

A COMPARATIVE STUDY ON PERMISSIVENESS TOWARD EUTHANASIA RELIGIOSITY, SLIPPERY SLOPE, AUTONOMY, AND DEATH WITH DIGNITY

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Abstract This study explores explanations for the approval of euthanasia by assessing differences among individuals and countries, using four main arguments used by opponents and proponents in the public debate over euthanasia. We performed multilevel analysis on data from thirty-three countries, obtained from the European Values Study 1999/2000 and the World Values Survey 2000; we enriched these data with country-specific information. First, our results supported the hypothesis based on the religion argument: religious people and people living in a religious context are more strongly opposed to euthanasia. In addition, Protestants and people living in Protestant countries have more favorable attitudes toward euthanasia than do Catholics and people living in Catholic countries. Second, we found support for the hypothesis derived from the slippery slope argument: fear that euthanasia will be abused resulted in people from vulnerable groups and people living in countries with low-responsive health care systems being more opposed to euthanasia. Third, as the autonomy-hypothesis predicted, highly educated people and people who highly value autonomy as well as people living in a country with a stronger than average attachment to autonomy show a more favorable attitude toward euthanasia. Fourth, while the death with dignity argument predicts that people who witness unbearable suffering in their personal or national environment are more favorable toward euthanasia, our results show only weak support. Furthermore, cross-level interaction tests showed that national contexts are, to some extent, able to decrease the differences between groups in society in terms of their response to euthanasia.

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Introduction

The issue of voluntary euthanasia invokes very strong, polarizing reactions. Proponents consider euthanasia a humane solution to unbearable suffering and a way to die with dignity, or they support an individual's right to self-determination (Keown 1992). Opponents may raise the religious argument (Macdonald 1998a, 1998b) that only God has the right to end a person's life, or they may bring up issues of dependency on medical staff or family members to make decisions and potential abuse, often referred to as the 'slippery slope' (Keown 1992; Griffiths, Weyers, and Adams 2008). Opponents fear that the use of voluntary euthanasia could eventually lead to involuntary euthanasia for persons deemed no longer valuable to society.

Like attitudes regarding euthanasia, euthanasia law and practices are divergent. While euthanasia is prohibited in most countries, a few countries have legalized euthanasia recently, albeit with strict conditions. Voluntary euthanasia has been legally permissible in the Netherlands and Belgium since 2002 (Griffiths, Weyers, and Adams 2008) and in Luxembourg since March 2009. In the United States, only Oregon and Washington have legalized assisted suicide. The Swiss government permits assisted suicide by nondoctors on foreigners, which has triggered so-called suicide tourism (Griffiths, Weyers, and Adams 2008, 477; Harding 2004). The withdrawal or withholding of life-prolonging treatment in order to hasten death is legal and considered normal medical practice in many countries. In addition, several countries, including the United States, allow patients the right to refuse aggressive medical treatment.

The supporters and opponents of euthanasia loudly voice their opinions in public debates, often using examples of particular cases or legislative practices abroad. A recent example is the case of Eluana Englaro, the Italian woman who had been in a coma for more than a decade and whose father wished to end her life support at the start of 2009. Prime Minister Berlusconi attempted to introduce legislation to prevent this and the Vatican stirred a movement against the hospitals and medical staff that wanted to assist the father. Eluana Englaro was finally taken off life support, but her father may face charges relating to this act (Donadio 2009). In another case, Mme. Sébire, a French woman with a facial deformity caused by a rare type of tumor, suffered excruciating pain because she could not tolerate morphine and committed suicide by overdosing on sleeping pills after her repeated request for euthanasia was turned down by the French justice. Her case invoked a heated debate in national and international media in spring, 2008 (Murphy 2008). A few years earlier, the case of Mrs. Schiavo, an American comatose woman whose husband sought to end her artificial nutrition, led to a prompt but ultimately futile attempt to introduce new legislation that would prevent the ending of her life (International Herald Tribune 2005).¹ The few countries in the world that permit the use of euthanasia

1. The three described cases are not identical in their form of euthanasia. The withdrawal of life support—once it has been connected—is technically called passive voluntary euthanasia. The active ending of her life as sought by Madame Sébire is an active form of voluntary euthanasia.

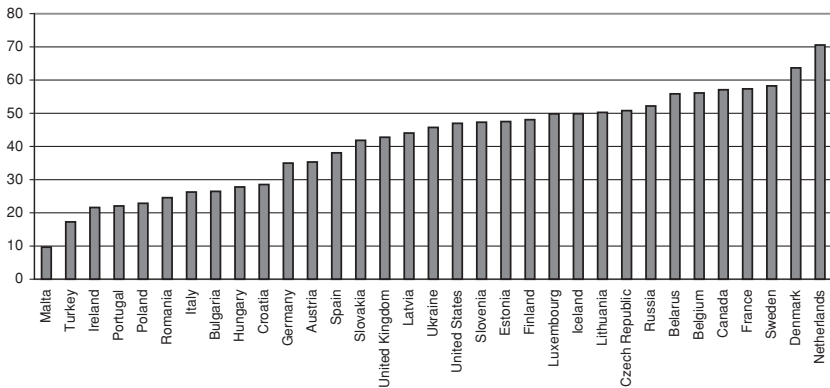


Figure 1. Percentage of the Population That Approve of Euthanasia.
 SOURCE.—European Values Study 1999 and World Values Survey 2000, Own Calculations (Weighted Data).

or assisted suicide have faced criticism from opponents in other countries (Griffiths, Bood, and Weyers 1998). For example, the Vatican newspaper has compared a Dutch neonatal doctor involved with the termination of life to the Nazi doctors (Sgreccia 2004).

The international nature of the public debate leads one to suspect that countries differ widely in their approbation of euthanasia, and this is clearly shown in figure 1. In Malta, the country with the least support for euthanasia, only 10 percent of the population expressed their approval of euthanasia. Like Malta, Turkey, Ireland, Portugal and Poland are near the bottom of the distribution. On the other end of the scale, we find the Netherlands, with about 70 percent of the population in favor of euthanasia, followed by Denmark and Sweden, with approval levels at around 60 percent.

Despite the huge differences amongst countries regarding attitudes toward euthanasia, existing literature has largely neglected a country-comparative perspective, instead focusing predominantly on explanations for individual differences. This line of research has revealed that religious individuals are more likely to oppose euthanasia than people who do not consider themselves religious (Leinbach 1993; Macdonald 1998a; DeCesare 2000; Galland and Lemel 2006; Moulton, Hill, and Burdette 2006; Jaspers, Lubbers, and De Graaf 2007). In addition, highly educated individuals are less likely to oppose euthanasia than individuals with lower education levels (Gilman, Merrill, and Reid 1997).

The academic discussion on public attitudes toward euthanasia is too one-sided in our opinion, as it focuses largely on religion and thereby neglects the other arguments used by opponents and proponents of euthanasia. Our aim is to establish a closer link between the public debate and academic research by introducing two improvements on existing research. First, we will convert all four arguments used by euthanasia opponents and proponents (Scherer and

Simon 1999) into a new framework to explain the variation in the approval of euthanasia. These four arguments include the well-known religious argument and the slippery slope argument used by euthanasia opponents, and the autonomy argument and death with dignity argument used by euthanasia proponents. Second, we will give attention to the international character of the debate by introducing a country-comparative perspective. Given the wide variation between countries as demonstrated in figure 1, it is unlikely that the population differences in religiosity and educational attainment (composition effects) are large enough to account for the total variation between countries. Therefore, other contextual circumstances might influence how people think about euthanasia. This paper derives new hypotheses from the religious culture, slippery slope, autonomy, and death with dignity arguments to explain country differences in approval of euthanasia. For example, the fear of potential abuse may depend, in part, on a country's health care system, and the feared prospect of a long and gruesome death may result from the prevalence of certain medical conditions in a given country. This country-comparative perspective, at the same time, extends the scope of countries included in euthanasia research. Existing literature predominantly focuses on the United States (Ostheimer 1980; Leinbach 1993; Gilman, Merrill, and Reid 1997; Macdonald 1998a, 1998b; DeCesare 2000; Wasserman, Clair, and Ritchey 2005; Moulton, Hill and Burdette 2006), and few focus on European countries (Cohen et al. 2006; Jaspers, Lubbers, and De Graaf, 2007). We will analyze data from the European Values Survey 1999 alongside data from the World Values Study 2000. We will apply multilevel analysis techniques, analyzing 37,393 respondents from thirty-three countries in order to answer our research question: How can differences in the approval of euthanasia among individuals and between countries be explained?

Explaining Differences in the Approval of Euthanasia

In the following section, we will present in detail the two arguments for and the two arguments against euthanasia, and explain our expectations regarding those individuals opposed to or in favor of euthanasia. Along with individual-level hypotheses, we will formulate hypotheses at the macro-level, specifying which characteristics may influence peoples' opinions on euthanasia. We will propose cross-level interaction hypotheses about how country characteristics affect individual differences in permissiveness. This will provide us with more insight into the proposed mechanisms present at both the individual and national level.

INDIVIDUAL CHARACTERISTICS

First, in line with the religion-based argument, earlier research has found that religious people are more opposed to euthanasia than nonreligious people

(Leinbach 1993; Gilman, Merrill, and Reid 1997; Macdonald 1998a; DeCesare 2000; Galland and Lemel 2006; Moulton, Hill, and Burdette 2006; Jaspers, Lubbers, and De Graaf 2007). Many religious individuals hold the conviction that only God should decide about life and death, prompting them to condemn the practice of euthanasia (Macdonald 1998b; Moulton, Hill, and Burdette 2006). Although all religions condemn the practice of euthanasia (Gill 1998), there is some variation in strictness. Islam strongly opposes euthanasia and categorically forbids all actions that could induce death (Brockopp 2003). The Eastern Orthodox and Catholic Church both take a very strict position as well, declaring that euthanasia and all other forms of ending life should be considered murder. At the same time, however, the Eastern Orthodox Church has no ultimate authority that forbids it (Hamel 1991), and the Catholic Church acknowledges that it is undesirable to prolong life in a way that is burdensome when there is no chance of recovery, and that one may refuse heroic treatments if death is inevitable (Seper and Hamer 1980). Protestants vary in their opinions on euthanasia. Liberal Protestants leave some room for passive euthanasia-like practices, whereas more conservative congregations condemn all forms. The *religiosity hypothesis* expects that nonreligious individuals will show stronger approval of euthanasia than religious individuals. The *denomination hypothesis* states that Muslims will be more opposed to euthanasia than Orthodox Christians and Catholics, whereas Protestants will constitute the most permissive religious group with respect to euthanasia.

Second, the slippery slope argument used by opponents of euthanasia suggests that people who believe that voluntary euthanasia will lead to involuntary euthanasia practices will be more opposed to euthanasia (Keown 1992; Macdonald 1998b; Scherer and Simon 1999). Those who feel like they are not in control over their lives or are not valuable contributors to society, such as the elderly, people who are socially inactive, and people who have no partner or children to care for, are more likely to fear the potential abuse of euthanasia. These individuals may expect to become the targets of involuntary euthanasia. The *slippery slope hypothesis* predicts that people from nonvulnerable groups are less likely to fear potential abuse of euthanasia, and therefore, have more favorable attitudes toward it.

Third, one of the arguments for euthanasia is that people should have the right to decide on their own life and death (Scherer and Simon 1999). This right of self-determination is a central component in the wider concept of personal autonomy. People who strongly embrace the value of autonomy are therefore likely to favor euthanasia just as they would favor other liberal moral stances. Because those who are highly educated typically value individual autonomy (Inglehart 1990; Vollebergh, Iedema, and Raaijmakers 1999; Stenner 2005), the *autonomy hypothesis* predicts that people who claim to adhere strongly to autonomy and those who are highly educated will be more likely to favor euthanasia.

Fourth, we derive a hypothesis from the death with dignity argument used by euthanasia supporters (Scherer and Simon 1999). Although people generally seek to avoid death, there are certain situations in which people welcome the end of life. For instance when one is in excruciating pain, one often wishes that death would come sooner and in a more humane way. The feared prospect of a long and gruesome death could cause people to consider euthanasia as a desirable option. This is especially true for illnesses like cancer (Wasserman, Clair, and Ritchey 2005). Although a long and painful death may be feared by everyone, those who have witnessed suffering of others close to them are more likely to consider this fear seriously and, consequently, are more likely to use the death with dignity argument. The *death with dignity hypothesis* posits that people who have personally witnessed physical suffering are more permissive toward euthanasia.

COUNTRY CHARACTERISTICS

We expect the national context to shape individual attitudes toward euthanasia. First, we expect the religious climate in a country to shape values concerning euthanasia amongst the general population. People in highly religious countries are exposed to religious values, including the disapproval of euthanasia, to a greater degree than people in secular countries for two important reasons (Kelley and De Graaf 1997). First, the culture and governmental policies of religious countries are more often imbedded with religious values. Second, there is a larger pool of devout people within religious countries. The effect of exposure to religious beliefs is assumed to operate independently of an individual's own religious beliefs. Regardless of whether people are religious themselves, the *religious context hypothesis* expects that people living in more religious countries are more likely to oppose euthanasia than people living in secular countries. Furthermore, we expect that people will be influenced by the particular religious culture of that country. Regardless of their own denomination, people are influenced by the denomination that historically shaped legislation and debate. The *traditional denomination hypothesis* predicts that people living in countries with a Muslim tradition will be most opposed to euthanasia, that Orthodox Christian and Catholic countries will occupy an intermediate position, and that the inhabitants of Protestant countries will be most permissive toward euthanasia.

Second, we expect fear of potential abuse of euthanasia to be greater in countries with health systems that show little respect for human dignity. Although people may not have any certainty that euthanasia will indeed be used against a person's will, living in an environment in which patients have little say in their treatment and medical professionals have been known to treat patients in inhumane ways may produce fear of misuse of euthanasia. This fear likely contributes to negative feelings about euthanasia. Therefore, our *health care*

system hypothesis expects countries with responsive health care systems to report higher approval rates for euthanasia.

Third, we expect the general cultural attitude in a country regarding autonomy to affect permissiveness toward euthanasia. If personal autonomy is widely embraced in a country, many regulations and debates, including the euthanasia debate, will include arguments based on autonomy. Similar to the country-level hypothesis on religion, we expect such a cultural climate to affect the opinion of the population as a whole. The *autonomy context hypothesis*, therefore, predicts that people are more likely to approve of euthanasia in countries in which personal autonomy is valued.

Fourth, we extend our reasoning behind the death with dignity hypothesis on the individual level to the national level. The fear of unbearable suffering might be a result of someone's personal experience, but this fear may also result from experiences in a wider context. We expect that if people observe much suffering, even on a broader national level, the death with dignity argument becomes more salient. Countries differ by the prevalence of painful, incurable, or unbearable diseases, and in the degree to which suffering can be alleviated. Suicide rates can be seen as an indicator of unbearable suffering since it is the most extreme solution. Consequently, the *unhealthy population hypothesis* and the *suicide rate hypothesis* predict that approval of euthanasia is higher in countries with relatively greater physical suffering and high suicide rates.²

CROSS-LEVEL INTERACTIONS

Although differences in approval rates of euthanasia between individuals exist in all countries, national policies and other national circumstances could reduce these individual differences. The mechanism we expect behind all cross-level interactions is that the differences between groups in society can be diminished when important reasons for these differences are taken away on a national level. We will apply this reasoning to the religiosity, slippery slope, autonomy, and death with dignity arguments. Furthermore, we will formulate a separate cross-level interaction hypothesis about the impact of countries' traditional denominations on the difference in attitudes toward euthanasia between religious and nonreligious people.

First, we expect the influence of religiosity on the individual level to be smaller in more religious countries because of a selection process: in devout societies, many people call themselves religious without having strong religious beliefs per se. The result is a rather diverse group of religious people holding different levels of religious beliefs. In contrast, people who consider themselves religious in a secular society are more likely to attach greater value

2. Suicide rates might be lower in countries in which euthanasia is legalized, but this is not a problem for the current research. In none of the countries considered was euthanasia legal at the time of survey.

to religious beliefs because people without strong religious beliefs have had ample opportunity to leave the church in secular environments. The selective nature of religious groups in secular countries makes them differ from the nonreligious group in their attitudes toward euthanasia to a greater degree. In principle, the argument can also run the other way around: it is the secular people in highly religious countries who form a selective group. However, we argue that religious persons are more likely to produce a negative response to euthanasia than nonreligious persons are likely to produce a positive response. For people with nonreligious values, there is no clear way to ethically evaluate euthanasia. They will most likely not use the religious argument to oppose euthanasia, but it is unknown whether they prefer the slippery slope, the autonomy, or the death with dignity argument.

Next, we expect that countries with responsive health care systems will ease the potential fear that physicians will misuse euthanasia. There is less reason to fear abuse or misapplication of euthanasia if the health care system is transparent and physicians take patients' wishes and worries seriously. This implies that the slippery slope effect becomes less salient, and that the differences between potentially vulnerable groups and nonvulnerable groups will be smaller.

Furthermore, we predict that in countries that show a stronger than average attachment to autonomy, the difference between higher and lower educated individuals is smaller. In such countries, the autonomy argument will be widely used in the public discussion regarding euthanasia. Since the highly educated already tend to use this argument, the widespread use of the autonomy argument would have a greater effect on those with lower education levels and might alter their level of permissiveness, thereby closing the gap with the higher educated.

In countries with high levels of suffering on a national scale, we expect individual experiences of suffering to be less determinative. When there is more suffering in a country as a whole, we expect people without personal experiences of suffering to appreciate the dignified way of dying that euthanasia can offer, as well. As a result, people who witnessed suffering do not differ much from people without such experiences in countries with higher levels of suffering.

Finally, we expect larger differences between nonreligious individuals and individuals with any denominational affiliation in countries with a stricter religious heritage. Nonreligious people are unlikely to use the argument that only God can decide about the timing of death. For religious individuals, however, this argument will be more salient when used in a country that has a strict religious culture. In such countries, God plays a larger role in public life, and thus in public opinion. We expect the difference between nonreligious and religious individuals of any denomination to be largest in Muslim societies, somewhat smaller in Orthodox Christian and Catholic countries, and the smallest in Protestant countries.

Data

Data in this study came from the European Values Study (1999/2000—integrated dataset, release 2 May 2006) as well as the World Values Survey (2000).³ These data suit the comparable focus of this research well by providing highly comparable data for a large set of countries collected at a time that euthanasia was nowhere legal. These large-scale data collections are based on nationally representative samples and contain questions on values regarding several domains, including moral issues. In this study, we included Austria, Belarus, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Turkey, Ukraine, and the United Kingdom from the European Values Study (EVS), and Canada and the United States from the World Values Survey (WVS). Response rates were almost 60 percent on average (see Appendix A for a complete overview). We restricted our sample to respondents between 18 and 75 years of age since several countries used this age range in defining their target population.

DEPENDENT VARIABLE: PERMISSIVENESS TOWARD EUTHANASIA

Permissiveness toward euthanasia was measured on a ten-point scale, using the following instructions: “Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between, using this card”; euthanasia was one item in a list of eighteen items. The higher the score on this ten-point scale, the more permissive the response.⁴ Respondents with missing values were deleted from the analysis.⁵

INDEPENDENT VARIABLES ON THE INDIVIDUAL LEVEL

We constructed a religiosity index based on factor scores that result from a confirmatory factor analysis on eight items, including the importance of religion in one’s life, the importance of God in one’s life, belief in God, life after death, hell, and heaven, whether one considers one’s self to be a religious person,

3. Detailed information on the European Values Study can be found in Halman (2001) and at www.europeanvaluesstudy.eu. Detailed information on the World Values Survey can be found at www.worldvaluessurvey.org. Country-by-country response rates and fieldwork dates are included in Appendix A. Exact question wording for all variables can be found in the online supplement to this article.

4. Logistic regression analysis on a distinction between opponents (score 5 or lower) and proponents (score 6 or higher) of euthanasia yields similar results.

5. We include the proportion of missing values per country in the analysis to check whether the number of missing values affects the results. This variable was not significant nor did it alter other coefficients, and is therefore left out of the models.

and the comfort and strength derived from religion. This scale is reliable and comparable between countries (Halman and Vloet 1994).⁶

Respondents were asked whether they belonged to a religious denomination and were asked to specify which one.⁷ Along with ‘no denomination,’ we coded the designations Roman Catholic, Protestant, Eastern Orthodox, Muslim and other denominations (e.g., Jewish, Hindu, Buddhist).

We have five indicators to test the slippery slope hypothesis. First, “feeling in control over one’s life” was measured on a ten-point scale. One end of the scale designates the feeling that one has no real control over one’s life, and the other end of the scale designates the feeling that one has complete freedom of choice and control over the way his or her life turns out. Second, we consider age, arguing that the elderly more than the young perceive themselves as more vulnerable to the misapplication of euthanasia. Third, people who are employed and students are designated socially active people, whereas retired people, housewives, and the unemployed are designated as inactive. Fourth, respondents who are married or have a stable, nonmarital relationship are coded to have a partner. Finally, we distinguish respondents who have children under 18 years old in the household. Because the World Values Survey does not report on the age of children or whether they live in the household of the respondent, we assign American and Canadian respondents under the age of 55 with children a score of 1 and respondents of 55 years and older with children and respondents without children a score of 0.

We include two indicators to test the autonomy hypothesis. First, we consider educational level, which is generally considered a good proxy for a strong attachment to autonomy. Country-specific educational classifications were recoded into the internationally comparable ISCED code. Since not all ISCED categories exist in each country, we distinguish three educational levels. Respondents with (inadequately) completed elementary education and/or basic vocational training were recoded in the low education category. Those who completed secondary education (vocational and intermediate) through a maturity level certificate were coded as having a medium-level education. Those possessing tertiary-level certificates were coded as having high education. For respondents from the United States and Canada, all forms of (in)complete primary education and incomplete secondary education were defined as low education; complete secondary education and (in)complete college was labeled as medium-level education, and at least some university level education as high education. Second, we took a direct measurement of respondent’s attachment to personal autonomy. When it comes to moral issues, like permissiveness toward

6. In contrast to Halman and Vloet (1994), we left out the item on belief in sin since it is not available in the World Values Survey.

7. The WVS has a one-stage instead of a two-stage question about denomination, offering the respondent the choice between no church and several denominations at the same time. Usually, lower numbers of non-church members are obtained by a one-stage question than by a two-stage question (Becker and De Hart 2006).

euthanasia, a respondent's opinion on absolute guidelines is "indicative of being self-reliant and autonomous in the religious domain" (Halman 1996, 206). Respondents who think people should be in control of their own lives generally do not accept imposed universal guidelines regardless of circumstances (score 0), but stress that what is good and evil depends entirely upon the circumstances at the time (score 1).

We regard widowhood as a proxy for a possible experience with a slow or gruesome death in the respondent's direct environment; this experience was used to test the death with dignity hypothesis. Not all widows and widowers have witnessed the suffering of their partners, but they are nevertheless expected to have more sympathetic attitude toward euthanasia based on their personal experiences. Widowhood was established by current marital status, and therefore does not refer to widowed individuals who remarried.

Sex will be included as a control variable with females coded as 1. Table 1 presents descriptive information of the individual-level variables used in the analysis. For missing values on each independent variable, we included a dummy in our analyses. Coefficients were not significant, and will therefore not be reported in the tables.

INDEPENDENT VARIABLES ON THE COUNTRY LEVEL

Aggregation of the individual-religiosity index resulted in a measure of countries' religious climates. The lowest level of religiosity can be found in the Czech Republic, whereas Turkey is defined as the most religious country in our sample.

The countries' traditional denominations are defined as Roman Catholic, Protestant, Eastern Orthodox, or Muslim. We extended the classification provided by Inglehart (1990, 440) to countries that were not in his sample.

Health system responsiveness indicates, among other things, the extent to which human dignity is respected, the extent to which patients participate in choices about their own health (including the choice to receive or not to receive medical treatment), and the extent to which the confidentiality of personal health information is assured. A complete description of this measure can be found in the World Health Report on health systems (World Health Organization 2000). Health system responsiveness is lowest in Bulgaria (4.43) and highest in the United States (8.10).

Aggregated individual scores on the autonomy item resulted in average levels of attachment to autonomy per country, which serve as a proxy for the degree to which people are exposed to the value of personal autonomy in their national contexts. Personal autonomy is most widely valued in Iceland (86.33) and least in Poland (43.06).

The unhealthy population hypothesis, which originates from the death with dignity argument, will be tested with a measure that expresses the amount

Table 1. Descriptive Information on Individual-Level Variables ($N = 37,393$)

	%	Minimum	Maximum	Mean	St. dev.
Dependent variable					
Permissiveness toward euthanasia		1.00	10.00	4.92	3.28
Religion					
Religiosity (index)		-2.51	1.48	0.01	1.00
No denomination	28.2				
Catholic	39.6				
Protestant	16.5				
Orthodox	9.0				
Muslim	3.8				
Other	2.1				
Missing on denomination	0.8				
Slippery slope					
Feeling of control over life ^a		1.00	10.00	6.75	2.28
Missing on the feeling of control	1.9				
Age		18.00	75.00	43.56	15.71
Socially inactive	38.2				
Socially active	61.4				
Missing on socially (in)active	0.5				
No partner	31.1				
Partner	68.8				
Missing on partner	0.1				
No children in household	57.0				
Children in household	42.7				
Missing on children	0.3				
Autonomy					
Low education	33.9				
Medium education	45.2				
High education	20.2				
Missing on education	0.7				
Value autonomy: no	36.3				
Value autonomy: yes	60.0				
Missing on value autonomy	3.7				
Death with dignity					
Not widowed	92.0				
Widowed	7.2				
Missing on widowhood	0.8				
Control variable					
Female	53.9				

SOURCE.—European Values Study 1999/2000 & World Values Study 2000.

^aMean and standard deviation are based on nonmissing observations.

Table 2. Descriptive Information on Country-Level Variables

	N	Permissiveness toward euthanasia (1–10)	Religiosity (index)	Traditional denomination	Health system responsiveness	Average autonomy value	Population unhealthiness	Suicide rate
Austria	1,386	4.37	0.13	Catholic	6.86	71.61	52.31	18.2
Belarus	882	5.39	-0.26	Orthodox	5.32	62.47	52.88	38.2
Belgium	1,748	5.89	-0.20	Catholic	6.82	62.53	56.96	20.9
Bulgaria	806	4.06	-0.32	Orthodox	4.43	55.85	55.17	16.9
Canada	1,766	5.74	-0.20	Protestant	6.98	54.45	56.86	11.8
Croatia	974	4.07	0.55	Catholic	5.32	57.45	62.63	19.9
Czech Republic	1,752	5.46	-0.72	Catholic	5.78	68.85	58.31	16.2
Denmark	889	6.68	-0.46	Protestant	7.12	85.26	58.91	13.4
Estonia	838	5.19	-0.64	Protestant	5.44	60.68	54.46	28.7
Finland	951	5.67	0.02	Protestant	6.76	64.60	53.23	23.4
France	1,467	6.18	-0.41	Catholic	6.82	66.07	57.86	15.9
Germany	1,721	4.57	-0.50	Protestant	7.10	54.62	54.90	13.9
Hungary	866	4.04	-0.27	Catholic	5.47	75.18	64.69	28.2
Iceland	907	5.34	0.23	Protestant	6.84	86.33	46.06	11.8
Ireland	853	3.21	0.58	Catholic	6.52	50.20	53.16	11.7
Italy	1,844	3.90	0.49	Catholic	6.65	49.67	50.69	6.8
Latvia	888	5.23	-0.14	Protestant	5.37	52.82	59.06	30.5
Lithuania	869	5.54	0.19	Catholic	5.31	57.76	53.84	45.5
Luxembourg	1,060	5.50	-0.16	Catholic	7.37	66.41	53.35	16.2

Continued

Table 2. Continued

	N	Permissiveness toward euthanasia (1–10)	Religiosity (index)	Traditional denomination	Health system responsiveness	Average autonomy value	Population unhealthiness	Suicide rate
Malta	944	2.23	1.01	Catholic	5.82	48.16	43.46	6.3
Netherlands	929	6.81	-0.25	Protestant	6.92	70.73	51.15	8.9
Poland	936	3.36	0.79	Catholic	5.73	43.06	57.34	17.3
Portugal	839	3.52	0.43	Catholic	6.00	54.28	53.61	6.7
Romania	888	3.35	0.67	Orthodox	5.35	52.59	54.29	12.5
Russia	2,074	5.57	-0.24	Orthodox	5.37	55.21	59.76	41.0
Slovakia	1,181	4.98	0.24	Catholic	5.51	53.14	58.06	13.9
Slovenia	922	5.41	-0.27	Catholic	6.04	63.02	59.17	29.5
Spain	1,032	4.85	-0.06	Catholic	6.18	53.00	51.94	8.3
Sweden	974	6.07	-0.48	Protestant	6.90	79.96	48.94	12.8
Turkey	1,182	2.78	1.20	Muslim	5.16	61.68	38.68	6.7
Ukraine	984	5.20	-0.06	Orthodox	5.13	52.64	53.95	35.8
United Kingdom	886	5.36	-0.26	Protestant	6.51	51.06	53.13	8.5
United States	1,155	5.08	0.30	Protestant	8.10	45.79	59.66	10.3
Total/Mean	37,393	4.92	0.00		6.22	59.91	54.71	18.3
St.dev. (mean-centered)			0.47		0.81	10.08	5.04	10.5
Minimum (mean-centered)			-0.72		-1.79	-16.86	-16.03	-12.0
Maximum (mean-centered)			1.20		1.88	26.42	9.99	27.2

Table 3. Correlation Matrix of Permissiveness toward Euthanasia with Country-Level Variables

	(1)	(2)	(3)	(4)	(5)	(6)
(1) Permissiveness toward euthanasia	1.00	-0.25**	0.11**	0.15**	0.13**	0.10**
(2) Religiosity (index)		1.00**	-0.18**	-0.42**	-0.50**	-0.32**
(3) Health system responsiveness			1.00	0.19**	-0.02**	-0.47**
(4) Average autonomy value				1.00	-0.06**	0.04**
(5) Population unhealthiness					1.00	0.43**
(6) Suicide rate						1.00

SOURCE.—European Values Study 1999/2000 & World Values Study 2000.
 ** $p < 0.01$.

of suffering in each of the countries. The World Health Organization reports the summary measure DALY (Disability Adjusted Life Years) that indicates the number of healthy years lost (either because of premature mortality or because of years lived in states of less than full health) per 1,000 people in a particular country, and is specified for several diseases. We calculated the number of healthy years lost due to cancers and neuropsychiatric conditions such as Alzheimer and Multiple Sclerosis. We assume that it is especially these kinds of diseases for which euthanasia might be perceived as a desirable option. The DALY also includes years of life lost due to early death, which does not reflect the theoretical notion of suffering. However, the number of healthy years lost due to disability is not available per country. Turkey has the healthiest population (38.68 years per 100,000 population), and Hungary the unhealthiest (64.69 years per 100,000 population).

The suicide rate expresses the number of individuals per 100,000 that die from intended self-inflicted injuries in the year 2002, as reported by the World Health Organization. Suicide is relatively uncommon in Portugal and Turkey (6.7) and most common in Lithuania (45.5).

Table 2 presents country-level descriptive statistics. In the analysis, for interpretation purposes, country-level variables center on the mean. Table 3 shows the correlation matrix of the country-level variables. Permissiveness toward euthanasia is negatively associated with religiosity of the population, and positively associated with health system responsiveness, average attachment to autonomy, population unhealthiness, and suicide rate, which corroborates our hypotheses. To put the hypotheses to a stronger test, we apply a two-level analysis, with random intercepts and fixed effects. Individual respondents are nested within countries.

Results

Table 4 presents the effects of the individual and country-level variables. We start out with an empty model to determine the variance in permissiveness toward euthanasia among individuals as well as countries. We observe a variance level of 9.64 for individuals and 1.18 for countries. Model 1 presents all individual-level effects. For interpretation purposes, the effects of the religiosity-index and denominations are estimated separately, the former in Model 1a and the latter in Model 1b. Due to the limited number of degrees of freedom on the country level, country characteristics are added one by one (Models 2 to 6). Model 7 is the final model that includes all individual and country-level variables at the same time; Model 7a includes the religiosity index and Model 7b includes traditional denominations. In table 5, the contribution of each variable to the total model fit can be compared to gain insight into the relative importance of each construct.

INDIVIDUAL CHARACTERISTICS

We find strong support for the religiosity hypothesis: permissiveness toward euthanasia is lower when religious beliefs are stronger ($b = -0.79$). The difference between respondents with the strongest religious and the weakest religious beliefs is over 3 points on the ten-point scale ($-0.79 * (-2.51 - 1.48) = 3.16$). The denomination hypothesis is partly corroborated by our findings: Muslims are most strongly opposed to euthanasia, followed (at some distance) by Catholics, who appear to be less permissive than Protestants. Unexpected is the position of Orthodox people, who are the most permissive of all religious groups. The impact of religiosity on permissiveness toward euthanasia is very strong compared to the impact of other factors (see table 5). Note that the religiosity-index explains a larger proportion of the variance on the individual level than does denomination.

The slippery slope hypothesis predicts that people who feel vulnerable more strongly oppose voluntary euthanasia. Indeed, we find that people who feel little control over the way their lives turn out, the elderly, as well as socially inactive people are less permissive toward euthanasia. Contrary to our expectation, having a partner or children does not lead to more permissiveness. Apparently, it is incorrect that people with a family to care for are less fearful that euthanasia might be carried out against their will.

The autonomy hypothesis finds support in our data. Medium and highly educated people are more in favor of euthanasia than poorly educated people ($b = 0.35$ and $b = 0.41$, respectively), and people who attach value to personal autonomy are more permissive than people who do not ($b = 0.56$, more than half a point on the ten-point scale). As table 5 shows, education and the attachment to autonomy have relatively strong effects on permissiveness toward euthanasia.

Table 4. Individual and Country-Level Effects on Permissiveness toward Euthanasia

	Model 0		Model 1a		Model 1b		Model 2a		Model 2b		Model 3		Model 4		Model 5		Model 6		Model 7a		Model 7b		
	b	se	b	se	b	se	b	se	b	se	b	se	b	se	b	se	b	se	b	se	b	se	
Intercept	4.87**	0.19	4.66**	0.17	5.45**	0.19	4.69**	0.15	6.06**	0.26	4.69**	0.15	4.65**	0.16	4.67**	0.16	4.66**	0.16	4.71**	0.13	5.78**	0.22	
Individual level																							
Female	0.12**	0.03	-0.08*	0.03	0.11**	0.03	0.11**	0.03	-0.08*	0.03	0.12**	0.03	0.12**	0.03	0.12**	0.03	0.12**	0.03	0.11**	0.03	-0.08*	0.03	
Religion																							
Religiosity (index)	-0.79**	0.02					-0.79**	0.02			-0.79**	0.02	-0.79**	0.02	-0.79**	0.02	-0.79**	0.02	-0.79**	0.02			
No denomination (ref)																							
Protestant			-0.78**	0.06					-0.79**	0.06												-0.80**	0.06
Catholic			-0.92**	0.05					-0.92**	0.05												-0.92**	0.05
Orthodox			-0.47**	0.08					-0.46**	0.08												-0.46**	0.08
Muslim			-2.37**	0.18					-2.35**	0.18												-2.35**	0.18
Other			-1.16**	0.12					-1.16**	0.12												-1.16**	0.12
Slippery slope																							
Feeling of control over life	0.03**	0.01	0.03**	0.01	0.03**	0.01	0.03**	0.01	0.03**	0.01	0.03**	0.01	0.03**	0.01	0.03**	0.01	0.03**	0.01	0.03**	0.01	0.03**	0.01	
Age	-0.02**	0.00	-0.02**	0.00	-0.02**	0.00	-0.02**	0.00	-0.02**	0.00	-0.02**	0.00	-0.02**	0.00	-0.02**	0.00	-0.02**	0.00	-0.02**	0.00	-0.02**	0.00	
Socially active	0.26**	0.04	0.30**	0.04	0.30**	0.04	0.26**	0.04	0.30**	0.04	0.26**	0.04	0.26**	0.04	0.26**	0.04	0.26**	0.04	0.26**	0.04	0.30**	0.04	
Partner	-0.05	0.04	-0.05	0.04	-0.06*	0.04	-0.06*	0.04	-0.05	0.04	-0.05	0.04	-0.06	0.04	-0.05	0.04	-0.06	0.04	-0.05	0.04	-0.05	0.04	
Children in the household	-0.05	0.03	-0.08*	0.04	-0.08*	0.04	-0.05	0.03	-0.08*	0.04	-0.05	0.03	-0.05	0.03	-0.05	0.03	-0.05	0.03	-0.05	0.03	-0.08*	0.04	
Autonomy																							
Education low (ref)																							
Education medium	0.35**	0.04	0.40**	0.04	0.35**	0.04	0.35**	0.04	0.40**	0.04	0.35**	0.04	0.35**	0.04	0.35**	0.04	0.35**	0.04	0.35**	0.04	0.40**	0.04	
Education high	0.41**	0.05	0.49**	0.05	0.41**	0.05	0.41**	0.05	0.49**	0.05	0.41**	0.05	0.41**	0.05	0.40**	0.05	0.40**	0.05	0.41**	0.05	0.49**	0.05	
Value autonomy (1 = yes)	0.56**	0.03	0.67**	0.03	0.56**	0.03	0.56**	0.03	0.67**	0.03	0.56**	0.03	0.56**	0.03	0.56**	0.03	0.56**	0.03	0.56**	0.03	0.67**	0.03	
Widowhood																							
Death with dignity	0.13	0.07	0.08	0.07	0.08	0.07	0.13	0.07	0.08	0.07	0.14	0.07	0.13	0.07	0.13	0.07	0.13	0.07	0.13	0.07	0.08	0.07	

Continued

Table 4. Continued

	Model 0		Model 1a		Model 1b		Model 2a		Model 2b		Model 3		Model 4		Model 5		Model 6		Model 7a		Model 7b			
	b	se	b	se	b	se	b	se	b	se	b	se	b	se	b	se	b	se	b	se	b	se		
Country level																								
Religion																								
Religiosity (index)								-0.96**	0.24															
Protestant (ref)																								
Catholic																								
Orthodox																								
Muslim																								
Slippery slope																								
Health system responsiveness																								
Autonomy																								
Average autonomy value																								
Death with dignity																								
Population unhealthiness																								
Suicide rate																								
Variance on individual level	9.64	0.07	8.73	0.06	9.04	0.07	8.73	0.06	9.04	0.07	8.73	0.06	8.73	0.06	8.73	0.06	8.73	0.06	8.73	0.06	8.73	0.06	8.73	0.07
Variance on country level	1.18	0.29	0.60	0.15	0.80	0.20	0.39	0.10	0.61	0.15	0.48	0.12	0.49	0.12	0.56	0.14	0.56	0.14	0.27	0.07	0.34	0.09	0.09	
% Individual variance explained	9.4%		6.3%		9.4%		6.3%		9.4%		9.4%		9.4%		9.4%		9.4%		9.4%		9.4%		6.3%	
% Country variance explained	49.7%		32.9%		66.8%		48.2%		66.8%		59.4%		58.4%		52.5%		52.6%		77.6%		71.4%		71.4%	
% Country variance explained																								
% Country variance explained																								
cf Model 1a																								
cf Model 1b																								

SOURCE.—European Values Study 1999/2000 & World Values Study 2000.

***p* < 0.01; **p* < 0.05.

Table 5. Contribution of Each Variable to Model Fit

	Model 7a		Model 7b	
	Chi2	df	Chi2	df
Individual level				
Sex	6	1*	3	1~
Religiosity (index)	934	1**		
Denomination			296	6**
Feeling of control over life	11	2**	8	2*
Age	83	1**	110	1**
Socially active	24	2**	31	2**
Partner	2	2	2	2
Children in the household	2	2	3	2
Education	52	3**	68	3**
Value autonomy (1 = yes)	154	2**	209	2**
Widowhood	2	2	1	2
Country level				
Religiosity (index)	2	1		
Traditional denomination			3	3
Health system responsiveness	5	1*	4	1~
Average autonomy value	0	1	3	1~
Population unhealthiness	0	1	1	1
Suicide rate	3	1~	5	1*

SOURCE.—European Values Study 1999/2000 & World Values Study 2000.

** $p < .01$; * $p < .05$; ~ $p < .10$.

Finally, the death with dignity hypothesis expects that people will have more sympathy for euthanasia if they have experienced suffering in their personal environment. Widowhood is an indirect measure of this and we find no strong evidence to support our hypothesis. The positive effect in Models 1a fails to reach the level of significance ($b = 0.13, p = .06$). This is due to the simultaneous inclusion of widowhood and marital status.

The selected individual-level variables explain only 9.4 percent (Model 1a) or 6.3 percent (in Model 1b) of the total variance on the individual level. If all individual level factors are taken into account, one third to one half of the original variance on the country level is explained (49.7 percent in Model 1a and 32.9 percent in Model 1b).

COUNTRY CHARACTERISTICS

The religious context hypothesis in Model 2a is supported by the data. Regardless of an individual’s religious beliefs, permissiveness toward euthanasia is lower if the religious beliefs in the country are strong ($b = -0.96$). Since the

range of the religious context variable is almost 2, the difference between people living in the least religious country and people living in the most religious country is almost two points on the 10-point scale.

The traditional denomination of the country predicts permissiveness of its population as well, and the results partly confirm the hierarchy we expected: people in Roman Catholic and Eastern Orthodox countries are less permissive than people in Protestant countries, regardless of their own religious denomination. The average approval of euthanasia is 1 point (on a ten-point scale) lower in Orthodox countries and 0.86 points lower in Roman Catholic countries compared to the average in Protestant countries (the difference between Roman Catholic and Orthodox countries is not significant). The Muslim country (in our sample only Turkey) does not differ significantly from Protestant or other countries.

The health care system hypothesis, which translated the slippery slope argument to the national context, finds clear support as well (see Model 3). As health systems act more responsively, people have more favorable attitudes toward euthanasia ($b = 0.41$). The strength of this effect is considerable; a difference of more than 1.5 points on the ten-point scale between people living in a country with the least and most responsive health care system.

The average attachment to autonomy in a country, indicating the general culture of a country with respect to the issue of personal autonomy, positively affects the opinion of the population toward euthanasia. Permissiveness toward euthanasia increases 0.03 points on the ten-point scale for every 1 percent increase in autonomy advocates, implying that the difference between the countries with the lowest and highest average attachment to autonomy is 1.30. Note that the effect drops below the level of significance if controlled for all other country characteristics in Model 7a. The effect remains significant in the final model with the countries' denominations (Model 7b).

We find no support for the unhealthy population hypothesis, but we do find support for the suicide rate hypothesis, both of which were derived from the death with dignity argument. The unhealthiness of the population was meant to measure the amount of suffering that people observe around them, and although the direction of the effect is in the expected direction, it does not reach the level of significance (Model 5). Note that the measure used in this study also includes years lost due to premature death, and consequently does not purely indicate long-lasting suffering. The suicide rate, indicative of the demand for death or the amount of suffering in a country, has a stimulating effect on permissiveness toward euthanasia, but only in the final model (Model 7a), which includes all country characteristics. The strength of the effect is maximally 1.18 points on the ten-point permissiveness scale.

The five country characteristics together explain an additional 55 to 57 percent of the variation in permissiveness toward euthanasia between countries beyond the individual-level explanations (see Models 7a and 7b), leading to a total explained variance of almost three-quarters. Table 5 shows that in the final

Table 6. Significant Cross-Level Interaction Effects on Permissiveness Toward Euthanasia^a

	b	se		b	se
Religiosity			Slippery slope		
Individual	-0.83**	0.02	Age	-0.02**	0.00
religiosity index			Health system	0.06	0.16
Country's	-0.74**	0.22	responsiveness		
religiosity index			Interaction	0.01**	0.00
Interaction	-0.48**	0.04			
Autonomy			Socially active	0.25**	0.04
Education medium	0.36**	0.04	Health system	0.56**	0.15
			responsiveness		
Education high	0.42**	0.05	Interaction	-0.23**	0.04
Interaction medium	0.00	0.00			
education			Partner	-0.06	0.04
Interaction high	-0.01**	0.00	Health system	0.31*	0.15
education			responsiveness		
			Interaction	0.16**	0.04

SOURCE.—European Values Study 1999/2000 & World Values Study 2000.

^aEach set of variables is added separately to Model 1a in table 4.

***p* < 0.01; **p* < 0.05.

model, health system responsiveness and the suicide rate are the most important contextual factors. In total, the individual and country-level characteristics we consider in this study are able to explain about three-quarters of the variance between countries.⁸

CROSS-LEVEL INTERACTIONS

Results of the cross-level interactions are shown in table 6; only significant effects are reported. The full individual-level model, as presented in Model 7a, table 4, serves as the baseline model. The general hypothesis, that differences between individuals would become smaller if the specific national context eliminated the important causes of these differences, is supported with respect to the slippery slope and the autonomy argument. The differences in permissiveness toward euthanasia between younger and older people, and between socially active and inactive people are smaller in countries with responsive health care systems. Country characteristics are mean-centered which means that the main

8. Although we had no theoretical expectations about the influence of a country's level of prosperity, an additional analysis (results not shown) revealed that gross national income does not add to the explained variance on the country level, but the effect of health system responsiveness drops just below the level of significance.

effect of being socially active ($b = 0.25$) holds for the population in countries with average health system responsiveness. In countries that score 1 point higher on the index, the positive and significant effect of control over life almost disappears ($0.25 - 0.23 = 0.02$). Responsive health care systems appear to be able to neutralize the fear that euthanasia will be abused. The results also reveal that the difference between highly and poorly educated people decreases as the average attachment to autonomy in the country increases. No significant interaction effects are found between the proxies for suffering at the individual and the national level.

The interaction between individual and national religious beliefs is significant, but in the opposite direction than expected. The difference in levels of approval between religious and nonreligious people is larger in religious countries. We expected the differences to be larger in secular countries because of a selection process: religious people in a secular society are assumed to adhere particularly strongly to their religious beliefs, forming a greater contrast with the nonreligious people in that society. We have no explanation for this finding and suggest this should be subject of further research.⁹

The testing of the cross-level interaction hypothesis regarding the countries' traditional denominations requires a different approach due to the categorical nature of the variable. The number of effects to be estimated would be extremely large given our limited number of degrees of freedom if we included all interaction effects in one model. Therefore, we estimated the individual denomination effect in three subsamples for (a) Roman Catholic; (b) Protestant; and (c) Eastern Orthodox countries. Since the only Muslim country in our sample (Turkey) has no respondents with other denominations, the cross-level interaction effects cannot be estimated for it.

The expectation was that attitudes between nonreligious people and people from any denomination would differ most in more strict religious contexts. As a result, the difference—expressed by the height of the bars in figure 2—should be lowest in Protestant countries and highest in Orthodox and Catholic countries. The difference in permissiveness toward euthanasia between religious and nonreligious people is indeed consistently higher in Catholic countries than in Protestant countries, regardless of the contrast that is chosen. In addition, we can partly confirm our hypothesis that stated this difference would be larger in Orthodox countries as well. Generally, the bars are higher in Orthodox countries than in Protestant countries. However, we observe an exception when the attitudes toward euthanasia of nonreligious people are compared with those of Catholic people.

9. We tested the robustness of our finding by performing the analysis excluding former communist countries because of their deviant religious histories, but the alternative model caused no change in the direction of the interaction effect.

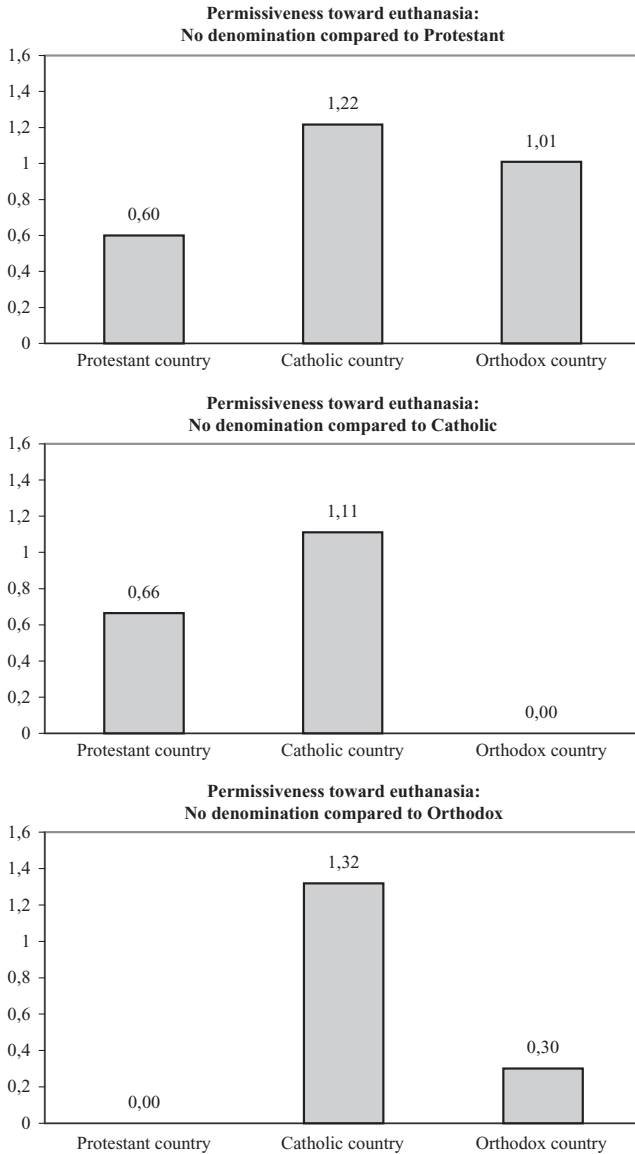


Figure 2. Differences in Permissiveness Toward Euthanasia between Denominations^{a)} in Countries with Different Dominant Denominations. (a) Nonsignificant Effects are Set to Zero.
 SOURCE.—European Values Study 1999/2000 & World Values Study 2000.

Conclusion and Discussion

This study aimed to create a closer link between the public debate on euthanasia and academic research on this topic, thereby improving our understanding of the explanations for differences in permissiveness toward euthanasia. Usually, research on attitudes toward euthanasia places strong emphasis on religion as an explanatory factor. However, opponents and proponents of euthanasia stipulate other arguments as well, which are largely ignored in academic research. As a way forward, we formulated testable hypotheses that are based, apart from the religious argument, on the slippery slope argument used by euthanasia opponents and the autonomy argument and death with dignity argument used by euthanasia proponents.

Another shortcoming of existing research is the lack of attention to differences in the approval of euthanasia between countries, despite the fact that public debate has a notable international character, and large country variation in permissiveness toward euthanasia exists. As a second improvement to prior research, we translated the four main arguments used in the euthanasia debate into testable hypotheses on the contextual level. We believe that our approach to introduce health related measures as explanations for country differences is not only suitable from a theoretical point of view, but also does justice to the historical context of the euthanasia debate that was stirred by medical developments. The invention of chloroform made euthanasia an option in a practical sense as voluntary death became a more attractive alternative to excruciating suffering. While medical progress has lengthened human life, these longer years are not always lived at the highest quality of health. Ongoing medical progress has invoked discussions regarding the desirability of voluntarily ending lives that are characterized by excruciating pain and hopelessness.

We have argued that there are four main arguments that people use to establish their opinion on the matter of euthanasia, and that individuals are influenced by their personal circumstances and by the broader national context when formulating their opinion on euthanasia. The hypotheses on the religion-based argument, slippery slope argument, and the autonomy argument were corroborated by our results. We can conclude that our search for other predictors of euthanasia attitudes, besides religiosity, turned out to be a fruitful one.

On the national level, the same pro and con arguments for euthanasia were put to the test with relevant country indicators. Again, we found that the hypotheses based on religiosity, slippery slope, and an attachment to autonomy, were supported by our results. The hypothesis based on the death with dignity argument was only partially supported. These findings show that contexts shape attitudes, and contribute to our understanding as to why, in the public debate on euthanasia, representatives of one country will attack other countries' practices rather than limiting their fight to opponents in their own country. Furthermore, we tested whether national contexts can diminish differences in permissiveness toward euthanasia between groups in a society. With respect to fear for abuse

of euthanasia and self-determination, this was the case. National contexts appear to take away some of the division between opponents and proponents of euthanasia.

Contexts may change over time. Apart from addressing variation between countries in approval of euthanasia, studying changes over time with newer data could give more insight in the dynamics of contextual influences. This study used surveys that were collected at a time when euthanasia was nowhere legal. Some countries have since legalized forms of euthanasia. Future research may wish to examine the role of (changes in) the legal system regarding euthanasia for explaining differences in attitudes.

Next to the large number of hypotheses that were supported by our research, we have some unexpected findings and suggestions for improvement. We have no convincing evidence that supports the hypotheses based on the death with dignity argument. We encourage future research to use better measures to put this hypothesis to a new and more stringent test. On the individual level, a more direct measure of experience with suffering in the personal environment is preferable over our measure, which was based on widowhood. At the country level, we suggest assessing measures such as the quality of palliative care available in countries. Palliative care might decrease the fear of unbearable suffering, thereby reducing the perceived need for euthanasia, and consequently reducing approval of euthanasia.

Contrary to our expectations and existing literature, Eastern Orthodox Church members are relatively permissive toward euthanasia. Another interesting and unexpected result emerged from the cross-level interaction between individual religious beliefs and religious context. The difference in opinions toward euthanasia of religious and nonreligious individuals is more strongly expressed in devout societies than in secular societies. If, as we proposed, selection processes are the explanation for differences between euthanasia values of religious and nonreligious persons in countries with different religious compositions, it is apparently the latter that form a selective group in devout countries. As the nonreligious adhere especially strong to their liberal values concerning euthanasia, differences between religious and nonreligious persons are particularly present in more devout countries. An alternative explanation could be that secular societies push the attitudes of religious persons toward acceptance of more liberal perspectives, whereas devout societies reinforce the beliefs of their religious inhabitants. The result would be a more pronounced difference in the attitudes of believers and nonbelievers in devout countries than in secular countries. However, this line of thought assumes that religious persons are sensitive to their environment, whereas nonreligious persons are not, or to a lesser extent. We can conclude that, although the religious argument has received the most attention in previous research, our study has given rise to new questions concerning the specific role of religion in shaping opinions toward euthanasia. Future research should attempt to better understand these observed patterns.

Appendix A: Response rates and fieldwork dates EVS and WVS by country

	Response rate ^a	Start date ^b	End date ^b
Austria	0.77 ^c	08-01-1999	10-31-1999
Belarus	0.67 ^c	03-01-2000	04-30-2000
Belgium	n.a.	03-01-1999	06-30-1999
Bulgaria	0.74 ^c	06-01-1999	07-31-1999
Canada	0.46 ^d	08-03-2000	09-24-2000
Croatia	0.68 ^c	03-01-1999	04-30-1999
Czech Republic	0.53 ^c	03-01-1999	05-31-1999
Denmark	0.56 ^c	04-01-1999	11-30-1999
Estonia	0.35 ^c	10-01-1999	10-31-1999
Finland	0.48 ^c	09-01-2000	10-31-1999
France	0.42 ^c	03-23-1999	04-10-1999
Germany	0.56 ^c	10-01-1999	12-31-1999
Hungary	0.68 ^c	11-01-1999	12-31-1999
Iceland	0.64 ^c	06-01-1999	12-31-1999
Ireland	0.54 ^c	10-01-1999	02-28-2000
Italy	0.76 ^c	03-01-1999	05-31-1999
Latvia	0.47 ^c	03-01-1999	03-31-1999
Lithuania	0.80 ^c	11-01-1999	12-31-1999
Luxembourg	0.50 ^c	07-01-1999	10-31-1999
Malta	0.73 ^c	03-01-1999	05-31-1999
Netherlands	0.35 ^c	03-01-1999	08-31-1999
Poland	0.73 ^c	02-01-1999	03-31-1999
Portugal	0.39 ^c	10-01-1999	12-31-1999
Romania	0.95 ^c	07-01-1999	07-31-1999
Russia	0.73 ^c	04-01-1999	06-30-1999
Slovakia	0.72 ^c	06-01-1999	07-31-1999
Slovenia	0.53 ^c	10-01-1999	10-31-1999
Spain	0.13 ^c	03-01-1999	04-30-1999
Sweden	0.41 ^c	11-15-1999	02-13-2000
Turkey	n.a.	09-01-2001	10-01-2001
Ukraine	0.66 ^c	12-01-1999	12-31-1999
United Kingdom	0.80 ^c	10-01-1999	11-30-1999
United States	n.a.	11-19-1999	09-25-2000 ^f

^aResponse rate calculated by the number of complete interviews divided by the number of starting names/addresses cf. Response Rate 1 in “Standard definitions. Final Dispositions of Case Codes and Outcome Rates for Surveys” of the American Association for Public Opinion Research (2006).

^bFieldwork dates for European countries retrieved from <http://zacat.gesis.org>—European Values Study 1999/2000: ZA3811 > Metadata > Study description > Other study description materials > Other reference notes > Further remarks. Fieldwork dates for Canada retrieved from WVS Canada 2000 Methodological Questionnaire, item 29 (www.worldvaluessurvey.org). Fieldwork dates for U.S. retrieved from WVS United States 2000 Methodological Questionnaire, item 29 (www.worldvaluessurvey.org).

^cDerived from EVS 1999/2000 Methodological Questionnaire Integrated Dataset, item 25 (<http://zacat.gesis.org>—ZA3811_bq).

^dResponse rate derived from WVS Canada 2000 Methodological Questionnaire, item 25 (www.worldvaluessurvey.org).

^eDerived from EVS 1999/2000 Methodological Questionnaire Integrated Dataset, item 24a (<http://zacat.gesis.org>—ZA3811_bq).

^fFieldwork in the United States consisted of two waves: from 11-19-1999 to 12-23-1999 and from 08-04-2000 to 09-25-2000.

n.a. not available.

Appendix B: List of exact question wordings of variables used in the analysis

The questionnaire of the European Values Study was used as the base here. If the question wording in the World Values Survey deviates considerably, both question wordings were included.

Permissiveness towards euthanasia

Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between, using this card.
(v235) Euthanasia

1 = never; 10 = always

Religiosity index

Please say, for each of the following, how important it is in your life.

(v6) Religion.

1 = very important; 4 = not at all important

(v110) Independently of whether you go to church or not, would you say you are.

A = a religious person; B = not a religious person; C = a convinced atheist

Which, if any, of the following do you believe in?

(v115) God

(v116) Life after death

(v117) Hell

(v118) Heaven

1 = yes; 2 = no

(v123) And how important is God in your life? Please use this card to indicate—
10 means very important and 1 means not at all important

(v124) Do you find that you get comfort and strength from religion or not?

A = yes; B = no

Denomination

EVS

(v101) Do you belong to a religious denomination?

A = yes; B = no

(v102) Which one?

Country-specific list of denominations

WVS

(v184) Do you belong to a religious denomination? IF YES, which one?

Feeling of control

(v67) Some people feel they have completely free choice and control over their lives, and other people feel that what they do has no real effect on what

happens to them. Please use the scale to indicate how much freedom of choice and control you feel you have over the way your life turns out?

1 = none at all; 10 = a great deal

Age

EVS

(v292) Can you tell me your year of birth, please
19 . . .

WVS

(v225) This means you are ____ years old.

Socially active

(v306) Are you yourself employed now or not? If yes: About how many hours a week? (If more than one job: only for the main job)

Has paid employment

1 = 30 hours a week or more

2 = less than 30 hours a week

3 = self employed

If no paid employment

4 = retired/pensioned

5 = housewife not otherwise employed

6 = student

7 = unemployed

8 = other (please specify)

Partner

EVS

(v293) Whether you are married or not: Do you live in a stable relationship with a partner?

A = yes; B = no

(v296) What is your current legal marital status?

A = Married; B = Widowed; C = Divorced; D = Separated;

E = Never married

WVS

(v106) Are you currently . . .

1 = Married; 2 = Living together as married; 3 = Divorced; 4 = Separated;

5 = Widowed; 6 = Single

Children

EVS

How many people, including yourself, are currently living in your household?

(v300) Aged between 13 and 17

(v301) Aged between 5 and 12

(v302) Under 5

WVS

(v107) Have you had any children? (IF YES:) how many?

Education

EVS

(v304) What is the highest level you have reached in your education?

Autonomy

EVS

(v100) Here are two statements which people sometimes make when discussing good and evil. Which one comes closest to your own point of view?

A. There are absolutely clear guidelines about what is good and evil. These always apply to everyone, whatever the circumstances

B. There can never be absolutely clear guidelines about what is good and evil. What is good and evil depends entirely upon the circumstance at the time.

A = Agree with statement A; B = Agree with statement B;

C = Disagree with both

Widowhood

EVS

(v296) What is your current legal marital status?

A = Married; B = Widowed; C = Divorced; D = Separated; E = Never married

WVS

(v106) Are you currently . . .

1 = Married; 2 = Living together as married; 3 = Divorced; 4 = Separated;

5 = Widowed; 6 = Single

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