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Trends in acceptance of euthanasia among the general public in 12 European countries (1981–1999)

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Background: We wanted to examine how the acceptance of euthanasia among the general public in Western Europe has changed in the last decades, and we wanted to look for possible explanations. **Methods:** We analysed data from the European Values Surveys, held in 1981, 1990, and 1999–2000 in 12 West European countries. In each country, representative samples of the general public were interviewed using the same structured questionnaire in all countries. Euthanasia was explained in the questionnaires as 'terminating the life of the incurably sick'. **Results:** A total of 46 199 respondents participated in the surveys. A significant increase in acceptance of euthanasia could be observed in all countries except (West) Germany. While the average increase in euthanasia acceptance was 22%, the increase was particularly obvious in Belgium, Italy, Spain, and Sweden. Although changes in several characteristics of respondents, such as decrease in religious beliefs, rising belief in the right to self-determination, and (to a lesser extent) rise in levels of education, were associated with growing acceptance of euthanasia, they could only partly explain the increase of euthanasia acceptance over the years. **Conclusions:** An increase of euthanasia acceptance among the general public took place over the last two decades in almost all West European countries, possibly indicating a growing support for personal autonomy regarding medical end-of-life decisions. If this trend continues, it is likely to increase the public and political debate about the (legal) regulation of euthanasia under certain conditions of careful medical practice in several West European countries.

Keywords: attitudes of general public, cross-national research, European values, euthanasia, trends

Increasing debate on the rights of terminally ill patients has marked the last 30 years in western society. The Netherlands and Belgium have adopted laws permitting euthanasia.[1] The state of Oregon and Switzerland permit or do not prosecute (physician-)assisted suicide under certain conditions, but euthanasia is not tolerated.[2,3] In most other western countries euthanasia remains illegal, but sanctions are often reduced and applied rarely and public debates about euthanasia legislation are not uncommon.[4] Following the report of the Select Committee on Euthanasia, a debate on a draft of an assisted suicide bill will be held in the UK parliament in the near future.[5,6]

Among the general public empirical studies reveal an increased acceptance of euthanasia, e.g. in Australia,[7] The Netherlands,[8] in the United States of America,[9,10] and in Canada.[11] The observed change in attitudes is explained by the secularization and individualization of society, which have influenced a movement away from traditional values to more liberal moral attitudes and with increased value being put on personal autonomy.[8] The association between these sociological developments and the trend in attitudes towards euthanasia has, however, never been investigated thoroughly. Moreover, the studies describing the increasing acceptance of euthanasia are limited to a few countries, most of them with an ongoing and intense societal debate on the issue. Furthermore, the reported studies used different study designs and questionnaires. Hence, results cannot be generalized to other countries and are difficult to compare.[12–14] Using a model based on identical study designs and questionnaires in all participating countries, this article attempts to meet these shortcomings.

Firstly, we describe trends and differences in trends in the acceptance of euthanasia among the general public in 12 West European countries. Secondly, we look for explanations of the changes in attitudes by examining other possibly associated societal changes, based on factors found to be significantly associated in the literature.[12,15–27] Thirdly, we examine whether changes in the acceptance of euthanasia can be explained by other societal changes, such as increase in the more highly educated, secularization, increase in general permissiveness, and/or whether there has been a specific change in euthanasia acceptance over the years. Finally, we investigate whether the change in the acceptance of euthanasia, in relation to other societal changes, is similar in all 12 countries or rather country-specific.

Methods

Dataset

We used data from the European Values Study (EVS). The EVS study is based on a large-scale cross-national research programme, initiated in the late 1970s, with regularly repeated surveys on the social, cultural, political, moral, and religious values held by the populations of European countries.

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In 1981, a first survey was conducted in 10 West European countries (all EC countries plus Spain), soon after joined by Iceland and Sweden. In 1990, after the fall of the Iron Curtain, the second survey was held in 23 European countries, including six East European countries. The third survey was held in 1999–2000 among more than 41 000 residents in 33 countries in western, central, and eastern Europe.

In this study we use the data from the following 12 countries that participated in all three surveys: Belgium, Denmark, France, Great Britain, Iceland, Ireland, Italy, The Netherlands, Spain, Sweden, Ulster, and West Germany.

Design

Each of the three surveys in these 12 countries involved representative national samples of all adult citizens (aged 18 years or older) who were interviewed face-to-face using the same structured questionnaires, enabling generalizations and comparisons. A total of 46 199 respondents were interviewed in the three surveys: 14 281 in 1980, 17 134 in 1990, and 14 784 in 1999–2000. The samples were obtained through quota sampling or random sampling with stratification by age, gender, and geographical region (e.g. state, county). Depending on the representativeness of the national sample a weight factor was added to correct for gender, age, marital status, education, and region. To calculate the average acceptance of euthanasia over the 12 countries a weight factor accounting for population size of the countries was also used.

Detailed information on the questionnaires, sampling procedures, fieldwork, weighting, etc., can be found elsewhere.[28–30]

Measurements

Dependent variable: acceptance of euthanasia

The three EVS surveys included one question that probed the attitude towards euthanasia: 'Please tell me whether you think ''euthanasia (terminating the life of the incurably sick)'' can always be justified, never be justified, or something in between.'

The respondent was asked to give a rating from 1 to 10, 1 meaning 'never justified', 10 meaning 'always justified'. Respondents also had the possibility of answering 'I don't know'. Responses of 'I don't know' were not considered in the analysis explaining the acceptance of euthanasia.

Independent variables

Only variables used in all three surveys, associated with acceptance of euthanasia as demonstrated in the literature and meaningful in the context of our analyses, were retained.

Socio-demographic variables include country of residence, gender, age, educational level (expressed in years of education), social class (manual or non-manual occupation), and finally an agricultural class variable (persons active in the agricultural sector versus others). The 'religious belief' variable, as an indicator of secularization, was a factor constructed by means of principal component analyses (PCA) and describes whether or not someone belongs to a religious denomination, the frequency with which religious services are attended, as well as the measure in which someone believes, respectively, in God, life after death, hell, heaven, and sin. We also constructed a factor by means of PCA giving some indication of the belief in the right to self-determination. This factor, further in the text conveniently called 'permissiveness', is based on the acceptance of divorce, abortion, suicide, homosexuality, and adultery. Detailed information about the construction of both factors, their component loadings, and their internal consistency is not presented here, but is available from the authors.

Statistical analysis

Means and percentages were used to describe the changes in the acceptance of euthanasia over time. Because distribution of the dependent variable in all three surveys was not normal (confirmed by the Kolmogorov–Smirnov test), the non-parametric Jonckheere–Terpstra test was used to determine statistical significance of associations between the dependent and the independent variables.

To test whether differences in euthanasia acceptance were related to the year of the survey independently from other significant correlates and possible confounders, corrected odds ratios were calculated by performing a multivariate ordinal logistic regression (cauchit link function). This method of analysis was considered to be the most appropriate one, given the non-normal distribution of our outcome variable. We expanded our model stepwise, by constructing five models. The first model describes the differences between the three survey years, controlling for country of residence; the second model adds the age and gender as controlling variables; the third model adds the educational level, social class, and agricultural class variable; the fourth model adds the 'religious belief' factor; and the fifth model adds the 'permissiveness' factor.

SPSS (version 12.0) was used for all statistical computations and a probability level of 0.01 was set to determine statistical significance of associations.

Results

For the first two surveys not all countries had documented complete information on the responses, but the number of cases obtained was higher than the targeted number of cases, and countries that did document response rates reported good figures (e.g. 71% average response rate in Scandinavian countries). The average response rate in 1999 was 56%. The characteristics of the samples of 1981, 1990, and 1999–2000 are described in table 1. The relative proportion of the countries within the total differs between the survey years. The mean age (in line with the ageing population), the number of the more highly educated, and the levels of general permissiveness have significantly increased. The number of persons employed in the agricultural sector, the number of manual workers, and the general level of religious belief (most notably between 1981 and 1990) had significantly decreased. The missing values for the euthanasia question, mostly persons answering 'I don't know', were stable over time.

A significant increase in acceptance of euthanasia from 1981 over 1990 to 1999 can be observed in almost all countries (figure 1). The average increase was 22%. The increase was especially high in Belgium (69%), but also in Ireland (56%) and in Spain (52%). In Sweden, Northern Ireland and France, acceptance of euthanasia increased by about a third. The increase in Italy, Iceland, and The Netherlands was in accordance with the average increase, while in Great Britain the increase was weaker (13%). The increase in Denmark was very weak (9%), with even a decrease in 1990 (in line with their decrease in general permissiveness). West Germany was the only country with no increase in euthanasia acceptance.

The general increase in euthanasia acceptance remained after controlling for other factors (table 2). The increase of euthanasia acceptance was stronger when controlling for age and gender (model 2). The changes in social characteristics of respondents, i.e. decrease of persons active in the agricultural sector, the decrease of manual workers, and particularly the increase in numbers of the more highly educated explain part of the increase in acceptance of euthanasia (model 3). A much larger influence can be ascribed to the decrease of religious beliefs (model 4). However, even after controlling for these societal

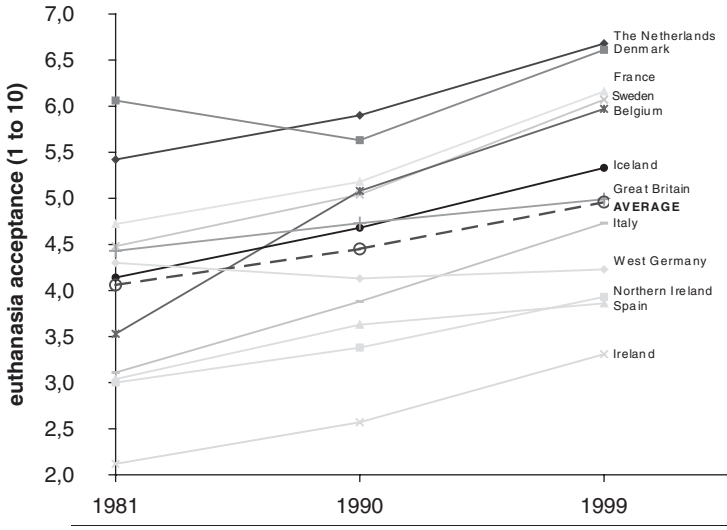
Table 1 Description of the sample of 12 countries from the EVS (1981, 1990, and 1999)

	1981 ($n = 14\,281$)	1990 ($n = 17\,134$)	1999 ($n = 14\,784$)	Total ($n = 46\,199$)	*P*-value
Country					
Belgium	1145 (8.0%)	2792 (16.3%)	1912 (12.9%)	5849 (12.7%)	<0.001[a]
Denmark	1182 (8.3%)	1030 (6.0%)	1023 (6.9%)	3235 (7.0%)	
France	1200 (8.4%)	1002 (5.8%)	1615 (10.9%)	3817 (8.3%)	
Great Britain	1167 (8.2%)	1484 (8.7%)	1000 (6.8%)	3651 (7.9%)	
Iceland	927 (6.5%)	702 (4.1%)	968 (6.5%)	2597 (5.6%)	
Ireland	1217 (8.5%)	1000 (5.8%)	1012 (6.8%)	3229 (7.0%)	
Italy	1348 (9.4%)	2018 (11.8%)	2000 (13.5%)	5366 (11.6%)	
The Netherlands	1221 (8.5%)	1017 (5.9%)	1003 (6.8%)	3241 (7.0%)	
Spain	2303 (16.1%)	2637 (15.4%)	1200 (8.1%)	6140 (13.3%)	
Sweden	954 (6.7%)	1047 (6.1%)	1015 (6.9%)	3016 (6.5%)	
Northern Ireland	312 (2.2%)	304 (1.8%)	1000 (6.8%)	1616 (3.5%)	
West Germany	1305 (9.1%)	2101 (12.3%)	1036 (7.0%)	4442 (9.6%)	
Age (in years)					
Mean (SD)	44.41 (17.88)	44.44 (17.62)	45.45 (17.35)	44.75 (17.62)	<0.001[b]
Sex					
Women	7281 (51.0%)	8841 (51.7%)	7655 (51.8%)	23777 (51.5%)	0.349[a]
Educational level (in years of education)					
<12	1527 (10.7%)	1314 (7.9%)	1271 (8.6%)	4112 (9.0%)	<0.001[c]
12 through 14	3138 (22.1%)	3277 (19.7%)	2158 (14.6%)	8573 (18.8%)	
15 through 18	5353 (37.6%)	6393 (38.4%)	5831 (39.4%)	17577 (38.5%)	
19 through 20	1405 (9.9%)	2096 (12.6%)	1770 (12.0%)	5271 (11.5%)	
21 or more	2796 (19.7%)	3576 (21.5%)	3753 (25.4%)	10125 (22.2%)	
Social class					
Manual class	6384 (48.1%)	6896 (42.2%)	4860 (38.3%)	18140 (42.9%)	<0.001[c]
Agricultural class					
Agricultural class	991 (7.5%)	908 (5.5%)	598 (4.7%)	2497 (5.9%)	<0.001[c]
Religiosity (factor scale, standardized scores)[d]					
Mean (SD)	0.09 (0.97)	−0.04 (1.01)	−0.04 (1.01)	0.00 (1.00)	<0.001[b]
Permissiveness (factor scale. standardized scores)[d]					
Mean (SD)	−0.18 (1.01)	−0.06 (0.94)	0.23 (1.01)	0.00 (1.00)	<0.001[b]
Missing values[e]					
n.a. or d.k.	759 (5.3%)	923 (5.4%)	749 (5.0%)	2431 (5.3%)	0.487[a]

a: Pearson's χ^2 testing the independence between each row and the survey year
b: One-way ANOVA comparing means in the three survey years
c: Kendal's tau-b testing the (ordinal) relationship between each row and the survey year
d: The presented scores are standardized scores (factor scale with mean = 0 and SD = 1)
e: This is the number of missing values for the euthanasia variable, i.e. the number that gave no answer or answered with 'do not know'. The majority of the missing values, however, concerns people answering with do not know (4.4% of total in 1990 and 4.0% of total in 1999)

changes a significant increase in euthanasia acceptance could be observed. Finally, model 5 demonstrates that the increase in euthanasia acceptance is largely congruent with the increase in 'permissiveness' (towards abortion, divorce, homosexuality, and adultery), but even taking this change into account the acceptance of euthanasia has still relatively increased.

Of course the influence of societal changes on the acceptance of euthanasia (but also, for example, the way in which the separate items of the 'permissiveness' factor loaded on the same dimension) varied between the countries. Therefore, an analysis per country was performed, which demonstrated that the trends in euthanasia acceptance, using this last model, are not the same in all countries (table 3). Belgium,



	Mean in 1981	Mean in 1990	Mean in 1999	Difference 1999-1981 (in%)	P-value (Jonckheere-Terpstra)
The Netherlands	5.42	5.90	6.68	+23.2%	<0.001
Denmark	6.06	5.63	6.61	+09.1%	0.041
France	4.72	5.18	6.16	+30.5%	<0.001
Sweden	4.48	5.04	6.07	+35.5%	<0.001
Belgium	3.53	5.08	5.97	+69.1%	<0.001
Iceland	4.14	4.68	5.33	+28.7%	<0.001
Great Britain	4.43	4.73	4.99	+12.6%	<0.001
Spain	3.11	3.88	4.73	+52.1%	<0.001
West Germany	4.30	4.13	4.23	-02.6%	0.686
Northern Ireland	3.00	3.38	3.93	+31.0%	0.001
Italy	3.04	3.63	3.86	+27.0%	<0.001
Ireland	2.12	2.57	3.31	+56.1%	<0.001
AVERAGE	**4.06**	**4.45**	**4.96**	**+22.2%**	**<0.001**

Figure 1 Acceptance of euthanasia in 12 countries (1981–1999)

Table 2 Trends in euthanasia acceptance 1981–1990–1999, multivariate ordinal logistic regression

	Model 1[a] (survey year and country of residence)	Model 2[a] (+ gender and age)	Model 3[a] (+ educational level, social class and agricultural class)	Model 4[a] (+ religious beliefs)	Model 5[b] (+ permissiveness)
1981 (reference year)					
OR	Reference	Reference	Reference	Reference	Reference
1990					
OR	1.41	1.43	1.40	1.36	1.20
95% CI	1.36–1.46	1.38–1.48	1.35–1.45	1.31–1.40	1.15–1.24
1999					
OR	1.90	1.98	1.91	1.84	1.38
95% CI	1.83–1.97	1.91–2.05	1.84–1.98	1.77–1.91	1.33–1.44

a: All nine thresholds statistically significant
b: All thresholds statistically significant, except between score 2 and 3

Italy, Sweden, and Spain have a strong relative increase in euthanasia acceptance. France, Ireland, Iceland, and The Netherlands experienced a somewhat weaker relative increasing acceptance. In The Netherlands the acceptance of euthanasia in 1990 was lower than would be expected from their general level of religious belief and 'permissiveness'. Great Britain, Denmark, and Northern Ireland (confidence intervals include 1) experienced no relative increase in euthanasia acceptance and in Germany the acceptance of euthanasia has decreased relatively.

Discussion

We have presented clear empirical proof that the acceptance of euthanasia among the general public has increased in most West European countries throughout the last two decades. The only exception is West Germany. Our findings show that an increased acceptance of euthanasia can be related to the increase in educational attainment, secularization, and the increased value society puts on individual liberties, but the change in acceptance also differs strongly between countries.

Table 3 Trends in euthanasia acceptance per country, based on model 5[a]

Country	1981 (reference year)	1990 OR (95%CI)	1999 OR (95%CI)
Belgium	1.00	1.65 (1.47–1.85)	2.57 (2.26–2.92)
Italy	1.00	1.68 (1.48–1.91)	1.85 (1.62–2.11)
Sweden	1.00	1.60 (1.37–1.86)	1.75 (1.49–2.04)
Spain	1.00	1.43 (1.29–1.58)	1.72 (1.52–1.95)
France	1.00	1.19 (1.04–1.36)	1.61 (1.42–1.82)
Ireland	1.00	1.33 (1.12–1.58)	1.54 (1.29–1.82)
Iceland	1.00	1.07 (0.92–1.25)	1.37 (1.18–1.59)
The Netherlands	1.00	0.79 (0.69–0.90)	1.18 (1.02–1.35)
Great Britain	1.00	1.08 (0.96–1.22)	1.13 (0.98–1.29)
Denmark	1.00	1.49 (1.28–1.73)	0.99 (0.86–1.14)
Northern Ireland	1.00	1.01 (0.77–1.32)	0.91 (0.73–1.15)
West Germany	1.00	0.83 (0.74–0.93)	0.78 (0.69–0.89)

a: Model 5: controlling for age, sex, educational level, proportion employed in agricultural sector, proportion belonging to manual social class, religious beliefs, and permissiveness

This study is, to our knowledge, the first to examine trends in attitudes towards euthanasia linked to other relevant changes in society, and with a cross-national design comparing 12 countries.

An important limitation is that the EVS used only one question to measure acceptance of euthanasia, which makes it more difficult to gain a thorough understanding of public attitudes. Furthermore, the description used in the EVS for euthanasia misses an important condition (namely that the act is 'at the explicit request of the patient'[31]), and does not specify any clinical circumstances (e.g. the degree of suffering, age of the patient, consciousness, and mental alertness of the patient), which might have had an impact on the acceptability of this medical practice.[26,32]

A number of striking and new insights are provided by our study.

First, the change in acceptance of euthanasia did not occur with the same speed in all countries. In particular, Belgium drastically changed its acceptance of euthanasia. In 1981 it was among the least accepting countries, but by 1999 the general public was clearly accepting euthanasia. This strong increase has probably been a major contribution to the Belgian euthanasia legislation of 2002.[1] The increase is found to be strongly associated with the particularly strong decrease in religious beliefs in the 1980s and the increase of general permissiveness (i.e. the value society has put on an individual's right to self-determination) in Belgium.

A second striking insight is that in Belgium, as well as in many other countries (France, Spain, Sweden, Ireland, and The Netherlands) the increase in acceptance of euthanasia was stronger than the increase in permissiveness and the decrease of religious beliefs. This can possibly be ascribed to the intense debate and public discussions on terminal patients' rights that were held in those countries, compared to the others. A public debate aimed at legalizing euthanasia and exposure of dying patients in the mass media (e.g. the Ramon Sampedro case in Spain) may have led to a greater awareness of and sensibility towards the rights of terminally ill patients, and to an increase in the acceptance of euthanasia, faster than the increase in general permissiveness.[33] It seems that the rise in the acceptance of euthanasia reflects changing attitudes towards death and dying and a generalized desire to counter 'bad' ways of dying.[34] If these trends continue, and if more and more individuals (like Dianne Pretty in the UK) will be brought in the media, giving a face to suffering patients desiring to end their lives, it is plausible that the public acceptance of euthanasia will increase further.

A third new finding is that secularization is strongly correlated with an increase of euthanasia acceptance, as could be expected from the previously reported association of religious beliefs and euthanasia acceptance,[12,17–21,24–26,35] but not necessarily coinciding with it. Countries with no change (e.g. Iceland) or with a weak decrease in religious beliefs still often experienced a strong increase in euthanasia acceptance. And while Italy has clearly increased its acceptance of euthanasia, it has also known an increase in religious beliefs according to the EVS data.[36] Based on these findings, we expect that further secularization will not inevitably, as suggested by other authors,[15] bring about a further increase in euthanasia acceptance.

Finally, the case of Germany demonstrates that other, country-specific, factors are clearly important as well. While Germany has known an increase in permissiveness (towards abortion, divorce, homosexuality, etc.) and a decrease in religious beliefs, it has not experienced any increase in euthanasia acceptance. Germany is, as has been reported elsewhere,[37] an exception in Europe on attitudes towards euthanasia. It is very likely that Germany's Nazi history has a strong influence on their continued restrictive attitude towards euthanasia. The memory of the Nazi euthanasia programme (the T-4 programme), which functions as a dreaded example inspiring fear of possible abuse of euthanasia, possibly prevents Germans—both the medical community as well as the general public—from adopting a more positive attitude towards euthanasia.[37–41]

To summarize our findings, we can see that a marked increase of the acceptance of euthanasia has occurred during the last two decades in almost all West European countries. The decrease in religious beliefs and increase in permissiveness are obvious correlates of this increased acceptance. However, our findings seem to suggest that public sensibilities towards 'right-to-die' issues and public debates on euthanasia and terminal patients' rights have most probably also contributed to the increase in euthanasia acceptance. Changing attitudes towards pain and suffering[42] and an increased individualism reflected in a desire for individual control and choice over time, place, and manner of death[33] have probably incited this attitude.

It is not unlikely that, if trends in public attitudes towards this sensitive issue continue as they have done in the last two decades, in most European countries it will be a question of

when rather than whether euthanasia, under certain conditions of careful, medical practice will be regulated.

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Key points

- This article presents data on trends in euthanasia acceptance over the last two decades based on the European Values Studies.
- Acceptance of euthanasia has increased significantly in 11 out of 12 West European countries.
- This increase is strongly related to secularization and belief in the right to self-determination.
- In some countries, other factors (e.g. specific historical events, public debate) have also influenced the evolution in euthanasia acceptance.
- Continuation of these trends might increase pressure for a regulation debate.

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