

**Affinity and Tension between Religious Denominations:
Evidence from Private School Enrolment***

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Abstract

A religious group will typically regard other religious groups differentially, viewing some in a positive light, as close substitutes, and others in a negative light. We define and estimate a model of intergenerational cultural transmission through education that allows for such differentiation. Regressing private school enrolment shares, classified by religious affiliation, on the local distribution of adherents among denominations across counties, we find significant differences among pairs of denominations, which are generally in line with previous observations. Recognizing these differences allows a more nuanced understanding of demand for religious education and of the intergenerational transmission of religious identity.

Keywords: Religious education, religious tension, private education, school choice

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I. Introduction

Previous studies of the intergenerational transmission of religious identity distinguish between an individual's own religious identity and other identities but generally abstract from the different ways in which members of one religious group regard other religious groups. In this paper we address this issue explicitly, recognizing that the variety of Christian denominations in the United States exhibit different degrees of affinity or tension towards each other, which are reflected in their choice of religious education. A child's parents will typically view some denominational groups in a positive light, regarding their schools as close substitutes for schools affiliated with the parents' own denomination, while seeing other groups in a negative light and regarding schools affiliated with those groups as detrimental to their child's spiritual and moral development and to their future relations with the child.

We incorporate this observation in a formal model of intergenerational cultural transmission through education with differentiated religious groups, which we then apply to an empirical analysis of private school enrolment in the United States. Bilateral, possibly asymmetric, patterns of affinity or tension between denominations are identified from cross-county variation in private school enrolment, classified by religious affiliation, as it relates to the local distribution of adherents. The significant variation we find in affinity or tension among different denominations suggests that recognizing these distinctions can contribute to a more nuanced understanding of demand for religious education and, more generally, of other instruments of intergenerational transmission of religious identity.

The theoretical framework we develop for our analysis draws on earlier models of cultural and religious transmission developed by Bisin and Verdier (2000), Gradstein and

Justman (2000, 2002), Cohen-Zada and Justman (2005), Cohen-Zada (2006), Cohen-Zada and Sander (2008), Cohen-Zada and Elder (2011) and Patacchini and Zenou (2011) among others. However, where these analyses largely abstracted from differences in the orientation of “other religious groups” and focused on their size distribution, our analysis explicitly recognizes these differences. They are represented here through a model of spatial differentiation among denominations in which the tension with which adherents of one religious denomination regard another denomination is represented by directional metaphorical distance.

Students of the sociology of religion use this notion of tension in two related ways. In one setting tension refers to mutual conflict between religious denominations; in another setting it describes patterns of exclusion and separation from outsiders that characterize “high-tension” denominations. One finds both types in the United States. A prominent example of the former is the residue of bilateral tension between American Protestants and Catholics that reached its height in the late nineteenth and early twentieth century. Examples of the latter are the high-tension practices of evangelical denominations, directed generally at the outside world, and aimed to sustain their inner cohesion, in contrast to mainline, “low-tension” Protestant denominations.

High-tension groups, in the latter sense, make “strict demands for complete loyalty, unwavering belief, and rigid adherence to a distinctive lifestyle” (Iannaccone, 1994, p. 1181), which may take the form of exclusive worship, dietary laws, modes of dress, marriage within the group, and so on. Finke and Stark (2005) emphasize the role of tension in describing the rise and subsequent relative decline of the Congregationalist and Methodist churches: “When successful sects are transformed into churches, that is, when their tension with the surrounding culture is greatly reduced, they soon cease to grow and eventually begin to decline” (p. 160). Iannaccone (1994) similarly argues that demands for strict observance, in

suitable measure and under appropriate conditions, have proved surprisingly successful in the religious marketplace. Stark and Bainbridge (1985) have shown that excessive strictness can prevent new sects from expanding beyond their initial membership.

Previous studies that systematically polled panels of experts on the relative tension exhibited by Protestant denominations in the United States produced a ranking of these denominations that runs from “low-tension” liberal, mainline denominations (Episcopal, Methodist, Presbyterian) through more moderate mainline denominations, conservatives and evangelicals (Lutheran, Reformed Church, Southern Baptist) to “high-tension” fundamentalists and Pentecostals (Nazarene, Assemblies of God, Seventh Day Adventist, Mormon). Hoge and Roozen (1979, quoted in Iannaccone, 1994) report on a ranking based on responses to the question: "Does the denomination emphasize maintaining a separate and distinctive life style or morality in personal and family life, in such areas as dress, diet, drinking, entertainment, uses of time, marriage, sex, child rearing, and the like? Or does it affirm the current American mainline life style in these respects?" Iannaccone (1994) replicated their study some years later with a different panel of experts, obtaining very similar results, and showed that these rankings correlate strongly with frequency of church attendance (Iannaccone, 1994, Fig. 1).

In our model of intergenerational transmission of religious identity through education, parents recognize the dual function of schools in shaping a child’s religious identity and preparing the child for employment in the workplace. They recognize that the religious affiliation of the school will influence the child’s future religious orientation, and seek to minimize the expected religious friction between themselves and their children, while taking into account each school’s general quality. Theoretical analysis of the model indicates that the share of students attending schools affiliated with, say, Catholic schools, is affected not only by the share of Catholic adherents in the local population but also by the shares of other

denominations, each signed and weighted in accordance with the metaphorical distance that its adherents see as separating them from Catholicism.

Our empirical analysis estimates, separately for primary and secondary education, a fractional logit regression of enrolment in Roman Catholic, Mainline Protestant and Evangelical Protestant schools, across counties in the United States, on the local distribution of adherents among a finer categorization of religious affiliation, which distinguishes among major Protestant denominational groups.¹ Average marginal effects calculated from these estimations estimate the propensity of the adherents of a denominational group, say Episcopalians, to choose a specific type of private religious education for their children, say, Catholic schools, compared to parents without religious affiliation: a positive effect associated Episcopalians in the equation for Catholic schools indicates that Episcopalians view Catholic schools more positively than do parents without religious affiliation; and a negative effect associated with, say, Catholics in the equation for evangelical Protestant schools indicates that Catholics view evangelical Protestant schools more negatively than do parents without religious affiliation. The patterns we find among the different denominations are generally consistent with the earlier findings of expert panels reported in Hoge and Roozen (1979) and Iannaccone (1994).

¹ The denominational groups are: Episcopalian, Presbyterian-Reform, Lutheran, Baptist, Methodist-Pietist, European Free Church, Adventist, Holiness and Pentecostal. They are amalgamations of smaller groups defined in Jones et al. (2002) except that we separated the Holiness group from the Methodists. See note 7 below for our distinction between mainline and evangelical groups in categorizing school affiliations. One classification is not a subdivision of the other: the Methodist, Lutheran and Presbyterian-Reform groups each include both evangelical and mainline denominations.

This attempt to map the geography of religious affinity among Christian denominations is very much in the tradition of Jacques Thisse's many contributions to the metaphorical application of distance, measured in a notional characteristics space, to describe structured patterns of imperfect substitution between goods or services, and his development and application of random utility models to empirical research. Among his many contributions in this field, too numerous to survey here in full, are key methodological contributions to the analysis of product differentiation in a characteristics space (Anderson, de Palma, Thisse, 1989, 1992; de Palma, Ginsburgh, Papageorgiou, Thisse, 1985; Irmen, Thisse, 1998; Gabszewicz, Thisse, 1986); analyses of product positioning and optimal diversity (Ottaviano, Thisse 1999; Schmalensee, Thisse, 1985), and of the pricing of differentiated products (Gabszewicz, Shaked, Sutton, Thisse, 1986; Norman, Thisse, 1996, 1999); research that sharpens the distinction between vertical and horizontal differentiation (Cremer, Thisse, 1991; Justman, Thisse and van Ypersele, 2002, 2005); and metaphorical spatial modeling of political competition (Ginsburgh, Pestieau, Thisse, 1987).²

The rest of the paper is organized as follows: Section 2 presents a theoretical model; Section 3 describes our data; our empirical results are reported in Section 4; and Section 5 concludes.

2. Formal Analysis

Consider a community with a fixed population of households of measure one, indexed by i , each household comprising a parent and a child. The parent of household i has disposable income y_i and belongs to one of $n + 1$ religious categories, where $k = 1, \dots, n$ denotes affiliation to one of n religious denominations and $k = 0$ denotes households without religious

²This is only a partial list. The introductory chapter to this volume provides a comprehensive discussion of the broad range of Jacques Thisse's work in this and other fields of study.

affiliation. We let r_k denote the share of group k in the community, and so $\sum_{k=0}^n r_k = 1$. The distribution of income in group k is characterized by the density function $f_k(y)$. In addition, we posit a matrix of tension between religious groups, $\mathbf{D} = \{D_{jk}\}_{j,k = 0, \dots, n}$ where D_{jk} represents the negative sentiment a parent in group j would feel if her child were to join group k . Note that \mathbf{D} is generally not a symmetric matrix.

We posit $n + 2$ types of schools, indexed by s , where $s = g$ denotes public schools, which are secular; $s = 0$ denotes secular private schools; and $s = 1, \dots, n$ denotes private denominational schools, corresponding to the n religious denominations in the population. In addition to its religious orientation, each school also offers general educational qualities that determine its contribution to the child's personal development, future earning capacity, enjoyment from school, and so on. We assume that in choosing a school for their children parents maximize utility, which is a function of household consumption c ; the instrumental quality q of the school their child attends, determined by such factors as its teacher-pupil ratio, the quality of its teachers, its physical facilities, and the variety of programs and activities it offers; the tension d they anticipate will develop between their own religious identity and the religious identity they expect their children will assume when they grow up, which depends on the type of school they attend; and an additive random term. Thus the utility of household i of religious type j that sends its child to a school of type s is:

$$v_{js}^i = U(c_{is}, q_s, d_{js}) + u_{js}^i \quad (1)$$

where u_{js}^i is independently distributed with mean zero and variance σ_{js}^2 .

As our empirical analysis addresses county-level data rather than individual observations we simplify the exposition by assuming that all households in the community earn the same income y and that all schools of type s in the community charge the same fee T_s and offer the same quality Q_s ; consumption for a household that chooses a school of type s is

thus $y - T_s$.³ In a cross-section of communities the relation between quality offered and fees charged will depend on local income levels, population density, the size of the school-age population and the local supply of teachers, and we take these factors into account in the empirical analysis. Finally, we assume that the child's future religious affiliation is uniquely determined by the type of school attended, $d_{js} = D_{js}$. This simplifying assumption highlights the effect on which we focus here but abstracts from the rich literature, following Bisin and Verdier (2000), which focuses on how the size distribution of religious affiliation affects the intergenerational transmission of religious identity.⁴

After substitution in (1) we have for the utility of household i of religious type j that sends its child to a school of type s :

$$v_{js}^i = U(y - T_s, Q_s, D_{js}) + u_{js}^i \quad (2)$$

Denote its expected value over households in denomination j that choose school type s by V_{js}

$$V_{js} = U(y - T_s, Q_s, D_{js}) \quad (3)$$

and note that $\frac{\partial V_{js}}{\partial D_{js}}$ is negative.

³ One can think of the random disturbance term as subsuming both local variation in household income and local variation in tuition and school quality among schools of the same type, as well as capturing individual variation in the match of schools of type s to the needs of household j in terms of geographic proximity, programs offered and so on.

⁴ An alternative, more comprehensive formulation might let the religious orientation of the child be determined by a weighted average of the home effect, the school effect and a neighborhood effect: $d_{js} = \omega_1 D_{jj} + \omega_2 D_{js} + (1 - \omega_1 - \omega_2) \sum_{k=0}^m r_k D_{jk}$. Following Cohen-Zada (2006) we incorporate a quadratic term in the empirical equations, reflecting a degree of substitution between neighborhood and school effects.

Following MacFadden (1974) we observe that under appropriate assumptions on the error term the probability that a parent affiliated with denomination j chooses a school of type s equals:⁵

$$P_{js}(\mathbf{D}_j) = \exp(V_{js}) / \sum_{s'} \exp(V_{js'}) \quad (4)$$

where \mathbf{D}_j is the j -th row of the inter-denominational distance matrix \mathbf{D} , and the summation in the denominator of the right-hand side, on s' , is over all $n+2$ types of schools. This is the expected value of the share of adherents of religious type j who choose to enroll their children

in a school of type s . As $\frac{\partial V_{js}}{\partial D_{js}} < 0$ we have:

$$\frac{\partial P_{js}}{\partial D_{js}} < 0 ; \text{ and } \frac{\partial P_{js}}{\partial D_{js'}} > 0 \text{ for } s' \neq s \quad (5)$$

The share of schools of type s in local school enrolment is:

$$R_s(\mathbf{r}, \mathbf{D}) = \sum_{j=0}^n r_j P_{js}(\mathbf{D}_j) = \sum_{j=1}^n r_j P_{js}(\mathbf{D}_j) + (\mathbf{1} - \sum_{j=1}^n r_j) P_{0s}(\mathbf{D}_0) \quad (6)$$

The marginal effect of the share of denomination j in the local population, r_j , on the enrolment share of schools of type s , R_s , is then:

$$\frac{\partial R_s(\mathbf{r}, \mathbf{D})}{\partial r_j} = P_{js}(\mathbf{D}_j) - P_{0s}(\mathbf{D}_0) \quad (7)$$

which is declining in D_{js} from (5).

⁵ McFadden (1974) shows that if ϵ_i^s follows a double exponential distribution with variance equal to $6/\pi^2$ then the logarithm of the odds ratio between attending two different types of school equals the difference between the expected values of their utilities, which implies (4).

3. Data

Our empirical analysis regresses enrolment in private schools, separately for each of three categories—Roman Catholic, mainline Protestant and evangelical Protestant—on the distribution of adherents among religious groups across counties in the United States.⁶ We use data aggregated at the county level, which has the essential advantage of including all students attending private schools in the United States. Individual survey data would allow us to incorporate individual controls in our analysis but the large majority of counties would not be represented in the sample or have very few observations, even for broadly defined categories, and would not allow us to explore patterns of substitution or tension among more finely classified denominational groups.

⁶ The data refer to “total adherents ... including full members their children and the estimated number of other participants who are not considered members...” The number of school-age children by denomination is arguably a more appropriate measure for our purpose but no such data are available at the county level as far as we know. Traditionally, Catholics have had a higher ratio of children to adults but the difference between Catholics and Protestants has been narrowing for some time now (D'antonio and Cavanaugh, 1983; Bahr and Chadwick, 1988); and Mosher et al. (1992) find that while Hispanic Catholics continue to have higher fertility rates this difference may have reversed among non-Hispanic white women. We include in our regressions the share of Hispanics in the local population, which must capture other effects, too. Overall, though Catholics have a higher proportion of young adults and a lower proportion of older members than mainline Protestants, with evangelical Protestants in between, the share of adults aged 30-49, who are likely to be parents of school-age children, is similar for the three groups (36%, 33% and 36% respectively; Pew Forum on Religious and Cultural Life, 2011).

Our analysis combines data from several sources. County data on elementary and secondary enrolment by school type were created using school-level data from the Private School Survey of 1999-2000. For each school, this survey reports enrolment by grade level, which allows us to distinguish between elementary (K-8) and secondary enrolment (9-12). The survey also reports for each private school whether it is religious or non-sectarian and to which denomination it belongs. It identifies twenty eight types of religious schools, which we aggregate into four broader categories: Catholic, mainline Protestants, evangelical Protestants and other religions.⁷ We supplemented these data with data on elementary and secondary enrolment in public schooling taken from the Public Elementary/Secondary School Universe Survey (1999-2000). This variable allows us to calculate the enrolment rate for each type of private school as a share of total enrolment (public and private). Thus we have six types of schools: public, private non-sectarian, Catholic, mainline Protestant, evangelical Protestant and other religions. We estimate individual equations for Catholic, mainline Protestant and evangelical Protestant enrolment shares, while using all six categories when estimating demand for schooling as a system of equations.

Data on the share of each denomination in the population of each county are taken from Religious Congregation and Membership in the United States 2000 (Jones et al., 2002), which provides county data on the shares of each of 149 denominations in the year 2000. We

⁷ *Mainline Protestant* schools includes Calvinist, Disciples of Christ, Episcopal, Friends, Evangelical Lutheran Church in America, Methodist, Presbyterian; *Evangelical Protestant* schools includes African Methodist Episcopal, Amish, Assembly of God, Baptist, Brethren, Christian (no specific denomination), Church of Christ, Church of God, Church of God in Christ, Lutheran Church – Missouri Synod, Wisconsin Evangelical Lutheran Synod, Other Lutheran, Mennonite, Pentecostal, Seventh-Day Adventists; schools affiliated with *other religions* include Greek Orthodox, Islamic, Jewish, Latter Day Saints and others religions.

aggregate these shares to our four broad categories—Catholics, evangelical Protestants, mainline Protestants and other religions—using the key provided therein. We combined these data with demographic variables taken from the County and City Data Book 2000, and added data on the share of the county population living in rural areas, taken from the STF3 files of the 2000 census. In addition, in order to better control for supply side effects, we also use the Private School Survey of 1989-1990 to calculate the density of each type of school in each county in 1990, ten years prior to the period of the analysis, aggregating the number of schools by type as above, and then dividing this number by the area of the county.

Table 1 presents summary statistics of our county level data in five categories: socio-economic and demographic characteristics, adherents by broad categories, adherents by our finer classification, and school enrolment, all for 2000, and school densities for 1990. National shares of adherents and school enrolment are reported in the rightmost column. The data on adherents by broad categories show that the average county shares of Catholics and mainline Protestants in the population were each about 14%; the average share of evangelical Protestants was about 23%; and of other religions, 2.5%, each with large variation. These simple averages of county shares (not weighted by population) differ substantially from national shares, reducing the number for Catholics, who reside disproportionately in large urban counties and generally increasing it for Protestants, who are more widely distributed. Average enrolment rates at the county level are lower than national rates for all three groups, reflecting the tendency of religious private schools to gravitate to more populous urban areas where a critical mass can be achieved more readily. Catholic schools exhibit the highest enrolment shares among religious schools, both locally and nationally, followed by evangelical Protestant schools and mainline Protestant schools. Non-sectarian schools account for less than one sixth of all private-school enrolment in the United States—more than mainline Protestant schools, less than evangelical Protestant schools.

The geographical dispersion of adherents and enrolment for the three major religious groups is presented graphically in three maps, in Figures 1, 2 and 3. The patterns are familiar. Catholic adherents and enrolment is concentrated in the Northeast, Midwest, Southwest and Florida, and largely absent in the rest of the South; evangelical Protestant adherents and schools are distributed more evenly across the country but largely absent from the Northeast; and mainline Protestant adherents, while absent to a large degree from the Western states are distributed evenly over most of the rest of the country, with lower school enrolment than either Catholics or evangelical Protestants.⁸ These patterns are also reflected in the data in Tables 2, 3 and 4. As Table 2 shows, each of these broad groups has adherents in 95% of all counties or more, while 40% of all counties have Catholic schools, 60% have evangelical Protestant schools and only 16% have mainline Protestant schools. Table 3 reports correlations between adherent shares. The large negative correlation between Catholics and evangelical Protestants reflects the patterns illustrated by the maps, with Catholics predominant in the Northeast, where evangelical Protestants are largely absent, and vice versa in the South. Enrolment in private religious schools exhibits a very different pattern, reported in Table 4, which shows modestly positive correlations between each pair of religious groups, reflecting the gravitation of all private schools to more densely populated areas.

Finally, Table 5 presents correlations between adherent shares and enrolment shares among Catholics, evangelical Protestants and mainline Protestants. These correlations preview some of the regression results. They shows a strong negative correlation, of -0.28 , between the share of evangelical Protestants in the population and the local Catholic enrolment rate, which contrasts with the small, positive correlation, of 0.04 , between the

⁸ We control for these patterns in our regressions through the use of state fixed effects while also reporting, for comparison, estimates without fixed effects.

share of mainline Protestants in the county and the local Catholic enrolment rate, suggesting differences in tension between evangelical and mainline Protestants in relation to Catholics. Note also that the negative correlation between the share of evangelical Protestants in the population and the local Catholic enrolment rate is of a much greater magnitude than the negative correlation between the share of Catholics in the population and the evangelical Protestant enrolment rate, indicating that the metaphorical distance between Catholics and evangelical Protestants may not be symmetric.

4. Empirical Estimation

We estimate separate fractional logit equations for each of three types of religious private schools: Catholic, mainline Protestant and evangelical Protestants, across US counties, weighting each county by its population; and for comparison a multinomial model that simultaneously estimates demand for all six types of schools, as a system. Fractional logit estimation is a quasi-maximum likelihood method that yields consistent estimates of the parameter values when the dependent variable is a fraction between zero and one, and either or both of the end values appear with positive probability.⁹

Each equation is estimated separately for elementary (K-8) and secondary (9-12) schools using four specifications: for a classification of religious adherents by four broad categories (Catholics, evangelical Protestants, mainline Protestants and other religions) and for a finer classification of Protestant denominations, each with and without state fixed

⁹ This is the case here: for each type of religious school we have many counties with zero enrolment. See Papke and Wooldridge (1996) for a general exposition of fractional logit estimation, which draws on earlier work by Gourieroux, Monfort and Trognon (1984).

effects.¹⁰ The missing category of religious affiliation comprises individuals who do not belong to any denomination. In equations using the broader categories of local adherents, we follow Cohen-Zada (2006) and Cohen-Zada and Elder (2011) in including a squared term for the share of adherents of the same denomination as the type of school. In all our estimations we control for the following set of county-level variables: median income, average number of persons per household, population, population density, percent of population living in a rural area, percent of population at school age, percent of population African-Americans, percent of population Hispanics, the pupil/teacher ratio and a ten-year lagged measure of the density of each type of schooling in each county.

Formally, for each school type s we maximize the quasi-likelihood function:

$$\mathcal{L}(\beta_s) = \sum_{n=0}^N \{ R_{sn} \log \left[\frac{\exp(x_{sn}\beta_s)}{1 + \exp(x_{sn}\beta_s)} \right] + (1 - R_{sn}) \log \left[\frac{1}{1 + \exp(x_{sn}\beta_s)} \right] \} \quad (12)$$

over the vector of parameters β_s , where n is a county index. The dependent variable, R_{sn} , is the share of enrolment in schools of type s in county n out of total student enrolment in county n ; and x_{sn} is a vector of explanatory county and school-type variables, which includes the share of adherents of each denomination in the population of county n , a squared term for the share of local adherents in the population of the same denomination as the type of school (when included), the county-level controls described above, and a vector of state fixed effects

¹⁰ We report both sets of results as using fixed effects in non-linear models may be problematic due to the incidental parameter problem while omitting them could induce spurious correlation between the demand for each type of schooling and the religious market shares, as unobserved state-specific factors may influence the demand for a particular type of schooling. We have on average about sixty counties per state, and are able to estimate our coefficients with precision. Furthermore, including state fixed effects reduces the standard errors of the estimated coefficients and thus we gain in terms of efficiency.

(when included). Non-adherents are the omitted denominational group so that the coefficient of denomination j 's adherent-share reflects the effect of replacing an adherent of denomination j , in the population, by a non-adherent.

In the following tables we report average marginal effects calculated from the fractional logit estimations, which correspond directly to the partial derivatives $\partial R_s / \partial r_j$ in equations (7) and (11): the marginal effect of an increase of one percent in the share of adherents of denomination j (and a concomitant decrease of one percent in the share of non-adherents, the left-out category) on the percent share of students enrolling in a school of type s .¹¹ As we showed in the exposition of the model, $\partial R_s / \partial r_j$ is declining in D_{js} , the metaphorical distance between denomination j and the religious group with which schools of type s are affiliated.¹² Thus a positive marginal effect for denomination j in the equation for school type s indicates that adherents of denomination j view an education in school type s more positively (compared to other options) than non-adherents; and vice versa for a negative marginal effect.

Table 6 reports the results for the demand for Catholic schooling. Considering first the elementary school equations estimated for the broad denominational definitions, reported in

¹¹ Where the estimation includes a squared term for a broadly defined denomination, the single marginal effect reported in the tables is derived from the estimated coefficients of the linear and squared terms.

¹² The average marginal effect of an explanatory variable X_{sj} on the conditional mean of the enrolment share is derived from the fractional logit estimation as follows:

$$\text{plim } \partial E(R_s | X_s = x_s) / \partial X_{sj} = \frac{\exp(x_{sn} \beta_s)}{[1 + \exp(x_{sn} \beta_s)]^2} \beta_{sj}, \text{ averaged over all observations in the sample.}$$

columns (1) and (2), we find a large, significantly positive Catholic effect;¹³ no significant effect for mainline Protestants, indicating no significant difference in their attitude to Catholic schools from non-adherents, who do not belong to any denomination (the omitted category); and significant negative effects for evangelical Protestants (for the regression with state fixed effects) and for adherents of “other religions”, indicating that they have a more negative attitude towards Catholic schools than do non-adherents. Comparing the two columns we find the results generally similar with the noted exception of the evangelical Protestant effect.

Columns (3) and (4) of Table 6 report the results of the elementary school equations, estimated for the finer classification of Protestant denominations, omitting the squared term for the Catholic adherents share.¹⁴ The denominations are ordered in accordance with earlier findings of expert panels from low-tension, mainline denominations to higher tension evangelical denominations. When state fixed effects are included, we obtain significant positive effects for the Episcopalian and Lutheran shares—the size of the Episcopalian marginal effect is especially large—and significant negative effects of similar size for Baptists, Methodist-Pietists and other religions. Moreover, all the effects of the mainline denominations are positive and those of the evangelical groups are negative. When state fixed effects are omitted only the marginal effects of Baptist, Pentecostals and other religions are negative and significant, and the negative effect of Pentecostals is large.

¹³ Our estimation also confirms the well-established existence of a significant concave effect of the Catholic adherents’ share on the enrolment share (Cohen-Zada, 2006)

¹⁴ We do this to maintain uniformity with the parallel equations for mainline and evangelical Protestant schools using the finer classification of Protestant denominations. We omit the squared term in those equations because the definition of school affiliation does not match the definition of any adherent group.

The right-hand side of Table 6 reports the results for secondary Catholic schools. In columns (5) and (6), where the broader classification of Protestant denominations are used, the significant positive effect of the Catholic adherent share is retained as are the signs of the other denominational groups, though only the effect of other religions, in the regression without state fixed effects, is significant (at the 5% level). The magnitude of the effects is generally similar at the elementary and secondary levels, but measured more precisely for elementary schools. When the finer classification of denominations is used we find again in column (7), where state fixed effects are included, a pattern similar to the elementary school equations: significant positive effects for the Episcopalian and Lutheran shares and significant negative returns for the Baptist and Methodist-Pietist shares; and again all the effects for the mainline denominations are positive and all those for the evangelical groups are negative except for European Free Church. When state fixed effects are omitted the effects are qualitatively similar but measured with less precision, though the negative effect of the Pentecostal and other-religions shares are now significant.

Table 7 reports the results for the demand for mainline Protestant schooling. Considering first the elementary school equations estimated for the broad denominational definitions with state fixed effects, reported in column (1), the marginal effects of the mainline Protestant adherents' share is positive and significant, as are the marginal effects of the Catholic and evangelical Protestant shares, indicating that Catholic and evangelical Protestant parents have a stronger preference for the low-tension religiosity of mainline Protestant schools than parents without religious affiliation, with the evangelical Protestant effect larger than the Catholic effect. When state fixed effects are omitted, in column (2), both the mainline and evangelical Protestant effects remain significant and positive while the Catholic share is no longer significant.¹⁵

¹⁵ The negative squared mainline Protestant term is significant only without fixed effects.

Columns (3) and (4) of Table 7 report the results of the elementary school equations estimated for the finer classification of Protestant denominations. When state fixed effects are included, we obtain large significant positive effects, of roughly similar size, for the Episcopalian, Presbyterian-Reform, and Pentecostal shares; a smaller significant positive effect for the Methodist-Pietist share; and no significant negative effects. The absence of significant negative effects is consistent with the low tension generally associated with mainline Protestant denominations, though it could also reflect the relatively small number of counties with mainline Protestant schools. In column (4), where state fixed effects are omitted, the Episcopalian effect is again positive and significant and doubles in size, the effect of the Presbyterian-Reform share is largely unchanged, the Baptist share is now significant and positive, and the Methodist-Pietist and Pentecostal shares are no longer significant, though the size of these effects does not change markedly. Again there are no significant negative effects.

The right-hand side of Table 7 reports the results for secondary mainline Protestant schools. The estimation for the broader classification of Protestant denominations with state fixed effects (column 5) finds no significant effects; when state-fixed effects are omitted the Catholic share is positive and significant (column 6). The results for the finer classification of Protestant denominations with state fixed effects, reported in column (7), are generally similar to the elementary school results: significant positive effects only for the Episcopalian and Presbyterian-Reform shares, with a larger effect for Episcopalians, and no significant negative effects. In column (8), where state fixed effects are omitted, the results are very similar except that the share of Catholics is now significant.

Next, we estimate the demand for evangelical Protestant schools, reported in Table 8. Considering first the elementary school equations estimated for the broad denominational definitions, reported in columns (1) and (2), we find a large significant positive effect of the

evangelical Protestant adherents' share on the share of enrolment in evangelical Protestant schools,¹⁶ while the effects of the Catholic and mainline Protestant shares are not significant and the effect of the share of adherents of other religions is negative, and significant when state fixed effects are omitted. However, when a finer classification of Protestant denominations is used, in columns (3) and (4), we find in both columns significant negative effects for Catholics and other religions, where the negative effect of other religions is substantially stronger than the negative Catholic effect; and a negative effect for the Episcopalian share when state fixed effects are omitted, reflecting the negative tension that adherents of these religions anticipate from sending their children to evangelical Protestant schools. At the same time, we find large significant positive effects for the European Free Church and Adventist shares, and significant but weaker positive effects for the Presbyterian-Reform, Lutheran, Holiness and Pentecostal shares, reflecting the positive perception of adherents of these groups of evangelical Protestant schools, compared to the perception of non-adherents.

The right-hand side of Table 8 reports the results for secondary evangelical Protestant schools. In columns (5) and (6), which report results for the broader classification of denominations, we find a significant positive effect of the evangelical Protestant share on enrolment in evangelical Protestant schools and significant negative effects of the Catholic, mainline Protestant and other religions shares—again the effect of other religions is the largest of the negative effects—reflecting the negative tension that adherents of these groups anticipate if they send their children to evangelical Protestant schools, compared to the perception of non-adherents. When the finer classification is used, in columns (7) and (8), the effects of the Catholic and other-religion shares are again negative and significant, with the

¹⁶ We also find a significant concave effect for both elementary and secondary education, which accords with previous findings.

effect of other religions again significantly larger while the shares of the three mainline Protestant denominations are not statistically significant. Among the evangelical Protestant denominations we find again large significant positive effects for the European Free Church and Adventist shares; the weaker effects of other Protestant denominations are now insignificant; and when state fixed effects are omitted, we find an unexpected negative effect for the Methodist-Pietist share.

Finally, we compare the results of separate fractional logit estimates of our equations to a multinomial model that estimates them as a system, to determine whether estimating these equations as a system would change our findings. We report the results for the finer classification of Protestant denominations—for elementary schools in Table 9 and for secondary schools in Table 10. Both tables present the coefficients from the fractional logit estimates rather than the marginal effects derived from these coefficients reported in Tables 6, 7 and 8, as this seemed the more direct comparison. The multinomial model requires that all shares sum to one, so we included in the estimation all six categories of schools and report here three for which we estimated separate equations: Catholic, mainline Protestant and evangelical Protestant, omitting public schools, secular private schools, and schools affiliated with other religions. Due to the limitations of the multinomial model we omitted state fixed effects and county weights, and re-estimated the separate fractional logit equations to maintain comparability. The results for the separate estimations are presented on the left-hand side of each table, and for the multinomial estimation on the right-hand side. They are extremely similar in every respect but one: the separately estimated unweighted equation for secondary mainline Protestant schools did not converge.¹⁷

¹⁷ Tables 6, 7 and 8 report the results of weighted estimations, which did converge. We re-estimated unweighted equations to maintain comparability with the multinomial estimates.

5. Summary

We develop a simplified model of intergenerational cultural transmission through education with differentiated religious groups, which indicates that the negative (or positive) regard in which adherents of religious denomination j regard another denomination, k , should have a negative (or positive) effect on the impact of the share of denomination j in the local population on local enrolment in private religious schools affiliated with denomination k . We then regress private school enrolment shares, classified by religious affiliation, on the local distribution of adherents among denominations, across counties in the United States, to identify patterns of tension or affinity.

Our findings indicate patterns of bilateral tension or affinity among denominations that are generally consistent with previous case studies and panel surveys, and with other measurable indicators that characterize high-tension denominations such as frequency of church attendance. We find evidence of bilateral tension between Catholics and evangelical Protestants both in the multiplicity of negative indications associated with evangelical Protestant groups in regard to Catholic education, and in the negative effect associated with Catholics in regard to enrolment in evangelical Protestant schools. This stands in contrast to the strong affinity of Episcopalians to Catholic education and the affinity of Catholics to mainline Protestant education. The generally low tension associated with mainline Protestant groups is consistent with the absence of significant negative effects on the part of any denomination in regard to mainline Protestant schooling, though this could also reflect the smaller number of counties with mainline Protestant schools.

The evidence these findings offer on the metaphorical distance between different religious groups highlights the importance of these distinctions for understanding both demand for religious education and the intergenerational transmission of religious identity. They indicate directions for further theoretical development of such models and suggest

avenues for structural empirical analysis using individual data, where such data is available. Methodologically, they provide yet another illustration of the wide range of issues that models of geographic differentiation, which Jacques Thisse has done so much to develop and refine, can illuminate and clarify our understanding of the organization of society.

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Figure 1. Share of Catholics in the population and enrolment in Catholic schools, by county

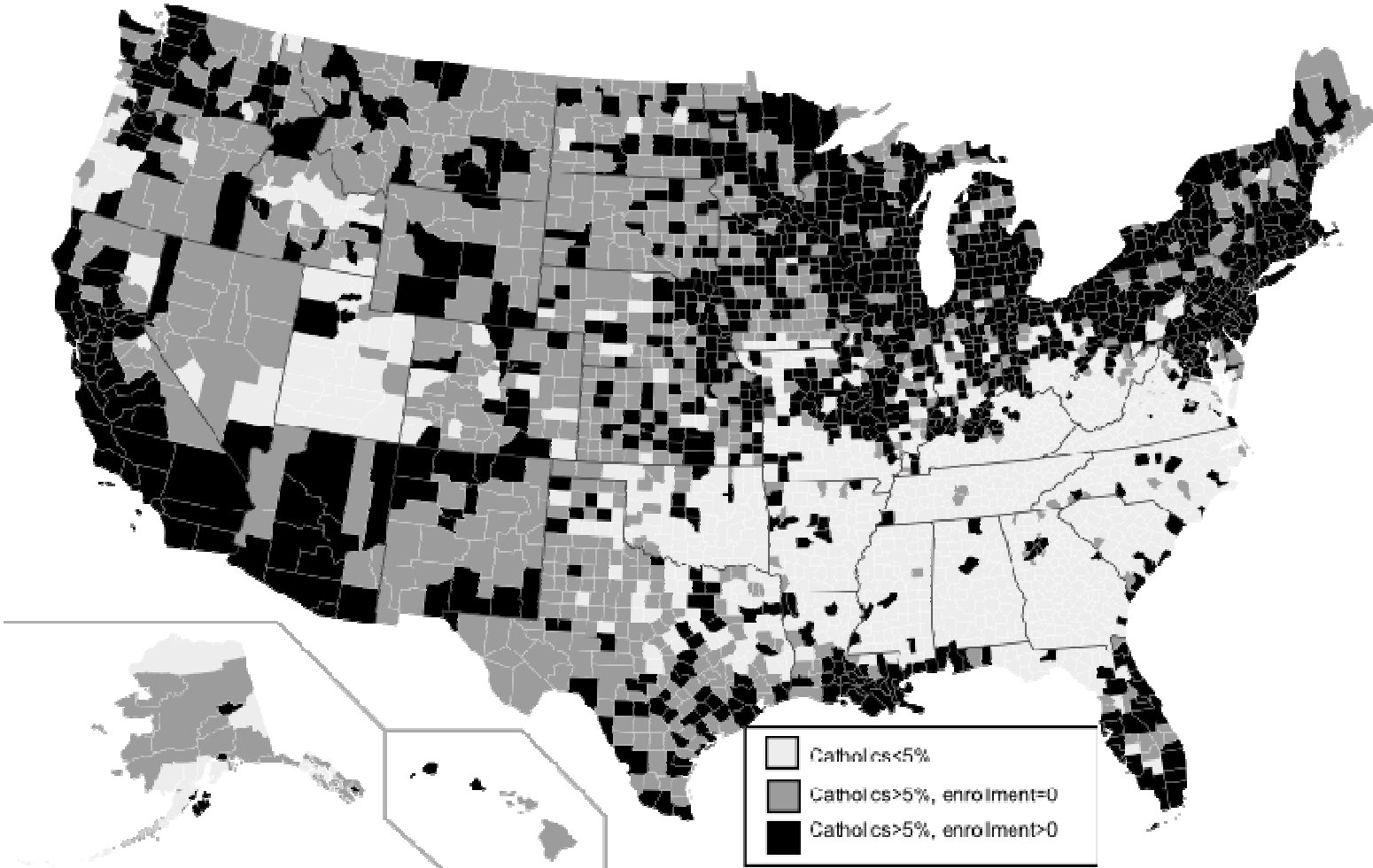


Figure 2. Share of evangelical Protestants in the population and enrolment in evangelical Protestants schools, by county

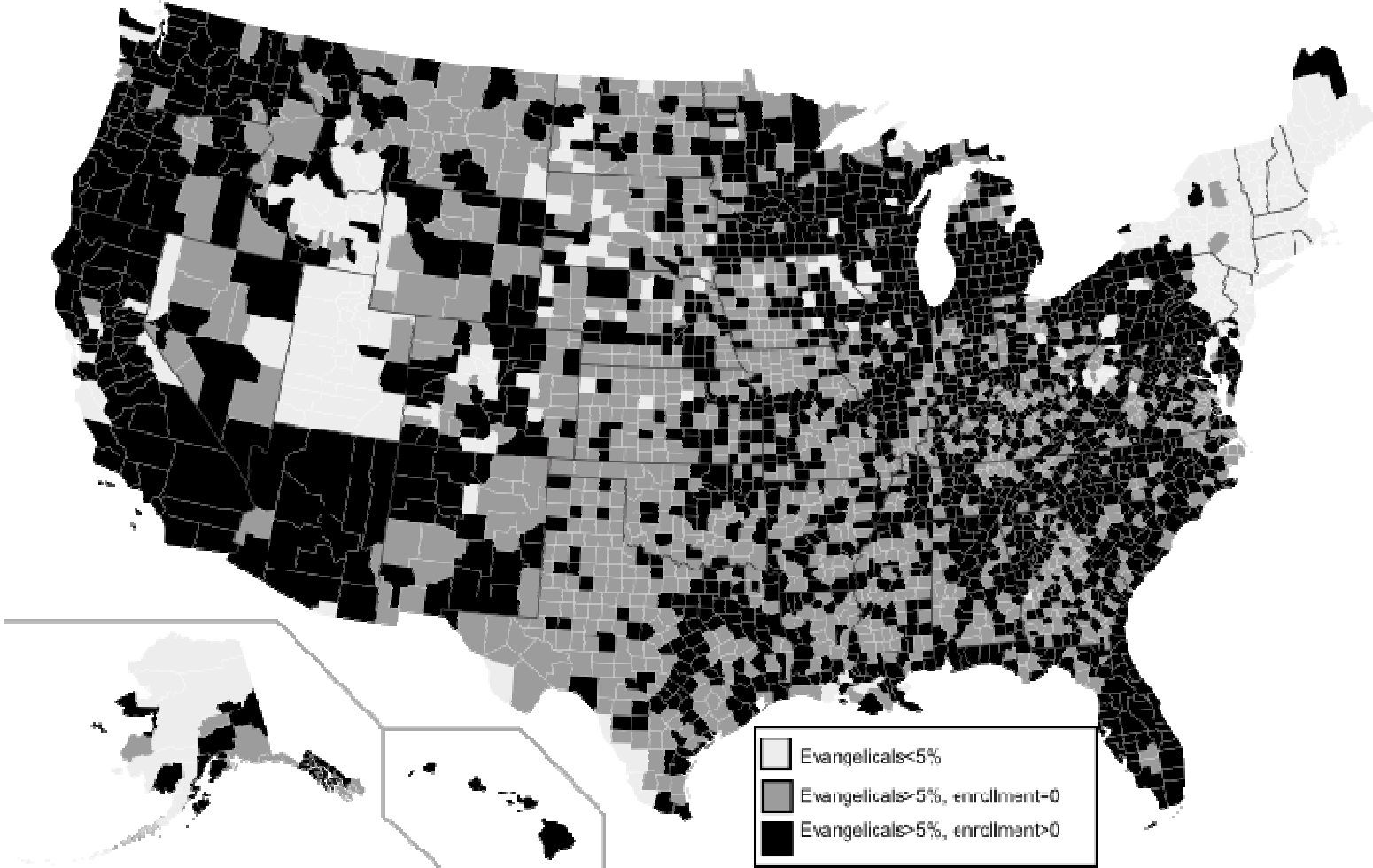


Figure 3. Share of mainline Protestants in the population and enrolment in mainline Protestants schools, by county

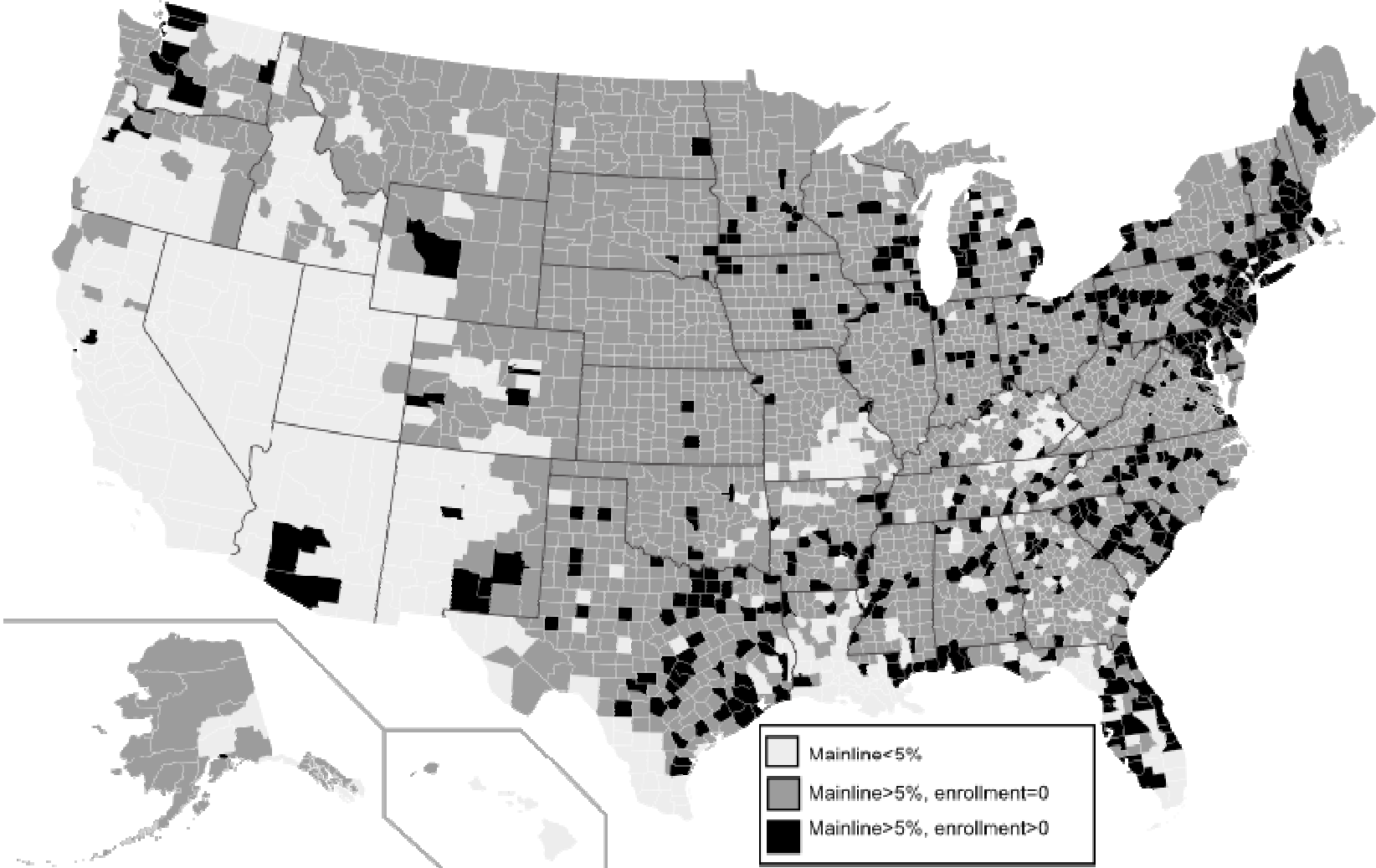


Table 1. Summary Statistics (all data are for the year 2000 except school densities)

Variable	<i>number of observations</i>	<i>mean</i>	<i>standard deviation</i>	
<i>Socio-economic and demographic characteristics by county</i>				
Median income	3139	32,631	8,056	
Population	3139	89,650	292,548	
Population density (people per square mile)	3139	244	1,667	
Pupils per teacher ratio	3127	13.75	4.71	
Average number of people per household	3139	2.54	0.20	
Percent of population living in rural areas	3138	59.9	30.1	
Percent of population at school age (5 to 17)	3139	19.20	2.47	
Percent African-Americans in county	3139	8.77	14.52	
Percent Hispanic in county	3139	6.18	12.00	
<i>Religious composition by broad categories, by county, %</i>				
				<i>national share</i>
Catholics	3138	13.7	14.9	22.0
Mainline Protestants	3138	14.3	11.4	9.6
Evangelical Protestants	3138	22.7	16.9	14.2
Other religions	3138	2.4	8.5	4.4
Non-adherents	3138	47.0	18.6	50.2
<i>Religious composition, Protestant denomination groups, by county, %</i>				
				<i>national share</i>
Episcopalians	3138	0.60	1.11	0.82
Presbyterian-Reform	3138	2.36	3.54	2.20
Lutheran	3138	5.41	10.61	2.87
Baptist	3138	17.80	17.37	9.86
Methodist-Pietist	3138	6.64	5.02	3.89
European Free Church	3138	0.59	1.99	0.27
Adventist	3138	0.27	0.56	0.34
Holiness	3138	0.98	1.57	0.83
Pentecostal	3138	2.00	1.93	1.92
<i>Enrolment shares in total school enrolment, by county, %</i>				
				<i>national share</i>
Catholic schools	3120	2.11	4.10	4.81
Mainline Protestant schools	3120	0.21	1.21	0.47
Evangelical Protestant schools	3120	1.80	3.08	2.66
Non-sectarian schools	3120	0.90	2.78	1.56
<i>Density of schools per square mile, by county, %, 1990</i>				
Catholic schools	3139	0.010	0.088	
Mainline Protestant schools	3139	0.001	0.010	
Evangelical Protestant schools	3139	0.007	0.037	
Non-sectarian schools	3139	0.004	0.059	

Table 2: Distribution of enrolment and adherents by county

	adherents>0 enrolment>0	adherents>0 enrolment=0	adherents=0 enrolment>0	adherents=0 enrolment=0	Total
Catholic	1248	1738	4	149	3139
Mainline Protestant	493	2627	0	19	3139
Evangelical Protestant	1854	1258	0	27	3139

Table 3. Correlations between denominations in shares of adherents

	Catholic	Mainline Protestant	Evangelical Protestant
Catholic	1		
Mainline Protestant	0.107 (0.000)	1	
Evangelical Protestant	-0.454 (0.000)	-0.161 (0.000)	1

P-values reported in parenthesis.

Table 4. Correlations between denomination enrolment shares

	Catholic	Mainline Protestant	Evangelical Protestant
Catholic	1		
Mainline Protestant	0.046 (0.011)	1	
Evangelical Protestant	0.064 (0.000)	0.086 (0.000)	1

P-values reported in parenthesis.

Table 5. Correlations between adherent and enrolment shares

	Catholics adherents	Mainline adherents	Evangelical adherents
Catholic enrolment	0.492 (0.000)	0.040 (0.025)	-0.281 (0.000)
Mainline Protestant enrolment	-0.002 (0.901)	0.033 (0.067)	0.020 (0.263)
Evangelical Protestant enrolment	-0.040 (0.026)	-0.039 (0.031)	-0.011 (0.533)

P-values reported in parenthesis.

Table 6. Enrolment in Catholic Schools Regressed on Local Shares of Adherents, Weighted Fractional Logit, Average Marginal Effects.

	Elementary				Secondary			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Catholic	0.170*** (0.015)	0.178*** (0.013)	0.126*** (0.016)	0.142*** (0.013)	0.141*** (0.021)	0.156*** (0.013)	0.103*** (0.020)	0.128*** (0.016)
Mainline	0.003 (0.022)	0.033 (0.027)	- -	- -	0.012 (0.045)	0.011 (0.035)	- -	- -
Episcopalians	- -	- -	0.456*** (0.174)	-0.180 (0.239)	- -	- -	1.231*** (0.241)	0.410 (0.410)
Presbyterian-Reform	- -	- -	0.010 (0.040)	0.036 (0.050)	- -	- -	0.028 (0.085)	0.066 (0.072)
Lutheran	- -	- -	0.057*** (0.015)	0.028 (0.026)	- -	- -	0.064* (0.033)	-0.003 (0.036)
Evangelical	-0.050** (0.024)	-0.010 (0.028)	- -	- -	-0.047 (0.035)	-0.012 (0.029)	- -	- -
Baptist	- -	- -	-0.109*** (0.024)	-0.058* (0.032)	- -	- -	-0.093** (0.039)	-0.047 (0.032)
Methodist-Pietist	- -	- -	-0.080* (0.048)	0.083 (0.054)	- -	- -	-0.129** (0.064)	-0.005 (0.083)
European Free Church	- -	- -	-0.059 (0.048)	0.009 (0.041)	- -	- -	0.062 (0.097)	0.153 (0.094)
Adventist	- -	- -	-0.125 (0.225)	-0.290 (0.285)	- -	- -	-0.225 (0.355)	-0.124 (0.375)
Holiness	- -	- -	-0.009 (0.077)	0.102 (0.078)	- -	- -	-0.024 (0.191)	0.100 (0.164)
Pentecostal	- -	- -	-0.088 (0.086)	-0.334*** (0.115)	- -	- -	-0.087 (0.140)	-0.381** (0.170)
Other religions	-0.090** (0.039)	-0.108*** (0.024)	-0.086** (0.036)	-0.132*** (0.025)	-0.037 (0.065)	-0.057** (0.027)	-0.014 (0.062)	-0.103*** (0.036)
State fixed effect	Y	N	Y	N	Y	N	Y	N
Observations	3,119	3,119	3,119	3,119	3,106	3,106	3,106	3,106

*** p<0.01, ** p<0.05, * p<0.1 Demographic controls include median income, density of population, percent of population at school-age, percent African-Americans in the population, percent Hispanics in the population, population, percent of population that lives in a rural area, average number of persons per household, and pupil to teacher ratio. We also include state fixed effects and ten-year lagged measures of the density of each type of schooling. Robust standard errors, clustered by state, are in parentheses.

Table 7. Enrolment in Mainline Protestant Schools Regressed on Local Shares of Adherents, Weighted Fractional Logit, Average Marginal Effects.

	Elementary				Secondary			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Catholic	0.008** (0.003)	0.001 (0.003)	0.004 (0.003)	-0.003 (0.003)	0.002 (0.005)	0.010*** (0.002)	0.000 (0.005)	0.007*** (0.002)
Mainline	0.031** (0.013)	0.018** (0.008)	- -	- -	0.018 (0.015)	0.012 (0.008)	- -	- -
Episcopalians	- -	- -	0.053* (0.032)	0.100** (0.047)	- -	- -	0.114*** (0.036)	0.118*** (0.035)
Presbyterian-Reform	- -	- -	0.061*** (0.013)	0.053*** (0.010)	- -	- -	0.057*** (0.009)	0.043*** (0.011)
Lutheran	- -	- -	-0.002 (0.016)	0.014 (0.011)	- -	- -	-0.021 (0.020)	-0.001 (0.013)
Evangelical	0.021*** (0.007)	0.018*** (0.006)	- -	- -	0.012 (0.008)	0.011 (0.007)	- -	- -
Baptist	- -	- -	0.009 (0.007)	0.011* (0.005)	- -	- -	0.001 (0.007)	0.005 (0.006)
Methodist-Pietist	- -	- -	0.020* (0.011)	-0.012 (0.015)	- -	- -	-0.012 (0.017)	-0.029 (0.020)
European Free Church	- -	- -	-0.011 (0.018)	-0.016 (0.021)	- -	- -	-0.031 (0.021)	-0.022 (0.021)
Adventist	- -	- -	-0.095 (0.070)	-0.094 (0.085)	- -	- -	-0.020 (0.093)	-0.071 (0.112)
Holiness	- -	- -	-0.060 (0.054)	-0.022 (0.034)	- -	- -	-0.066 (0.068)	0.002 (0.040)
Pentecostal	- -	- -	0.057** (0.029)	0.051 (0.034)	- -	- -	0.043 (0.033)	0.034 (0.038)
Other religions	-0.006 (0.011)	0.001 (0.007)	0.000 (0.007)	0.004 (0.006)	-0.009 (0.011)	-0.001 (0.008)	0.003 (0.007)	0.002 (0.006)
State fixed effect	Y	N	Y	N	Y	N	Y	N
Observations	3,119	3,119	3,119	3,119	3,106	3,106	3,106	3,106

*** p<0.01, ** p<0.05, * p<0.1 Demographic controls include median income, density of population, percent of population at school-age, percent African-Americans in the population, percent Hispanics in the population, population, percent of population that lives in a rural area, average number of persons per household, and pupil to teacher ratio. We also include state fixed effects and ten-year lagged measures of the density of each type of schooling. Robust standard errors, clustered by state, are in parentheses.

Table 8. Enrolment in Evangelical Protestant Schools Regressed on Local Shares of Adherents, Weighted Fractional Logit, Average Marginal Effects.

	Elementary				Secondary			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Catholic	-0.009 (0.016)	-0.010 (0.017)	-0.027** (0.012)	-0.041*** (0.012)	-0.018** (0.009)	-0.016* (0.009)	-0.025*** (0.008)	-0.027*** (0.007)
Mainline	0.008 (0.014)	0.000 (0.018)	- -	- -	-0.034** (0.015)	-0.028* (0.014)	- -	- -
Episcopalians	- -	- -	-0.065 (0.101)	-0.193* (0.109)	- -	- -	-0.005 (0.106)	-0.090 (0.091)
Presbyterian-Reform	- -	- -	0.046*** (0.017)	0.030* (0.018)	- -	- -	0.013 (0.019)	0.011 (0.018)
Lutheran	- -	- -	0.121*** (0.019)	0.086*** (0.027)	- -	- -	0.023 (0.020)	0.015 (0.021)
Evangelical	0.139*** (0.023)	0.108*** (0.026)	- -	- -	0.062*** (0.014)	0.038*** (0.015)	- -	- -
Baptist	- -	- -	-0.017 (0.011)	-0.005 (0.010)	- -	- -	-0.011 (0.009)	-0.003 (0.008)
Methodist-Pietist	- -	- -	0.024 (0.036)	-0.013 (0.034)	- -	- -	-0.040 (0.028)	-0.040* (0.022)
European Free Church	- -	- -	0.236*** (0.046)	0.222*** (0.041)	- -	- -	0.112*** (0.017)	0.113*** (0.018)
Adventist	- -	- -	0.363*** (0.078)	0.482*** (0.097)	- -	- -	0.372*** (0.047)	0.431*** (0.066)
Holiness	- -	- -	0.081* (0.049)	0.060 (0.062)	- -	- -	0.002 (0.051)	-0.027 (0.051)
Pentecostal	- -	- -	0.076** (0.038)	0.064 (0.041)	- -	- -	0.010 (0.038)	0.002 (0.036)
Other religions	-0.063 (0.043)	-0.045** (0.019)	-0.081*** (0.027)	-0.073*** (0.017)	-0.048*** (0.018)	-0.071*** (0.014)	-0.050*** (0.015)	-0.078*** (0.014)
State fixed effect	Y	N	Y	N	Y	N	Y	N
Observations	3,119	3,119	3,119	3,119	3,106	3,106	3,106	3,106

*** p<0.01, ** p<0.05, * p<0.1 Demographic controls include median income, density of population, percent of population at school-age, percent African-Americans in the population, percent Hispanics in the population, population, percent of population that lives in a rural area, average number of persons per household, and pupil to teacher ratio. We also include state fixed effects and ten-year lagged measures of the density of each type of schooling. Robust standard errors, clustered by state, are in parentheses.

Table 9. Enrolment Rates by School Type in Elementary Schools Regressed on Local Shares of Adherents, Using Fractional Logit and Fractional Multinomial Logit Regressions, unweighted and without State Fixed Effects

	Separate Fractional Logit			Multinomial Fractional Logit		
	Catholic	Mainline	Evangelical	Catholic	Mainline	Evangelical
	(1)	(2)	(3)	(4)	(5)	(6)
Catholic	0.036*** (0.004)	-0.009 (0.008)	-0.013** (0.006)	0.036*** (0.004)	-0.007 (0.008)	-0.011* (0.006)
Episcopalians	0.005 (0.041)	0.100 (0.063)	-0.000 (0.038)	0.007 (0.041)	0.102 (0.063)	0.001 (0.038)
Presbyterian-Reform	0.008 (0.007)	0.099*** (0.013)	0.006 (0.006)	0.011 (0.008)	0.100*** (0.013)	0.009 (0.007)
Lutheran	0.004 (0.006)	0.018 (0.016)	0.019*** (0.007)	0.004 (0.006)	0.018 (0.016)	0.019*** (0.007)
Baptist	-0.008 (0.007)	-0.002 (0.011)	-0.007* (0.004)	-0.008 (0.007)	-0.002 (0.012)	-0.007 (0.004)
Methodist-Pietist	0.018* (0.010)	-0.025 (0.023)	-0.008 (0.013)	0.017* (0.010)	-0.025 (0.022)	-0.008 (0.013)
European Free Church	-0.036** (0.014)	-0.017 (0.057)	0.067*** (0.017)	-0.034** (0.014)	-0.016 (0.057)	0.067*** (0.017)
Adventist	-0.074 (0.068)	0.057 (0.127)	0.098*** (0.035)	-0.069 (0.068)	0.060 (0.127)	0.097*** (0.035)
Holiness	0.006 (0.014)	-0.121 (0.087)	0.011 (0.021)	0.006 (0.014)	-0.122 (0.086)	0.010 (0.021)
Pentecostal	-0.128*** (0.030)	0.056 (0.042)	-0.007 (0.014)	-0.129*** (0.030)	0.054 (0.042)	-0.009 (0.015)
Other religions	-0.037*** (0.012)	-0.012 (0.018)	-0.031*** (0.007)	-0.038*** (0.012)	-0.013 (0.018)	-0.031*** (0.007)
Observations	3,119	3,119	3,119	3,119	3,119	3,119

*** p<0.01, ** p<0.05, * p<0.1 Demographic controls include median income, density of population, percent of population at school-age, percent African-Americans in the population, percent Hispanics in the population, population, percent of population that lives in a rural area, average number of persons per household, and pupil to teacher ratio. We also include state fixed effects and ten-year lagged measures of the density of each type of schooling. Robust standard errors, clustered by state, are in parentheses.

Table 10. Enrolment Rates by School Type in Secondary Schools Regressed on Local Shares of Adherents, Using Fractional Logit and Fractional Multinomial Logit Regressions, unweighted and without State Fixed Effects

	Separate Fractional Logit			Multinomial Fractional Logit		
	Catholic (1)	Mainline (2) no convergence	Evangelical (3)	Catholic (4)	Mainline (5)	Evangelical (6)
Catholic	0.039*** (0.004)		-0.022*** (0.006)	0.039*** (0.004)	0.001 (0.008)	-0.018*** (0.006)
Episcopalians	0.183*** (0.041)		-0.013 (0.051)	0.177*** (0.041)	0.174** (0.083)	-0.020 (0.059)
Presbyterian-Reform	0.030*** (0.010)		0.005 (0.006)	0.035*** (0.012)	0.098*** (0.014)	0.006 (0.006)
Lutheran	0.002 (0.009)		-0.004 (0.009)	0.000 (0.009)	0.000 (0.020)	-0.005 (0.009)
Baptist	-0.014 (0.010)		-0.014*** (0.005)	-0.015* (0.009)	-0.011 (0.008)	-0.015*** (0.005)
Methodist-Pietist	0.026 (0.018)		-0.024 (0.015)	0.023 (0.018)	-0.070** (0.031)	-0.020 (0.015)
European Free Church	-0.087* (0.048)		0.052*** (0.013)	-0.088* (0.050)	-0.058 (0.067)	0.049*** (0.013)
Adventist	0.074 (0.081)		0.228*** (0.040)	0.080 (0.081)	0.151 (0.206)	0.219*** (0.036)
Holiness	-0.023 (0.044)		-0.039 (0.032)	-0.020 (0.044)	-0.036 (0.083)	-0.046 (0.035)
Pentecostal	-0.143** (0.069)		-0.013 (0.022)	-0.146** (0.069)	-0.044 (0.069)	-0.012 (0.022)
Other religions	-0.032** (0.013)		-0.046*** (0.010)	-0.039*** (0.013)	-0.081*** (0.031)	-0.046*** (0.010)
Observations	3,106		3,106	3,106	3,106	3,106

*** p<0.01, ** p<0.05, * p<0.1 Demographic controls include median income, density of population, percent of population at school-age, percent African-Americans in the population, percent Hispanics in the population, population, percent of population that lives in a rural area, average number of persons per household, and pupil to teacher ratio. We also include state fixed effects and ten-year lagged measures of the density of each type of schooling. Robust standard errors, clustered by state, are in parentheses.