

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1. Introduction

Religious regulation of moral attitudes has been discussed and tested with empirical data multiple times (see Halman, van Ingen, 2015). The liberalization of moral attitudes in regard to abortion, homosexuality, euthanasia and other morally ambiguous issues was explained by the increasing secularization of societies, similarly, individual and national differences in moral attitudes were related primarily to the level of religiosity of a person or a nation. A much less investigated issue is the value determination of moral attitudes, which is substantively different from the one related to religiosity. Some authors do not differentiate between religiosity and human values at all (e.g. Inglehart, 1997), the others use both values and religiosity but do not explicate their relationship in regard to moral attitudes (e.g. Köneke, 2014). This study aims to address whether religiosity and human values have independent impacts on moral attitudes, and investigate how they interact in determining individual and national differences in moral attitudes.

As a case study of moral attitudes we focus on attitudes toward euthanasia for two reasons. First, despite the legalization of euthanasia in several Western European countries and some states of America since 1997, the debate around the legalization and moral justifiability of euthanasia is still topical among politicians, medical experts and lay people. Therefore, there is a fair amount of variance in attitudes toward euthanasia, which allows us to study the relative impact of religiosity and human values. Second, euthanasia is an end-of-life decision which has been strictly regulated by religion and only recently became the subject of an individual value-based decision. This makes the attitude toward euthanasia a moral attitude which is based on the two competing determinants – religiosity and basic values.

Recent studies attributed variations in attitudes toward euthanasia mostly to the degree of religiosity (Burdette, Hill, Moulton, 2005) as well as to the rational fears of possible abuse of euthanasia procedures (Keown, 2002). The moral arguments of opponents of euthanasia can be reduced to a low tolerance toward interference in the natural, and/or sacred processes of birth and death (Hendry et al., 2013). Supporters of euthanasia emphasize its fundamental difference from suicide and appeal to an individual right to mercy. Such reasoning arises in the framework of the importance of the values of autonomy, self-determination and independence (Kimmelmeier et al, 2002).

While the hypotheses about the impact of religiosity on attitudes toward euthanasia were repeatedly tested (Cohen et al., 2006; 2014; Burdette, Hill & Moulton, 2005), the same cannot be said for the hypotheses about the impact of basic values. Particularly, the positive influence of the values of individualism and autonomy and the negative impact of various conservative values have been little investigated, a rare exception is paper by Köneke (2014), though it focused on trust instead of values. Moreover, it is still questionable whether the values of autonomy have an independent impact on attitudes toward euthanasia or whether both attitudes and values are determined by religiosity.

These issues have acquired increasing relevance due to the modernization and post-modernization of societies which are characterized by increasing values of autonomy and individual choice (Inglehart and Baker, 2000; Welzel, 2013), as well as the fall of religiosity throughout the world (Hayward and Krause, 2015). Therefore, in modernized societies the regulation of moral attitudes based on traditional religiosity could have been replaced by secular-individualistic regulation. Although we do not trace the change of moral attitude regulations, in this paper, we focus on the investigation of the effects of basic human values and religiosity and their interplay in regard to the attitudes toward the right to euthanasia.

2. Background and hypotheses

2.1 Definition

Various authors refer to concepts such as "acceptance", "permissiveness", "justifiability", "approval of practice", "approval of legalization", "positive or negative attitudes", etc. Although all these terms are related to moral attitudes toward practices of euthanasia, the exact meaning may depend on the modality of issue. For example, in relation to the *approval* of euthanasia, the study would deal with attitudes toward the practice. Therefore, individualistic values can lead to either approval or disapproval of euthanasia, depending on what corresponds to the interests of the individual in a specific situation. Likewise, collectivist values give priority to the interests of the group and, similarly, depending on the focus of these interests people who share this type of value can either reject euthanasia (e.g. as symbolic support for seniors' status) or approve it (as it relieves the group of a burden). Very different hypotheses arise when the study refers to the *rights* of individuals to choose between life and death. In this case, individualism will quite unambiguously emphasize the right to euthanasia, while collectivism

will deny it. Approval of euthanasia itself is likely to be dependent on micro-level circumstances, such as the particular characteristics of each case, personal experience of dealing with terminally ill people, the degree of emotional involvement; these are difficult to take into consideration in a large-scale study. Recognition of right to euthanasia is less dependent on experience and is more a product of personal values. Approval of euthanasia does not necessarily translate into support for the legalization of this practice, while the recognition of right to euthanasia is directly related to the attitude toward its legalization. Approval and the recognition of the right to euthanasia are not even clearly related to each other.

In this paper, we focus on the recognition of the right to euthanasia, or its justifiability, since this aspect of moral attitudes is directly linked to the approval of euthanasia legalization leaving the approval, acceptance and other issues for the more specific inquiries.

2.2 Values, religiosity and recognition of the right to euthanasia

The value basis of the right to euthanasia may be found in the theory of modernization and post-modernization. Its central postulate states that there is a growing role of freedom of choice and autonomy in decision-making around the world (Inglehart, Baker, 2000; Welzel, 2013).

Post-modernization theory emphasizes the role of economic and technological progress which trigger social and cultural change. This change first manifests in the transition from the traditional values to the modernized ones. The fulfilment of the basic needs of food and shelter leads to a transition from religious and survival values to "secular-rational" ones which promote material well-being. The next transition leads to the values of self-expression that emphasize autonomy, freedom of choice and decisions, equality and tolerance. This logic applies both to the development of societies through the time, and to the differences between the individuals and countries at one point in time.

Since religiosity is closely related to the evaluation of end-of-life issues, its decrease (and the corresponding increase of secular-rational values) is followed by more permissive views of euthanasia. In secularized societies and individuals, the traditional religious understanding of morality becomes less relevant, and statements based on traditional religious beliefs are more vulnerable to criticism contributing, in particular, to discussion on the justifiability of euthanasia. The second value change toward self-expression affects moral views too, since respect for

freedom of choice and autonomy of decision making provides the grounds for the idea of death with dignity (Van Der Graaf, Van Delden, 2009). Self-expression promotes an individualized conception of morality, and moral issues increasingly become a subject of personal choice. It assumes that the termination of life is morally justifiable when it does not harm others and is a result of a person's own independent decision.

Although the two value shifts have many differences, both lead to increasing positive attitudes toward euthanasia, because the first is related to declining religiosity and the second to the growth of the values of autonomy.

The contribution of religiosity to the attitudes toward euthanasia at both the individual and country level has been repeatedly demonstrated. However, there are very few studies directly devoted to the impact of values on attitudes toward euthanasia. Kemmelmeier et al. (2002) demonstrated that positive attitudes towards euthanasia are promoted by individualism. More individualistic states of America showed a higher degree of acceptance of euthanasia, which is seen as the last step of self-determination. In more collectivist states, life and death questions are seen through the common rules, which frequently are religious norms. In this kind of societies, recognition of the right to euthanasia is impeded. Hendry et al. (2013) point out that many researchers stressed the importance of values, but did not focus on their impact.

Individual control and self-determination are frequently given as oppositions to the traditional authorities, rejection of deviant behaviour, and a commitment to religious and moral traditions. However, the relations between religiosity and the values of autonomy are quite ambiguous. For example, Inglehart (1997) directly contrasts the traditional values (most of which are related to the importance of God) with the values of autonomy and individual choice, however, the transition to values of self-expression was found to be related to a revival of religiosity, probably in new forms (Inglehart, Baker, 2000). Moreover, religiosity and the values of autonomy may also engage in a causal relationship in which religiosity serves as a cause for lower values of autonomy (Schwartz, Huisman, 1995; Saroglou, Delpierre, Dernelle, 2004). Theoretically, there could even be a reversed relationship where a low level of the values of autonomy can lead to higher levels of religiosity. It is reasonable therefore to consider these two characteristics related, but not identical, and their relationship as (at least partly) causal. In addition, religiosity and the values of autonomy may have different impacts on moral attitudes depending on the level of each of them—for example, religiosity may have less impact on the

justifiability of euthanasia among people with higher values of autonomy. This means that in addition to the independent contribution of each factor, an interaction effect is possible. We will address each of these relationships.

2.3 The main hypotheses

Verbakel and Jaspers (2010) formulated four hypotheses about the reasons for different level of justifiability of euthanasia: religiosity, autonomy, death with dignity and the "slippery slope". We consider the level of knowledge of the euthanasia issue, and refined and supplemented these five hypotheses: the values of autonomy, traditional religiosity, interactions between them and the vulnerability hypothesis.

2.3.1 The values of autonomy

Unlike Verbakel and Jaspers, we treat the idea of death with dignity as an essential function of the values of autonomy (Van Der Graaf, Van Delden, 2009), therefore we combine the value of autonomy and dignity into a single hypothesis. Based on previous studies of attitudes toward euthanasia and our discussion of post-modernization theory, we propose the following hypothesis:

H1. The importance of values of autonomy, individual choice and independence has a positive effect on the recognition of the right to euthanasia at both the individual and country levels.

2.3.2 Traditional religiosity

Numerous studies have demonstrated significant differences in the relation to euthanasia between people with varying degrees of traditional religiosity. We focus on traditional religiosity characterized by the presence of a spiritual authority and submission to it. Unlike it, the new type of religiosity (see for example Siegers, 2011) seems to be highly individualistic which in turn leads to the positive attitudes in regard to euthanasia (Siegers, Henseler, in press).

People who consider themselves religious in the traditional sense and who live in countries where the role of religion is highly important, demonstrate a higher degree of opposition to the right to euthanasia. The difference in views on the right to euthanasia between

religious and non-religious individuals seems to be more pronounced in societies with a strong commitment to religion rather than in secular ones. Perhaps, secular societies push religious people towards the acceptance of more liberal points of view while religious societies shift the opinions of both religious and non-religious people toward the negative pole of the attitude continuum. Therefore:

***H2.** The degree of traditional religiosity at both individual and country level has a negative impact on the recognition of the right to euthanasia. Moreover, the religiosity of the society and the religiosity of the individual have a multiplicative effect.*

In addition, we look for causal and interaction relations between religiosity and the values of autonomy. There is a relation between religiosity and values of autonomy and causation or interaction between them is very likely. This idea is expressed in the hypotheses of the mediation and moderation of the religiosity effect applied both to the individual and country levels.

***H3.** Traditional religiosity and values of autonomy have a negative multiplicative effect, so the role of the values of autonomy is weakened among individuals with higher degree of religiosity (and vice versa, among individuals with higher autonomy the effect of religiosity is lower).*

***H4.** Traditional religiosity and values of autonomy have an independent impact on the recognition of the right to euthanasia, and, additionally, the effect of religiosity is partially mediated by basic values.*

2.3.3 Vulnerability (the "slippery slope" hypothesis)

The greatest part of fears associated with euthanasia is linked to fears of its abuse by doctors, the healthcare system as a whole, and third parties, such as relatives. Keown (2002) developed a "slippery slope" hypothesis according to which the legalization of euthanasia can lead to undesirable consequences—the abuse of this practice against the will of patients. People who are more vulnerable due to a lack of resources, knowledge, different kinds of capital (financial, social or human) as means of control over the process of euthanasia, and those from

countries with less developed health care systems are more likely to believe in the possibility of abuse. Therefore, they are less likely recognize the right to euthanasia regardless of their religiosity and values.

Social Capital. A high level of trust in doctors is recognized as one of the main reasons for the legalization of euthanasia in the Netherlands (Rietjens et al., 2009). Trust in people in general might be a proxy for the trust to physicians, as it was found to be positively related to the justifiability of euthanasia both at the individual and country level (Köneke, 2014).

Trust in family is a necessary condition for certain types of euthanasia (e.g., in the case of a permanent vegetative state). In addition to trust, an important part of social capital includes the professional activity.

Human capital. The concept of human capital usually includes a variety of qualities that enables a person to successfully exist including education, physical and psychological health. The lower justifiability of euthanasia is observed among poorly educated people, apparently education enhances the formation of personal autonomy and individualism, and thereby improves people's attitudes towards euthanasia. Better-educated individuals are more likely to recognize a right to euthanasia (Hendry et al., 2012).

Older people are less likely to recognize the right to euthanasia: it is a combination of ageing and cohort effects (Tormos, Rudnev, Bartolome, in press). Younger cohorts grew up in a more permissive environment and with more economic security, and have formed a less skeptical attitude toward euthanasia, compared with previous generations. Ageing is related to more conservative views and a reduction of the perceived distance to death, which also leads to less permissive attitudes among older people.

The state of health indicates a higher probability of an individual's involvement in the discourse on euthanasia, and therefore leads to a more informed evaluation of the practice. It also indicates an experience of suffering, which has a significant positive impact on a person's views on the right to euthanasia (Hendry et al., 2012).

The sense of control over one's own life, or an internal locus of control, is also a manifestation of human capital which may have a direct effect on the positive assessment of the right to euthanasia. People with an external locus of control do not feel that they can manage what happens to them therefore they may be more anxious about such medical practices (Cicirelli et al., 1997).

At the country level one of the key indicators of human capital is life expectancy. Since this index characterizes the ageing of the population, the higher it is the more real the issue of euthanasia in society is, and perhaps, the higher the level of awareness is and consequently, euthanasia is seen as more justifiable issue.

Financial capital. Differences in individual income create inequities in access to the health care system, and wealthy people find themselves in a more favourable situation for treatment and safer conditions for the decision on euthanasia while poorer people face health conditions inspiring less confidence. Therefore, it is reasonable to expect that richer people have a more positive attitude to the justifiability of euthanasia, while poorer are more cautious. Lower social status was demonstrated to decrease the level of recognition of right to euthanasia (Cohen et al., 2006).

A similar logic can be applied at the country level. People living in countries with non-responsive healthcare systems are reasonably skeptical about the recognition of the right to euthanasia. Verbakel and Jaspers (2010) showed that differences in the degree of justifiability of euthanasia between many social groups vanish when there is a high quality healthcare system—as a responsive healthcare system reduces fear of euthanasia.

A high level of prosperity in the country directly reflects the development of social institutions, including the healthcare system and is associated with a modernization process characterized by the increasing importance of the values of autonomy and freedom of choice (Inglehart, Baker, 2000).

Different kinds of capital therefore may potentially reduce vulnerability and ensure people that euthanasia would not be abused. However, many studies miss the fact that issues related to people's vulnerability arise at a higher level of awareness and are linked to the implementation of euthanasia procedure. Lay people are not usually involved in this topic, so the variables related to their vulnerability might have much less impact than values and religiosity. This might lead to the weak or inconsistent impact of the vulnerability factors to the recognition of right to euthanasia.

H5. Social, human and financial capital have a weak or inconsistent but independent impact on the recognition of the right to euthanasia both at individual and country levels.

2.4 Contribution of the current study

As mentioned above, studies of attitudes toward euthanasia repeatedly note the importance of considering the value determinants, but only in rare cases these determinants were actually studied. These rare studies have a number of limitations. First, most of these studies are limited to European countries (Köneke, 2014, Verbakel & Jaspers, 2010). Second, the measurement of values is sometimes questionable. For example, Verbakel, Jaspers (2010) equated the "value autonomy" with faith in the existence of absolute good and evil. Some models included variables of the general permissibility of different issues (such as homosexuality, abortion, divorce) as a predictor (Cohen et al., 2006); given these items were the same items of the battery as an attitude toward euthanasia, the results are inflated with endogeneity. Cultural categories of individualism and authoritarianism were used in studies limited to the scope of one country (Kemmelmeyer et al., 2002). It is still an open question whether religiosity and values have an impact when accounted for simultaneously. At the same time there are databases allowing the analysis of dozens of factors, at both individual and country levels. In our study we attempted to systematize the theoretical background, find the most comprehensive and valid set of indicators to test each hypothesis controlling for all available "non-value" factors.

The rest of the paper is organized as follows. First, we describe the data and measurement of the variables of interest, then we present the descriptive statistics followed by the results of a series of multilevel regressions to test the hypotheses about the joint impact of values and religiosity, and finally a multilevel path analysis is conducted to test the hypothesis about mediated effect of religion on attitudes towards justifiability of euthanasia. In the conclusion we summarize and discuss the contribution of results.

3. Data and Method

3.1 Data

The data from the fifth wave of the World Values Survey (WVS), collected in 2005–2006 is used as the empirical base of the current research. The data from the more recent WVS waves are available, however, the euthanasia item was excluded from the questionnaire.

Since the WVS data have many missing values, we had to reduce our sample to cover as many predictors of attitude to euthanasia as possible. From the original 56 countries in the database, six were excluded due to the lack of data on individual values measured by modified

Schwartz's technique, Japan was excluded because of the absence of data on income, in Jordan there were no data on trust in family and strangers, Serbia was excluded because of the uncertainty in coding the scale to measure the justifiability of euthanasia. In addition, 12 countries were excluded due to missing scores on Schwartz cultural values which were measured independently at the country level (Schwartz, 2008).

As a result, the sample includes 35 countries, distributed around the world and representing eight cultural zones identified by Inglehart and Baker (2000). The resulting sample consists of 39,913 individual responses.

3.2 Analytic approach

Given the hierarchical structure of WVS data with a combination of individual and country levels, multilevel models were employed. Multilevel regressions and path analysis allow an unbiased estimation of the effects at each level (Hox, 2010).

The first three hypotheses relating to the independent impact of religiosity and values of autonomy, and their interactions at the individual and country levels were tested using multilevel regressions with maximum likelihood estimation.

The testing of the fourth hypothesis about the mediated effects on two levels requires the application of multi-level structural equation modelling. Due to the small number of countries, the estimation of parameters using conventional methods was problematic, so we turned to the more flexible Bayesian estimation.

3.3 Measures

The dependent variable is an indicator of the recognition of the right to euthanasia and it was measured by the question "Please tell me for each of the following actions whether you think it can always be justified, never be justified, or something in between". One of the eleven assessed issues was euthanasia defined as "ending of the life of the incurable sick".

As we have noted, there are many modalities in the discussion of euthanasia related to acceptance, permissiveness, approval and so forth. In this paper, we focus on the recognition of right to euthanasia, which is measured exactly by this WVS question. The question wording means that respondents evaluated an abstract situation expressing a general attitude toward euthanasia, or recognition of a third person's moral right to euthanasia. It would be misleading to

link the answers to this question to approval or acceptance which would imply the readiness of respondents to implement it themselves. Instead, the answers to this question are related more to justifiability, or tolerance and, as a logical consequence, lead to the support for the legalization of euthanasia practices.

The distribution of answers to the euthanasia justifiability question is listed in Figure 1. Western and Northern European countries as well as Australia are at the top, and share more positive attitudes toward the right to euthanasia while the countries sharing traditionalist and/or Islamic culture such as Egypt, Indonesia, Ethiopia are located at the bottom.

Following the classification of cultural zones that combine religious and geographical characteristics (Inglehart and Baker, 2000), a more positive attitude towards the recognition of the right to euthanasia is observed in the European countries that belong to the Protestant, English-speaking and Orthodox areas, while among African, Latin American and Asian cultural zones this recognition is significantly lower (see Figure 1).

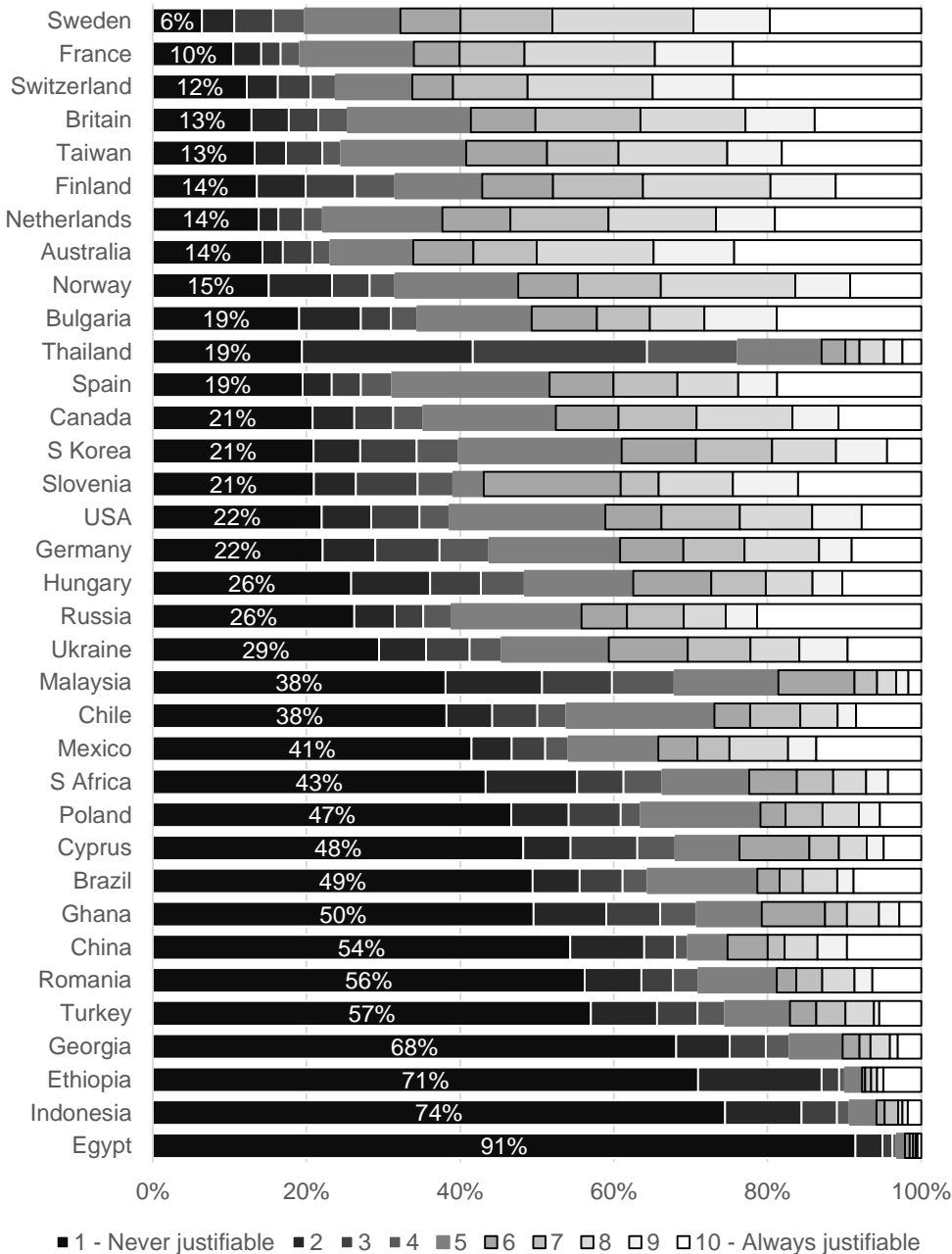


Figure 1. Distribution of answers to the question about the justifiability of euthanasia among the population of 35 countries.

Independent variables at the individual level follow the structure of three hypotheses: religiosity, values and the slippery slope.

The first group of predictors in our analysis are modernizing and conservative values which were measured in several ways: based on the questionnaire of Schwartz, by a 12-point

index of post-materialism suggested by Inglehart, and some components from his index of Autonomy Values. The full wording of the questions and algorithms for calculated indices are given in the Appendix.

Schwartz value measures are widely used and have demonstrated a high validity (Schwartz et al., 2001). Unlike to the original Schwartz's instruments, in WVS only one item per value was included and even these were modified. Respondents were asked to rate their similarity to each of 10 value portraits. We have selected Self-Direction, Stimulation and Security values, since they are the most indicative of the values of autonomy and its opposite. The values of autonomy at the individual level are represented by Stimulation and Self-Direction which are parts of the Openness to Change higher-order value and reflect the importance of personal choice and motivation to participate in innovative practices. The Value of Security appears as indicator of conservative values related to the concern for maintaining the current state of affairs.

Within the framework of Inglehart's post-modernization theory, values of individual choice are measured by the post-materialism index, which classifies people into three categories: materialists, post-materialists and mixed. Post-materialism is an orientation of the person to the opportunities of free choice and indicates people who have "passed" the post-materialist shift. Post-materialist values were measured using a 12-item index of materialism/post-materialism (Inglehart, 1990). This index is based on four questions, in each of which respondents had to choose the most and the second most important goals for their country.

In several works, Inglehart (1990) used the Autonomy index, which indicates the respondent's preference for qualities such as "independence" and "unselfishness" over "obedience" and "religiosity" in children. Since the measurement invariance of this index is debatable and the "religiosity" item is conflated with the other religiosity measures, three of these items were used separately. The most direct measures of the values of autonomy include questions about the qualities respondents would like to see in their children: "independence" (an indicator of the importance of freedom of choice), "obedience" (an indicator of conservative orientation), "unselfishness" (an indicator of the importance of caring for others and involvement in social concerns).

At the country level, we turned to the cultural values of Schwartz (2008; 2014) defined as the latent normative systems, external to the individual, which serve as a basis for the social

institutions and have an impact on individuals. Schwartz identified seven cultural values, one of which seems to be the most relevant for the current study: Affective Autonomy. Autonomy prescribes an individual to opt for individual choice and freedom as opposed to submission to an authority. Schwartz provides scores for Intellectual Autonomy as well, however we opted for Affective Autonomy because of the large contribution of emotions to moral judgements (Haidt, 2001).

Inglehart's indicator of country level autonomy is not different from the individual-level one. Similar to the individual level, the country average of the post-materialism index is assumed to reflect the extent to which country values are "post-modernized" and which characterizes the normative environment which places independent choice first.

The level of religiosity was measured through its manifestation in the importance of God in the life of the respondent where higher scores correspond to greater importance. Religiosity at the country level was introduced as an average importance of God for the population of the country.

Social capital indicators included answers to the question about the degree of trust in the family; trust in strangers was used as a proxy for confidence in doctors. Generalized interpersonal trust was measured as a belief in the fairness of the majority of people. The elements of human capital were measured with the level of education (a three-point scale), the subjective evaluation of respondent's health; internal locus of control was measured by a question about the degree of freedom possessed by a respondent. At the country level it was measured by life expectancy (World Bank, 2005). As an indicator of financial capital we included within-country deciles of income. At the country level financial capital was indicated by Gross domestic product (GDP) per capita in 2005 in United States dollars; and human capital was measured by life expectancy in years which also characterizes the ageing of the population.

Additional controls included gender and age at the individual level and the two indicators of quality of the healthcare system: the number of doctors per 1000 people and the proportion of GDP spent on healthcare (World Bank, 2005).

4. Results

4.1. Individual-level predictors

Table 1 presents the results of three models, (M0) empty, assessing the cross-country variation of the dependent variable, (M1) including individual predictors and (M2) interactions between the individual characteristics.

The intraclass correlation across 35 countries is 24%, which means that almost quarter of all differences in euthanasia justifiability are between-country differences and the remaining 76% are explained by the other, individual-level factors.

All the indicators of the values of autonomy, including the Self-Direction values, independence and post-materialism showed highly significant and positive effects on the attitude toward right to euthanasia. The individual degree of religiosity, measured as the importance of God for the respondent, has a significant negative impact on euthanasia justifiability: the higher the importance of God for the respondent, the worse their attitude towards the right to euthanasia, which is consistent with most previous studies and our hypotheses.

Conservative values of obedience have a negative impact on the recognition of the right to euthanasia. The value of Security showed a non-significant effect, probably due to some collinearity with religiosity³.

Thus, in spite of the fact that the level of the values of autonomy and conservative values measured by various indicators were controlled for in the model, the influence of religion nevertheless remained highly significant. The values of autonomy are significant predictors while controlling for religiosity level. This confirms the hypothesis of the independent impact of religiosity and the values of autonomy at the individual level.

³ Adding the religious affiliation (confession) instead of the importance of God, the negative effect of Security becomes significant.

Table 1. Non-standardized regression coefficients of multilevel regressions, dependent variable – recognition of right to euthanasia

	M0. Empty model		M1. Individual-level predictors		M2. Individual-level predictors + interaction	
	Estimate	(Std. Error)	Estimate	(Std. Error)	Estimate	(Std. Error)
The values of autonomy						
Self-Direction (Schwartz)			0.06	(0.02)**	0.12	(0.01)**
Independence (children’s quality)			0.20	(0.04)**	0.20	(0.03)**
Post-Materialism (12-item)			0.04	(0.02)*	0.04	(0.02)*
Conservative values and Religiosity						
Obedience (children’s quality)			-0.16	(0.05)*	-0.16	(0.05)*
Security (Schwartz)			-0.03	(0.03)	-0.03	(0.03)
Importance of God			-0.20	(0.02)**	-0.20	(0.02)**
<i>Interaction between Self-Direction value and importance of God</i>					-0.07	(0.03)
Unselfishness (children’s quality)			0.13	(0.05)*	0.13	(0.05)*
Social capital						
General trust			-0.01	(0.01)	-0.01	(0.01)
Trust in family			-0.16	(0.04)**	-0.16	(0.04)**
Trust in strangers			-0.06	(0.04)	-0.06	(0.04)
Active in labor market			0.10	(0.04)*	0.10	(0.04)*
Human capital						
State of health (subjective)			-0.05	(0.02)*	-0.05	(0.02)*
Internal locus of control (feeling of freedom)			-0.01	(0.01)	-0.01	(0.01)
Age			-0.01	(0.002)**	-0.01	(0.002)**
Education - Primary						
Secondary			0.19	(0.07)*	0.19	(0.07)*
Tertiary			0.46	(0.11)**	0.46	(0.11)**
Income (country decile)			0.04	(0.01)**	0.04	(0.01)**
Gender (female)			0.04	(0.04)	0.04	(0.04)

Global intercept	4.47 (0.26)**	6.37 (0.34)*	6.33 (0.55)**
Variiances			
Random intercept	2.37 (0.41)**	1.49 (0.29)**	1.49 (0.29)**
Residual	7.66 (0.59)**	7.25 (0.55)**	7.25 (0.55)**
Model fit			
Intraclass correlation	0.24	0.17	0.17
Deviance /-2LogLikelihood (Scaling correction factor)	194709.1 (40.2)	192528.3 (8.2)	192524.3 (7.8)
Likelihood ratio test (scaled difference of deviances)		776.4**	6.62
Sample-Adjusted Bayesian Information Criterion (SABIC)	194731.336	192684.016	192687.44

Note. Unstandardized coefficients. N cases is 39,913, N countries is 35. Maximum Likelihood Robust estimator.

* Significant at $p < .05$.

** Significant at $p < .001$.

As the parameters in model M2 show, the interaction between Self-Direction values and religiosity is not significant and likelihood ratio test shows that it does not significantly add to the model fit. Therefore, there is no interaction effect between religiosity Self-Direction values.

We did not have any expectations considering the Unselfishness values, they showed a positive though marginally significant effect. It may be used as a hint to understanding the dependent variable as the right to euthanasia, since unselfishness, or the value of caring, has been demonstrated to correlate with different kinds of tolerance (see Schwartz, 2007).

The various components of social capital show conflicting results, which was hypothesized. The level of generalized trust and trust in strangers revealed insignificant coefficients. Trust in family has a significant but a negative effect on the recognition of the right to euthanasia. Such a result is surprising, since previous studies reported either a positive relationship between trust and the justifiability of euthanasia (Köneke, 2014) or the absence of link between them (Rudnev, under review). Trust in family can be considered mostly as a declaration of loyalty to one's family, rather than a significant factor in the sense of trust in relation to end-of-life issues. A declaration of loyalty to family is often associated with

conservative values and a lower value of autonomy, which leads to a negative relationship with the recognition of the right to euthanasia⁴.

Different components of human capital, including a higher level of education and younger age show a positive impact on the recognition of right to euthanasia. However, a better subjective state of health is associated with a less positive assessment of euthanasia, which is consistent with findings of other researchers (Verbakel, Jaspers, 2010), the presence of suffering produces a more favourable view of the right to euthanasia. The sense of control over one's life showed no significant effects in all modifications of model, it may point to the ambiguous meaning of fatalism in relation to euthanasia: when people do not feel in charge of their lives they might equally be in favour or against euthanasia for others. With regard to income, in all models it has a highly significant effect, as expected.

4.2. Country-level effects

In order to test the hypothesis at the country level twelve models were estimated. The results are shown in Table 2. The model M2 did not include predictors of country level being used as a "reference point" (M2 in Table 1 is the same model). M3 includes the cultural value of Affective Autonomy only. Its impact at the country level on support for the right to euthanasia is highly significant and large, explaining 49% of the cross-country variation. Affective Autonomy is a highly significant predictor in most other models, including such independently measured controls as the number of doctors per 1000 people, life expectancy, healthcare expenditure, GDP per capita, as well as aggregated from individual data: generalized trust and post-materialism. This points to the strong and robust impact of Affective Autonomy on support for the right to euthanasia at the country level.

Across models M4–M7 introducing other exogenous variables only total healthcare expenditures made a significant contribution to the quality of the model. Representing overall

⁴ The differences between effects of two kinds of trust can be explained by referring to the distinction between bonding and bridging social ties (Granovetter, 1973), where the trust in family and associated with it conservative values demonstrate the focus on bonding, while the values of independence and trust in strangers focus on bridging. In this context, the negative impact of trust in family on the recognition of the right to euthanasia is interpretable – orientation on bonding impedes the successful development of novel practices while bridging contributes to it creating channels of information about them.

involvement of population in healthcare services, it has a positive effect on the country level support for the right to euthanasia.

Table 2. Multilevel regression models with country-level predictors.

				Affective Autonomy		Deviance (scaling correction factor)	Scaled likelihood ratio test	SABIC
Model		Estimate	St.Error	Estimate	St.Error			
M2.	(No country-level predictors)					192524.3(7.8)		192687.4
M3	Affective autonomy			1.75	(0.28)**	192501.0 (7.5)	20.4*	192671.5
M4	Number of doctors per 1.000 population	0.17	(0.18)	1.52	(0.37)**	192499.5(7.3)	5.99	192677.4
M5	Life expectancy	0.05	(0.02)*	1.37	(0.33)**	192497.9(7.2)	4.99	192675.9
M6	Total expenditure on healthcare, % GDP	0.15	(0.03)**	1.16	(0.25)**	192485.9(7.2)	7.25*	192663.9
M7	GDP per capita, constant USD	0.03	(0.01)*	1.10	(0.44)*	192495.4(7.3)	5.97	192673.4
M8	Averaged trust	-0.11	(0.26)	1.80	(0.34)**	372826.0(7.3)	NA	373004.0
M9	Post-Materialism	0.58	(0.50)	1.53	(0.31)**	325746.8(7.3)	NA	325924.8
M10	Average importance of God	-0.37	(0.13)*	1.32	(0.46)*	374952.0(17.9)	NA	375152.3
M11	Country-level interaction of importance of God and affective autonomy							
	Importance of God*Affective Autonomy	-0.02	(0.25)	0.32	(0.72)	374958.5(17.4)	4.17 ^a	375166.2
	Average importance of God	-0.25	(0.98)					
M12	Random effects of importance of God							
	Average importance of God	-0.03	(0.15)	1.93	(0.53)**	370004.2(6.5)	NA	370189.6
	Variance of random slopes of Importance of God	0.007	(0.001)**					
M13	Cross-level interaction of importance of God							
	Average importance of God	-0.01	(0.15)	1.90	(0.53)**	370002.1(6.4)	0.41 ^b	370194.9
	Interaction between importance of God at individual and country level	-0.01	(0.01)					

	Variance of random slopes of Importance of God	0.006	(0.001)**					
M14	The most impactful predictors							
	Average importance of God	-0.32	(0.11)	0.92	(0.37)**	370139.3(7.0)	NA	370324.7
	Total expenditure on healthcare, % GDP	0.14	(0.03)**					

Notes. Affective Autonomy was included in every model in the table beside M2. Only coefficients of country level are demonstrated, coefficients of individual level are identical to results shown in Table 1, model M2.

Unstandardized coefficients. N cases is 39,913, N groups is 35. Maximum Likelihood Robust estimator. All the indicators refer to year 2005 or the closest available values. Models M8-M14 use latent score of the observed variables at the country level instead of country averages, as it is provided by Mplus software; this enables more correct account of biases of country-level averages (see Lüdtke et al., 2008).

* Significant at $p < .05$.

** Significant at $p < .001$.

a. LRT test with model M10.

b. LRT test with model M13.

NA – Likelihood ratio test is not available due to lack of a baseline model.

Country-level effects of post-materialism and generalized trust are insignificant, contrary to previous results (Köneke, 2014). This may be partly attributed to the more accurate indicators and less homogeneous sample of countries than in other studies.

Country-level religiosity has a negative impact on a country-level support for euthanasia, as expected. In model M11 we tested the interaction between religiosity and Affective Autonomy at the country level, however multicollinearity issue occurred and led to the insignificance of all three effects, while the change of model fit indices (likelihood ratio test) showed that the inclusion of interaction did not improve the explanatory power of the model. Thus, the hypothesis about the presence of interactions between religiosity and values of autonomy at the country level was rejected.

Models M12 and M13 tested the hypothesis of cross-level interactions between individual and country-level religiosity. The former model introduced the random effect of the importance of God at the individual level, allowing it to vary between countries, and the variance of this random effect is significantly different from zero. M13 explained the between-country variation in effects of individual religiosity using country-level religiosity, that is, cross-level interaction was introduced. However, this attempt was not successful, both country importance of God and cross-level interaction lost their significance, and the likelihood ratio test showed no

significant improvement in the model fit. Therefore, we selected the model with smaller number of parameters and rejected the hypothesis about the presence of cross-level interactions between two levels of religiosity⁵.

The range of tested country-level predictors demonstrated a robust significance of the only two variables: Affective Autonomy which has an unconditional and large contribution to the level of support for right to euthanasia, a smaller significant contribution was demonstrated by religiosity (as expected), and one indicator of healthcare system quality—total health care expenditure. Thus, we developed model M14, which may be treated as the final one at this stage.

4.3. Indirect effects of religiosity mediated by values

This part of the analysis tests hypothesis H4 about the indirect effects of religiosity mediated by the values of autonomy in addition to the direct effect of religiosity. The hypothesis was tested with multilevel path analysis; an overall path diagram is shown at Figure 2.

At the individual level four exogenous variables were included: the importance of God which has direct and indirect effects mediated by four autonomy-related values and two conservative values. As in all the previous models, the outcome variable is the recognition of the right to euthanasia.

At the country level the exogenous variables were the importance of God and expenditure on the health care system, while the effect of religiosity was mediated by the value of affective autonomy. The number of control variables was cut to age only, because inclusion of each extra variable increased the number of parameters exponentially.

Due to the complexity of the multilevel path analysis, the convergence and identification of the model in the maximum likelihood approach was questionable, so we applied a more flexible Bayesian estimation. The minimum number of iterations was set to 10,000, 5 chains and Gibbs sampler were used. Trace plots were scanned for convergence of the five chains visually, all of them are satisfactory.

⁵ To save space, we do not demonstrate the analysis of random effects for the other predictors at the individual level, however, all of them were tested. The only predictor that showed a significant random effect is Security values, which are non-significant on average. Unfortunately, we were unable to find any country-level variables that could explain this variation.

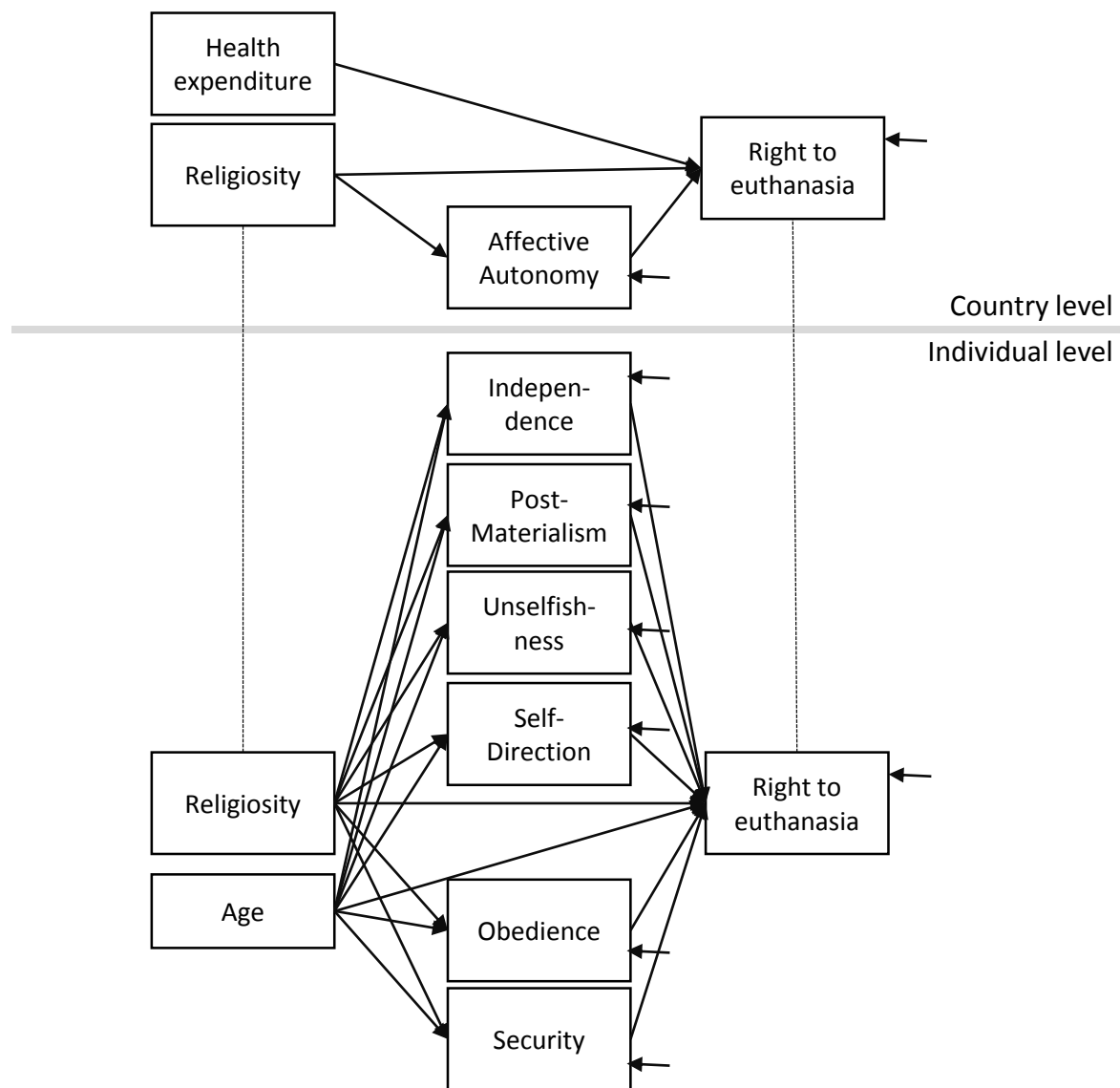


Figure 2. Multilevel path model. Posterior Predictive P-Value (PPP) is 0.429; deviance (DIC) is 1,251,936.423, estimated number of parameters (pD) 128.775.

The main indicators of the model quality are posterior predictive p-values (PPP) which are higher than the minimum of 0.05 and approach the ideal value of 0.5. This indicates that the model acceptably describes the general population, i.e. the structure of relationships between variables among the population of 35 countries. Direct and indirect effects are listed in Table 3.

The direct effects remained close to those described in the first part of the paper, which means that the exclusion of a number of predictors did not distort the results of the analysis.

Table 3. Direct, Indirect (mediated by values) and overall non-standardized effects on the assessment of right to euthanasia in a multilevel path analysis

X	Direct effects of importance of God ->X	Direct effects of X-> right to euthanasia	Indirect effects from importance of God -> right to euthanasia	Total effect
<i>Individual level</i>				
Self-Direction	-0.033 (0.002)*	0.074 (0.013)*	-0.002 (0.000)*	
Independence	-0.017 (0.001)*	0.212 (0.030)*	-0.004 (0.001)*	
Postmaterialism	-0.026 (0.003)*	0.049 (0.011)*	-0.001 (0.000)*	
Security	0.024 (0.002)*	-0.026 (0.013)*	-0.001 (0.000)*	
Obedience	0.014 (0.001)*	-0.192 (0.030)*	-0.003 (0.000)*	
Unselfishness	0.000 (0.001)	0.126 (0.030)*	0.000 (0.001)	
<i>Importance of God</i>		-0.206 (0.006)*	-0.011 (0.001)*	-0.217 (0.006)*
<i>Country level</i>				
Affective Autonomy	-0.161 (0.035)*	0.963 (0.383)*	-0.149 (0.072)*	
Healthcare expenditure		0.138 (0.041)*		
<i>Averaged importance of God</i>		-0.310 (0.093)*	-0.149 (0.072)*	-0.464(0.087)*

Note. * Significant at $p < .05$.

PSD are the posterior standard deviations, which are a Bayesian analogue of standard errors; they are presented in parentheses.

Both the values of autonomy and religiosity have a significant independent impact on the support for the right to euthanasia at individual and country levels. Moreover, the indirect effects of religiosity mediated by different values of autonomy and conservative values at the individual level, and affective autonomy at the country level are significant. The importance of God has a significant and negative effect on Self-Direction, Independence and Post-materialism, and a positive effect on Security and Obedience. The latter values, as mentioned above, have negative effects on the recognition of the right to euthanasia, thus, the all the indirect effects of religiosity are negative (except for the one mediated by Unselfishness which is zero); they enhance the negative direct effect. At the individual level only -0.011 units of indirect effects are added to the direct effect which is -0.206 ; at the level of countries the direct effect of -0.310 is increased by -0.149 units of indirect effect, so the overall effect of religiosity on support for right to euthanasia is -0.464 . It follows that the effects of religiosity are mediated by the values of autonomy to a higher degree at the country than at the individual level. Thus, hypothesis H4 is confirmed.

5. Conclusion

In this study we investigated the competing roles of religiosity and human values in predicting attitudes toward right to euthanasia across populations of 35 nations. The results of multilevel analysis showed the independent contribution made by various aspects of the values of autonomy and religiosity both at individual and country levels. The interactions between Self-Direction values and religiosity were found insignificant. Instead, path analysis demonstrated that at both levels of analysis autonomy and conservative human values mediate the effect of religiosity strengthening its negative effect on the support for the right to euthanasia.

The fact that the effect of values remains significant after controlling for the religiosity at the individual and country level as well as for different relevant controls indicates that in the 35 studied countries, religion is not an exclusive source of moral attitudes; values, although being influenced by religiosity, present an additional source of moral regulation. This result together with inconsistent effects of different indicators of vulnerability, confirms the thesis that a respect for independent decision to end one's life is considered by people as a consequence of values of personal autonomy as well as their religiosity rather than expresses their rational fears about the procedure.

The influence of "individualized morality"—value orientations of persons, and values of the culture in which they live—are not less significant than the degree of religiosity. In more general terms, we found some support for the thesis that although affected by religiosity, human values have an independent and very robust impact on moral judgements, even the ones related to end-of-life issues, which in turn were closely regulated by religiosity. We may also speculate that the religious regulation of moral attitudes is being substituted by human values in recent decades when the role of religion declined across the world.

Future research might look in detail at the change from religious toward secular regulation of moral attitudes, we would expect the effects of religiosity on moral attitudes to decrease and impact of non-religious values to increase within the recent years. Another direction of future research could involve other cases of moral attitudes beside recognition of the right to euthanasia, including various innovative practices discussed in moral terms such as gay marriage, marijuana use, in vitro fertilization, and many others.

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Appendix. Variables and Measures

1) Schwartz's values

Respondents were asked to indicate for each description whether that person is very much like him, like him, somewhat like him, not like him, or not at all like him. Mentioned indicators were recorded (so that higher value corresponded to the greater expression of value for the respondent) and centered (the average of all items in the value questionnaire was subtracted from individual figure for each value).

Self-Direction value belong to the category of Openness to change being measured by following portrait: "It is important to this person to think up new ideas and be creative; to do things one's own way".

Value of **Security** belongs to the opposite category of Conservation being measured by the following judgement: "Living in secure surroundings is important to this person; to avoid anything that might be dangerous".

2) **Independence, Obedience and Unselfishness.** Values measured through children's qualities. Respondents were faced with "a list of qualities that children can be encouraged to learn at home", among which were "Independence", "Obedience" and "Unselfishness" and were asked: "Which, if any, do you consider to be especially important? Please choose up to five!"

3) 12-item Index of **Postmaterialist** Values

12-item postmaterialism/materialism values index is supplied with the WVS dataset. It is based on three questions in which respondents chose the one most important and second important issue. For choice of each materialist items either "the most important" or "second important" a respondent got -1 point, for postmaterialist items added one point. The wordings are following (materialist items are marked M, postmaterialist are marked with P):

V69. People sometimes talk about what the aims of this country should be for the next ten years. On this card are listed some of the goals which different people would give top priority. Would you please say which one of these you, yourself, consider the most important? (*Code one answer only under "first choice"*):

V70. And which would be the next most important? (*Code one answer only under "second choice"*)

M A high level of economic growth

M Making sure this country has strong defense forces

P Seeing that people have more say about how things are done at their jobs and in their communities

P Trying to make our cities and countryside more beautiful

V71. If you had to choose, which one of the things on this card would you say is most important? (*Code one answer only under "first choice"*):

V72. And which would be the next most important? (*Code one answer only under "second choice"*):

M Maintaining order in the nation

P Giving people more say in important government decisions

M Fighting rising prices

P Protecting freedom of speech

V73. Here is another list. In your opinion, which one of these is most important? (*Code one answer only under "first choice"*):

V74. And what would be the next most important? (*Code one answer only under "second choice"*):

M A stable economy

P Progress toward a less impersonal and more humane society

P Progress toward a society in which ideas count more than money

M The fight against crime

4) **Importance of God** was measured on the 10-point scale by the question "How important is god in your life" there 1 - not all important, 10 - very important.

5) **General trust** was measured by the question "Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair?" on the scale there "1" means that "people would try to take advantage of you", and "10" means that "people would try to be fair".

6) **Trust in Family** and **Trust in strangers** were measured on the 4-point scale with categories "trust completely", "somewhat", "not very much" or "not at all" so that the higher value of variable corresponds to the lower level of trust.

7) **Subjective health** was based on the subjective assessments of respondent on the scale from "1" - very good to "4" - poor.

8) Internal **locus of control** was measured as feeling of freedom by the following judgement "Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them. Indicate how much freedom of choice and control you feel you have over the way your life turns out" there 1 means "no choice at all" and 10 means "a great deal of choice".

9) **Education** was measured by nominal variable with 3 categories: Primary, secondary and tertiary.

Gender and Activity in Labour Market were transformed to binary variables, Age and Income were included in the models as continuous variables.

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