The Curious Dawn of American Public Schools

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I. The puzzles

• Why so much primary education in a vast frontier country that resembled Russia in its natural resource abundance and high human fertility?
• Why such an early shift to tax-based schools in a country born hating government and taxes?
• Why did small towns lead the way in raising taxes for schools?
II. Conclusions

(A) Four ways the US was different from Europe at birth:

(1) US (white) citizens had world’s highest wages, low poverty, less capital constraint → High parental demand.

(2) US schools and teachers were cheaper than in UK, thanks partly to the early feminization of teaching.

(3) Small-town democracy in the North → More tolerance for mixing property tax with tuition.

(4) Small-town autonomy → Need only a local, not a national, majority in favor of taxes and schools.
II. Conclusions, continued

(B) The great rise of primary schooling probably spanned the entire era from Revolution to Civil War. Not just a “common school revival” of the 1840s.

Fishlow was probably right. Past studies paid too much attention to legal history, and to Horace Mann.
II. Conclusions, continued

(C) Within the US, the theme of democracy and local voice also helps to explain schooling differences across the land. (We agree with Engerman-Sokoloff, and Goldin-Katz.) A higher share of men having the right to vote raised enrollments and attendance, with an insignificantly negative effect on expenditures per pupil. Overall result: more voting rights and voting rates, more education.

(D) It didn’t work the same in the slave states. Though most whites had the right to vote, slavery and greater government centralization kept more Southern white children out of school.
III. How Early, How Local, How Public?

(A) Don’t try to guess from the passage of laws. The acceleration probably was right in the first decades of independence -- right after the Constitution said nothing about education.

Don’t date it from N. Eng. laws of the 1640s, or from the laws to enable local school taxes from the 1820s-1830s, or the start of states’ “permanent school funds.”

The history of other countries (e.g. Prussia, Austria, India) shows the irrelevance of unfunded mandates for universal schooling.
How early did the rapid growth of schooling begin?

(B) The drift toward public money:
From the start, many towns devised a formula where taxes paid for several weeks’ schooling free but parents had to pay the rest with tuition (“rate bills”). Thus only partly public money, but a higher share public than in most of Europe.

Figure 2 on New York State ….
Figure 2. Public and Private Shares of Funding for Schools, New York State 1829 - 1850

(Sources: Randall 1844, NY Sup't of Common Schools 1849, American Almanac 1852.)
(C) Schooling remained mixed and fluid until the Civil War

(1) Students were part-timers, drifting in and out of school over many years.

(2) Little grade-level structure, or teacher certification, or curriculum standards.

(3) Both “public” and “private’ schools mixed taxes and tuition, in different proportions. See Table 3 in the paper. (Even some churches were built with tax money.)

(4) Places differed in who got enrolled and subsidized. Here is some of the geography ➔
Early states’ school types (Cubberley)

- **Green**: common schools
- **Yellow**: pauper & paroch.
- **Red**: no-action states
- **White**: (later states)
Public expenditure on schooling per free 5-14 pop, 1850

- Yellow = $2.30 and up
- Light yellow = $1.73 - $2.30
- Light brown = $1.30 - $1.73
- Pale brown = less than $1.30
- Gray = (no data)
IV. Four reasons why Americans went to primary school so early

(A) Low poverty from the start

Though the US may not have pulled ahead of the UK in GDP per capita until later in the 19th c., ordinary whites’ wages bought more basics, from the Revolution on (Figure 3).

This eased the capital constraint, and raised parental demand for small investments like schooling.
Figure 3. Mass vs. England

IV. Four reasons why Americans went to primary school so early (continued)

(B) Cheaper schools and teachers

As Table 4 shows, Americans in the Northern states paid fewer weeks’ common labor earnings for a year’s common public schooling than did the English -- whether we calculate the total cost per attending student, or just the part paid by parents.

Teachers’ wages were lower relative to non-teacher wages in the Northern states than in the South or in England. A probable reason: The feminization of teaching. Northern women were more literate and more welcomed into primary school teaching (relative to other occupations) than elsewhere.
IV. Four reasons why Americans went to primary school so early (continued)

(C) Voting and voice

By the 1840s, almost all white men could vote. Well ahead of Europe (Figure 4 in paper).

The broader franchise moved the locus of crucial votes from the very top of the income spectrum down into the middle ranks, earlier here than in other countries.

Why would this tip the political balance in favor of taxes for schools? Figure 5 ➔
Figure 5. Choosing between Private and Public Primary Schools for Different Income Ranks -- A Stylized Portrait for Early America

Would you vote for tax & public school? If there is a public school, send your child?
Figure 5. Choosing between Private and Public Primary Schools for Different Income Ranks — A Stylized Portrait for Early America

Would you vote for tax & public school?  
If there is a public school, send your child?

No  Yes  Vote against
Figure 5. Choosing between Private and Public Primary Schools for Different Income Ranks -- A Stylized Portrait for Early America
IV. Four reasons why Americans went to primary school so early (continued)

(D) Local autonomy -- two simple ideas

(1) Local government is a good match for primary schooling. Some local external benefits, and economies of scale stop earlier for schools than for other public goods.

(2) In poor countries, where only a few localities want public schooling, progressive localities are politically free to finance it by themselves.
V. County-level patterns in enrollments and school support

(A) Data sets

(1) a cross-section of U.S. counties in 1840 (Table 4),
(2) a cross-section of U.S. counties in 1850 (Tables 4, 5),
(3) cross-section of state effects in 1850 (Table 6).
(4) cross-section of New York counties 1845 (Table 7).
(5) cross-section of changes in U.S. counties, 1840-1850, when three states changed voting laws
(6) cross-section of changes in New York 1821-1835, when voting laws changed
V. County-level patterns in enrollments and school support, continued

(B) Independent variables = voting rights or voting rates, slaves per white, age distribution, free coloreds per white, urbanization, church accommodations, migrants from other states, immigrants from abroad

(C) Some control variables left out
   (a) All income, wealth variables -- no county data, not exog.
   (b) All local production and job variables -- not exog., no IVs
   (c) Adult illiteracy -- bad data, not exog., no IVs
Political Voice: Using the voting rate to proxy voting rights (U.S. samples)

Voting rate = \( \frac{\text{Men voting on local schools}}{\text{white man}} \) = the product of these three ratios:

1. \( \frac{\text{Men franchised for presidential elections}}{\text{white men}} \), which depends on state suffrage requirements and the local share meeting the requirements, \( \times \) times

2. \( \frac{\text{Men actually voting for president}}{\text{franchised men}} \) \( \times \) times

3. \( \frac{\text{Men voting locally}}{\text{men voting for president}} \) (assume this is \( \sim 1 \), since the corresponding franchise ratio \( \sim 1 \))

For New York State, we were able to identify (1).
Some of the 1840-1850 results --

• A higher voting rate raised enrollments, and public support per child, within the North (Top rows of Tables 4-5, 7).
• Slavery cut the tax support for all white education at the state level, but re-directed tax (and tuition) support toward slave-heavy counties in 1850 (Tables 5, 6).
• Having more established churches of all kinds raised enrollments and teachers, but with a more private mix of funds (Tables 4, 5).
• Receiving migrants from New England strongly raised Northern enrollments, but not the support per child (Tables 4, 5, 7).
<table>
<thead>
<tr>
<th></th>
<th>North 1840</th>
<th>North 1850</th>
<th>South 1840</th>
<th>South 1850</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Raising the voting share from 60% to 80%</strong></td>
<td>0.136**</td>
<td>0.096*</td>
<td>0.026</td>
<td>-0.015</td>
</tr>
<tr>
<td></td>
<td>(0.051)</td>
<td>(0.047)</td>
<td>(0.015)</td>
<td>(0.025)</td>
</tr>
<tr>
<td><strong>Slaves per white man</strong></td>
<td></td>
<td></td>
<td>-0.0001</td>
<td>-0.0033</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.003)</td>
<td>(0.004)</td>
</tr>
<tr>
<td><strong>Children (5-14) per white man</strong></td>
<td>-0.341**</td>
<td>-0.523**</td>
<td>-0.150**</td>
<td>-0.054</td>
</tr>
<tr>
<td></td>
<td>(0.089)</td>
<td>(0.108)</td>
<td>(0.030)</td>
<td>(0.062)</td>
</tr>
<tr>
<td><strong>Church accommodations</strong></td>
<td></td>
<td>0.140**</td>
<td></td>
<td>0.042**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.040)</td>
<td></td>
<td>(0.017)</td>
</tr>
<tr>
<td><strong>Migrants from other states</strong></td>
<td>0.361*</td>
<td></td>
<td>-0.064</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.160)</td>
<td></td>
<td>(0.088)</td>
<td></td>
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</tbody>
</table>

Table 4. Public school enrollment rates (%)
Table 5. Public school support per 5-14, 1850

<table>
<thead>
<tr>
<th></th>
<th>North Public $</th>
<th>North Total $</th>
<th>South Public $</th>
<th>South Total $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raising the voting share from 60% to 80%</td>
<td>0.45** (0.16)</td>
<td>0.43* (0.18)</td>
<td>0.28 (0.21)</td>
<td>-0.16 (0.24)</td>
</tr>
<tr>
<td>Slaves per white man</td>
<td></td>
<td></td>
<td>0.37** (0.03)</td>
<td>0.45** (0.04)</td>
</tr>
<tr>
<td>Children (5-14) per white man</td>
<td>-1.31** (0.36)</td>
<td>-1.59** (0.42)</td>
<td>0.49 (0.52)</td>
<td>-0.31 (0.57)</td>
</tr>
<tr>
<td>Church accommodations</td>
<td>0.17 (0.14)</td>
<td>0.36* (0.15)</td>
<td>-0.37** (0.13)</td>
<td>-0.005 (0.16)</td>
</tr>
<tr>
<td>Migrants from other states</td>
<td>0.31 (0.52)</td>
<td>-0.22 (0.59)</td>
<td>0.65 (0.72)</td>
<td>0.35 (0.84)</td>
</tr>
</tbody>
</table>
### Table 6. Fixed State Effects 1850

<table>
<thead>
<tr>
<th></th>
<th>Public enrollments</th>
<th>All school enrollments</th>
<th>Public $/5-14</th>
<th>Total $/5-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slaves per white man</td>
<td>-0.11** (0.03)</td>
<td>-0.10** (0.03)</td>
<td>-0.31* (0.14)</td>
<td>0.27* (0.11)</td>
</tr>
<tr>
<td>Children (5-14) Per</td>
<td>-0.03** (0.01)</td>
<td>-0.03** (0.01)</td>
<td>-0.35** (0.06)</td>
<td>-0.17* (0.05)</td>
</tr>
<tr>
<td>white man</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 7. NY state Public schools 1845

<table>
<thead>
<tr>
<th></th>
<th>Enrollment % of free</th>
<th>Average daily attendance</th>
<th>Attending anytime in the year</th>
</tr>
</thead>
<tbody>
<tr>
<td>% franchised</td>
<td>1.69** (0.33)</td>
<td>0.83** (0.23)</td>
<td>1.88** (0.29)</td>
</tr>
<tr>
<td>Migrants from</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New England</td>
<td>1.08** (0.36)</td>
<td>0.80** (0.25)</td>
<td>1.20** (0.32)</td>
</tr>
<tr>
<td>other U.S. states</td>
<td>0.81 (0.62)</td>
<td>0.65 (0.44)</td>
<td>0.47 (0.55)</td>
</tr>
<tr>
<td>foreign countries</td>
<td>0.41 (0.30)</td>
<td>0.16 (0.21)</td>
<td>0.42 (0.26)</td>
</tr>
</tbody>
</table>
Natural experiments in changing voting rights

- (1) Louisiana’s democratization 1845-1847: Here the link between votes and schools was even more direct than in our model. The new state constitution gave universal white male suffrage and explicitly called for a free-school law. That law was passed in 1847.

- (2) New York’s switch to universal manhood suffrage in 1821 and 1826 affected counties differently, depending on their wealth and income distributions. Counties where this raised the voting share most had greater gains in enrollments (marginally significant).
What happened to these political voice effects after the Civil War?

• For Southern whites, both the balance of power and the educational outcomes converged slowly toward those of the North. In particular, Southern centralization faded: localities pulled power away from legislatures.

• The new visible link between voting rights and schooling was the story of Jim Crow laws after Reconstruction in the South, as Robert Margo has shown.