Where Else Does Turnout Decline Come From? Education, Age, Generation and Period Effects in Three European Countries

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Recent research has found that voter turnout is declining in most advanced industrial countries. The trend is driven by generational replacement because the age cohorts that entered the electorate at the end of the twentieth century are voting at lower than expected rates. In North American countries, the decline is also concentrated among the poorly educated. This article examines the relative contribution of period, life-cycle, generational and educational effects on changes in electoral participation over the last four decades in Sweden, Norway and Germany with individual-level data. Turnout decline is partly driven by generational change in the countries observed as the literature suggests. Additionally, there is also a clear socio-economic correlate. Most strikingly, poorly educated persons of all age groups are increasingly failing to vote in Germany. The results suggest that the causes of the long-term evolution are multidimensional and the relative consequences vary across countries. The debate about turnout decline and its possible remedies has to take into account the fact that both members of new generations *and* citizens with low education attainment are the main targets of measures aimed at increasing turnout rates, but different actions might be required to attract each specific demographic group to the polls.

Introduction

Voter turnout rates are declining in most advanced industrial democracies. There are several contending views as to why this is happening and what can be done to reverse the trend. One central question posed by Blais et al. (2004, 221) is 'where does turnout decline come from?' Knowing in more detail how the turnout rates of different social groups have evolved over time is particularly useful because it can help us to focus the debate, develop a deeper understanding of the forces that drive the long-term trends and suggest what can be done about it. Addressing this question, recent research has stressed that the youngest age cohorts to enter the electorate have been

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voting at particularly low rates, and that this seems to be the result of generational, rather than just life-cycle or period, effects (Franklin et al. 2004; Wattenberg 2006; Wass 2007). At the same time, studies have found that there is another social group in which the decline is particularly concentrated: citizens with low levels of educational attainment are also increasingly failing to go to the polls, at least in the United States (Lyons & Alexander 2000; Miller & Shanks 1996) and Canada (Blais et al. 2004). Most research about the evolution of turnout over time focuses on either aggregate-level data or single country studies. However, we need to know if the patterns observed at the individual level are common for a wide range of countries or, conversely, if the correlates of turnout decline are context-specific.

This article focuses on the effect of two sociodemographic variables of particular interest: age and education. Age is among the most powerful predictor of the vote and has been at the centre of recent scholarly debate about decreasing turnout rates. Education is a central socioeconomic variable and a proxy for social position. I use pooled National Election Studies[1] and the Comparative Study of Electoral Systems in order to disentangle the relative contribution of life-cycle, period, generational and educational effects on the evolution of turnout over time. Furthermore, this article addresses methodological issues encountered when using pooled cross-sectional data: some longitudinal data are not comparable and the reliability of Election Studies is a major problem due to the fact that over-reporting rates have grown steadily over time.

The results for three European countries (Sweden, Germany and Norway) show that there are country-specific patterns in the evolution of turnout rates over time. However, the study identifies two groups that are voting at particularly low rates: the young and the poorly educated. I suggest that they should be the main target of efforts to increase turnout. Additionally, the causes of low turnout and the effectiveness of possible remedies are likely to vary across these groups and this fact has to be consistently brought into the debate.

Is There Really Turnout Decline? Where Does It Come From?

It has been long debated whether or not voter turnout rates are in decline in advanced industrial countries in the last decades, and if so, why this is the case. The first evidence about a downward trend was detected in the United States in the 1970s and aroused perplexity among political scientists (Brody 1980). In a more affluent society in which barriers to voting have been removed, one would expect turnout rates to rise, not to decrease. There are critical positions towards the mainstream claim. McDonald and Popkin

(2002) raise questions about the validity of the measure of turnout that is commonly used because it does not acknowledge the fact that the size of the disenfranchised American population – because of felony or non-citizen status – has increased. However, even studies that have taken this problem into account found a substantial downward trend in recent decades (Teixeira 1992; Wattenberg 2002), and the current state of the art in the United States seems to be that 'there is a consensus among political scientists that contemporary voter turnout rates are lower than they were in the 1960s' (Macedo 2004, 22). In most other advanced industrial countries it was long considered that the evolution of voter turnout can be better described as 'trend-less fluctuation' (Andeweg 1996, 150–151; Topf 1995). However, several authors have gathered persuasive evidence about a general trend towards a reduction in turnout rates, even if some countries might constitute an exception (Blais 2000; Franklin 2004; Gray & Caul 2000; Lane & Ersson 1999, 141–142; Mair 2002, 128–130; Wattenberg 2002). At the same time, many single country studies of advanced industrial democracies concur with this diagnosis.[2]

One of the turning points in this debate has been the finding that the generations born after the 1950s are voting at lower rates than would be expected if only life-cycle effects were taken into account (Blais et al. 2004; Franklin et al. 2004). This result is coupled with a renewed emphasis on the idea that voting is, to a great extent, a habit: a citizen either learns or fails to learn in the first three or four elections in which he or she takes part (Plutzer 2004). Once this period has passed, most persons stay relatively fixed in their ways as voters and non-voters for the rest of their lives. As a consequence, each election leaves a long-term footprint in the electorate through its effect on the future electoral participation of the cohorts that recently entered the electorate at that time (Franklin 2004). The combination of both arguments leaves little space for further discussion of whether there is a generalized decline or not in most countries. If the young age cohorts are the leading force of the trend, the observed aggregate decline is only part of an expected larger drop. As the relative size of the less participatory new generation increases and the older age cohorts die, we expect that the total turnout rate will continue to decline in the future. As well as the generational effect, several authors have shown that there is still another group increasingly refraining from voting: the less educated (Miller & Shanks 1996; Lyons & Alexander 2000; Blais et al. 2004). The evidence is, however, limited to single country studies (the United States and Canada), and we do not know whether this finding applies to other democracies as well.

Knowing which social groups are most affected by turnout decline is important for several reasons. On a descriptive level, analyzing the socioeconomic and demographic correlates of voting allows us to track the evolution of participatory inequality. The gaps in the voting rates of different social groups are larger in some countries and they can widen, remain the same, or

close over time. If the socially disadvantaged and the young disproportionately refrain from voting, this logically implies that the biases in participation because of age or socioeconomic status are widening. Even if not everyone agrees with this statement, unequal turnout is *per se* an issue of concern for many political scientists (Jacobs & Skocpol 2005; Lijphart 1997; Verba et al. 1995).

Second, analyzing the correlates of turnout decline is also important for explanatory reasons. Identifying where the decline comes from is useful as a means of testing contending theories. The reasons why a particular group refrains from voting might well be different from the ones causing abstention in another group. For example, some people abstain because they do not understand the political process (e.g. the uninterested and poorly educated), while others (e.g. young postmaterialists) prefer to participate in more demanding activities. Changes in the turnout rates of such groups are likely to have different causes. Furthermore, it is useful to establish whether there are common or differing trends and correlates of turnout in different countries. If we find the same evolution in a wide range of countries, common features may explain it, but country-specific explanations are more promising if the patterns differ.

Finally, knowing the sociodemographic correlates of voter turnout is necessary for prescriptive reasons if we are interested in discussing how to increase electoral participation. Reforms that have a positive effect on certain types of individuals might decrease the participation of others (Anduiza 2002). For example, measures promoting more direct democracy and responsiveness may be useful in promoting the engagement of critical, knowledgeable and probably young citizens. However, they are a heavy cognitive burden and will result in growing abstention of politically unsophisticated citizens.

Theories of Turnout Decline and Their Predictions

There are several contending explanations of why turnout has declined in most advanced industrial democracies. Each of them contains specific predictions about how the electoral participation of different social groups has evolved over time. Cultural and electoral competition theories expect turnout to decline among young citizens, whereas mobilization theory expects it to decline among the poorly educated. Cultural explanations emphasize the role of changing attitudes as a result of societal and economic modernization. Rising living and educational standards produce citizens who give more value to personal choices than to traditional compliant values (Inglehart 1977, 1997). Instead of being loyal to a political party and giving unconditional support to those who govern, they are more independent and sceptical. In general, they are less prone to trust political institutions and

traditional actors and are more critical (Dalton 2004; Dalton & Wattenberg 2000; Norris 1999; Pharr & Putnam 2000). They are not that strongly attached to the norm that voting is a civic duty (Blais 2000) and rather regard it as just another right in the context of changing conceptions of good citizenship (Dalton 2007).

On the other hand, the changing media environment, characterized by an exponentially increasing range of available options, erodes the common base of knowledge of current affairs traditionally provided by the evening news broadcast and widespread newspaper readership (Wattenberg 2006). Perhaps because they can easily skip political information, young generations generally have particularly low levels of political knowledge (Howe 2006; Milner 2002). By and large, according to the cultural approach, attitudinal factors and changing levels of political information account for a citizenry that is less inclined to vote (Dalton & Wattenberg 2000; Rubenson et al. 2004). New generations are the driving forces of attitudinal change: all of the evolutions described are especially widespread among them. If changing attitudes are the causes of turnout decline and new generations have higher levels of such new attitudes, the prediction from this model is that turnout decline is more concentrated among these new generations.

From another point of view, the specific characteristics of citizens matter very little, if at all. Rather, it is argued, the political character of elections and the institutional features that determine them have a direct effect on voter turnout (Jackman 1987; Jackman & Miller 1995). Armed with such information, turnout rates can be explained pretty well and therefore there is almost no need for individual-level variables. The story then is quite different. The lowering of the voting age from 21 to 18 in most countries is a crucial turning point (Franklin et al. 2004). Learning to vote is costly and the circumstances in which the first opportunities to learn take place are important. If the environment is the appropriate one, the young citizen will make the transit smoothly from being a non-voter to a habitual voter. Just after leaving school or when attending university young adults are more likely to be in situations that are not conducive to learning to vote: they have a short period of residence in a community and weak social connections with adults who can help bearing the costs of learning to vote. It has been also alleged that during recent decades elections have become less competitive in established democracies.[3] On the one hand, they are less likely to bring policy change (Franklin 2004). Over time, politicians have learned to encapsulate themselves from popular control through multiple strategies, in order to achieve job security.[4] This provides fewer incentives for citizens to get involved in party politics. On the other hand, in most established democracies the party systems have undergone a process of fractionalization breaking into smaller parties, which has produced an increase in the number of parties (Mair 2002, 133–135; Wattenberg 2000). Thus, it is less likely that parties obtain a clear majority

status, making a specific vote is less meaningful. From this point of view, those who entered the electorate after the lowering of the voting rates are expected to vote at lower rates, and thus there is also a generational effect. Less competitive elections in recent years are also a reason why new generations are voting less than previous ones.

Mobilization theories offer a third interpretation whereby one of the reasons for turnout decline is that group mobilization of the working class has become weaker over recent decades. Political mobilization by parties and other groups cuts down the costs of participation, particularly information and decision costs. Groups provide free and easily understandable information that is useful for making political decisions. Low-educated citizens face higher information and decision costs when it comes to go to the polls, but if these costs are subsidized by organizations, the resulting gap in the turnout rates of different educational groups vanishes: '[W]hen political leaders off-set the costs of political involvement – when they provide information, sub-sidize participation, occasion the provision of social rewards – they make it possible for people who have few resources of their own to participate' (Rosenstone & Hansen 1993, 242). Mobilization also works in the benefit side of participation, both instrumental and non-instrumental. In the non-instrumental side, organizations and group-based mobilization fosters a sense of solidarity and group identity that brings people to the polls in order to state expressively their commitment to the group (Morton 1991; Uhlaner 1989). Again this is particularly useful for people with few resources. In the instrumental side, certain groups are able to shift policy positions and increase the benefits derived from the fact that the preferred candidate wins rather than the other. For example, trade unions can influence the policy positions of left parties in order to defend the interests of their members, and this constitutes a rational basis for the alliance (Radcliff & Davis 2000).

Thus the effort of organizations who have poorly educated citizens as their main constituency is crucial to bring them to the polls. Several factors have weakened the role of such organizations in European countries in the last decades. Left-wing parties are no longer as able to bring their classical constituencies to the polls and the share of the unionized labour force is smaller in most countries (Bartolini 2000, Ebbinghaus & Visser 2000). Both evolutions depress turnout rates (Gray & Caul 2000; Radcliff & Davis 2000). The evolution of left-wing parties into less discernable alternatives depresses the degree to which the parties are perceived as meaningful and clearly distinct options, which is also a disincentive to vote. This theory clearly predicts that lower-status individuals, who are the classical political constituencies of parties of the left and trade unions, are the ones that increasingly fail to go to the polls. In sum, the declining role of traditional mobilization agencies may have led some poorly educated citizen to withdraw from electoral activity, which ultimately results in declining turnout rates.

The Data: Some Problems of Longitudinal Research

The European Voter Project has gathered data from six countries that have held National Election Studies regularly for a long time period in Europe: Great Britain, Norway, Denmark, Sweden, Germany and the Netherlands. In theory, temporal series of Election Studies constitute a privileged data source for the study of the longitudinal evolution of voting behaviour. However, there are some important problems with the data, due to which, the analysis presented here will be based on only three out of six available countries in the European Voter Project.

Voter over-reporting is a serious problem in electoral studies based on survey data. It is a well-known fact that voters are more likely to be contacted than are abstainers, and that some persons who actually did not vote report having done so because of recall error or social desirability (Burden 2000). In the period observed, actual turnout rates have fallen – if only slightly – in all the countries studied.[5] The main problem with the available survey data is that *over-reporting has grown in some countries at the same rate as turnout has declined*. Table 1 summarizes the mean values of the real turnout rates, the reported turnout rates and the over-reporting rates for two periods: the first includes elections until 1985, and the second period covers elections held between 1986 and 2005.

Consider, for example, the Netherlands. Electoral participation has dropped by 5 percentage points in the period observed, but according to survey estimates it has not decreased, but rather risen by 2 percent. Over-reporting has increased from a mean value of 6 percent during the period before 1985 to much higher values afterwards. It is apparent that it is impossible to study a longitudinal evolution that according to the data has not taken place at all. Similar problems affect other countries too. In Denmark, the official decline is 3 percentage points, but the over-reporting has grown by exactly the same amount, and thus, according to survey data, turnout is completely stable in this country. As a consequence, in these two countries, it does not make sense to study turnout decline on the basis of survey data.

It does not make sense to analyze the correlates of turnout decline on the basis of data that do not acknowledge the trend at all.[6] In Germany and Sweden over-reporting rates have doubled between the two periods observed. In the former, a 9 percentage point real drop is only reflected by a mere 2 percentage point change in surveys. Admittedly, this is a severe problem, but the data allow studying turnout decline. In Sweden, a 5 percentage point drop becomes 3 percentage points in the surveys. In Great Britain and Norway, over-reporting also exists, but it has more or less remained stable over time. In Norway, the data are validated against the official register of voters. However, even in this case there is over-report, which is probably due to the fact that contacting voters is easier than contacting non-voters.

Table 1. Actual and Reported Turnout in Six European Countries

	Great Britain		Denmark		Germany		Netherlands		Norway		Sweden	
	Pre 85	Post 85	Pre 85	Post 85	Pre 85	Post 85	Pre 85	Post 85	Pre 85	Post 85	Pre 85	Post 85
Mean official turnout	75	69	88	85	89	80	84	79	83	79	89	84
Mean reported vote	85	81	93	93	94	92	90	93	90	86	93	90
Gap	10	12	5	8	5	11	6	14	7	7	3	6

Source: IDEA 2004 and http://www.idea.int, European Voter Database and the second round of the Comparative Study of Electoral Systems.

A further problem with longitudinal data relates to the consistency of the coding categories. It is rare to have available comparable series over time. In theory this should not be a problem for the present research because the focus is on very core individual-level variables: age and education. Yet even so, there are important problems. The available data for education in Great Britain are not reliable: the relative size of each education group varies widely from one election to the other, which indicates lack of consistency in the coding (see Appendix Table 2 for more details). Thus Great Britain is only included in the first analysis, which does not require information about educational levels. Studying the longitudinal evolution of aspects related to voting with survey data is problematic, although as long as we know which kind of problems the data have, bad data are generally better than no data at all. The study mainly concentrates on three countries: Norway, Sweden and Germany. These are the only European countries for which there are long time series that acknowledge some downward trend in the turnout rates.

## Disentangling Life-cycle, Period and Generation Effects

It is necessary to distinguish between age, cohort and period effects in order to investigate which are the demographic correlates of turnout. However, it is impossible to disentangle fully the size of the three effects. At most, we can obtain tentative estimates, but no definitive evidence (Glenn 1976, 1977). *Age or life-cycle effects* refer to the well-known cross-sectional finding that young people initially vote at low rates, but they increasingly acquire the habit of voting as they grow older. At the end of the life cycle, because of physical and other problems associated with aging, turnout rates drop. *Period effects* correspond to the evolution of turnout rates over a given time span – for example, if the competitiveness of elections increases the effect will be a boost in turnout rates during that period. A *cohort or generational effect*[7] is found if the citizens born in a time period vote at different rates to other citizens when they were the same age. The problem is that the three variables are linearly dependent – for example, age is a function of year of birth (cohort) and time (period). With any two pieces of information, the third one can be predicted with certainty. This leads to an identification problem: multicollinearity. In order to address it, the only solution is to code some of the variables of interest in an imperfect way – that is, to exclude some pieces of information. Using this strategy implies that the effects of the variable for which we omit information are attributed to any of the two other variables. There is no real solution to this situation, but we have to be aware of it.

Results

One exploratory way to examine whether turnout decline is due to young citizens voting in recent elections at lower levels than would be expected solely due to life-cycle effects is through the graphical display of the voting trajectories of different age cohorts over time. The graphs in Figure 1 present this evolution for the four countries studied. In order to achieve a smoother and clearer trend, they display prior moving averages.[8]

The pictures that emerge from this analysis are quite different in each country. Norway is the paradigmatic case of generational-driven change. Almost each new cohort has begun voting at a lower level than previous age cohorts when they were the same age. After the initial election, we observe a slight increase in electoral participation of most cohorts. This figure is perfectly consistent with the generational theory of turnout decline (Lyons

Figure 1. Moving Averages of Voter Turnout by Age Cohorts.
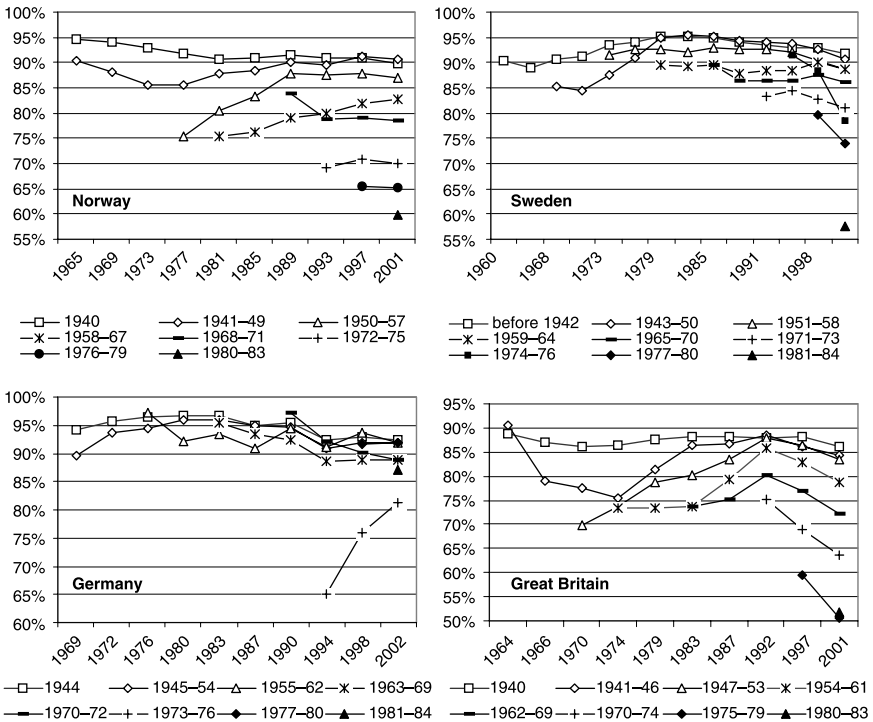
Source: National Election Studies compiled in the European Voter Dataset and the second wave of the Comparative Study of Electoral Systems for Norway, Germany and Sweden. The data corresponding to the 2005 election in Great Britain are also available, but the over-reporting rate (19 percent) is much larger than in any other British election.

& Alexander 2000; Franklin et al. 2004). On the contrary, there does not seem to be such a generational basis in Germany. Only the age cohort born between 1973 and 1976 started voting at a very low level. Their rates rapidly increased in subsequent elections, but they have not reached the levels of the other groups. At the same time, there is a small decline in participation, observable throughout all age groups. Remarkably, there is no rise in turn-out after the first elections. Sweden is also close to the generational model, but the evolution is less straightforward. Most cohorts that entered the electorate after 1990 are voting at lower rates than the previous ones at the same age, while there also seems to be a general decline in participation in the last elections observed for all cohorts. A similar conclusion is true for Great Britain: slight generational or cohort effects go hand-in-hand with a more marked period effect in the last two elections affecting all age groups.

The next step is to describe the evolution of the electoral participation of different educational groups over time. Because of the important impact of age on voting, and the fact that the mean educational level of the young generations has risen, it is advisable to disaggregate the data in age groups. Otherwise the results will be misleading. The group of young adults aged 18–34 has been chosen because the initial voting rates are of particular interest: they have a long-term effect on the behaviour of the cohorts. The research question concerns whether the decline in turnout among young adults is homogeneous across all educational groups or whether it is particularly concentrated among certain groups. Table 2 presents the mean reported turnout of young adults during four decades.[9]

The turnout rates of the citizens with higher education are relatively stable over time. The differences between the voting rates in the 1960s and 1970s and those in the 1990s range from a 6 percentage point drop in Germany to a 4 percentage point increase in Sweden. The largest drops in this age group are concentrated among citizens with medium to low levels of education. According to the Norwegian Election Studies, the turnout rate of the low-educated has declined by 18 percentage points between the 1960s and the 1990s, and by 19 percentage points among the middle-educated, compared to a 5 percentage point drop of the better educated. In Sweden and Germany, there was a peak in electoral participation during the 1970s. Since then until the 1990s it has declined between 6 and 14 percentage points in the different educational groups. The drop is particularly concentrated among citizens with primary education.

A more systematic multivariate examination of the trends is necessary in order to disentangle the relative contribution of different variables to the changes in turnout levels. Multivariate analysis is also required to include all cases in the analysis and not to lose information. The approach used here is based on the method proposed by Blais and his colleagues (Blais et al. 2004, 230). The first aim is to discern as clearly as possible which effects are

Table 2. Mean Turnout of Young Adults (18–34 Years Old) by Decade

	1960s	1970s	1980s	1990s	1960–1990	1970–1990
Germany						
Primary	93.8	97.7	90.1	79.1	−14.6	−18.6
N	160	433	493	278		
Secondary	87.5	98.6	92.6	85.7	−1.8	−12.9
N	16	138	272	600		
Upper education	100.0	100.0	94.8	93.9	−6.1	−6.1
N	14	96	192	477		
Norway						
Primary	86.1	75.7	77.3	67.8	−18.3	−7.9
N	137	107	344	149		
Secondary	91.8	80.6	82.3	72.7	−19.0	−7.8
N	522	504	1,414	917		
Upper education	89.4	87.7	90.8	85.2	−4.2	−2.4
N	142	162	390	386		
Sweden						
Primary	81.8	90.8	84.9	79.2	−2.6	−11.6
N	724	946	681	332		
Secondary	86.7	92.2	89.8	86.8	0.1	−5.5
N	624	1,432	1,023	1,480		
Upper education	90.1	95.7	94.2	94.6	4.4	−1.1
N	182	760	966	643		

Source: National Election Studies compiled in the European Voter Dataset.

attributable to period, generation and life-cycle effects. As explained, this can only be done at the expense of some information loss because the data of the three dimensions is perfectly collinear. Deciding which information is left out is somewhat arbitrary and can influence the results and the conclusions: a modification in the codification of the variables produces slightly different results. The second aim is to observe the education effect and to test the hypothesis that turnout decline is more concentrated among low-educated people. Thus, the core model contains four dimensions: life-cycle, generation, period effects and education effects. Additionally, interactions between these variables allow us to test additional hypotheses concerning which specific groups have the largest changes in turnout rates.

Period effects are modelled by a trend variable that is coded 0 for the first election analyzed and one additional value for each following election. In Sweden, turnout rates go up at the beginning of the period, reaching a high point during the 1970s, and decline thereafter (see Appendix Table 1). This pattern is modelled by the inclusion of a quadratic variable time squared. The hypotheses tested are:

H1: Turnout rates have declined over time.

H1.2: In Sweden, turnout rates grew during the first period and declined afterwards.

Life-cycle effects on turnout are observed through the age of the respondent. An additional variable age squared is introduced in order to account for the habitual curvilinear pattern in electoral participation. The hypothesis tested is:

H2: Young citizens begin voting at low rates, which grow and reach a high point during adulthood. This increase is less steep or negative in old age.

Generation effects are specified by the introduction of dummy variables. According to some authors there is a generational basis of turnout decline – namely, that while older age cohorts continue to vote at relatively higher rates, the generations that entered the electorate in recent elections have been voting at lower-than-expected rates. This difference, coupled with the process of population replacement, has been the driving force of the observed turnout decline (Lyons & Alexander 2000; Franklin et al. 2004). Those born before 1945 are the reference category, and I have introduced three dummies for those belonging to the baby boom generation (born 1945 to 1959), for those born in the 1960s and for those born in the 1970s. The hypothesis tested is:

H3: Those belonging to the baby boom generation and those born in the 1960s and the 1970s vote at lower rates than the pre-war generation, controlling for life-cycle and period effects.

There is little available information about the *educational level* of the respondents in the national election studies – only their primary, secondary and higher education. It is coded 0 for those with primary education, 0.5 if the respondent has secondary education and 1 if he or she has higher education. In this way the coefficients can be interpreted as the change in the log odds of voting for citizens with higher education compared to those with only primary education. The hypothesis tested is:

H4: Citizens with higher educational achievement vote more often.

I also want to examine if turnout decline is more concentrated in some educational groups as recent research has shown in the cases of Canada and the United States. According to this hypothesis, well-educated citizens vote at stable rates, independently of their age, but the less educated saw their participation rates drop in recent decades. This is specified through the introduction of an interaction term 'time * education'. I expect the coefficient to be positive and significant, meaning that the difference of having higher education compared to having only primary education is small at the beginning of the period ($\beta *$ education) and becomes larger in subsequent elections (β education + β time * education):

H5: The effect of education on voting has become larger over time.

These variables are introduced in a logistic regression model with clustered standard errors. In pooled cross-sections the observations are not independent

Table 3. Vote and Period, Life-cycle, Generational and Educational Effects

		Germany	Norway	Sweden
H1	Time	−0.079 (0.043)	−0.090** (0.090)	0.277** (0.052)
H1.2	Time^2			−0.025** (0.015)
H2	Age	0.064** (0.017)	0.105** (0.014)	0.097** (0.018)
H2	Age^2	−0.001** (0.000)	−0.001** (0.000)	−0.001** (0.000)
H3	Generation baby-boom	−0.553** (0.093)	−0.211 (0.111)	−0.235 (0.138)
H3	Generation 1960s	−0.947** (0.185)	−0.188 (0.160)	−0.496* (0.175)
H3	Generation 1970s	−0.980** (0.250)	−0.299* (0.132)	−0.281 (0.282)
H4	Education	0.220 (0.284)	0.972** (0.183)	0.725** (0.123)
H5	Time ∗ education	0.173** (0.047)	−0.012 (0.022)	0.037* (0.015)
	East Germany	−0.669** (0.171)		
	Constant	1.939** (0.523)	−0.441 (0.399)	−0.375 (0.537)
	N	14,207	18,199	31,692
	Pseudo-R^2	0.054	0.055	0.039
	Log likelihood	−3,361.003	−6,430.878	−8,363.469

Notes: * p < 0.05; ** p > 0.005.
Sources: National Election Studies compiled in the European Voter Dataset and second round of the Comparative Study of Electoral Systems. Entries are unstandardized logistic regression coefficients with clustered standard errors in brackets.

from each other, but are gathered in different moments of time. Clustered standard errors account for the nested structure of the data. In Germany, an additional dummy variable is added that accounts for lower expected turnout levels in the East after reunification. Table 3 reports the results.

Period effects are clearly different in the three countries studied. As hypothesized, in Norway there is a negative linear trend (i.e. turnout drops over time), while in Sweden the trend is curvilinear (i.e. it grows at the beginning of the period and decreases afterwards). It comes as a surprise that the coefficient for time is not significant in Germany. The observed turnout decline is entirely attributable to the variables introduced in the model and there is no specific period effect. The decline is due to changes in the composition of the electorate (the incorporation of East Germany and the growing proportion of new generations in the population), as well as to the increasing gaps between those with low and those with high levels of education over time. Life-cycle effects have, as hypothesized, a curvilinear shape in all countries. We find generation effects in the expected direction, but in some cases the coefficients are not significant. In Norway, being a member of 1960s or the 1970s generation predicts lower turnout than for those born before 1945. Surprisingly, only the generation born in the 1960 votes at significantly lower rates than the previous ones in Sweden, once we control the other variables in the model.

Table 4. Predicted Probabilities of Voting for Different Types of Individuals

	Germany (West)		Norway		Sweden		
	1969	2002	1965	2001	1964	1976	2002
Primary education							
20 years	0.92	0.78	0.75	0.55	0.73	0.84	0.79
50 years	0.97	0.77	0.93	0.77	0.90	0.95	0.90
80 years	0.94	0.74	0.90	0.74	0.84	0.91	0.89
Upper education							
20 years	0.93	0.95	0.88	0.74	0.85	0.93	0.92
50 years	0.97	0.98	0.97	0.92	0.95	0.98	0.97
80 years	0.95	0.98	0.96	0.90	0.86	0.96	0.96

Sources: National Election Studies compiled in the European Voter Dataset and second round of the Comparative Study of Electoral Systems.

Finally, with regards to education, we find the expected positive effect in Sweden and Norway. In the latter, the interaction between education and time is not significant, meaning that the influence of this variable on the vote has remained stable over time. On the contrary, in Sweden there is a positive interaction between education and the vote, and consequently the difference in the probability of voting between citizens with primary and upper education has grown in the last decades. In Germany the interaction term is positive and significant, while the coefficient for education is not. This means that at the beginning of the period there were no differences in the voting rates of both groups, but that gaps have emerged in subsequent elections.

The substantive meaning of logits cannot be interpreted in an intuitive way, but rather we need to create specific combinations of individual characteristics and compute expected values for them. Table 4 reports the predicted probability of voting for different kinds of individuals according to our model. There are two main ways to look at the results. First, by looking at the horizontal lines we can compare the expected probability of voting for two persons belonging to two different generations who share the same demographic profiles. Second, the diagonal shows the probability of voting for the same kind of citizens when they were 20 or 50 in the early election studies and then some thirty years later. For example, a 20 year-old poorly educated German had a probability to vote of 0.92 in 1969; in 2002 this person was around 50 years old and had a probability of voting of 0.77.

Interestingly, the voting patterns predicted by the multivariate analysis vary across countries. The question 'where does turnout decline come from?' has different answers depending on which country we focus upon. According

to this data, the decline in West Germany is concentrated among the poorly educated, independently of their age. On the contrary, the voting rates of the highly educated, even the young, continue to be very high or have even risen during the observed period. The generation effects seemed strong in the multivariate analysis, but once we look at their substantive impact, this appears to be small. In Germany then, the main source of turnout decline is socioeconomic rather than generational. Even if less obvious, a similar conclusion is true in Sweden. The voting rates of highly educated Swedes of all ages increased from the 1960s to the 1970s, and have remained very stable since then. When we focus on the poorly educated, a parallel rise happened during the first period. Later, the predicted voting rates sink slightly but clearly, especially in the two youngest age groups. Finally, the predicted probabilities of voting in Norway show a downward trend across all demographic groups. However, the predicted drops are especially substantial among the young and the poorly educated.

Conclusion and Discussion

Turnout rates are lower at the beginning of the twenty-first century in most advanced industrial democracies than they were in the 1970s. Certain socioeconomic and sociodemographic groups are the leading forces of the aggregate trend. Knowing the correlates of turnout decline is necessary in order to disentangle its causes and to debate possible remedies to this tendency. The analysis presented here shows that there are slight differences across countries when it comes to addressing the question of 'where does turnout decline come from?' In Norway and Sweden, all groups have witnessed moderate declines in the last two decades, but the drops are particularly concentrated among young, poorly educated citizens. Thus, efforts to bring more citizens to the polls should target them as a priority. On the contrary, poorly educated Germans of all ages are increasingly withdrawing from electoral participation, while age is less salient: young, but highly-educated, citizens continue to vote at very high rates.

Cultural and electoral competition theories predict that the decline is particularly concentrated among new generations, while mobilization theory stresses the declining capacity of left-wing parties and trade unions to bring lower-class citizens to the polls. According to the data, both approaches are partly right, suggesting that the explanations of the trend might be manifold. However, mobilization theory seems to predict better the German evolution than do generational-based theories. On the other hand, the fact that turnout has declined in Scandinavian countries in parallel to growing electoral competition is puzzling and deserves further attention. A more detailed analysis should observe the impact of individual and contextual features on

the turnout rates of different social groups in a dynamic perspective. In order to address appropriately the causal link between turnout decline and its correlates, it is necessary to disentangle several questions. The first one consists of a closer look at the link between political attitudes and voting for different social groups, and the longitudinal evolution of attitudes and behaviour. Second, it is necessary to relate electoral competition to the differential turnout rates of different kinds of people building on Mark Franklin's work. Third, declining membership in trade unions and left-wing political parties has to be related more consistently to changes in the participation rates of poorly educated citizens. This task is beyond the scope of this article, but it is necessary in order to throw light on the causes of the longitudinal evolution. At this point, the explanatory link is basically speculative.

Surely a close examination of the reasons, consequences and remedies of turnout decline has to focus on new generations, as argued most forcefully by Mark Franklin and his colleagues (Franklin 2004; Franklin et al. 2004). However, it cannot *only* focus on them because doing so misses part of the story. Older poorly educated citizens who used to vote in the past and are refraining to vote in recent years are a relevant population group that is excluded from the large picture by the focus on the young. It is interesting to note that the academic and the public debates in the United States and Europe often point to the younger generations as the main culprits of growing civic disengagement. Such an interpretation masks the socioeconomic basis of the same trend.

The consequences of the electoral disengagement of both population groups are substantially different. One can claim with Dalton (2007) that it is not fair to blame young citizens just for being distinct from their parents and grandparents. Young citizens, the argument goes, find voting a poor means of expressing their opinions, while they engage in a myriad of different actions, from doing voluntary work to political consumerism or protest activities, that allow them to convey intense and nuanced opinions and are a way to transform *and* expand democracy. Thus, if new generations are able to find the means to make their voices heard and they prefer to do so, this is not necessarily a problem from a democratic point of view, but a challenge to be met by deepening democracy. If one wants to attract these critical young citizens to the electoral process, the way to go is probably to provide more meaningful choices and increase accountability.

The story is quite different if we focus on the electoral disengagement of citizens with low levels of education. Voting is the easiest political activity and the one that has more capacity to engage citizens with few resources. Other activities have a larger cost burden and we do not typically expect high participation rates among lower status individuals. They have more

difficulties in making sense of the political world and they might be more dependent on the guides and cues provided by parties and groups. The European left was particularly successful at mobilizing lower status citizens politically. A weakening of these ties is likely to result in their withdrawal from the political realm rather than in more action in new repertoires. Inequality in political participation is therefore an issue of particular concern with regards to this demographic profile. That being said, the findings of this article need to be put into context. Compared to the dramatic gaps in the turnout rates of different social groups found in the United States, a difference of 15 to 20 points can hardly be painted as a serious threat to political equality. I would argue that the finding of this article with the most cause for concern is the tendency towards a widening of the gaps in the participation rates of different social groups. If they continue to expand, they are likely to result in a problem for equality in the future.

Finally, the existence of different population groups that are increasingly failing to go to the polls has implications for the debate about possible ways to reverse the downward trend. Public commentators and scholars tend to agree that high turnout is a desirable aim. Many possible measures, such as more proportionality, easier registration procedures (in the United States), absentee voting, measures to increase accountability or electoral finance reform, have been proposed as means of solving the alleged democratic malaise. However, not all possible measures can be expected to have the same effects on different population groups. Research on the interaction between individual and contextual incentives finds that certain measures can even have contradictory effects depending on the kinds of citizens we focus upon (Anduiza 2002).

I have proposed that both young citizens and poorly educated citizens should be the target of actions to increase turnout rates. It is relevant to notice that certain reforms can benefit one of the groups, but depress even further the turnout rates of the other. For example, more direct democracy or a broadening of the pool of electoral choices may make voting more attractive for some of the young, sophisticated and critical citizens. At the same time, such measures make the act of voting more costly in cognitive terms and will result in even more disengagement of citizens with few resources. There are fundamental trade-offs in every act of institutional design and of course compromises have to be made, but the debate so far has focused on new generations; therefore, solutions that aim to engage this population group are also more likely to be considered, and eventually implemented. Lower status citizens might be failing to vote for entirely different reasons and respond to policies in a particular way. Thus they have to be addressed explicitly in the discussion about turnout decline.

Appendix

Appendix Table 1. Reported and Official Turnout Rates

Great Britain			Denmark			Germany			Netherlands			Norway			Sweden		
Year	SRV	IDEA	Year	SRV	IDEA	Year	SRV	IDEA	Year	SRV	IDEA	Year	SRV	IDEA	Year	SRV	IDEA
															1960	90	86
			1971	94	87										1964	88	84
			1973	97	89	1961	82	88							1968	93	89
1964	89	76	1975	93	88	1965	94	87							1970	91	88
1966	83	72	1977	94	88	1969	95	87	1971	85	79	1965	94	85	1973	94	91
1970	81	79	1979	93	90	1972	97	91	1972	90	84	1969	92	84	1976	95	92
1974	87	73	1981	91	88	1976	98	91	1977	91	88	1973	90	80	1979	95	91
1979	86	76	1984	93	88	1980	94	89	1981	94	87	1977	87	83	1982	93	91
1983	83	73	1987	92	87	1983	96	89	1982	89	81	1981	87	82	1985	94	90
1987	86	75	1988	91	84	1987	92	84	1986	93	86	1985	88	84	1988	90	86
1992	87	78	1990	91	83	1990	96	78	1989	93	80	1989	89	83	1991	91	87
1997	78	71	1994	92	84	1994	85	79	1994	92	79	1993	83	76	1994	92	88
2001	72	60	1998	96	86	1998	93	82	1998	91	73	1997	86	78	1998	88	81
2005	80*	61	2001	96*	87	2002	92*	79	2002	97*	79	2001	83*	75	2002	88*	80

Note: SRV = Self-reported vote in surveys.
Sources: National Election Studies contained in the European Voter Dataset and the Comparative Study of Electoral Systems (marked with an asterisk).

Appendix Table 2. Distribution of the Educational Categories in Britain

	Low	Middle	High
1964	67	14	19
1970	69	13	18
1974	77	13	11
1979	70	3	27
1983	75	14	10
1987	62	30	8
1992	77	14	9
1997	75	13	11
2001	44	39	17
Total	70	17	13

Note: All the information about education in the United Kingdom is missing in the 1966 dataset. In the 2001 Election Study, it is missing in 1.072 out of 2,996 cases.
Source: Pooled National Election Studies.

NOTES

1. The pooled dataset was created by the European Voter Project and is kindly made available on request. The data of the Comparative Study of Electoral Systems can be downloaded from http://www.cses.org/.
2. See, e.g. for Great Britain: Clarke et al. 2004, Phelps 2004; for Norway: Midtbo & Stromsnes 1996; for Italy: Corbetta & Tuorto 2004; for Germany: Becker 2002; Rattinger 1992; for Finland: Wass 2007.
3. This argument has been developed in the comparative literature, but it does not seem to fit well with the Scandinavian experience.
4. E.g. party leaders are today more independent from the opinion of grassroots members and they have achieved more direct funding from the state in order to meet their growing needs (Katz & Mair 1995).
5. The size of the gap depends on the time points we take as a reference for calculating it. The peaks and lows vary across countries, so that any decision about where to put cutting points in order to divide the periods is subjective. However, in general, the trend is quite clear (see Appendix Table 1 for more detailed data).
6. An alternative approach is to weight the available data so that turnout levels match official statistics. This is acceptable if we have strong reasons to believe that the growth is equally distributed across all kinds of individuals. However, it is likely that non-voters have become harder to reach over time or that some specific groups have become more likely to be misreported over time. In such cases, the conclusions reached with weighted data could be seriously misleading. In the absence of rigorous studies on this question, it is preferable not to focus on the countries where this problem is most serious.
7. The difference between 'cohort' and 'generation' is that the latter refers to the cases where certain age cohorts shared the experience of important events during their formative years.
8. Moving averages are calculated as the average of the three successive events: they are typically either Central Moving Averages: $(M_{t-1} + M_t + M_{t+1}) / 3$, or Prior Moving Averages: $(M_{t-2} + M_{t-1} + M_t) / 3$.
9. As has been explained, the data for Great Britain are not analyzed because there is no consistency in the coding of the education category over time.

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