

CONSTRUCTION OF THE FIRST MASS EDUCATION SYSTEMS IN NINETEENTH-CENTURY EUROPE

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This article analyzes two aspects of the construction of the first mass education systems in Europe and the United States in the nineteenth century: the timing of national laws mandating compulsory education and organizational expansion in enrollments. The interaction among the state, the church, and societal groups was a critical determinant of the form these systems took. Where the state was formally allied to a national church, it was able to create a national educational system early. In the absence of such a state-church linkage, outcomes depended on the roles of societal groups. Where such groups were actively involved in schooling, enrollments expanded early but the state found it difficult to construct a single national system. Where societal groups did not mobilize around education, compulsory schooling laws were enacted early, but because of the state's organizational weakness, these laws were not realized in the growth in enrollments.

Over the course of the nineteenth century, mass education systems were constructed throughout Europe. State-controlled compulsory schooling replaced or incorporated and expanded on what had been provided privately or by religious authorities. In the twentieth century, state educational systems have become indispensable components of modern nation-states and widely institutionalized throughout the world (Boli and Ramirez 1984). The nineteenth-century construction of educational systems in Europe is particularly worthy of study because it occurred when the idea of mass education was not yet taken for granted.

This article examines the conditions that facilitated the creation of these first national education systems. Although the literature detailing the rise of mass education within national societies is rich, this article seeks to add to the growing body of comparative

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research on variations among societies (Archer 1982; Boli and Ramirez 1984; Boli, Ramirez, and Meyer 1985; Craig and Spear 1978; Muller, Ringer, and Simon 1988). We perform a longitudinal regression and event-history analysis of educational expansion in 17 Western countries. Our results suggest three paths to mass education, each produced by a characteristic pattern of educational activity involving linkages among the central state, societal groups, and the church.

HISTORICAL OVERVIEW

Our analysis concentrates on two aspects of national educational systems: the formal construction of the system through legislation and the expansion of enrollments. We use the enactment of national laws mandating compulsory education to date the formal creation of systems. These laws require all children of both sexes to attend school up to a certain age; their national and mass character is evident.¹ The expansion of schooling is discussed in relation to primary enrollment

¹ Since we are concerned with the symbolic construction of a unified national system of education, this law must be enacted at the national level, not only at subunit levels. In the extreme case, we coded the United States as never having a compulsory rule because it has not yet passed such a law at the federal level (although all 50 states have enacted such laws independently).

ratios: the proportion of children aged 5–14 who were enrolled in school.

The paths taken to establish national educational systems varied considerably from nation to nation. Although almost every European state institutionalized mass education before World War I, the timing and sequence of educational expansion differed significantly. One sort of variation was the quickness of countries to pass laws and build schools. The second was the interrelation of legislative and organizational system building: the relative timing of compulsory laws and the expansion of enrollments within countries.

Table 1 captures some basic differences. Prussia was the first to enact compulsory education legislation. Frederick II established a national system of education in 1763 to "save the souls" of his subjects. This system was managed by the Lutheran clergy until the beginning of the twentieth century. Although it did not immediately achieve its goal of universal schooling, enrollments expanded rapidly in Prussia as part of the state's attempt to create a "unified nation" after its military defeat in 1806 (Ramirez and Boli 1987).

Elsewhere, conflict between secular and religious authorities often made it difficult to enact national educational legislation. In France, the Catholic Church and the state struggled for control over schooling through

most of the nineteenth century. Laws enacted in 1791 and 1833 to establish a state-controlled system of education were overturned by the more conservative social politics of Napoleon and Louis Napoleon. Education was a focal point of competition for the political loyalties of the French people. The Church and the landowners wanted to instill conservative sympathies, the state, to build a republican France. The result of this conflict was that, despite the strength of the French bureaucracy, compulsory schooling was not successfully enacted until 1882.

Great Britain provides a parallel example. Powerful local groups were unwilling to let the state seize control of education. Anglicans, Nonconformists, and Dissenters sought to expand their congregations through schooling. The bourgeoisie wished to preserve their sons' advantages over the working classes. And strong local authorities resisted centralization in any form. A multifaceted array of private, religious, and local schools developed, each serving particular constituencies and blocking the construction of a unified national system.

Many schooling systems, measured in primary enrollment ratios, were solidly in place by 1870, the date of our first observation (see Table 1). It is important to note, however, how weak the relation between the dates of compulsory laws and early enrollment ratios appears. Some of the highest enrollments in 1870 were found in France, the United States, and Switzerland—countries that had not yet passed national education laws. However, Greece and Portugal, two states that had had such laws for at least 25 years in 1870, had among the lowest enrollment ratios. Although counter examples like Prussia and Sweden exist, it is clear that the relation between state legislation and the organizational expansion of education is problematic.

ARGUMENTS

Much sociological thought attributes the expansion and formalization of education to differentiation. In functional versions, complex social organization requires expanded, formalized mechanisms of socialization and allocation (Parsons 1957). More critical versions emphasize social control, particularly the advantages to capital of a well-trained and domesticated labor force (Bowles

Table 1. Dates of Introduction of Compulsory Education and Primary Enrollment Ratios in 1870

Country	Introduction of Compulsory Education	Primary Enrollment Ratios in 1870
Prussia	1763	67
Denmark	1814	58
Greece	1834	20
Spain	1838	42
Sweden	1842	71
Portugal	1844	13
Norway	1848	61
Austria	1864	40
Switzerland	1874	74
Italy	1877	29
United Kingdom	1880	49
France	1882	75
Ireland	1892	38
Netherlands	1900	59
Luxembourg	1912	—
Belgium	1914	62
United States	—	72

and Gintis 1976). Recent studies, however, have shown little empirical support for the impact of differentiation, as measured by urbanization, economic development, and industrialization, on the origins and expansion of mass education (Craig and Spear 1978; Meyer et al. 1977, 1979; Richardson 1984).

Although the foregoing perspective tends to attribute a relatively narrow, technical character to schooling, recent arguments have sought to broaden the conceptualization of education. These arguments emphasize the historical peculiarities of modern Western education: its focus on individual achievement, its general rather than occupationally specialized curriculum, its inclusion not only of elites but of entire populations, and its critical role in the "project" of collective or national progress. For Boli, Ramirez, and Meyer (1985, p. 157), "mass education is part of the effort to construct the universalistic and rationalized society," that builds highly general competencies that are appropriate for a social world in which much value is located in the individual.

Sources of Education Building

The view that mass education enacts a new model of socialization suggests two sources of education building in the West. The first is the state, for which education helped to construct a national society made up of individual citizens. The second are religious groups whose doctrine is closely linked to individual progress. In the remainder of this section, we discuss these two sources and consider their conflict or alliance in building education. We then advance hypotheses that link each source to the construction of mass education through national laws and the expansion of enrollments.

The creation of educational systems has often been described as central to the state's nation building (Bendix 1964; Weber 1976). Here, the state is seen as aggressively penetrating, reconstructing, and mobilizing society. Education's individual-oriented ideology and organization help to construct citizenship as the primary political status across the lines of class, regional, ethnic, and gender differences. Its mass character brings the entire population under the aegis of the state as members of the national polity and prepares them to undertake the roles necessary to enhance the external power of the

state. In this context, education becomes a duty as much as a right.

A second source of education building involves the centrality of groups whose ideology is linked to the goals of education. The groups most often connected to these goals are Protestants, both theoretically and empirically (Craig 1981). There is a direct link between the importance of reading the Bible within Protestant sects and the consequent demand for literacy (Cipolla 1969). More generally, formal education's emphasis on individual socialization and achievement parallels the Protestant emphasis on the individual's unmediated relation to God and individual salvation (Weber 1958).

The educational activities of the state and religious groups were often conflicting. When religious groups attempted to educate children, they resisted the state's attempt to impose a unified and homogenized national system. And in many countries, churches sought to maintain more traditional socializing methods in opposition to formal education. Collins (1977, p. 19) argued that school systems emerged from "strong bureaucratic states that were independent of the Catholic Church."

We make a parallel argument but stress the positive advantages of an alliance between church and state rather than the peculiar position of the Catholic Church.² Where churches were national—formally linked to the state and under the symbolic authority of the sovereign—they could greatly expand the penetrating and mobilizing power of the central state. Connections between state and church allowed the state to lean on the prior religious organization of education when building a national system.³

The fact that national churches were Protestant ensured their support of the schooling enterprise. Specifically religious motives that led to education reinforced and were

² Rokkan (1970) also pointed to the importance of national churches in accounting for the emergence of representative institutions in Europe.

³ The alliance between state and church was especially important because of the relative weakness of states in the nineteenth century, for which it was organizationally difficult to build and staff schools. We assume that the much stronger states of the twentieth century would receive less educational benefit from an alliance with a national church.

reinforced by the unity of the spiritual and political communities. The cultural consensus provided by a national church also tended to block conflict over the ideological content of education. When the church was not formally subordinated to the state, which was the case for both independently organized Protestant sects and the supranationally organized Catholic Church, conflict tended to block the creation of a national system. Thus, while the Prussian state could construct a national education system through the Prussian Lutheran church, the French state found its greatest opponent in the Catholic Church.

These lines of argument suggest a distinction between sources of expansion of enrollment and sources of national laws enacting a comprehensive educational system. We expect that the bureaucratic capacity of the state should be related to the growth in enrollments. We also expect that where a variety of Protestantism was dominant, schooling should have developed early and more extensively. And when these two forces were combined in the institutional configuration of a national church, we expect even faster rates of growth in enrollments.

The distinction arises in the organizational form education will take. When the main source of education are groups or organizations that do not occupy a central position in society, it should be hard to construct formal rules enacting a unified national system. And it should be especially difficult if the proponents of schooling are in competition with each other, as in the sectarian struggles in England. By contrast, where the central state is the chief source of educational expansion or religious authority is linked to the state as a national church, the school system should be easily formalized in national rules.

These predictions set up two paths (see Boli, Ramirez, and Meyer 1985, pp. 158–161 for similar hypotheses, couched in an analysis of the structure of the polity). The first involves both the expansion of enrollments and the passage of national rules. Measures of the organizational capacity of the state and the existence of a national church should be associated with both these outcomes. The second involves the expansion of enrollments that does not occur within a unified national educational system. The strength of groups that are linked to the goals of schooling should be associated with expanded enroll-

ments but not with the early passage of national rules.

Finally, these arguments have implications for the relationship between the passage of national educational laws and the expansion of enrollments. To the extent that one set of conditions leads to both outcomes while another leads to enrollments but not to national rules, we do not expect the two outcomes to be closely related because enrollments can expand in the latter case in the absence of national rules. One might predict, however, a weak positive relationship between rules and enrollments, since the rules signal the educational activity of the state.

DATA AND VARIABLES

The 17 cases in our study consist of the major Western countries in existence during the nineteenth century.

Dependent Variables

The two dependent variables of interest are the dates of compulsory schooling laws and the levels of primary enrollments. The dates of compulsory rules, defined as laws requiring all children to attend primary school, were taken from Flora's (1983) historical compendium and the *UNESCO World Survey of Education Handbook* (1958). Enrollments were calculated as ratios of total primary enrollments to the size of the 9–15 age population. This method of calculation enabled us to derive enrollment ratios for six decennial time points between 1870 and 1920. It has the disadvantage that variations in the fit of primary school ages to the 9–15 age group produce errors in the enrollment ratio.⁴

Independent Variables

Two variables serve to examine the argument that the "strength" of a state should generate mass education. State revenue, taken from Banks (1971), measures the state's organizational capacity as the level of public

⁴ Data for primary enrollments are taken mainly from Banks (1971), Flora (1983), and the U.S. Bureau of Education's *Report of the Commissioner of Education* (1871–75). Benavot and Riddle (1988) provided a discussion of sources and methods of calculating enrollment ratios.

revenue standardized by population. Even organizationally weak states, however, are bolstered by the external supports available to them through their sovereign status (Krasner 1985; Meyer 1980). Independence was coded 1 if the case was an independent sovereign state and 0 if it was an administratively coherent dependent of another state. The case was excluded from the analysis during periods when it was not recognizable as an administrative entity (for example, Italy prior to unification).⁵

As was noted, Protestant religious beliefs are connected to some of the most important ideological underpinnings of education, notably the focus on the individual and the belief in social progress. Although religious communities, such as Protestant sects, are not the only societal groups that can be linked to the ideology of mass education, they are the ones we could identify and measure. From our previous arguments, we expect that the dominance of such groups should lead to the expansion of enrollments but not to national laws. Scores for Protestantism (the percentage of the population belonging to Protestant faiths) were calculated for 1900 from the *World Christian Encyclopedia* (Barrett 1982) and were assumed to be constant for the period under study.

We see the presence of formal ties between the church and the state as the critical means of unifying their potentially antagonistic schooling efforts. In the absence of these ties, the church was typically in opposition to the state's efforts (as in France), neutral, or fragmented (when there was a substantial degree of religious heterogeneity). National church was coded 1 if the church was formally subordinated to the state and 0 if there was no such linkage. The countries with national churches are Denmark, Norway, Prussia, Sweden, and the United Kingdom. Nonnational church countries thus include both the Catholic nations and the predominantly Protestant nations like the United States and the Netherlands.

Although our arguments deemphasize the effects of social differentiation, we include urbanization in the analysis. At a minimum, it

is clear that urban settings differ importantly from rural ones in the structure of the economic opportunities that are available to the young and in the scale of educational organization. The variable, urbanization, is defined as the percentage of the population living in cities of over 100,000 population, taken from Banks (1971).

We hoped to examine the effects of national rules and enrollments on each other. Since data on enrollments were available only from 1870 on, it was not feasible to use them to explain the timing of legislation on compulsory education, much of which occurred before that date. We use the dummy variable compulsory education to indicate the enactment of legislation on compulsory schooling; it can be taken as a measure of the symbolic construction of a national educational system. If our arguments are correct, it should not have had much of an impact on the expansion of enrollments.

Table 2 gives the means and standard deviations for the variables included in the analysis. Table 3 presents the zero-order correlations among the independent variables in 1870.

METHODS

A quantitative analysis of the nineteenth-century construction of education in Europe is difficult because of the small number of cases involved. With 17, there are too many for a comparative case study and too few for a sophisticated statistical analysis (Ragin 1987). Given the paucity of theoretically relevant cases, our strategy is to exploit variations over time as well as across cases. The central analyses we performed are longitudinal models of the timing of compulsory education and the increase in enrollments. Because of the historical nature of the problem, these analyses are better treated as investigations of the construction of European educational systems than abstract hypothesis testing.

An examination of the timing of compulsory attendance legislation and of enrollment ratios involves different analytic strategies. The first can be handled most appropriately in an event-history framework, in which the dependent variable is the probability of adopting compulsory legislation at each point in time. To examine variations in enrollment ratios, we use both cross-sectional and longitudinal multiple regressions.

⁵ State revenue is used only in the analysis of enrollments because data were available from 1870. Independence is used only for the analysis of compulsory rules, since it shows little variation by the end of the century.

Table 2. Means and Standard Deviations for Variables Included in the Regression Analyses

Variables	1870 (15 cases)		1920 (15 cases)	
	Mean	SD	Mean	SD
Primary enrollment	52.32	19.40	63.92	20.34
National church	.33	—	.35	—
Compulsory education	.60	—	.92	—
State revenue	7.67	4.27	52.48	38.33
Urbanization	7.67	7.40	17.75	8.94
Protestantism	42.20	43.32	42.20	43.32

In the event-history analysis, we follow the methods described by Coleman (1981) and Tuma and Hannan (1984) to analyze what conditions increase the probability that some "event" will occur. Here, the event of interest is the adoption of compulsory legislation. The dependent variable is the instantaneous rate at which this event occurs,

$$r(t) = \lim_{dt \rightarrow 0} \frac{Pr(t, t+dt)}{dt}$$

where $Pr(t, t+dt)$ is the probability that compulsory legislation will occur between time t and time $t + dt$.

We were able to get complete data on a restricted set of variables starting in 1814, which allows us to examine all cases with the exception of the first country to enact compulsory legislation (Prussia). The effects of explanatory variables were modeled in a log-linear framework to ensure nonnegative rates:

$$R = \exp (B_0 + B_1 * \text{national church} + B_2 * \text{independence} + B_3 * \text{urbanization} + B_4 * \text{Protestant}).^6$$

⁶ We expect that all cases are affected by a common set of factors or "environment" that changes over time. Since we do not attempt to capture this common environment (the impact of international debates about education, levels of competition within the European state system, the example of prior attempts to build national education systems), Cox's (1972) proportional hazards model provides a useful way to hold such factors constant. The rate is specified as $r(t) = q(t) * R$, where $q(t)$ is an unspecified "nuisance function" and R is the above log-linear vector of explanatory variables. $q(t)$ is not estimated but instead cancels out in the estimation, allowing the effects of explanatory variables to be calculated independently of common factors that vary over time.

To analyze the growth in enrollments in the 1870–1920 period, we pool observations for all time periods. Separate analyses of changes within decades suggested few period-specific effects. We model enrollments as follows, measuring the exogenous variables at the time of the previous observation:

$$\begin{aligned} \text{Enrollment} = & B_0 + B_1 * \text{national} \\ & \text{church}_{t-1} \\ & + B_2 * \text{compulsory}_{t-1} \\ & + B_3 * \text{urbanization}_{t-1} \\ & + B_4 * \text{Protestant}_{t-1} \\ & + B_5 * \text{state revenue}_{t-1} \\ & + B_6 * \text{enrollment}_{t-1} + e \end{aligned}$$

Since preliminary analyses indicated that the effects of some variables may depend on the relation between the state and the church, we also estimate a model that excludes the national church effect and the cases with national churches.

European countries had various levels of enrollments in 1870, the beginning of our longitudinal analysis (see Table 1). A cross-sectional examination of enrollments in 1870 summarizes the growth process to that date. This analysis provides a baseline for our longitudinal analysis. The regression equation for 1870 takes the following form:

$$\begin{aligned} \text{Enrollment} = & B_0 + B_1 * \text{national church} \\ & + B_2 * \text{compulsory} \\ & + B_3 * \text{urbanization} \\ & + B_4 * \text{Protestant} \\ & + B_5 * \text{state revenue} \\ & + e. \end{aligned}$$

RESULTS

Timing of Compulsory Legislation

We first present results of the conditions facilitating national compulsory attendance laws. Parameters, standard errors, and anti-

Table 3. Zero-order Correlations among Independent Variables in 1870

National church	1.00				
Compulsory education	.34	1.00			
State revenue	-.11	-.50	1.00		
Urbanization	.21	-.40	.74	1.00	
Protestantism	.78	.03	-.04	.23	1.00

logs of the parameters for the partial likelihood model are presented in Table 4.⁷

Our chief finding is the strong and significant effect of the presence of a national church. On a univariate level, the average dates of compulsory legislation are 1829 for states with national churches and 1875 for those without national churches. This effect remains when we hold other variables constant in the event-history analysis. The coefficient for national church is both significant at a .05 level and large in magnitude. The rate of the adoption of compulsory education legislation for states that were formally allied to a national church is 22 times larger than it is for states without such a tie. Our direct indicator of state strength, independence, has a parallel but much weaker effect. Rates for independent states are calculated to be 3 times as large as rates for nonsovereign territories, but the effect is not statistically significant.

The effect of the variable Protestant is small and insignificant; the only Protestant nations to pass compulsory rules early were those with national churches. This finding is consistent with our expectation that religious groups that promote schooling do not facilitate the early passage of formal national rules establishing mass education.

Urbanization has a negative effect that is nearly significant at the .10 level. Given the small number of cases in the analysis, we think this finding is suggestive. Although it is difficult to see why high levels of market or industrial activity would block compulsory laws, urbanization may reflect high potential levels of social conflict over education—especially the fear of an educated, politically mobilized working class (Stone 1969).

Overall, state strength per se (as measured

by its independence) does not significantly affect the timing of compulsory legislation. But state strength in relation to the church—the symbolic union between church and state—is critical in facilitating the enactment of these rules. Also as expected, societal support for education, as measured by the percentage of the population who were Protestant, does not lead to the speedy enactment of national educational legislation.⁸

Enrollment Levels

We begin with the cross-sectional analysis of enrollment ratios in 1870 (see Table 5). As was mentioned earlier, this analysis summarizes the unobserved growth paths of enrollments over much of the nineteenth century. It is thus essential as a baseline for the later longitudinal analysis.

The presence of a national church has a large effect on enrollment ratios in 1870. Its presence boosts enrollments by 22 percent, although the coefficient is not quite double its standard error (almost significant at a .1 level). This effect is in the predicted direction—strong national centers should be able to construct actual schooling systems as well as formalize them in law. State revenue, in contrast, has a weak and insignificant relation to 1870 enrollment levels.

The evidence is much weaker for signs of societal pressures for mass education. The coefficient for Protestant is nearly zero. One reason is that it is difficult to disentangle its effect from that of the national church (since all countries with national churches had mainly Protestant populations). When either variable is omitted from the analysis, the other has a positive coefficient significant at the .05 level; when both are included, the effect of the national church is still large but

⁷ Since the model is log linear, the antilog gives the multiplier of the rate for a unit increase in the variable. For dummy variables, the antilog is especially informative; an antilog of 5, for example, indicates that the rate is 5 times larger when the variable's value is 1 than when it is 0.

⁸ We also ran analyses in which the United States was omitted. The results of these analyses were substantially similar to those already reported.

Table 4. Partial Likelihood Estimates of the Rate of Compulsory Education^a

Variables	Parameter	SE	Antilog
National church	3.212*	1.202	22.6
Independence	1.202	.803	3.3
Urbanization	.082	.050	
Protestantism	-.017	.019	

^a Chi-square, *df* 10.97, 4; significance .026.

* *p* < .05.

not significant, while Protestantism has no effect.

High levels of urbanization are associated with low levels of enrollments in 1870. This finding is consistent with studies of the growth of enrollments in the United States and Europe cited earlier, which found that enrollments generally grew faster in rural areas than in towns.

The biggest surprise in the analysis is the large and significant negative effect of the prior passage of compulsory attendance legislation. Compulsory legislation is associated with a drop of 37 percent in 1870 enrollments. This finding is contrary to the expectation that the variable compulsory would have no effect (if societal and statist pressures for education were mutually exclusive) or a small positive effect (if a national law signals the beginning of state school building).

The longitudinal analysis examines the growth of enrollments between 1870 and 1920 (see Table 6). The first analysis, in which all cases are included, shows that none of the explanatory variables bears a significant relation to the growth in enrollments. That is, given enrollment levels in 1870, neither state strength (the presence of a national church and state revenues) nor Protestantism nor urbanization lead to particularly rapid growth in schooling. Relation-

ships in 1870 (the positive effect of the presence of a national church and the negative effects of urbanization and the passage of compulsory education laws) were thus maintained, at least until 1920.

When we exclude the cases with national churches, however, we find that the coefficient for compulsory education nearly triples in magnitude and becomes significant. This finding reflects the slow growth of such countries as Italy, Portugal, and Spain, which lack a national church but passed compulsory schooling legislation early. Since the cross-sectional analysis showed that countries with compulsory legislation had much lower enrollments in 1870, this finding means that such countries fell even farther behind over the next 50 years.⁹

Overall, our examination of enrollment levels shows some impact of the state on schooling—that states allied to national churches had high enrollments in 1870. But the presence of a national church does not lead to added growth for the period 1870 to 1920, and state revenues never has a significant effect. Protestant beliefs have little effect when the presence of a national church is controlled for. Finally, the key finding is the negative effect of the passage of compulsory legislation—both on enrollments in 1870 and on the subsequent growth in enrollments. The latter finding, however, is true only for states with nonnational churches; in countries with both compulsory schooling laws and national churches, educational expansion is about average between 1870 and 1920. When we put these results together with those of the

Table 5. Cross-sectional Multiple Regression Estimates of Primary Enrollment Ratios, 1870 (*N* = 15)

Variables	Coefficient	SE
National church	22.83	13.86
Compulsory education	-36.17**	10.18
State revenue	-.24	1.20
Urbanization	-1.50*	.70
Protestant	.09	.14
Constant	75.87**	12.93
<i>R</i> ²		.78

* *p* < .10.

** *p* < .05.

⁹ Analyses were again run after the United States was omitted as a potential special case, and again, the omission of this case did not change the pattern of the results. Exploratory analyses in which individual variables were omitted had little effect on the pattern of results. The exception was the effect of the high correlation between a national church and Protestantism.

Table 6. Multiple Regression Estimates of Primary Enrollment Ratios, Pooled Cross Section (1870-1920)^a

Variables	Includes Church Cases (N = 69)		Excludes Church Cases (N = 45)	
	Coefficient	SE	Coefficient	SE
Primary enrollments _{t-1}	.90**	.05	.87**	.07
National church	.95	3.70		
Compulsory education	-2.14	2.50	-5.88**	2.50
State revenue	-.15	.30	.39	.36
Urbanization	.21	.16	-.40	.27
Protestantism	-.01	.04	.05	.06
Constant	8.48*		11.84**	4.96
R ²	.86		.92	

^a Regressors measured at the time of the previous observation.

* $p < .10$.

** $p < .05$.

event-history and cross-sectional analyses, the importance of a national church stands out. Only when the state was allied to a national church did education expand both formally through national compulsory legislation and organizationally through enrollments.

DISCUSSION

Direct state-driven arguments receive weak support in our analysis. Characteristics of the state, such as its revenue and sovereign status, have little effect on enrollments and laws. Rather, the state's connection to religious authority seems critical. Equally, the prevalence of Protestant religious beliefs is not closely associated with enrollments when the presence of a national church is controlled for.

Our results point to two central factors involved in the formal and organizational creation of mass education systems during the period under study. First, the state's alliance with a national church leads to the early construction of educational systems, both in compulsory laws and in actual enrollments. These relationships remain strong even when Protestantism as a religious doctrine is included in the analysis. Second, a compulsory schooling law, in itself, is associated with low enrollments. This effect is unexpected. It seems implausible that national compulsory schooling rules lead to low enrollments.

In line with the arguments of Archer (1979), Collins (1971, 1977), and Rubinson (1986), a framework of conflict and competition provides an explanation for these results. Here, two levels of interaction are involved:

that between church and state and that within society. Different patterns of conflict at these two levels led to distinct paths to mass education. Table 7 summarizes these paths: *statist construction of education*, exemplified by Denmark, Norway, Prussia, and Sweden, where the state created educational systems quite early, both formally and organizationally; *societal construction of education*, illustrated by France, the Netherlands, Switzerland, the United Kingdom, and the United States, where schooling expanded considerably ahead of the state's involvement in education; and *rhetorical construction of education*, as in Greece, Italy, Portugal, and Spain, where states were quick to legislate compulsory education but unable to realize it in actual schooling.

For the cases in which the state constructed mass education, the necessary condition seems to have been the existence of a national church. Compulsory mass schooling, in essence, means the state's direct control of and involvement in education. The crucial factor is the resistance that the state met in issuing these rules: the conflict between the state and other societal groups and institutions (the church being the primary one) over education. Only when there was an alliance between the national church and the state was

Table 7. Paths to Educational Systems in Nineteenth-century Europe

Societal Conflict	State-Church Conflict	
	National Church	No National Church
High	Statist construction of education	Societal construction of education
Low		Rhetorical construction of education

it possible both to legislate and to organize a national educational system. All the cases in this category thus had national churches.

A national church provided both an ideological and an organizational basis for a national mass education system. Its presence simultaneously legitimated the authority of a secular center and emphasized a national identity for its members. The alliance with the national church made it ideologically easy for the state to promote a compulsory mass educational system that would transform all individuals into members of the national polity. The existence of a strong national church also contributed to the state's ability to realize its claims. States were able to provide comprehensive schooling systems through a centralized religious structure that was under their control. The best example is Prussia, where education was managed by the national church for more than a century.

For the cases of societal construction of education, our results suggest a shift in emphasis from the presence of groups with schooling missions to the process of competition over socialization itself. We interpret the negative effects of urbanization on compulsory rules in this context. In urban areas, there are more groups who regard education as important and disagree over its content or who should receive its benefits. Societal opposition was not always urban based, however; local opposition within the decentralized American polity, religious divisions in the Netherlands and Switzerland, and the Catholic Church in France were probably more important. It was difficult for the state to gain control of education in the face of an array of conflicting interests, each resisting centralization and blocking the construction of a single national system.

But schooling grew rapidly in the absence of central state control. In the United States, education was organized through local and state governments rather than at the national level, and in France (in large part), by the Catholic Church. In the Netherlands, Calvinists, Catholics, and secularists had their own school systems. The role of these societal groups thus provides an "unobserved variable" that explains the negative relationship we find between compulsory laws and enrollments. The same local conflict and competition that made a unified national system difficult to achieve made for the rapid expansion of schooling.

What holds these cases together is the presence of active competition and conflict over the provision and content of education, although substantively different actors were involved in different countries. In most cases, the competing sources of education were social groups, with the central state initially taking a minor role. Examples include religious groups in the Netherlands and Great Britain and local groups in the United States and Switzerland. The case of France is an exception; here, the conflict is between the relatively balanced central state and the Catholic Church. If the state had been much stronger, France might have followed the statist path of early compulsory rules and enrollments. If the state had been much weaker, it seems likely that France would have taken the rhetorical path. Without the real threat of a more secular and republican France, the Catholic Church might not have built an alternative system of mass education or opposed the state's legislative action. But the French state and the Catholic Church were sufficiently evenly matched that their competition led to the societal path of the early expansion of enrollments and late national rules.

The United Kingdom provides a second important test case, since it had both a national church and high levels of societal conflict and competition over education. Here, it seems that societal forces were decisive, since locally or privately organized schooling preceded national compulsory laws and the involvement of the state. What this case makes clear, however, is that for a national church to facilitate the state's construction of education, it requires deep organizational roots in the population. Despite its formal linkage to the state, the Anglican Church was only one of several competing religions in the United Kingdom and so could not play the integrating role played by other national churches.

The rhetorical path inverts the process just described. Here, the "unobserved variable" of conflict and competition over education is conspicuously lacking. Few groups had an autonomous stake in schooling, and the state faced little opposition in symbolically constructing a homogeneous national system of education. But the weakness of these states and the absence of autonomous educational activity within these societies meant that enrollments expanded slowly.

It would appear that the Greek, Italian, Portuguese, and Spanish states were as committed to the goal of mass education as were the states of northern Europe. The potential of mass education to build a more homogeneous national society was particularly important in states like Italy and Greece, which were politically unified only in the nineteenth century. But the compulsory schooling laws these states enacted could not be much more than political rhetoric (Edelman 1964). In Greece, Italy, Portugal, and Spain, the landed nobility, the traditional church, and communal groups remained the essential structures of political organization through the nineteenth century. The disconnection of the state from society and the absence of linkages to a national church that could bridge this gap meant that legislative action was not matched by the necessary organizational structure. The way feudal or corporatist structures were organized around informal, particularistic socialization meant that few alternative sources of formal, universalistic schooling were present. The lack of competition over education reversed the conditions found in the societally grounded educational systems, providing a connection between the existence of compulsory rules and low enrollments.

CONCLUSION

Our analysis suggests an explanatory framework that emphasizes the interaction among different institutions in society. We think that competition and conflict between these institutions—the state, the church, and various kinds of societal groups—are most important as explanations of the first mass education systems. When the notion of state-controlled mass education becomes taken for granted, one may need a different kind of theory—one that focuses on the transmission of this institution across societies—to explain striking uniformities (Meyer 1980). As a state-centric model is institutionalized, the “loose coupling” between national rules and enrollments should tighten as weak states gain the ability to achieve their goals and alternative arrangements are delegitimated. In the twentieth century, loose coupling in the educational system has come to mean the disconnection between national rules about the content of education and the reality of what goes on in the classroom, while compulsory

schooling laws and enrollments are synchronized.

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