

# Vocational and Academic Education and Political Engagement: The Importance of the Educational Institutional Structure

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It is hardly disputed that educational institutions carry responsibility for the education of democratic citizens through the enhancement of civic and political engagement. Despite the wealth of studies on civic and citizenship education, scholars have not yet examined the relevance of national educational institutional factors. This study examines to what extent elements of national educational systems, in particular early tracking and a vocational orientation, are related to political engagement of young adult citizens. Using pooled European Social Survey data collected between 2002 and 2012 from 24 European countries, and examining electoral participation, political interest, and political activism, it is shown that people educated in vocational programs had lower levels of political engagement than people educated in general/academic education. Moreover, these differences were greater in strongly tracked educational systems relative to comprehensive/untracked systems. These results suggest that educational institutions that differentiate students early and rigidly may form a threat to democratic equality.

## Introduction

Comparative research has assessed the importance of national educational institutions with regard to three main outcomes: equality of learning, efficiency of learning, and the connection of schooling systems to the labor market (Müller and Gangl 2003; Hanushek and Wössmann 2005; Brunello and Checchi 2007). A large consensus has emerged on these issues. In particular, a vocational educational system is found to be good for young people's integration into the labor market, and a tracked system is harmful to equality of educational opportunity.<sup>1</sup> However, other important outcomes of schooling have been neglected in research on educational institutional cross-national variation: the way in which educational systems affect the level and distribution of civic outcomes such as political participation. This lack of knowledge is unfortunate, as "civicness" can be regarded as one of the most important educational goals (OECD 1997) and one of the main driving forces of social

<sup>1</sup> Van der Velden and Wolbers (2003); Breen (2005); Brunello and Checchi (2007); Van de Werfhorst and Mijs (2010); Montt (2011); Bol and Van de Werfhorst (2013).

Received June 13, 2015; revised April 13, 2016; accepted April 26, 2016; electronically published December 7, 2016

*Comparative Education Review*, vol. 61, no. 1.

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0010-4086/2017/6101-0002\$10.00

cohesion in Western societies (Andersen et al. 2006). It is important to know whether educational institutions are influential on the extent to which this goal is realized.

This article examines the impact of two types of educational institutions on political outcomes: curricular tracking in different school types and the vocational orientation of the educational system. In particular, this study is interested in how these institutions are related to the distribution of political engagement between graduates of different types of education. Both tracking and vocational specificity, as two dimensions of cross-national institutional variation, can be expected to enlarge dispersions of civic and political engagement, by magnifying differences between people educated in different types of education. It may be difficult for strongly tracked and highly vocationally specific educational systems to provide training to all students in the sorts of skills and knowledge that are usually thought to be relevant for each individual citizen equally, such as democratic and participatory skills. Thus, whereas occupationally oriented educational institutions may enhance the transparency of qualifications for labor market purposes, thereby emphasizing variation across the pool of school leavers looking for jobs, it may be less successful in providing civic education and more particularly commonality in civic education. This element of commonality is relevant because it serves democratic equality through equality in participation (e.g., Verba et al. 1978, 1995).

A structural-institutional perspective on educational systems is hardly available in the political socialization and civic education literatures. Thus far, studies have mostly concentrated on classroom implementation of citizenship education and its effectiveness in the formation of democratic attitudes and participation and on interpersonal skills that prepare children for human interactions as adults (Ten Dam and Volman 2007). International research on citizenship education has compared countries, but hardly from a perspective that compares national educational institutional structures. Rather, cross-national variation has mostly been explained by political factors, such as the proliferation of democracy (e.g., Hahn 1998, 1999; Torney-Purta et al. 2001). Only two comparative studies to date have examined the relationship between national systems of tracking and civic engagement: Janmaat and Mons (2011) used data on 14-year-old students. At that young age it may be difficult to assess the full impact of tracking on political and civic outcomes, as it is the age at which many systems start to differentiate between children. Moreover, the study was unable to examine the relationship between the type of track an individual has been enrolled in (vocational or academic/general) and civic engagement, a relationship that should be examined to see whether larger dispersions in civic outcomes result from larger variations between tracks. Finally, to study the political behavioral correlates of educational systems, it makes more sense to focus on young adults, as they have passive and active democratic rights.

The other comparative study (Hoskins et al. 2014) studied voting intentions of 16–18-year-olds in Germany, England, and Denmark and found that students enrolled in vocational education reported the intention to take part in elections less often than students in the general track. That was the case in all three countries. Even though that study revealed important differences across tracks, the small scale of the study prohibited an analysis of the extent to which educational system characteristics are related to inequalities in civic and political participation.

Do educational systems live up to their task of creating active political engagement among their students equally, or do certain institutional features of educational systems magnify democratic inequalities? This article investigates to what extent, and why, each type of secondary education (vocational or academic/general) is related to political and civic engagement and whether and why this association varies across educational institutional structures (i.e., societies).<sup>2</sup> These research questions are answered using information from young adults from the pooled European Social Surveys of rounds 1–6 (ESS). These survey data are merged with national-level indicators on educational systems. The ESS data set includes detailed information on educational attainment using a harmonized framework (Schneider 2010), allowing the empirical distinction in relevant education groups (including vocational and academic/general tracks in secondary school). The ESS is also rather rich with regard to indicators of civic and political engagement. Specifically, the ESS allows us to examine political participation, political interest, and various forms of activism and involvement.

### Type of Education and Political Engagement

A core task of education is to prepare students for participation in society. The role of education in preparing for citizenship has mainly been studied by educationalists and political scientists studying citizenship education. The premise of this approach is that employment is relevant, but not sufficient, as an indicator of integration in society. In addition to labor market integration, civic engagement can be seen as crucial for young people's societal integration. This could include behaviors and orientations like participation in voluntary organizations, being interested in politics, and electoral participation.<sup>3</sup> The impact of education on civic and political outcomes has been

<sup>2</sup> The terminology used for different forms of secondary education varies strongly between systems, depending on the extent to which forms of education are tracked between schools. This article analyzes qualitative differences within secondary education (although also in comparison with other levels of education) resulting in forms of schooling that can be referred to as either general/academic or vocational. We use the words "school type" to refer to these qualitative differences, although other terminology may be preferred for some of the countries under study.

<sup>3</sup> Verba et al. (1978, 1995); Putnam (2000); Skocpol (2003); Andersen et al. (2006); Newton and Zmerli (2011).

studied frequently. Political scientists stress that education affects political participation and civic engagement through the resources people have available to them (including civic skills) and through networks that stimulate political activity.<sup>4</sup>

However, not only differences between educational levels but also qualitatively different types of education within levels may be expected because of different skills and networks. No comparative study has carefully examined the impact of educational track, or secondary school type, on civic participation. Possibly because of the often inadequate measurement of education in cross-national surveys on citizenship outcomes (such as the World Values Survey, the European Values Survey, data from the International Social Survey Programme), we know next to nothing about the variation between people in different types of education (vocational or academic/general) with regard to political participation. The lack of knowledge is unfortunate because students educated in different school types or tracks receive different kinds of education that are likely to affect their civic engagement. This may imply that active participation in society is related to not only the level of education but also the vocational or general/academic nature of the curriculum. It is therefore relevant to investigate the association between education and civic outcomes more fully, certainly given that the foundation of adult civic participation is laid during youth.<sup>5</sup>

Which variations in civic and political engagement can be expected across educational tracks or school types? First of all, it is likely that people educated in vocational tracks have acquired fewer skills that foster active participation in society through different educational processes. They obtain fewer general skills that are important for civic participation, such as literacy and communicative skills. Also, vocational forms of schooling are designed to prepare students for work through the provision of work-relevant skills, leaving less room for citizenship classes. This reduces attention to civic and citizenship education that is held to be effective to promote civic engagement (Kerr et al. 2010). These processes imply that the resources people have available to them vary across education groups (Brady et al. 1995; Hillygus 2005; Callahan et al. 2010). Second, in addition to resources, the “recruitment networks” in which people are enrolled are likely to vary across educational groups, through which civic engagement is affected (Brady et al. 1995, 271; Bekkers et al. 2008). Because, as Marshall (1950) argued, a “divided” education system (into several tracks) emphasizes social distance by promoting intraclass similarity and interclass difference, people educated in vocational schools belong to different networks with different habits and norms regarding their role as democratic citizens than people educated in general education or with tertiary qualifica-

<sup>4</sup> Brady et al. (1995); Phelan et al. (1995); Bekkers (2005); Gesthuizen (2006).

<sup>5</sup> Stolle and Hooghe (2004); McFarland and Thomas (2006); Dill (2009); Callahan et al. (2010).

tions. Third, track placement affects one's self-image and study involvement and determines expectations of future schooling (Buchmann and Park 2009; Van Houtte and Stevens 2009). To the extent that political interests are shaped by (expected) future social positions, it is plausible that students educated in vocational education feel stigmatized and may refrain from politics more strongly. Fourth, differences across educational tracks can be attributable to selection into those tracks—children in the vocational tracks are different from children in the academic or general tracks, because of selection factors that positively affect civic and political engagement, such as academic ability (Sieben and De Graaf 2004; Persson 2014).

One empirical study that has examined the variation across tracks in civic education is the work by Niemi and Junn (1998). Their descriptive findings showed that in the vocational track 12 percent of ninth to twelfth graders did not take any American government/civics courses, whereas this was only 6 percent for students enrolled in the college-preparatory track. Unfortunately their study did not incorporate school track as an independent variable predicting civic knowledge or any other type of indicator of civic involvement. Ten Dam and Volman (2003) showed that students educated in vocational school types get less teaching in "critical citizenship." Van der Wal and Waslander (2007) reported quantitative evidence for school type differences in democratic knowledge, to the advantage of students enrolled in the preuniversity school type compared to students in vocational education.

On the basis of these arguments, it can therefore be expected that people educated in vocational programs display a lower level of civic engagement than people educated in general educational types at the same level (*hypothesis 1*).

### Cross-National Variation in the Impact of Schooling

In addition to variations in civic and political engagement between education groups within countries, the current study is particularly interested in how national education systems are related to the level of diversification in engagement across education groups. Does the variation between school types differ across countries?

There are two alternative hypotheses about cross-national variation. In strongly tracked, vocationally oriented systems relative to comprehensive schooling systems, there may be stronger differences between school types in terms of political engagement (*hypothesis 2a*). In such systems, separation of school pupils is more rigid, in separate schools or school buildings, and for the full duration of the program of several years, whereas in less rigid tracking systems (such as Scandinavian countries) students are less strictly separated in separate school buildings, are separated on a year-by-year basis, or are even less rigidly separated by subject (Lucas 1999). Stronger institutionalized tracking may affect dispersions in civic engagement through the three mechanisms

mentioned above. First, in strongly tracked systems, the vocational tracks will devote less attention to general skills than do vocational tracks in less differentiated systems. This may lead to larger variations across tracks in the learning of general skills that foster political engagement.

Second, in tracked systems the vocational schools may put less emphasis on citizenship skills (e.g., in social studies or history classes). In such systems there is often a strong involvement of employers in the design of vocational education. In Germany, for instance, employers directly influence learning in vocational types of schooling by means of the apprenticeship system. In the Netherlands, another country with a strong vocational orientation in the educational system, employers form part of the governance structures in vocational schools. Societies differ in how antagonizing class interests have shaped educational systems, with a strong influence of class interests in Germany and other stratified educational systems and weak class influence in the United States (Marshall 1950; Rubinson 1986). Because it may not be in the interest of employers (at least not as much as it is for the state) to prepare students for democratic participation in society at large, vocationally qualified students may receive relatively weak civic education in strongly tracked systems (e.g., Rogers et al. 2008). A plausible difference between countries is that the emphasis on civic education across education groups (Dijkstra and de la Motte 2014) is related to the structure of the vocational training system.

Third, because different school types in tracked systems are often located in different organizations, it is hard for students to form networks across school types, limiting the recruitment channels that may lead to participation and engagement. Separating students may reduce the possibilities for educational institutions to promote interpersonal dialogue between different social groups. Because track placement is usually affected by social class, separate schooling environments could prohibit the mutual understanding and integration of groups from diverse backgrounds (Hyland 2006). Communication, central to citizenship education in the view of Dewey ([1916] 1966), may then be harmed by separation.

An alternative hypothesis, however, would be deduced if we focus on the cross-national differences in stigmatization and selection into the vocational programs. Vocational education attracts different student populations in different countries, with vocational students being more negatively selected (e.g., on academic ability, parents' social class, or motivation) in systems with limited vocational educational institutionalization than in highly vocational-specific systems. In vocationally specific systems, a vocational qualification is more acceptable because it leads to good employment opportunities. For example, scholars have referred to the German vocational system as the "German Skills Machine" (Culpepper and Finegold 1999). In less vocationally oriented systems, such as in Sweden or Britain, the negative impact of vocational education on working lives is so tremendous that Wolf called British



vocational education “a great idea for other people’s children” (2002, 56). To the extent that this differential selection across countries takes place, having been educated in a vocational track may have a stronger negative association with political engagement in less vocationally oriented schooling systems than in strongly oriented ones. If attributes that affect track placement (e.g., theoretical abilities and skills, social class, and motivation) are also affecting active participation in society, such a differential selection may lead to lower civic engagement of lower-track students in generic systems than in vocationally oriented systems. In addition, because of these processes vocational education may lead to a stronger negative stigmatization in comprehensive/untracked systems, which may lead to refraining from active participation in society. In sum, even if our data do not allow us to analyze the impact of unobserved factors that may jointly predict track placement and engagement, this line of reasoning would lead to the hypothesis that vocational track placement has a weaker effect on citizenship outcomes in strongly tracked and vocationally oriented schooling systems (*hypothesis 2b*).

#### Data, Variables, and Research Design

##### *Data*

The ESSs of rounds 1–6 (collected biannually, between 2002 and 2012) have been used for the empirical analyses. The analytical sample is limited to individuals between 18 and 45 years old at the time of survey ( $N = 78,616$ , with slightly lower  $N$ s for the selection on dependent variables). By limiting the age range, the educational institutional variation can reasonably be assumed constant over time versus if the full age range were analyzed.<sup>6</sup>

The ESS data have detailed information about educational attainment, allowing us to distinguish between people educated in vocational education and those educated in general/academic forms of secondary education as their highest attained education (apart from other levels of educational attainment). The ESS data are based on a harmonized education variable for a large subset of the countries (developed by Schneider 2010), which is highly

<sup>6</sup> To provide evidence concerning the stability of educational institutional settings, we looked at the age of selection (taken from Braga et al. 2013) and the relative size of the vocational upper-secondary educational sector (UNESCO database) for cohorts educated in the 1970s, 1980s, and 1990s and for a subset of our countries. While some reforms took place, the rank-order correlations of a country’s position between decades on tracking age were 0.86 (1970s–80s,  $N = 18$  countries), 0.83 (1980s–90s,  $N = 18$ ), and 0.68 (1970s–90s,  $N = 18$ ) and for vocational enrollment 0.78 (1970s–80s,  $N = 20$ ), 0.94 (1980s–90s,  $N = 22$ ), and 0.75 (1970s–90s,  $N = 20$ ). In a more detailed analysis on year-by-year reforms, it appeared that the between-country variance accounted for 76 percent of the variance in tracking age and 75 percent of the variance in vocational enrollment (the remaining 24 and 25 percent being within-country between-year variance). These two types of analysis reveal that there is much stability in each country’s educational system. Given that we use more elaborate measures of the educational institutional structure, and we lose countries in this exercise, we assume that the between-country variation in the measured institutional structures gives a good picture of the educational systems that we analyze.

relevant in a comparative education study. The ESS includes important variables related to social cohesion and participation, all of which are relevant targets of civic and citizenship education. If the cross-national variations in the effects of vocational versus general track are robust, these should be demonstrated using a variety of indicators of civic and political engagement. I study the impact of education on electoral participation, political interest, and an index of various forms of activist involvement. These variables together provide relevant information about possible inequalities in civic involvement by education type. For 24 countries we have the relevant individual-level and contextual-level information.<sup>7</sup>

#### *Measuring Political Engagement*

The current study focuses on three well-known indicators of political engagement: electoral participation, political interest, and participation in various forms of political activism.

*Electoral participation* is measured by a question asking whether respondents voted in the latest national election.

*Political interest* is measured with the following question: How interested would you say you are in politics, are you very interested, quite interested, hardly interested, or not at all interested? Scale values were assigned from 1 to 4 with higher scores indicating a higher level of political interest.

*Political activism* is measured as an index of the number of political activities the respondents took part in in the past year: contacted politician or government official, worked for a political party or activist group, worked in another organization, wore or displayed campaign badge, signed a petition, took part in lawful public demonstration, or boycotted certain products (0–7).

#### *Independent Individual-Level Variables*

*Educational attainment* is operationalized with four categories representing the highest achieved level. It is a challenge to measure education in international comparative research. While UNESCO provides the international classification ISCED, it has been poorly implemented in comparative data sets such as the ESS, such that it was “too undifferentiated at the upper secondary and tertiary levels” (Schneider 2010, 348). The ESS Data Archive has therefore used a special adjustment of ISCED 1997, called ES-ISCED, which minimizes the between-country variation in the loss of predictive power relative to a country-specific coding of education (created by Schneider 2010). ES-ISCED uses two dimensions of educational attainment, the level and the

<sup>7</sup> Belgium (BEL), Bulgaria (BGR), Switzerland (CHE), the Czech Republic (CZE), Germany (DEU), Denmark (DNK), Spain (ESP), Finland (FIN), France (FRA), Great Britain (GBR), Greece (GRC), Hungary (HUN), Ireland (IRL), Iceland (ISL), Israel (ISR), Luxembourg (LUX), the Netherlands (NLD), Norway (NOR), Poland (POL), Portugal (PRT), Russia (RUS), Slovakia (SVK), Slovenia (SVN), Sweden (SWE).



vocational versus general/academic character of the programs—obviously of central importance to the current study. The categories we distinguish are up to lower-secondary education (ES-ISCED I, II), full upper-secondary vocational (ES-ISCED IIIb, IV), full upper-secondary general (ES-ISCED IIIa), and tertiary (ES-ISCED V1, V2).<sup>8</sup> For France, Israel, and Sweden we used national educational classifications for the survey years in which no harmonization in ES-ISCED was created. Other ESS countries dropped out because the national educational code did not distinguish vocational from general/academic forms of education or had missing values on the contextual educational-institutional variables.

*Age* is coded using three categories (18–25, 26–35, and 36–45 years old). *Gender* is coded as men = 1, women = 0. *Parental education* is modeled using four categories: primary, lower secondary, upper secondary, tertiary. *Religiosity* is assessed in the survey with the question “how religious are you?” which had answer categories between 0 (not at all religious) and 10 (very religious). Furthermore, robustness checks were carried out by adding controls for *employment status* (employed, unemployed, not in the labor force, unknown). It is important to examine the differential impact of education across educational institutional settings with and without employment status. We may find disadvantaged positions for persons with vocational qualifications relative to general qualifications, when controlling for employment status. Vocationally qualified persons are known to have a higher probability of employment, particularly in differentiated schooling systems (Müller and Gangl 2003; Breen 2005). Given that employment contributes to active political engagement, employment status may function as a suppressor variable in examining the impact of type of education on political engagement. If, however, the lower level of engagement of vocationally qualified individuals in strongly differentiated systems persists with and without controlling for employment status, it is clear that a potentially higher employment probability does not make up for possible negative vocational education effects on political engagement.

#### *Classifying Educational Systems*

The differential impact of individual-level education across educational institutional arrangements is examined by focusing on two dimensions of cross-national variation in educational systems: *curricular tracking* in secondary education and the *vocational orientation* of the upper-secondary schooling system. These are conceptually different dimensions of educational systems, although empirically correlated (e.g., Shavit and Müller 1998; Van de Werfhorst 2011). Curricular tracking refers to the timing and form of institutions

<sup>8</sup> This categorization resembles ISCED-1997 codes: 0, 1, 2, 3C < 2 years (up to lower secondary); 3B, 3C ≥ 2 years, 5B, 4B, 4C (full upper-secondary vocational); 3A, 4A (full upper-secondary general); and 5A, 6 (tertiary).

governing the selection of students in separate school types on the basis of demonstrated learning ability. This indicator mostly concentrates on international variation at the first stage of secondary education. The vocational orientation of a system refers to the size and form of upper-secondary vocational education aimed at providing work-relevant specific skills. The dimensions are empirically correlated because strongly tracked systems often offer at least one vocationally oriented school type with comparatively high levels of enrollment. The classification of educational systems developed by Bol and Van de Werfhorst (2013) is used. That study developed indicators for more countries than available for the current study and has standardized indicators on that larger number of countries (including non-European). It provides us with country-level scale values that are independent of the “coincidental” inclusion in any individual-level data set, which is an asset of the scaling procedure.

Curricular tracking is captured with a summary index composed of the age of first selection in education (reverse coded), the number of school types available to a typical 15-year-old student, and the length of the tracked curriculum as a proportion of total length of primary and secondary education, using a factor analysis (OECD 1993, 2006; Eurydice 2016). Other cross-national studies focus on similar forms of tracking.<sup>9</sup>

The vocational orientation of a system is assessed using two similar indicators from different sources: the Organization for Economic Cooperation and Development (OECD 2006) and the United Nations Organization for Education, Science, and Culture (UNESCO). Both indicators assess the enrollment in vocational schools as a proportion of total upper-secondary enrollments. Upper-secondary vocational enrollment is a common indicator of the vocational orientation of a country (e.g., Shavit and Müller 1998) and is available for a large number of countries. We took the score of the factor comprising the two indicators.

Figure 1 shows the values of the two country-level indicators per country. The correlation between the two contextual variables is  $r = 0.41$ .

In addition to educational institutional variables, we add several control variables at the contextual level, both as a main effect and in interaction with education. First, we include the Gini coefficient of posttax posttransfer household income. This is coded for each country and each survey year separately, using the SWIID database (Solt 2009). Second, we control for tertiary enrollment. The rationale behind this control variable is that tertiary enrollment is related to a reduced association between education and social capital (Gesthuizen et al. 2008) and that tracking and tertiary enrollment are negatively correlated ( $r = -0.55$  in our data). Enrollment is measured by the

<sup>9</sup> Hanushek and Wössmann (2005); Marks (2005); Brunello and Checchi (2007); Van de Werfhorst and Mijs (2010).

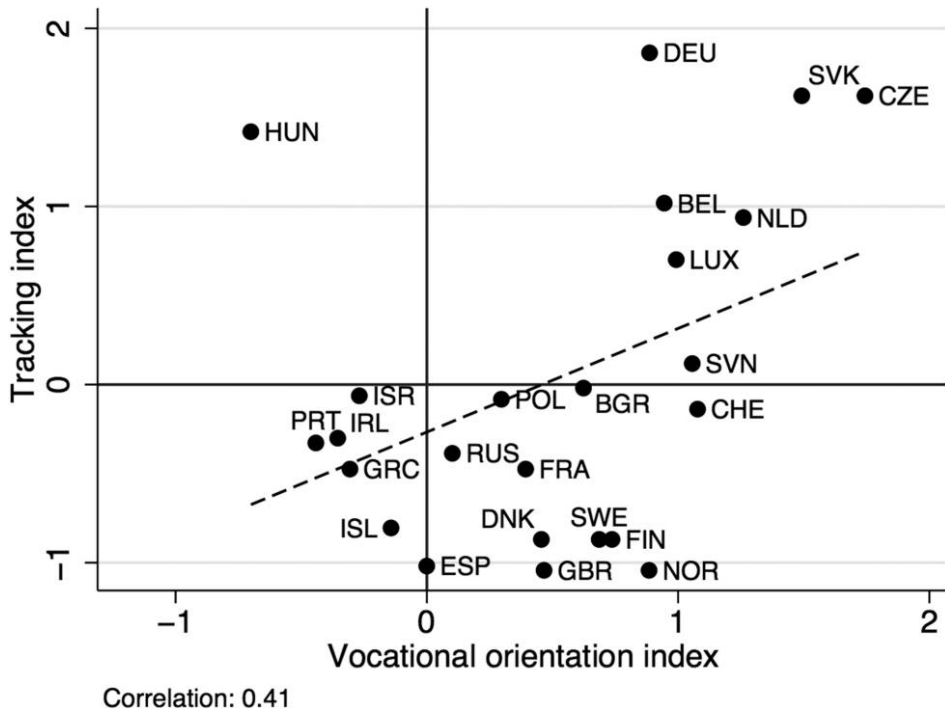


FIG. 1.—Tracking and vocational orientation of educational systems

number of students enrolled in tertiary education as a percentage of total enrollment (Schofer and Meyer 2005). Third, gross domestic product (GDP) per capita (in constant US\$) is controlled, as education effects may also vary across levels of economic development (obtained from the World Bank database). Both tertiary enrollment and GDP per capita were assigned at the cohort level (rather than survey year) to maximize variability of this indicator. In models controlling for these variables (and their interaction with educational attainment) a random intercept was added at the birth year level (unnested cross-classified models; see below). Descriptive statistics of all variables that are used in this study can be found in table A1.

**Results**

*Political Engagement across Countries*

We start our analyses of the ESS data by a description of the gap between people educated in different forms of education in different countries. We concentrate on people educated in vocational education and see to what extent their level of political engagement differs from people educated at (1) upper-secondary general/academic education and (2) tertiary educa-

tion. Furthermore, we examine these gaps in relation to the two educational institutional characteristics tracking and vocational orientation.

Figure 2 shows the education gaps for countries of different levels of curricular tracking. Figure 2A shows that the gap between people educated in academic/general upper-secondary education and people educated in vocational upper-secondary education is sometimes positive, sometimes negative; indicating that the variability in political engagement is not the same

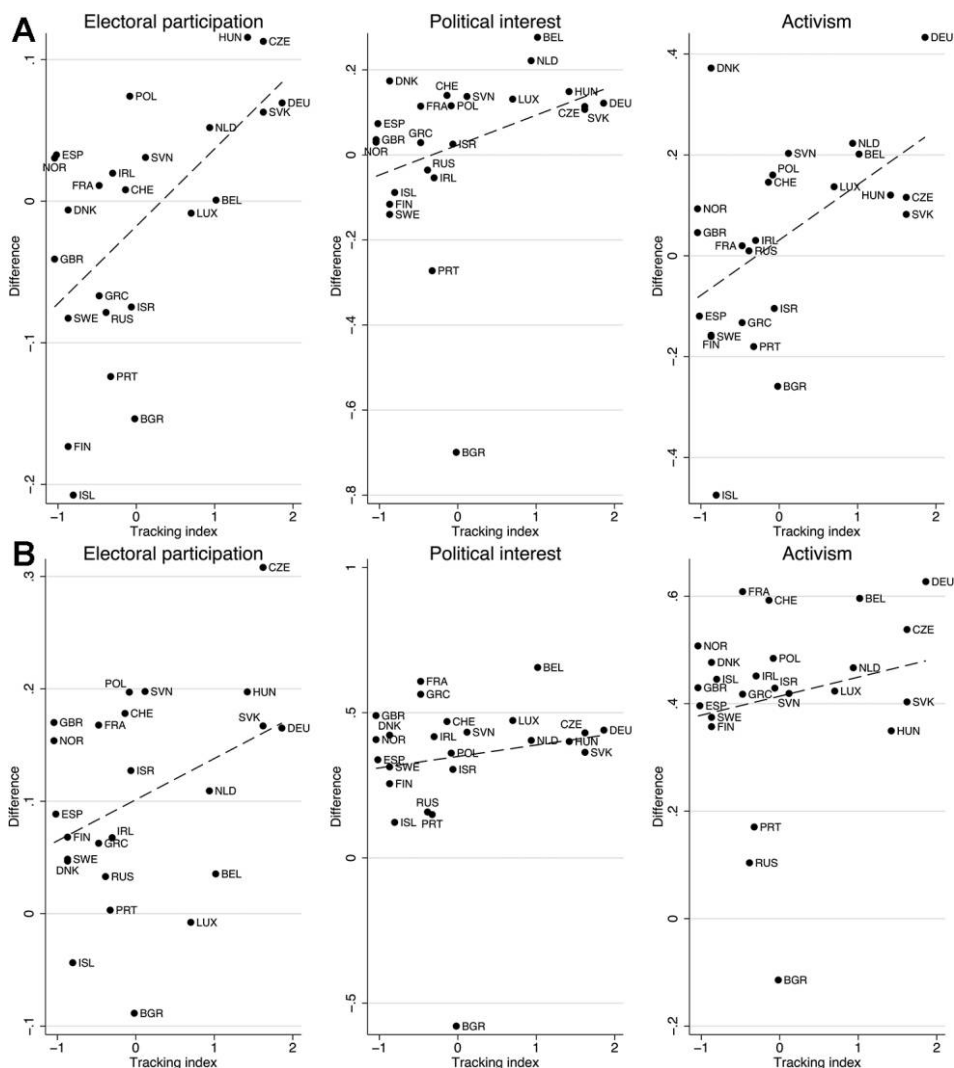


FIG. 2.—A, Gap in political engagement between general/academic and vocational education by tracking of the educational system; B, gap in political engagement between tertiary and vocational education by tracking of the educational system. SOURCE.—ESS rounds 1–6.

across countries. In some countries, people educated in academic forms of secondary education have higher levels of engagement than people educated in the vocational streams, such as in the Netherlands, Germany, Hungary, and the Czech Republic. In other countries, in particular in Scandinavia, France, and Britain, the difference is much smaller and in some cases even to the advantage of people educated in vocational education. Importantly, there is a systematic relationship between the level of tracking in the educational system and the gap between academic and vocational types of secondary education; the gap is more strongly to the advantage of people educated in academically oriented education in systems where tracking happens earlier and more rigidly.

Figure 2B shows that persons with tertiary education are more strongly engaged with politics than persons educated in vocational education; the gap is positive in almost all cases. Also, here we see that the gap is slightly increasing in more strongly tracked educational systems, although the pattern is less clear than with the comparison of the two forms of upper-secondary education.

Figure 3 reports an exercise similar to that in figure 2, but now the gaps are set off against the vocational orientation of the system. Here we see a similar pattern; the gap between vocational and academic forms of secondary education is, on average, larger in more strongly vocationally oriented educational systems.

#### *The Impact of Individual and Contextual Variables on Political Engagement*

Multilevel models are estimated to study the impact of individual level variables and the macrolevel variables on civic engagement. Given the structure of the data, with individuals nested in two different levels that are not nested among themselves (country and survey year), we employ cross-classified multilevel models (Rabe-Hesketh and Skrondal 2005). With cross-classified models we estimate random intercepts at the country level (assuming equal variances across survey years) and random intercepts at the level of survey year (assuming equal variances across countries). We furthermore add random slopes for the education dummies to capture between-country variance in the effect of education on political engagement.

The prime interest of this article is in the effect of individual education (to test hypothesis 1) and the cross-level interaction effect between individual education and educational institutional variables (tracking and vocational orientation, to test hypotheses 2a and 2b).

*Electoral participation.*—Table 1 shows estimates of cross-classified multilevel logistic regression models predicting electoral participation at the latest national elections. Model 1 only includes individual-level variables and confirms well-known patterns shown by other studies. Parents' education is positively associated with the probability to vote in elections, independent of

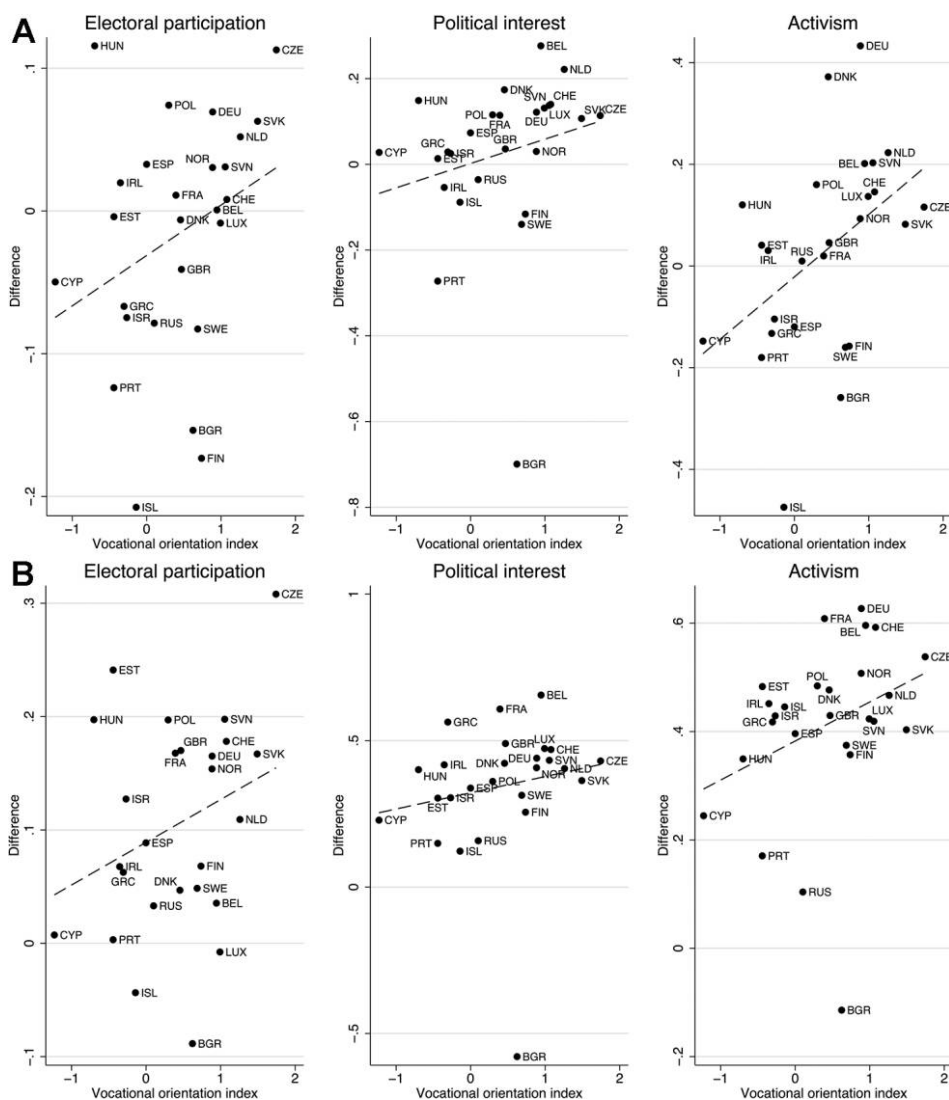


FIG. 3.—A, Gap in political engagement between general/academic and vocational education by vocational orientation of the educational system; B, gap in political engagement between tertiary and vocational education by vocational orientation of the educational system. SOURCE.—ESS rounds 1–6.

one's own education. Men are more likely to vote than women, and the probability to vote increases with age. More religious people are more likely to vote than less religious people. Looking at the coefficients for educational attainment it becomes clear that education has a strong positive relationship with the likelihood to vote. Electoral participation is highest among tertiary degree holders. However, on average we do not see that people educated in



TABLE 1  
CROSS-CLASSIFIED MULTILEVEL LOGIT MODELS ON ELECTORAL PARTICIPATION

	Model 1	Model 2	Model 3	Model 4	Model 5
Parents' education (relative to less than lower secondary):					
Lower secondary	.117*** (.035)	.117*** (.035)	.117*** (.035)	.118*** (.035)	.118*** (.035)
Upper secondary	.193*** (.033)	.193*** (.033)	.191*** (.033)	.194*** (.033)	.192*** (.033)
Tertiary	.328*** (.036)	.328*** (.036)	.326*** (.036)	.328*** (.036)	.327*** (.036)
Male	.071*** (.018)	.071*** (.018)	.071*** (.018)	.071*** (.018)	.071*** (.018)
Religiosity	.045*** (.003)	.045*** (.003)	.045*** (.003)	.045*** (.003)	.045*** (.003)
Age group (relative to 18-25):					
26-35	.379*** (.023)	.379*** (.023)	.379*** (.023)	.379*** (.023)	.379*** (.023)
36-45	.840*** (.024)	.840*** (.024)	.839*** (.024)	.839*** (.024)	.839*** (.024)
Educational attainment (relative to upper-secondary academic):					
Up to lower secondary	-.710*** (.077)	-.710*** (.077)	-.695*** (.067)	-.576*** (.087)	-.609*** (.082)
Secondary vocational	-.104 (.072)	-.103 (.072)	-.100 (.054)	-.020 (.089)	-.095 (.070)
Tertiary	.546*** (.059)	.547*** (.059)	.555*** (.060)	.519*** (.074)	.495*** (.075)
Tracking index	.053 (.150)	.053 (.150)	.091 (.149)	.050 (.149)	.089 (.149)
Vocational orientation index	-.043 (.215)	-.043 (.215)	-.048 (.213)	-.024 (.214)	-.045 (.214)
Educational attainment × tracking index:					
Up to lower secondary			-.208*** (.073)		-.159* (.075)
Secondary vocational			-.242*** (.055)		-.239*** (.059)
Tertiary			-.075 (.065)		-.108 (.069)
Educational attainment × vocational orientation index:					
Up to lower secondary				-.268* (.106)	-.177 (.106)
Secondary vocational				-.160 (.103)	-.010 (.086)
Tertiary				.056 (.080)	.119 (.097)
Constant	.227 (.134)	.247 (.170)	.244 (.169)	.235 (.170)	.242 (.169)
Variance between ESS rounds	.005*** (.004)	.005*** (.004)	.005*** (.004)	.005*** (.004)	.005*** (.004)
Variance in education slope:					
Up to lower secondary	.114*** (.040)	.114*** (.040)	.080*** (.031)	.086*** (.031)	.070*** (.027)
Upper-secondary vocational	.092*** (.036)	.092*** (.036)	.042*** (.019)	.082*** (.032)	.042*** (.019)
Tertiary	.059*** (.024)	.059*** (.024)	.061*** (.025)	.056*** (.024)	.055*** (.023)
Variance between countries	.371*** (.110)	.369*** (.109)	.366*** (.108)	.367*** (.109)	.365*** (.108)
-2 log likelihood	76,766.73	76,766.60	76,746.01	76,758.08	76,741.53
χ <sup>2</sup> difference		.13	20.59***	8.52*	4.47
Against model ( <i>df</i> )		Model 1 (2)	Model 2 (3)	Model 2 (3)	Model 3 (3)
					Model 4 (3)
					Model 5 (3)

NOTE.—Cross-classified mixed effects logit model. Data from ESS rounds 1-6. Standard errors in parentheses. *N* = 71,591.

\* *P* < .05.

\*\* *P* < .01.

\*\*\* *P* < .001.

the vocational sector have lower odds of participation than people in academic/general secondary education.

Model 2 adds the educational institutional variables. This model shows that there is only a weak, nonsignificant relationship between educational system indicators and average political participation.

More interestingly from the perspective of the hypotheses is model 3, which adds interaction terms between the tracking index and individual educational attainment. This model shows that tracking is associated with larger differences between educational categories. For every standard deviation increase in a country's level of tracking, the negative impact of vocational education relative to academic secondary education triples ( $-0.100$  in main effect,  $-0.242$  in the interaction effect). Inspection of the random part of the model at the bottom of the table, in particular the random slope of vocational education, demonstrates that the interaction between tracking and education explains around 54 percent ( $[0.092 - 0.042]/0.092$ ) of the variability in the negative vocational education slope. This particular interaction effect is thus accountable for a sizable portion of the cross-national variation in the effect of vocational education on electoral participation. Also the negative coefficient of lower-secondary education gets much stronger in strongly tracked educational systems ( $b = -0.208$  for the interaction term), explaining about 30 percent of the variance in its slope.

Model 4 reports the interaction effect between the vocational orientation index and individual education. This model shows that the difference between academic and vocational forms of full secondary education is not significantly associated with a strongly vocational educational sector. However, the disadvantage of people who did not achieve full secondary education and those who did is larger in strongly vocational countries.

Model 5 includes both educational system variables. This model shows that it is particularly the tracking system, not the vocational orientation, that is associated with larger education gaps in electoral participation.

*Political interest.*—Table 2 shows results for the models predicting political interest. For the individual-level control variables, we find more or less the same pattern as with electoral participation. Parents' education, gender, religiosity, and age show the expected associations with political interest. We find lower levels of political interest among the lower educated, and within upper-secondary education it is particularly those who have been educated in the vocational sector who show relatively little interest in politics.

Model 2 shows that the educational institutional variables have no association with the average level of political interest. However, as is shown in model 3, the gap between upper-secondary vocational and upper-secondary academic/general education is enlarged in more strongly tracked educational systems. The interaction effect is not quite as strong as with electoral participation; it takes almost 2 standard deviations in the tracking index to double

TABLE 2  
CROSS-CLASSIFIED MULTILEVEL MODELS ON POLITICAL INTEREST

	Model 1	Model 2	Model 3	Model 4	Model 5
Parents' education (relative to less than lower secondary):					
Lower secondary	.105*** (.011)	.105*** (.011)	.105*** (.011)	.105*** (.011)	.105*** (.011)
Upper secondary	.153*** (.010)	.153*** (.010)	.153*** (.010)	.153*** (.010)	.153*** (.010)
Tertiary	.294*** (.011)	.294*** (.011)	.294*** (.011)	.294*** (.011)	.294*** (.011)
Male	.267*** (.006)	.267*** (.006)	.267*** (.006)	.267*** (.006)	.267*** (.006)
Religiosity	.015*** (.001)	.015*** (.001)	.015*** (.001)	.015*** (.001)	.015*** (.001)
Age group (relative to 18–25):					
26–35	.087*** (.008)	.087*** (.008)	.087*** (.008)	.087*** (.008)	.087*** (.008)
36–45	.220*** (.008)	.220*** (.008)	.220*** (.008)	.220*** (.008)	.220*** (.008)
Educational attainment (relative to upper-secondary academic):					
Up to lower secondary	-.301*** (.019)	-.297*** (.019)	-.297*** (.019)	-.298*** (.024)	-.305*** (.024)
Secondary vocational	-.100*** (.019)	-.097*** (.019)	-.097*** (.016)	-.068*** (.023)	-.080*** (.021)
Tertiary	.253*** (.017)	.256*** (.017)	.256*** (.017)	.267*** (.022)	.261*** (.022)
Tracking index	-.055 (.051)	-.044 (.051)	-.044 (.051)	-.056 (.051)	-.045 (.051)
Vocational orientation index	.066 (.073)	.065 (.073)	.065 (.073)	.074 (.073)	.068 (.073)
Educational attainment × tracking index:					
Up to lower secondary			-.030 (.020)		-.035 (.022)
Secondary vocational			-.056*** (.016)		-.047** (.017)
Tertiary			-.032 (.018)		-.029 (.020)
Educational attainment × vocational orientation index:					
Up to lower secondary					
Secondary vocational					
Tertiary					
Constant	1.876*** (.048)	1.845*** (.059)	1.843*** (.059)	1.840*** (.059)	1.842*** (.059)
Variance between ESS rounds	.002*** (.001)	.002*** (.001)	.002*** (.001)	.002*** (.001)	.002*** (.001)
Variance in education slope:					
Up to lower secondary	.006*** (.002)	.006*** (.002)	.006*** (.002)	.006*** (.002)	.005*** (.002)
Upper-secondary vocational	.006*** (.003)	.006*** (.003)	.004*** (.002)	.005*** (.002)	.003*** (.002)
Tertiary	.005*** (.002)	.005*** (.002)	.005*** (.002)	.005*** (.002)	.005*** (.002)
Variance between countries	.045*** (.013)	.043*** (.013)	.043*** (.012)	.043*** (.013)	.043*** (.012)
Individual-level variance	.618*** (.003)	.618*** (.003)	.618*** (.003)	.618*** (.003)	.618*** (.003)
-2 log likelihood	184,966.18	184,964.79	184,951.78	184,959.09	184,949.72
χ <sup>2</sup> difference		1.39	13.01**	5.7	2.06
Against model ( <i>df</i> )		Model 1 (2)	Model 2 (3)	Model 2 (3)	Model 3 (3)
					Model 4 (3)

NOTE.—Cross-classified mixed-effects linear model. Data from ESS rounds 1–6. Standard errors in parentheses. *N* = 78,394.

\* *P* < .05.

\*\* *P* < .01.

\*\*\* *P* < .001.

the negative impact of vocational education. Yet it is true that strongly tracked educational systems are associated with larger gaps in political interest, particularly among those vocationally and academically educated.

In model 4 we see a similar pattern with the vocational orientation of the system. A strongly vocationally oriented educational system has a correspondingly negative effect on political interest for those with vocational qualifications. In both models 3 and 4, the variance in the slope of vocational education is reduced when the interaction terms are added to the model. Model 5 shows, like with electoral participation, that it is the tracked nature of the educational system, not the vocational orientation, that is associated with larger gaps between vocational and academic forms of education.

*Political activism.*—Table 3 shows the same models predicting political activism. Given that activism is a count variable (the number of activities in which respondents participated in the past year), we estimated a cross-classified multilevel Poisson regression model.

Model 1 shows higher levels of activism among people from better-educated parents. Men take part in more activities than women, and religiosity is positively associated with the number of political activities. Individual educational attainment has a strong association with political activism. Not only is there a general pattern in terms of level of education, with people in higher levels of education displaying higher levels of activism, but within full secondary education there are strong differences between education groups. Those with vocational qualifications have significantly lower levels of political activism than individuals with general/academic secondary qualifications.

Model 2 shows that tracking has a negative association with political activism, whereas the vocational orientation of the educational system is positively related to activism. Model 3 shows that the activism gap between vocational and academic forms of upper-secondary education is larger in more strongly tracked educational systems. Model 4 shows that the same does not hold for more strongly vocationally oriented educational systems; the educational differences within secondary education are unrelated to the size of the vocational sector. However, what model 4 does show is that the activism gap between tertiary education and academic forms of secondary education is smaller in more strongly vocationally oriented systems. Model 5 shows that the cross-national patterns of education gaps hold when both educational system indicators are interacted with individual education.

*Robustness checks.*—To test whether the main findings are maintained when important control variables are added, some robustness checks were performed. Given the persistent finding of larger educational gradients between vocational and academic secondary education in more strongly tracked educational systems, this is the interaction effect that is taken as a baseline. Subsequently it was assessed to what extent the interaction effect of interest differs with added effects of income inequality and its interaction with

TABLE 3  
CROSS-CLASSIFIED MIXED-EFFECTS POISSON MODELS OF POLITICAL ACTIVISM (NUMBER OF POLITICAL ACTIVITIES)

	Model 1	Model 2	Model 3	Model 4	Model 5
Parents' education (relative to less than lower secondary):					
Lower secondary	.112*** (.017)	.112*** (.017)	.112*** (.017)	.112*** (.017)	.112*** (.017)
Upper secondary	.207*** (.015)	.207*** (.015)	.207*** (.015)	.207*** (.015)	.207*** (.015)
Tertiary	.396*** (.015)	.396*** (.015)	.396*** (.015)	.396*** (.015)	.396*** (.015)
Male	.085*** (.008)	.085*** (.008)	.085*** (.008)	.085*** (.008)	.085*** (.008)
Religiosity	.011*** (.001)	.011*** (.001)	.011*** (.001)	.011*** (.001)	.011*** (.001)
Age group (relative to 18–25):					
26–35	.003 (.011)	.003 (.011)	.002 (.011)	.002 (.011)	.002 (.011)
36–45	.135*** (.011)	.135*** (.011)	.135*** (.011)	.135*** (.011)	.135*** (.011)
Educational attainment (relative to upper-secondary academic):					
Up to lower secondary	-.433*** (.046)	-.432*** (.046)	-.430*** (.045)	-.442*** (.060)	-.462*** (.059)
Secondary vocational	-.106* (.043)	-.106* (.043)	-.103*** (.037)	-.042 (.053)	-.072 (.050)
Tertiary	.313*** (.034)	.314*** (.034)	.314*** (.034)	.372*** (.040)	.382*** (.041)
Tracking index		-.256* (.121)	-.250* (.121)	-.257* (.121)	-.253* (.121)
Vocational orientation index		.350* (.174)	.349* (.174)	.362* (.174)	.359* (.174)
Educational attainment × tracking index:					
Up to lower secondary			-.052 (.048)		-.071 (.051)
Secondary vocational			-.111** (.039)		-.094* (.042)
Tertiary			-.000 (.036)		.038 (.035)
Educational attainment × vocational orientation index:					
Up to lower secondary				.024 (.072)	.067 (.076)
Secondary vocational				-.119 (.064)	-.058 (.064)
Tertiary				-.112* (.049)	-.134* (.052)
Constant	-.585*** (.116)	-.753*** (.135)	-.753*** (.135)	-.761*** (.135)	-.759*** (.135)
Variance between ESS rounds	.002*** (.001)	.002*** (.001)	.002*** (.001)	.002*** (.001)	.002*** (.001)
Variance in education slope:					
Up to lower secondary	.042*** (.015)	.042*** (.015)	.039*** (.014)	.042*** (.015)	.037*** (.014)
Upper-secondary vocational	.038*** (.013)	.038*** (.013)	.027*** (.010)	.034*** (.012)	.027*** (.009)
Tertiary	.024*** (.008)	.024*** (.008)	.024*** (.008)	.019*** (.006)	.018*** (.006)
Variance between countries	.308*** (.090)	.245*** (.072)	.246*** (.072)	.244*** (.071)	.245*** (.071)
-2 log likelihood	200,571.46	200,566.06	200,558.06	200,558.12	200,550.50
χ <sup>2</sup> difference		5.4	8.00*	7.94*	7.56
Against model ( <i>df</i> )		Model 1 (2)	Model 2 (3)	Model 2 (3)	Model 3 (3)
					Model 4 (3)

NOTE.—Cross-classified mixed-effects Poisson regression. Data from ESS rounds 1–6. Standard errors in parentheses.  $N = 78,616$ .

\*  $P < .05$ .

\*\*  $P < .01$ .

\*\*\*  $P < .001$ .

educational attainment, employment status, tertiary enrollment and its interaction with educational attainment, and GDP per capita and its interaction with educational attainment. Table 4 reports the results. In all these models the gap between vocational and academic forms of secondary education is larger in more strongly tracked systems than in systems in which students are separated less rigidly. It is thus concluded that the findings reported above are robust and largely unaltered if additional controls are added to the model.

One other important finding of table 4 is that employment status functions as a suppressor variable in the model predicting electoral participation. Clearly, conditional on employment status, the average gap between vocational and academic secondary education is statistically significant.

*Summarizing the Results in Light of the Hypotheses*

How do these observed patterns relate to the hypotheses that were formulated? With regard to all three indicators of political and civic engagement, it is clear that people educated in vocational education display lower levels of engagement than people educated in general and academic types of education of similar length. This supports hypothesis 1. In line with well-accepted theories of political socialization, vocational education can have this negative effect through processes of skills acquisition, network formation, and stigmatization. These results may also be due to negative selection into vocational education or to unobserved characteristics relevant to political and civic engagement.

With regard to cross-national variation, it is evident that the difference between vocational and general/academic types of education increases with a more strongly tracked educational institutional structure. This is true for all three dependent variables. So, whereas the selection argument may be important to explain school type effects for all countries together, the fact that school type differences magnify in more strongly tracked educational systems gives more leeway to causal explanations of education effects on political engagement. Selection is unlikely to drive these cross-national differences, as the selection into upper-secondary vocational education is plausibly less “negative” in terms of characteristics relevant for political engagement in strongly tracked educational systems. Had selection been a sufficient explanation for cross-national differences, one would expect that school type differences would be largest in countries where the negative selection into vocational tracks is strongest—which applies to systems that are least tracked (Van de Werfhorst 2011). This means that support was found for hypothesis 2a, while hypothesis 2b has been refuted. Hypothesis 2a stated that school type effects get larger in more strongly tracked and vocationally specific educational systems, because educational curricula are completely separated for several years, in different school organizations and buildings. Such organizational structures reduce commonality in the acquisition of civic and



political competences. One qualification must be made to this conclusion, however. It is mostly the tracking of the educational system, and not its vocational orientation, that is associated with larger gaps between vocational and academic/general education. This finding leads to a conclusion similar to earlier studies that found that early tracking is harmful to equality whereas vocational orientation is not (Brunello and Checchi 2007; Koçer and Van de Werfhorst 2012). For political outcomes we corroborated this finding.

### Discussion and Conclusion

This article studied the impact of educational attainment on political and civic engagement in 24 European countries, operationalized by three indicators of engagement: electoral participation, being interested in politics, and taking part in a number of civic and political activities. These indicators are at the core of contemporary concerns about the decreasing levels of social capital and social cohesion and on what civic and citizenship education should teach.<sup>10</sup> Given the obvious relevance of political engagement for social cohesion of contemporary societies, variations between educational groups and countries in engagement help us to understand cross-national variations in social capital and social cohesion. Stronger variations across educational groups in terms of political participation is detrimental to social cohesion of societies, at least to the extent that one would assume that democratic equality is considered morally just.

The particular focus was on differences between vocational and general/academic programs of schooling. Our results showed that vocational education is associated with lower engagement than academic forms of secondary education. Moreover, it is clear that countries vary in the way in which schooling is associated with engagement; the association with education varies with the extent to which an educational system differentiates students in different school types. Most notably, the difference in political and civic engagement between graduates from vocational and general/academic forms of secondary education is larger in societies that more rigidly select children in separate school types early in the school career. This finding is in line with arguments deduced from political socialization theories that stress that political interest and participation are raised by the resources (skills) people have and by the social networks of which they are part (Verba et al. 1978, 1995; Brady et al. 1995). In more rigidly tracked educational systems, such as Germany and the Netherlands, (pre-)vocational schools may devote less attention to the kinds of skills that enhance political engagement, including general skills and specific civic competences. In such systems, different types of education teach different kinds of civic competences that may

<sup>10</sup> Putnam (2000); Skocpol (2003); Andersen et al. (2006); Green et al. (2006); Ten Dam et al. (2011).

TABLE 4  
EDUCATION EFFECTS AFTER ADDING CONTROL VARIABLES AT INDIVIDUAL AND CONTEXTUAL LEVEL

	Baseline	Gini <sup>a</sup>	Employment Status <sup>b</sup>	Tertiary Enrollment <sup>c</sup>	GDP per Capita <sup>d</sup>
Electoral participation:					
Educational attainment (relative to upper-secondary academic):					
Up to lower secondary	-.695*** (.067)	-1.764*** (.345)	-.650*** (.070)	-.628*** (.110)	-.638*** (.076)
Secondary vocational	-.100 (.054)	-.304 (.305)	-.110* (.053)	-.028 (.098)	-.133* (.060)
Tertiary	.555*** (.060)	.751* (.346)	.520*** (.061)	.315** (.112)	.490*** (.070)
Tracking index	.077 (.137)	.003 (.122)	.072 (.138)	.089 (.152)	.075 (.155)
Educational attainment × tracking index:					
Up to lower secondary	-.208** (.073)	-.158** (.061)	-.190* (.075)	-.196* (.076)	-.207* (.072)
Secondary vocational	-.242*** (.055)	-.225*** (.053)	-.234*** (.054)	-.237*** (.057)	-.226*** (.052)
Tertiary	-.075 (.065)	-.080 (.064)	-.072 (.067)	-.030 (.063)	-.033 (.063)
Observations	71,591	70,610	71,164	69,004	69,004
Political interest:					
Educational attainment (relative to upper-secondary academic):					
Up to lower secondary	-.297*** (.019)	-.321** (.115)	-.295*** (.018)	-.383*** (.031)	-.331*** (.024)
Secondary vocational	-.097*** (.016)	-.273*** (.083)	-.092*** (.016)	-.007 (.029)	-.043* (.020)
Tertiary	.256*** (.017)	.321*** (.095)	.259*** (.017)	.316*** (.029)	.279*** (.021)
Tracking index	-.026 (.047)	-.027 (.047)	-.026 (.047)	-.025 (.046)	-.019 (.044)
Educational attainment × tracking index:					
Up to lower secondary	-.030 (.020)	-.029 (.021)	-.030 (.020)	-.013 (.020)	-.011 (.022)
Secondary vocational	-.056*** (.016)	-.048** (.015)	-.056*** (.016)	-.064*** (.018)	-.070*** (.018)
Tertiary	-.032 (.018)	-.034 (.018)	-.032 (.018)	-.040* (.017)	-.043* (.019)
Observations	78,394	77,283	77,924	75,368	75,368

Political activism:										
Educational attainment (relative to upper-secondary academic):										
Up to lower secondary	-.430***	(.045)	-.755*	(.342)	-.398***	(.015)	-.512***	(.057)	-.481***	(.047)
Secondary vocational	-.104**	(.037)	-.460*	(.193)	-.091***	(.011)	.008	(.050)	-.053	(.043)
Tertiary	.314***	(.034)	-.018	(.179)	.277***	(.011)	.467***	(.044)	.365***	(.032)
Tracking index	-.152	(.120)	-.167	(.112)	-.164	(.117)	-.146	(.122)	-.147	(.121)
Educational attainment × tracking index:										
Up to lower secondary	-.052	(.048)	-.042	(.056)	-.047**	(.014)	-.034	(.047)	-.033	(.047)
Secondary vocational	-.111**	(.039)	-.099**	(.038)	-.068***	(.011)	-.115**	(.041)	-.117**	(.042)
Tertiary	-.000	(.036)	.011	(.036)	.003	(.010)	-.003	(.034)	-.002	(.031)
Observations	78,616		77,503		78,142		75,574		75,574	

NOTE.—Models control for the specified individual-level or contextual-level variable, plus its interaction with educational attainment. All models control for other variables of previous models and include random slopes for educational categories. Data from ESS rounds 1–6. Standard errors in parentheses.

<sup>a</sup> Control variable measured at the level of country × survey year.

<sup>b</sup> Control variable measured at the level of county × survey year.

<sup>c</sup> Control variable measured at the individual level.

\*  $P < .05$ .

\*\*  $P < .01$ .

\*\*\*  $P < .001$ .

<sup>e</sup> Control variable measured at the level of country × birth year, with cross-classified variances between survey years, birth years, and country.

directly influence the active engagement of citizens in politics and society at large, with limited attention to such qualities in the lower tracks (Niemi and Junn 1998; Ten Dam and Volman 2003). Furthermore, in strongly tracked educational systems that are characterized by differentiation in separate school buildings and school organizations, recruitment networks are likely to be formed within schools, making it hard for students in less demanding school types to incorporate supportive norms on political engagement from outside their homogeneous peer group. Also, the study by Hoskins et al. (2014) showed marked differences in political outcomes between vocational and academic forms of education. That study, however, did not find stark differences between the three societies that were investigated (Germany, Denmark, and England). Our comparison of a large number of countries enabled us to investigate educational system characteristics in a quantitative way and demonstrated important differences in the educational gap between countries.

There are two alternative theories that may relate to my findings that deserve discussion. First, track differences in engagement may, instead of being causally influenced by the skills and networks acquired in different school types, be due to selection on characteristics relevant for engagement (Persson 2014). Although this possibility cannot be ruled out, the analyses controlled for parents' education, an important factor on which such selection may take place. But more important, the fact that differences in engagement between school types are more pronounced in more strongly tracked schooling systems is unlikely to be explained by differential selection into vocational education across countries. If anything, selection into vocational education is less negative on relevant unobserved characteristics in more strongly tracked educational systems because vocational education usually offers good and reliable career prospects in those countries (Shavit and Müller 1998). Nevertheless, strict causal claims cannot be made on the basis of the results of this article.

There are important conclusions to be drawn from these findings. In light of contemporary studies of the relevance of vocational education to strengthen the signaling function of schooling on the labor market more generally, and to reduce youth unemployment in particular,<sup>11</sup> the results of this article indicate that there is also a less positive story to tell about vocational education. Vocational education seems to contribute to the diversification of political engagement among populations, thereby limiting equality in participation and, ultimately, democratic equality. And more important, vocational education is particularly harmful to active political engagement in societies where students are more rigidly tracked.

<sup>11</sup> See, e.g., Shavit and Müller (1998); Moller et al. (2003); Müller and Gangl (2003); Breen (2005).

If we place our findings in the context of broader effects of vocational education, including positive effects on employment opportunities, the results of the current study suggest that a combination must be sought between the positive signaling function of vocational schools in vocational systems, on the one hand, and less separation of students for preparation for citizenship early in their school career, on the other. It may then be concluded that an optimal schooling system both separates in school types with strong involvement of employers at the upper-secondary level and brings together students of diverse ethnic and social backgrounds of the various programs for citizenship education during secondary education. This way, communication contributes to mutual understanding among social groups that have been separated before they have grown into maturity. Although such a solution may not fully equalize political engagement, it is one way forward to deal with the complex task of preparing youth for both work and citizenship.

## Appendix

TABLE A1  
DESCRIPTIVE UNIVARIATE STATISTICS OF ALL VARIABLES

	Mean	SD	Min	Max
Individual-level variable:				
Electoral participation	.720	.449	0	1
Political interest	2.318	.865	1	4
Political activism	.882	1.283	0	7
Religiosity	4.171	2.964	0	10
Gender (male = 1)	.482	.500	0	1
Contextual variable:				
Tracking index in country	.215	.994	-1.043	1.862
Vocational orientation index in country	.596	.637	-.700	1.744
Gini coefficient in country in survey year	28.804	4.807	22.502	43.445
Tertiary enrollment in country in year of birth	.077	.032	.013	.194
GDP per capita in country in year of birth	4,761.467	5,381.117	241	36,930
	Percentage			
Categorical variable:				
Age group:				
18-25	24.9			
26-35	35.6			
36-45	39.5			
Parents' education:				
Less than lower secondary	15.1			
Lower secondary	14.9			
Upper secondary	42.6			
Tertiary	27.4			
Educational attainment:				
Up to lower secondary	17.0			
Upper-secondary vocational	32.0			
Upper-secondary academic/general	26.1			
Tertiary	24.9			
Employment status at time of survey:				
Unknown	1.2			
Not in labor force	23.8			
Unemployed	8.3			
Employed	66.8			

NOTE.—ESS rounds 1-6.  $N = 78,616$ .

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