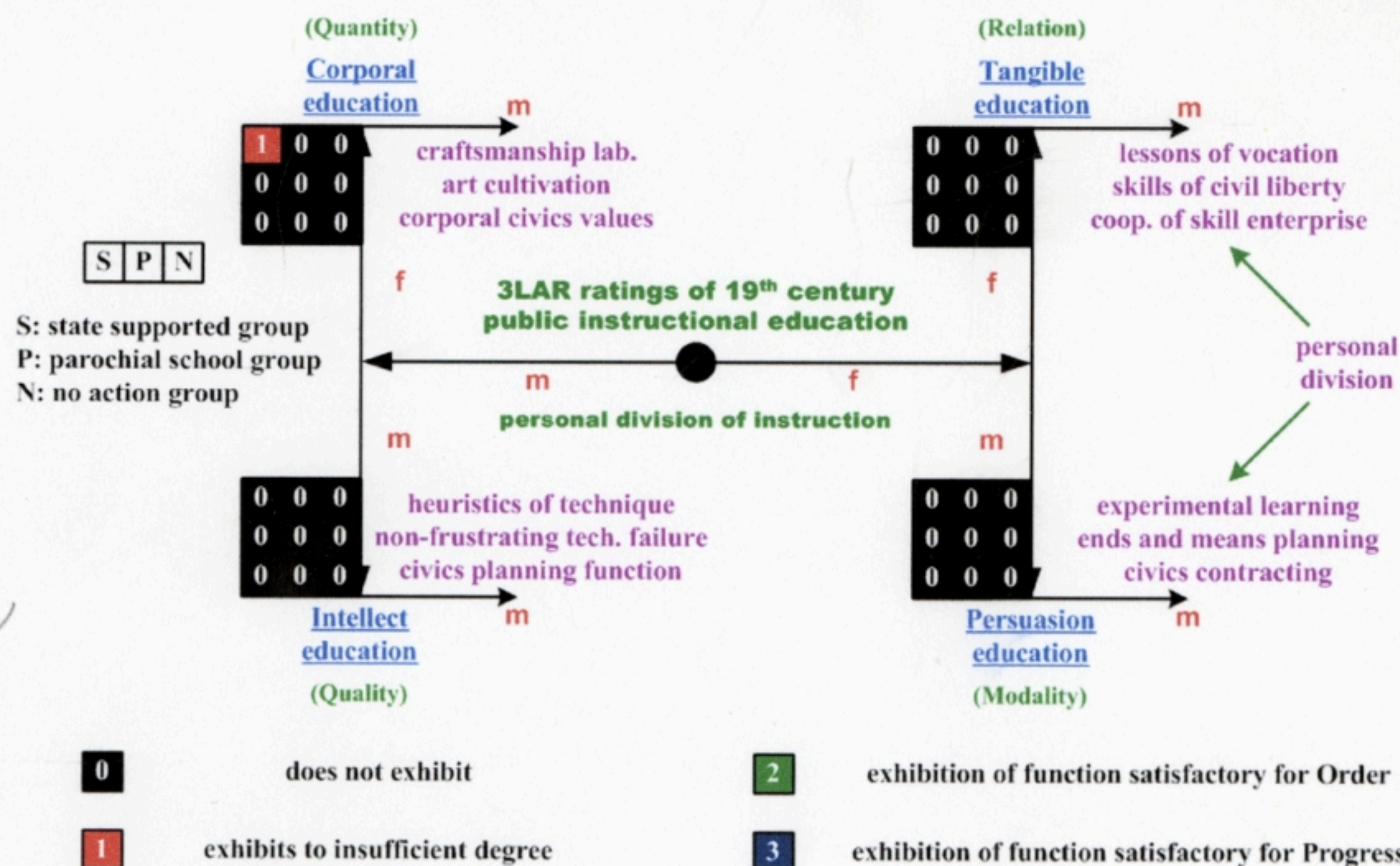


## Chapter 7 The Passage to Industrialization

### § 1. Public Education in the 19th Century

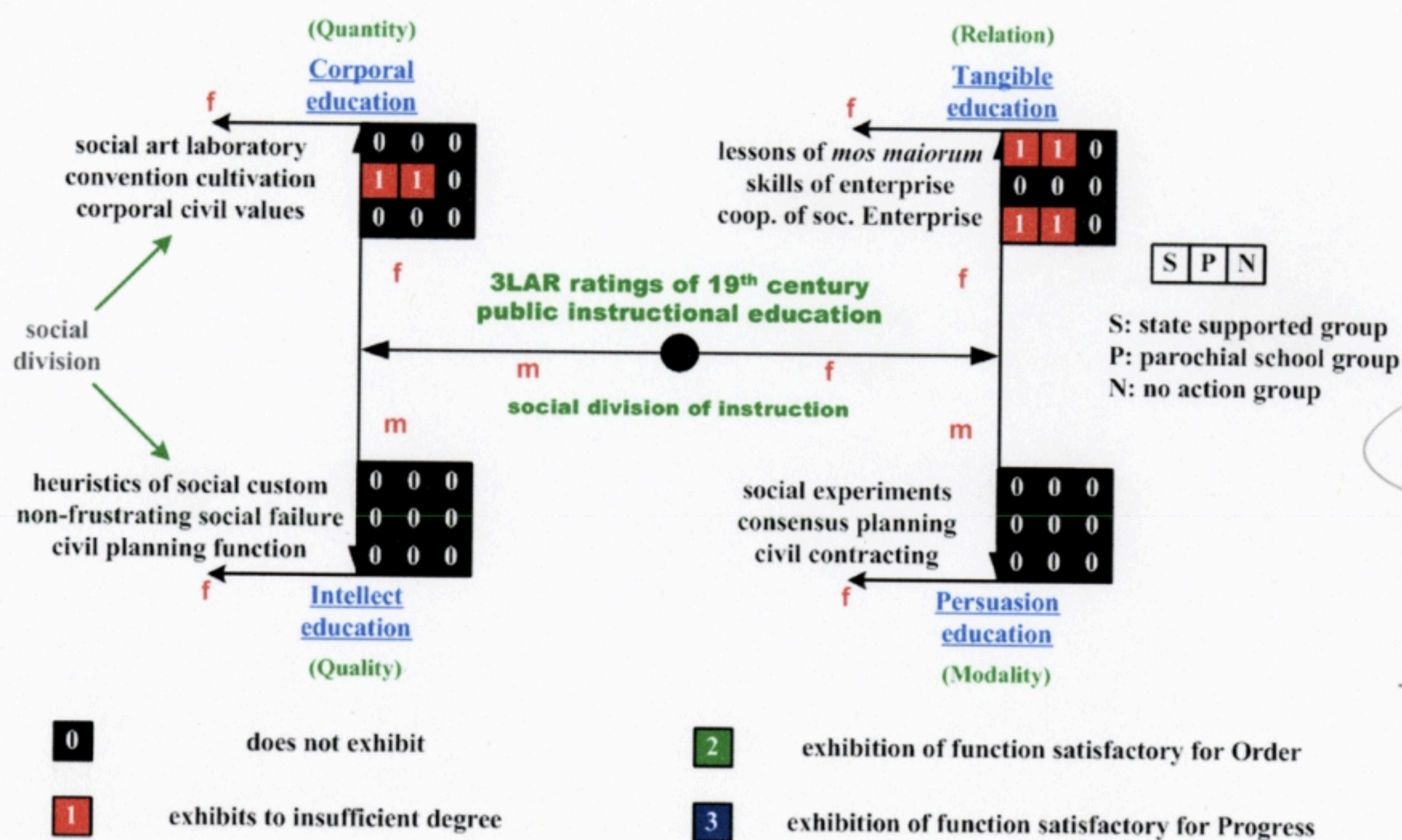
Critique of the American institution of public education from independence throughout the entire 19th century up to the time of Dewey can only conclude that the entire period was, from the perspective of *public* instructional education, an educational Dusk Age. By this I mean a period of shadowy gloom in the educational landscape which, while not wholly devoid of small and isolated points of enlightenment, was inadequate to meet even the requirements for Order in American Society overall. 3LAR functional ratings in both dimensions fall markedly from even the modest levels of achievement in pre-Revolutionary America. Figure 7.1 illustrates the ratings results in the personal dimension of public instructional education; figure 7.2 does the same for the social dimension. In this chapter and the next, the reasons for the fall are examined.

Several social factors in combination during this period contributed to generally poor levels of achievement in education. Topping the list is the human factor of satisficing decision-making relying on judgments of taste that are based on destabilized sets of old customs and traditions. Adding to this with barely less impact is the effect of the 18th century Economy revolution and its advanced phase, the industrial revolution in America. Another factor that cannot be discounted is the establishment of a new and antisocial force in America, namely, the formation of national political parties in the 1820s and early 1830s. All of these factors had generally negative effects on public education. One more factor, that can only be regarded as a mixed blessing, was the shift in American political attitudes from the republicanism of the Founding Fathers to an antisocial populism in the form of increasing institution of non-consensus democracy in political governance. This last phenomenon must be regarded as a mixed blessing because, on the one hand, it probably headed off devolution of governance into the mode of aristocracy rule and it did contribute to the eventual abolition of slavery; but it also maintained and led to an even higher degree of granulation in American Society that resulted in widespread uncivic competitions, anti-bonding relationships, and many serious violations of the American social contract of 1788.



**Figure 7.1:** 19th century ratings of the functions of public educational instruction in the personal dimension. The ratings are broken down in terms of state attitudes towards schooling.





**Figure 7.2:** 19th century ratings of the functions of public educational instruction in the social dimension. The ratings are broken down in terms of state attitudes towards schooling.

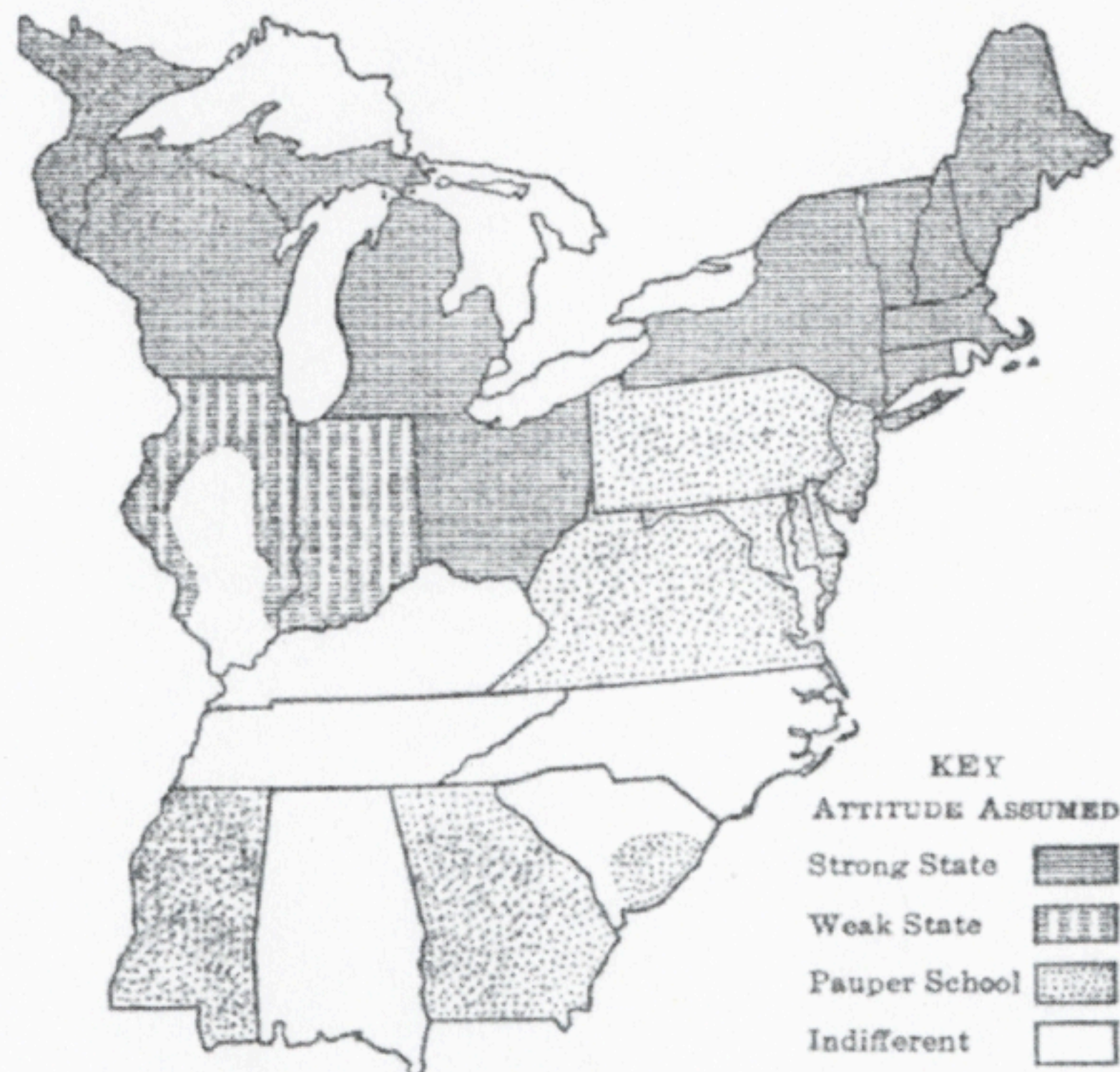
At the dawn of the 19th century home schooling and home apprenticeship were still primary institutions of education for the majority of the American population. The quality of instruction in these institutions was very idiosyncratic, varying greatly from family to family. Up until 1820 the United States was still principally an agrarian nation although, as noted earlier, the trend toward a coalescing of populations into townships and counties had been a feature of westward expansion from the beginning. America had passed through the first phase of the Economy revolution but had not yet begun its second phase, which some call the age of mechanization and others call the American industrial revolution. The apprenticeship institution, which had been the major means of public education in America, was gone by 1800 and what remained of it on homestead farms and in some cities and towns can be regarded as nothing else than private instructional education.

The Revolutionary War had, of course, cut off the supply of manufactured goods shipped to America from England. This gave rise to an expansion of cottage industries for what crude goods were manufactured in the United States. Some historians have referred to these private enterprises as "infant industries." What is usually called "the machine age" had not yet begun in America, and so the trade schooling received by young people during the period of cottage industry was in practical respect the last remnant of the old apprenticeship system because a breadth of craft skills were required to sustain it. Even before the start of the 19th century, however, there were early signs of the coming second phase in the Economy revolution, which would usher in the age of the unskilled worker. It is said that the first true factory in the United States was established by 1787 in the town of Beverly, Massachusetts, and the first cotton spinning-mill was set up at the falls of the Pawtucket River in Rhode Island in 1791 [Cubberley (1919), pg. 103]. The social impact of this development and its effect on schooling institution in the United States would not be keenly felt until the 1830s. In the meantime, government institutions in the United States were occupied with the urgent matters of getting commerce back on its feet, dealing with issues of westward expansion, and, at the national level, coping with international and domestic problems provoked by the French Revolution in 1789 and the French and Napoleonic Wars in Europe that began in 1792. It cannot be fairly said that the state governments and the national government completely neglected education during this period, but the problem of education was at best a low priority.



## § 2. Government Promotion of Education: 1785-1829

1787 The degree of state government support for public education at the turn of the century varied from state-supported efforts to re-establish pre-War local systems of schooling to an utter lack of state government support for the institution of schooling. The well-educated and liberal-minded members of the American Philosophical Society might have recognized that universal public education was a true function of republican government and vital to achieving and maintaining the Framers' 1787 vision of a uniquely American confederate republic, but this understanding was not shared by the state legislatures or by the agents of the new general government. Blake (1961) has called the period from 1789 to 1829 a "period of state efforts to promote education," but this is at best a misleading label for what state governments were doing during that period. Potter documents in some detail what actions the states took during this period [Potter (1967), pp. 134-159]. Cubberley suggested a three-fold classification of groups for these efforts: (I) a "good-school-conditions" group, made up of Vermont, New Hampshire, Connecticut, Massachusetts (including Maine), and New York; (II) a "pauper-parochial-school" group made up of Georgia, New Jersey, Pennsylvania, Virginia, Delaware, and Maryland; and (III) a "no-action" group made up of Rhode Island, North Carolina, South Carolina, Kentucky, and Tennessee. The approaches and attitudes taken in these states affected the development of schooling institution in western territories of the United States and the new states admitted thereafter to the U.S. Union. Figure 7.3 illustrates the geographical distribution, excluding Florida, of the approaches in states east of the Mississippi River to 1850 [Cubberley (1919), pg. 70]. State support in new states tended to follow the characteristics of the original places from which the settlers had emigrated. For example, upstate New York was settled by New Englanders and this made New York State more like New England than its Middle Atlantic neighbors despite opposite attitudes in New York City.



**Figure 7.3:** Levels of state government support and encouragement of public education in states east of the Mississippi River to 1850. School institution during the westward expansion of the United States was primarily influenced by where the settler populations emigrated from. In regions where most of the new population came from the same background, school institution copied that of the home states. In regions where a mixture of people from different Cubberley groups settled, school institution was a matter of compromise between the different groups of settlers, resulting in weak support for schooling institution.



In no case were the Enlightenment visions presented in the essays discussed in chapter 6 pursued. Support in the "strong state support" group in figure 7.3 was strong only in the sense that here the state constitutions and legislatures sought to reestablish the traditional schooling that they were accustomed to from colonial days (with some slight modifications made from notions employed in the academy institutions that had begun with Franklin in Philadelphia in the mid-18th century). This demonstrates a pattern of behavior that Toynbee disparaged as "mimesis." The other groups likewise followed mimesis patterns in the types of institutions of schooling reestablished after the War. Territories settled by people originally from these states tended to copy whatever schooling institution was familiar to the settlers from their home states. In those territories settled by people coming from different states, the schooling institution reflected a compromise mixture of ideas copied from the divers home states.

The general government was barred by the Tenth Amendment from a direct role in schooling institution. What national effect the general government did have was not the act of the new Constitutional government but rather was due to a 1785 act of Congress under the old Articles of Confederation: the Land Ordinance of 1785. This act addressed how new territories ceded to the United States by Great Britain in the peace treaty ending the Revolutionary War were to be incorporated into the new nation. In a 1780 resolution agreed to by the states, it was agreed "that the manner and condition of the sale of the lands in dispute [the new territories] should be exclusively regulated by Congress." In other words, the states agreed to give up their individual claims on the new western lands and acknowledge these territories to be national property. The Land Ordinance followed from this. Keith and Bagley describe it for us:

This action by Congress had a salutary effect. . . . [In] May, 1785, Congress adopted a plan for the disposal of this new national territory. The lands were to be divided "into townships six miles square"; each township was to be subdivided into thirty-six lots, one mile square; the lines of these 640-acre lots were to be run in the same direction as the external lines of the townships and the lots were to be numbered from 1 to 36. Out of every township, the four lots numbered 8, 11, 26, 29, were reserved by the United States Government for future sale; and the lot No. 16 of every township was dedicated to "the maintenance of public schools within the said township." . . .

Even before the War for Independence . . . colonial experience had proved the worth of land endowment as a means of insuring free schools. Congress, under the Articles of Confederation, having won the vast public domain as a national asset, followed the established precedent and decreed that Lot 16 in each township in this vast domain was to be dedicated to the "maintenance of public schools." The Ordinance of 1787 . . . contained the famous declaration, – "Religion, morality and knowledge, being necessary for good government and the happiness of mankind, schools and the means of education shall be forever encouraged." This language is a reaffirmation, in general terms, of the act of May, 1785, but it is not the declaration by which Lot No. 16 is specifically set aside for public schools. [Keith & Bagley (1920), pp. 15-16, 20]

It is important to note the use of the word "encouraged" in the 1787 ordinance. This is a toothless term and stops a great deal short of mandating education as a requirement. Most of the states did at least pay lip service to "encouraging" education, but this is something far different from the idea of "encouraging" *public* education as an institution of government even at the state level. The group-II states "encouraged" church-sponsored parochial and private enterprise education only; the group-III states didn't bother to "encourage" education of any sort.

A considerable degree of caution must be exercised by scholars in using material from Keith and Bagley. Their book is not an impartial historical treatise but is, as the authors themselves state, a manifesto lobbying for the establishment of a national school system generally and for the passage of a bill then pending in Congress – the Smith-Towner Bill – that would have created an



"executive department in the Government to be called the Department of Education, with a Secretary of Education, who shall be the head thereof" . . . and "That it shall be the duty of the Department of Education to conduct studies and to report thereon. Research shall be undertaken in (a) illiteracy; (b) immigrant education; (c) public-school education, and especially rural education; (d) physical education, including health education, recreation and sanitation; (e) preparation and supply of competent teachers for the public schools; and (f) in such other fields as, in the judgment of the Secretary of Education, may require attention and study." Keith and Bagley provide the full text of the bill in their book. No doubt to their disappointment and despite the fact this bill would have created nothing more than what would have amounted to a cabinet-level research organization, the Smith-Towner Bill failed to become law.

Nonetheless, their book is a valuable source of documentation and data regarding numerous issues related to public education. One need only take care to separate facts from the authors' opinions. For example, Keith and Bagley subtly equate "public schools" with "free schools" throughout their book; these two phrases were by no means synonymous in the late 18th and early 19th centuries. "Public" schools were not "free" schools; they were public in the sense that no one was excluded from being able to attend them provided they could afford the tuition that was charged. Only pauper schools were financed by public money and were free to poor children and parents who were eligible to make use of them. Part of the eligibility requirement was that the family had to make a formal public affidavit that they were paupers – an action most people in those days regarded as so shameful that many poor people who were otherwise eligible refused to do it. In no state or territory were public schools "free" schools.

Most contemporary education scholars regard the educational policies of New England, and Massachusetts particularly, as providing the premier leadership example most directly responsible for the evolution of public education throughout the 19th and 20th centuries. Most early-20th century education scholars held this same view. It is therefore instructive to see what the example being set for others to follow was. Massachusetts' constitutional provision, later copied by New Hampshire, read

Wisdom and knowledge, as well as virtue, diffused generally among the body of the people, being necessary for the preservation of their rights and liberties; and as these depend on spreading the opportunities and advantages of education in the various parts of the country, and among the different orders of the people, it shall be the duty of the legislatures and the magistrates, in all future periods of this Commonwealth, to cherish the interests of literature and the sciences, and all seminaries of them; especially the university at Cambridge, public schools and grammar schools in the towns; to encourage private societies and public institutions by rewards and immunities for the promotion of agriculture, arts, sciences, commerce, trades, manufactures, and a natural history of the country; to countenance and inculcate the principles of humanity and general benevolence, public and private charity, industry and frugality, honesty and punctuality in their dealings; sincerity, good humor, and all social affections and generous sentiments among the people. [Cubberley (1919), pg. 63]

Well, one can suppose it is nice if legislatures and magistrates have a duty to "cherish" these named interests. But what exactly does this mean? Webster's Dictionary (1962) lists three usages for this word:

**cherish**

1. to treat with tenderness and affection; to take care of; to foster; to nurture.
2. to hold dear; to value highly.
3. to indulge and encourage in the mind; to harbor; to cling to; as, to *cherish* the principles of virtue.



Which of these usages is intended by the language of the state constitution? Because it does not specify, the constitutional provision is left as meat for constitutional lawyers to pick over. Even if we assume the context was "to foster; to nurture; to take care of," this is hardly any better description of what precisely was it to be the duty of the state government *to do*.

What the group-I ("strong state support") states *did* do is described by Cubberley:

*Vermont.* First general state school law in 1782. District system authorized. Support of schools by district tax or rate bill on parents optional. State aid granted. 1797 – Districts failing to provide schools to receive no state assistance. 1810 – Town school tax obligatory and gradually increased from 1 per cent to 3 per cent by 1826. 1825 – State school fund created. 1827 – New school law required towns to build school buildings; required certificates of teachers; made the beginnings of school supervision; and added spelling, grammar, history, geography, and good behavior to the list of required school subjects.

*New Hampshire.* First general state school law in 1789. Town tax required and rate fixed; teachers' certificates required; English schools and Latin schools required in the larger towns. 1791 – Town taxes for schools increased. 1821 – State school fund created. 1827 – Poor children to be provided with schoolbooks free.

*Massachusetts.* First general state school law in 1789. This legalized the practices in education of the past hundred and fifty years and changed them into state requirements. A six-months elementary school required in every town, and twelve-months if having 100 families. Also a six-months grammar school required of every town having 150 families, and twelve-months if 200 families. All teachers to be certified, and all grammar school teachers to be college graduates or certificated by the minister as skilled in Latin. These laws also applied to Maine, which was a part of Massachusetts until 1820.

*Connecticut.* Laws of 1700 and 1712 required all parishes or school societies operating schools to maintain an elementary school for from six to eleven months a year, varying with the size of the parish. Law of 1714 required inspection of schools and teachers. These laws continued in force by the new State. A permanent school fund had been created in 1750 by the sale of some Connecticut lands, and in 1795, on the sale of the Western Reserve in Ohio for \$1,200,000. This was added to the permanent school fund. 1798 – School visitors and overseers ordered appointed.

*New York.* Little of an educational nature had been done in this State prior to the Revolution except in the matter of church charity schools. In 1795 a law, valid for five years, was enacted which distributed \$100,000 a year to the counties for schools. By 1798 there were 1352 schools in 16 of the 25 counties and 59,660 children were enrolled. On the expiration of the law, in 1800, it could not be reenacted. By 1812, when the first permanent school law was enacted, New England immigration into the State had counterbalanced the private-parochial-charity-school attitudes of New York City. The Massachusetts district system was instituted, local taxation required, state aid distributed on the basis of school census, and the first State Superintendent of Schools provided for. In 1814 teachers were ordered examined. By 1820 New York schools were probably the best of any State in the Union. [Cubberley (1919), pp. 65-67]

This last note of opinion isn't necessarily saying very much. One can say with equal truth that the Civil War field hospital with the highest immediate-post-operative survival rate for amputations had the best institution of surgical practices of any field hospital; it doesn't mean the treatment was very good. In point of fact, more Civil War amputees died later from infections or other post-operative complications than died on the operating table. Often these men were never counted on the casualty lists as killed *from* (rather than "in") combat action.

American readers might find these descriptions quite familiar even today. It is undoubtedly true that New England commandingly led the development of schooling institution in the United



States over the long run. Probably the most chronic challenge facing the young states, then as now, was the apparently never-ending question of who was going to pay the costs of the schooling institution. Having been among the most vocal of those who feared centralized power in a federal-national government for the nation as a whole, the group-I state legislatures did not hesitate to centralize the power of government in their own state. State legislation mandated the creation of local schools and school districts and, when these districts demonstrated unwillingness to tax themselves to do so, eventually did not hesitate to force them to do so – a tactic a number of so-called conservative states today howl about loudly when the U.S. Congress does the same thing to them; the political term used to denounce this tactic is "unfunded mandate."

It is not difficult to "cherish" something if you command the physical power to force others to do all the work and bear all the costs regardless of whether they would have done so or not of their own accord. In this case, all you really need is the loyalty of your militiamen. The same state governments who today criticize the general government for unfunded mandates ignore their state's townships and school districts when these protest against the state government for doing the same thing to them. The situation does tend to bring to my mind John Adams' warnings,

2. A single assembly is apt to be avaricious, and in time will not scruple to exempt itself from burdens, which it will lay, without compunction, on its constituents. . . .
6. [A] single assembly, possessed of all the powers of government, would make arbitrary laws for their own interest, execute all laws arbitrarily for their own interest, and adjudge all controversies in their own favor. [Adams (1776), pg. 236]

Centralized state governments are, corporately, single assemblies. In every state in the United States they have the capacity to act, and frequently enough do act, as despotically as many Revolutionary-era people feared a powerful central government of the nation would act. It is a governance tradition modeled on rulership methods that are older than history.

This habit of institution-by-tradition was also demonstrated in the new states when numerous practical difficulties and issues pertaining to the specifics of the Lot No. 16 provision of the Land Ordinance of 1785 came to light. The first case occurred in Ohio and it is worthwhile to examine it in some detail because, as Keith and Bagley noted, it illustrates practically all the difficulties involved in administering the Land Ordinance of 1785:

In 1802 Congress passed an act enabling the people of Ohio to form a constitution and state government under certain conditions that were clearly set forth in the act itself. Relating to land grants, this law provided:

First, "That the section numbered sixteen in every township, and where such section has been sold, granted, or disposed of, other lands equivalent thereto and most contiguous to the same, shall be granted to the inhabitants of such township for the use of schools."

Second, "That certain salt lands and springs should be granted to the state for the use of the people under regulations to be set up by the legislature of the state."

Third, "That one twentieth of the net proceeds of all lands within the state sold by Congress after June 30, 1802, should be set aside for the laying out and making of public roads."

These grants, however, were subject to the following condition:

"Provided always that the three foregoing propositions herein offered are on the condition that the convention of the said state shall provide by an ordinance, irrevocable without the consent of the United States, that every and each tract of land sold by Congress, from and after the 30th day of June next, shall be and remain exempt from any tax laid by order, or under the authority of the state, whether for state, county, township, or any other purpose whatever, for the term of five years, from and after the date of sale."



This five year exemption from all taxes, which was to constitute an inducement to settlers, was made a condition of granting the sixteenth section of each township for the use of schools. [Keith & Bagley (1920), pp. 23-24]

There were, however, complications in carrying out this plan. The school lot had been granted to the township's people, but who was to administer the setup, manage the sale, and pocket the proceeds of these lands? Here the U.S. Congress, by another act passed in 1803, made the state legislature the responsible agent:

The Congressional act of 1803 "vested in trust in the legislature all lands appropriated by the United States for the support of schools." The legislature of Ohio tried to lease the lands for fifteen years, but settlers wished to buy lands, not lease them. The state then planned to lease the lands for ninety-nine years, but this met with only small success. Ohio finally applied to Congress for authority to sell the school lands outright. Congress made no reply, for it had already made Ohio the trustee for the school lots of the state. In 1827, the Ohio legislature made plans for the sale of these lands as follows:

- (1) The sale of Lot 16 was to be voted on by the people of each township.
- (2) If the township favored the sale, the lands were to be appraised and not sold below the appraisement.
- (3) On payment in full by the purchaser, a deed in fee simple was to be made by the state.

These school lands were thrown upon the market in competition with the lands owned by the United States and by the Ohio and Symmes companies<sup>1</sup>. They were consequently sold at a very low price to investors and settlers.

The money thus covered into the state treasury was credited to the township to which it belonged and the interest paid to the school officials of the township. The investment of this money became a considerable problem. An act of the Ohio legislature in 1837 provided that the school funds might be loaned to the state, to counties, or to the Canal Fund, at six per cent interest, five sixths of which was to go to the township. Finally the state took the whole fund and spent it for its temporary needs, substituting an "irreducible debt" bearing interest at six percent. This interest is raised by general taxation; the land endowment, therefore, became a burden to the taxpayers, quite contrary to the plain intent of the Federal legislation authorizing the grants. [*ibid.*, pp. 25-27]

Similar actions also occurred in Illinois, Indiana, Alabama, Louisiana, and Missouri. The sorts of complications just described were later avoided by Congress by the expedient of making later grants of Lot No. 16 directly to the states (i.e., to the state legislatures) instead of the townships. The net effect was that, instead of providing a self-regenerating source of school funding from the lease of Lots No. 16, support for schooling had to be provided by state systems of taxation. Keith and Bagley seem to have regarded this as a good thing because "the inadequacy of the funds" thus led to state systems of taxation from which "the policy of state support for local schools gradually evolved" [*ibid.*]. Perhaps it reflects nothing more than my own personal opinion, but I find it difficult to see how a deliberate inadequacy is somehow a desirable feature in any institutional planning. I also see no "the policy of state support for local schools"; every state has its own policy and while they have many similarities – including in most states placing the principal revenue burden on property taxes – there are enough differences and changing legislative-political attitudes involved to refute a contention that there is any general "the" as *one* policy.

One effect that *was* general was placing the power of the purse strings in the centralized hands

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<sup>1</sup> The Ohio Company and the Symmes Company were land speculators who had received land grants in Ohio by acts of Congress.



of state government rather than in the hands of the townships where the schools are. With the power of the purse strings naturally comes the power to coerce, and it is usually accompanied by attitudes held by agents of the state government that townships must therefore be made subservient to the state government. In every state I have visited, I hear propaganda slogans about the sanctity of "local control of the schools," and in every state I have visited the reality is that local control is effected only when the controllers strictly comply with the mandates of the state government. I know of not one township in America where the local School Board is subservient to a Parent-Teacher Association or where a county tax assessor's office is at liberty to ignore a command from the state government to raise its property tax assessment levels. When the number of intrusions and their personal effects on individuals are tallied up, the time-worn propaganda slogan "intrusive big government" is in practical reality more properly applied to your local Statehouse than to your general government in Washington, D.C.

My point in bringing this up is to illustrate a functional disconnect between the institutions of state government and the institutional objectives for the general government that had been so carefully worked out at the 1787 Constitutional Convention and explained in *The Federalist*. The confederate governance institution of the general government is not copied at the state level, where the institution of government was established by traditional reasoning and habit, and in manners much more similar to the old European forms except for divers degrees of representative government that depended on the extent of the franchise in the early years of the states. I also bring this up to point out that, at first, the general government was attempting to encourage a high level of local governance of the school system but that it also kept within its understood boundary regarding the extent to which it could dictate specifics to the state governments even in the newly added states.

Let us recap the legal basis for state support of public schooling in the United States. Each state, as a condition for admission to the Union, assumed an obligation to set aside 1/36th of the land in each township for the purpose of public schooling. What sort of instructional education was not specified. Having sold the granted land, thereby becoming divested of property ownership, the state government was nonetheless still obligated to see to it that public schooling was provided. Because the proceeds from the land sale were diverted to other state purposes, meeting this obligation necessitated a state system of taxation for the support of schools. Again, no details were specified by the original legislation, nor were standards set out to define whether or not the state was meeting its obligation, nor was there any stipulation about what actions the general government was empowered to take in the event a state government failed to meet its assumed obligation<sup>2</sup>. In every state, the institution was set up by decision-making and policy more or less copied from tradition or examples from other states previously admitted to the Union. Such was the starting point for the institution of public education in the United States.

### § 3. The Literacy Performance of the System of Basic Schooling Institution

To a person who has a disposition to like plans and organizations to be neat and tidy in at least a formal way, the history just cited might leave a disturbing impression. Practically speaking, it

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<sup>2</sup> There is no Constitutional provision by which the general government can kick a state out of the Union, nor are there any other sanctions the general government has *explicit* Constitutional empowerment to take against a state. Indeed, Constitutional scholars are still debating whether the Southern Confederacy really did or did not have the right to secede from the Union in 1861. Social Contract theory is explicit about this latter question: They did not because there had been no actual violation of the social contract at the time the southern states seceded. Whether or not the Congress had the Constitutional power to end slavery is another question altogether. Social Contract theory says this would have required a Constitutional amendment. That is, in fact, what ended slavery in the United States. The 13th Amendment, not Lincoln's Emancipation Proclamation, ended the formal institution of slavery in the U.S.



does not essentially matter whether or not the planning and organization are neat and tidy; what matters is whether or not the instituted system works sufficiently well or not. To assess this, we must look at some empirical indicators of practical success or the lack thereof. In dealing with new social institutions, it is also wise to allow the new system to have time to "settle in" a bit, and to allow its agents to make adjustments to it based on empirical discovery of start-up problems unwittingly built into the original design, before passing judgments on its performance. We already know that the Economy revolution of the 18th century deprived the U.S. institution of public education of some of its key factors for achieving the objectives of an institution of public instructional education. What effect this had we will examine when we turn to the next phase of that Toynbee challenge, namely, the American industrial revolution.

Before that, however, let us look at how well or poorly the remaining functions – those that had been part of the pre-Revolutionary schooling system – fared in the century that followed and whether or not the three distinct state government approaches (groups I, II, and III) showed any difference in performance levels. Owing to a lack of all the empirical data that should properly be accounted for in an assessment of this sort – and restraining from hypothetical speculations in lieu of this data – we find there is only one fairly reliable indicator for which a substantial amount of documentation is readily available at present. The indicator is basic literacy – a function everyone acknowledges to be a primary function of public education – and the primary source of data for this indicator is obtained from U.S. Census.

Even here an assessment of the 19th century is not without important issues. One of the most important is the question of what the most scientifically accurate definition of "literacy" is. This is an issue currently being debated – sometimes with a certain amount of heat – by scholars of education today (see Gutek, 2003). Unfortunately for our immediate purposes, "literacy" was defined in 19th and early 20th century census-taking as "the ability for a person ten years of age or older to write in any language." It was presumed that the ability to write implied the ability to read – and, by proxy, that inability to write is indicative of inability to read – something we know is not necessarily true. For a scientist this situation means he must be cautious about drawing sweeping conclusions and avoid posing causal hypotheses on the basis of such data. Yet if we bear this in mind, the available data is pertinent to the question and is not something to be dismissed out of ignorance if it contradicts Desire or taste. Nor is it something to be embraced enthusiastically if it appears to support a pet speculation or supposition.

With these ground rules in mind, I present in this treatise an analysis of schooling performance factored into seven geographical regions of the continental United States with some additional breakdown on a state-by-state basis. The reference year of 1910 is taken for the evaluation "snapshot." This provides a sufficiently long window to allow for all 48 contiguous states to come into the Union, for the traumas of the 1861-1865 Civil War and the following years of Reconstruction to settle out, and for the Census Bureau agents to develop and improve their methods. Because the institutions of public schooling by the later states were carried out principally by mimesis, the extended time interval should not mask the effects of the state attitudes at the beginning of the period or be overly-affected by the industrial revolution and populism in the "Age of Jacksonian Democracy" period (roughly, 1828 to 1900).

One dynamical social factor that cannot be ignored in this evaluation is the growth in U.S. population state-by-state and region-by-region during this period. In 1800 the population of the United States stood at 5,308,483 according to Census figures. In 1910 it stood at 91,972,266. This is a 17.3-fold increase over a period that saw the expansion of the United States reach across the continent. It is therefore pertinent to examine how this growth took place and to ascertain whether or not by the beginning of the 20th century the growth rate was stable.

Table 7.1 provides the relevant census data from the year 1800 to 1900 [Morison &



Commager (1930), pp. 918-19]. It is organized into seven geographical regions defined in the table. These are: (1) the New England region; (2) the Middle Atlantic region; (3) the South Atlantic region; (4) the South Central region; (5) the North Central region; (6) the Mountain States region; and (7) the Pacific region. These regional definitions are used throughout the analysis, and census data compiled by Keith and Bagley (1920) has been reformatted to fit this regional schema.

Tabulations such as table 7.1 usually do not adequately convey a "sense" of what the data is telling us. Graphical representation, however, is often very good at accomplishing this. Figures 7.4 illustrate the decade-by-decade growth in U.S. and regional populations for this period.

**Table 7.1: U.S. Population by State and Region from 1800 to 1900**

State	1800	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900
New England	1,233,011	1,471,973	1,660,071	1,954,717	2,234,822	2,728,116	3,135,283	3,487,924	4,010,529	4,700,749	5,592,017
Maine	151,719	228,705	298,335	399,455	501,793	583,169	628,279	626,915	648,936	661,086	694,466
New Hampshire	183,858	214,460	244,161	269,328	284,574	317,976	326,073	318,300	346,991	376,530	411,588
Vermont	154,465	217,895	235,981	280,652	291,948	314,120	315,098	330,551	332,286	332,422	343,641
Massachusetts	422,845	472,040	523,287	610,408	737,699	994,514	1,231,066	1,457,351	1,783,085	2,238,947	2,805,346
Rhode Island	69,122	76,931	83,059	97,199	108,830	147,545	174,620	217,353	276,531	345,506	428,556
Connecticut	251,002	261,942	275,248	297,675	309,978	370,792	460,147	537,454	622,700	746,258	908,420
Middle Atlantic	1,402,565	2,014,702	2,699,845	3,587,664	4,526,260	5,898,735	7,458,985	8,810,806	10,496,878	12,706,220	15,454,678
New York	589,051	959,049	1,372,812	1,918,608	2,428,921	3,097,394	3,880,735	4,382,759	5,082,871	6,003,174	7,268,894
New Jersey	211,149	245,562	277,575	320,823	373,306	489,555	672,035	906,096	1,131,116	1,444,933	1,883,669
Pennsylvania	602,365	810,091	1,049,458	1,348,233	1,724,033	2,311,786	2,906,215	3,521,951	4,282,891	5,258,113	6,302,115
South Atlantic	2,286,494	2,674,891	3,061,063	3,645,752	3,925,299	4,679,090	5,364,703	5,853,610	7,597,197	8,857,922	10,443,480
Delaware	64,273	72,674	72,749	76,748	78,085	91,532	112,216	125,015	146,608	168,493	184,735
Maryland	341,548	380,546	407,350	447,040	470,019	583,034	687,049	780,894	934,943	1,042,390	1,188,044
Dist. of Columbia	14,093	24,023	33,039	39,834	43,712	51,687	75,080	131,700	177,624	230,392	278,718
Virginia	880,200	974,600	1,065,366	1,211,405	1,239,797	1,421,661	1,596,318	1,225,163	1,512,565	1,655,980	1,854,184
West Virginia								442,014	618,457	762,794	958,800
North Carolina	478,103	555,500	638,829	737,987	753,419	869,039	992,622	1,071,361	1,399,750	1,617,949	1,893,810
South Carolina	345,591	415,115	502,741	581,185	594,398	668,507	703,708	705,606	995,577	1,151,149	1,340,316
Georgia	162,686	252,433	340,989	516,823	691,392	906,185	1,057,286	1,184,109	1,542,180	1,837,353	2,216,331
Florida				34,730	54,477	87,445	140,424	187,748	269,493	391,422	528,542
South Central	335,407	786,208	1,358,169	2,062,096	3,025,430	4,303,522	5,768,658	6,434,410	8,919,371	11,170,137	14,080,047
Kentucky	220,955	406,511	564,317	687,917	779,828	982,405	1,155,684	1,321,011	1,648,690	1,858,635	2,147,174
Tennessee	105,602	261,727	422,823	681,904	829,210	1,002,717	1,109,801	1,258,520	1,542,359	1,767,518	2,020,616
Alabama			127,901	309,527	590,756	771,623	964,201	996,992	1,262,505	1,513,401	1,828,697
Mississippi	8,850	40,352	75,448	136,621	375,651	606,526	791,305	827,922	1,131,597	1,289,600	1,551,270
Arkansas		1,062	14,273	30,388	97,574	209,897	435,450	484,471	802,525	1,128,211	1,311,564
Louisiana		76,556	153,407	215,739	352,411	517,762	708,002	726,915	939,946	1,118,588	1,381,625
Oklahoma										258,657	790,391
Texas						212,592	604,215	818,579	1,591,749	2,235,527	3,048,710
North Central	51,006	292,107	859,305	1,610,473	3,351,542	5,403,595	9,096,716	12,981,111	17,364,111	22,410,417	26,333,004
Ohio	45,365	230,760	581,434	937,903	1,519,467	1,980,329	2,339,511	2,665,260	3,198,062	3,672,329	4,157,545
Indiana	5,641	24,520	147,178	343,031	685,866	988,416	1,350,428	1,680,637	1,978,301	2,192,404	2,516,462
Illinois		12,282	55,211	157,445	476,183	851,470	1,711,951	2,539,891	3,077,871	3,826,352	4,821,550
Michigan		4,762	8,896	31,639	212,267	397,654	749,113	1,184,059	1,636,937	2,093,890	2,420,982
Wisconsin					30,945	305,391	775,881	1,054,670	1,315,497	1,693,330	2,069,042
Minnesota						6,077	172,023	439,706	780,773	1,310,283	1,751,394
Iowa					43,112	192,214	674,913	1,194,020	1,624,615	1,912,297	2,231,853
Missouri		19,783	66,586	140,455	383,702	682,044	1,182,012	1,721,295	2,168,380	2,679,185	3,106,665
North Dakota							4,837	14,181	135,177	190,983	319,146
South Dakota							0	0	0	348,600	401,570
Nebraska							28,841	122,993	452,402	1,062,656	1,066,300
Kansas							107,206	364,399	996,096	1,428,108	1,470,495
Mountain	0	0	0	0	0	72,927	174,923	315,385	653,119	1,213,935	1,674,657
Montana								20,595	39,159	142,924	243,329
Idaho								14,999	32,610	88,548	161,772
Wyoming								9,118	20,789	62,555	92,531
Colorado							34,277	39,864	194,327	413,249	539,700
New Mexico						61,547	93,516	91,874	119,565	160,282	195,310
Arizona								9,658	40,440	88,243	122,931
Utah						11,380	40,273	86,786	143,963	210,779	276,749
Nevada							6,857	42,491	62,266	47,355	42,335
Pacific	0	0	0	0	0	105,891	444,053	675,125	1,114,578	1,888,334	2,416,692
Washington							11,594	23,955	75,116	357,232	518,103
Oregon						13,294	52,465	90,923	174,768	317,704	413,536
California						92,597	379,994	560,247	864,694	1,213,398	1,485,053
Total	5,308,483	7,239,881	9,638,453	12,860,702	17,063,353	23,191,876	31,443,321	38,558,371	50,155,783	62,947,714	75,994,575