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### Investing in Public Education

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*Secretary*, J. W. CRABTREE

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## FOREWORD

Why does the comparatively small bill which the public pays for the education of children attract so much attention, while much larger bills paid for privately purchased items attract so little attention?

The return from money expended for education is delayed. Its effect may not be fully evident for a generation or more. The return from money expended for an automobile is immediate. It secures a shiny new machine at once—often before it is paid for.

The school bill is collected under the most unfavorable circumstances. It comes in one lump sum. Even though quarterly payments are permitted the total is impressive. Tax-payment time is played up by certain newspapers as a time of awful anguish. How different are the conditions surrounding one's private expenditures. Billions are spent annually to extol the merits of everything from toothpaste to automobiles and from safety razors to tobacco. Whoever heard of a newspaper crying out about the growing sums paid for such articles? Many a man pays more for tobacco than for the education of his children. But he pays his tobacco bills in dribblets. He seldom knows the total. His automobile bill may be several times his school taxes, but he buys the machine on an "easy payment" plan, and purchases gasoline in ten gallon lots.

The taxpayer's contact with the school is not close. He thinks of schooling in terms of the obsolete institution he attended a generation ago. His understanding of the school is too often based on the reports of children or the misrepresentation of a self-seeking politician. He suffers no such misunderstanding of his private purchases. When he thinks of a car he thinks of a 1930, not a 1910, model. He drives it himself. He does not have his child drive it and accept an immature verdict as to how it runs.

These are but some of the handicaps under which schools, as opposed to most privately supported agencies, work. But they are not insuperable. They can be and have been surmounted. The school can rise above them by making known its purposes and accomplishments.

Education Week is a time when the importance of interpreting the schools should be emphasized. But Education Week is only one of fifty-two weeks each year when this work should go on. Have parents visit your schools during Education Week. Disseminate facts concerning the schools. See that their aims are understood, that their weaknesses as well as their strengths are discussed. Make known the facts concerning school costs. Do these things during Education Week and every one of the other fifty-one weeks of the year.

To the information which each school system will assemble locally may be added the facts given in this issue of the *Bulletin*. Other sources of information are also suggested. Let all intelligent school men and women accept their share of the task in order that the people may know their schools.

J. W. CRABTREE, *Secretary,*  
*National Education Association.*

## The Ability of the United States to Pay for Its Schools

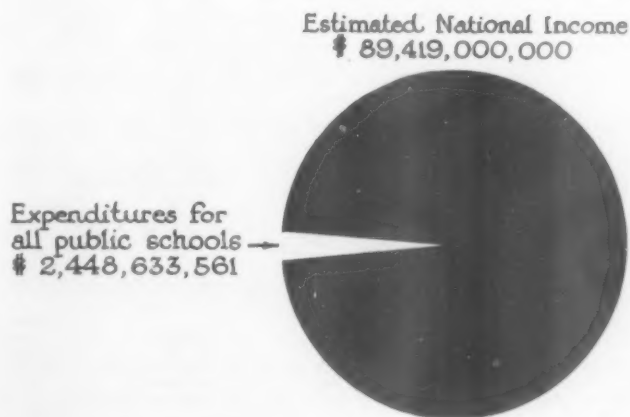
There has been much publicity in recent years concerning the amount expended for public schools. We have been told that too large a portion of our wealth and income is invested in the schools; that more money is expended for education than the importance of this public interest justifies; that the amount of public expenditure, of which school costs are an important item, is larger than the nation can afford; that public expenditures in general, and school costs in particular, are absorbing a rapidly increasing portion of the national income and that we have already, or will shortly reach the limit which can safely be expended for public education. These are but a few of

the questions which have been raised concerning the cost of the schools.

Are such fears and forebodings justified? Are they supported by the facts or are they the products of narrow vision or selfish interest? It is the purpose of this section of the *Bulletin* to present the factual material whereby an interested citizen may answer such questions for himself. Every figure given is based upon the most reliable source of information available. These sources are cited briefly. Address the Research Division of the National Education Association for additional information as to the basis of any of the figures given.

CHART I

### INCOME and SCHOOL SUPPORT IN THE UNITED STATES



*Research Division, National Education Ass'n.*

Sources of data: Income from National Bureau of Economic Research. School costs from various reports of the U. S. Department of Interior, Office of Education.

# How Much of Our Income and Wealth is Invested in Public Education?

## Current Income and Current School Expenditures

The answer to the question which heads this section can be obtained by comparing the nation's yearly income with its expenditures for public schools. For practical purposes, we may think of income<sup>1</sup> as the total amount which the people of the United States receive from sources such as wages, salaries, business profits, interest on investments, and certain other items. The most reliable estimate of the income of the people of the United States is that of the National Bureau of Economic Research. According to this agency, the incomes of all the people of the United States added together amounted to \$89,419,000,000 in 1928, the last year for which there are figures. In the same year, according to the United States Office of Education, we expended \$2,448,633,561<sup>2</sup> for public schools, that is, tax supported schools, of elementary, secondary, and collegiate grade. Of this sum \$2,184,336,638, or 89 percent was expended for public elementary and high schools and the remainder for the public support of colleges. Since we had an income of \$89,419,000,000 and expended \$2,448,633,561 for public schools, 2.74 percent of our income went for their support.

Table 1 gives in somewhat more detail the figures as to expenditures for public schools of all types. This table indicates that for each \$100 of income we allot \$2.44 for public elementary and secondary schools, and \$.30 for

tax supported colleges and universities. Public schools of all types require \$2.74 for each \$100 of income.

## Value of Wealth and of School Property

There is an important difference between the income and the wealth of a nation. The meaning of income is explained in the paragraphs just above. By wealth is meant the value of all tangible property in the United States. Just as we may think of income as the amount a man receives during the year we should think of his wealth as the value of the property he owns, including such items as, land, buildings, equipment, and of all other physical property. The wealth of the nation is the total value of all tangible property whether owned by individuals or collectively. A portion of the nation's wealth exists in the form of school property, such as school sites, school buildings, and equipment.

What part of our wealth is invested in school property? This question can be answered by comparing the nation's total wealth with the value of its school property. The total wealth of the United States in 1928, according to the National Industrial Conference Board, that is, the value of all forms of tangible property, such as lands, buildings, and equipment, is estimated at \$353,520,000,000. In the same year according to the United States Office of Education, the value of the property of public schools of all classes was \$6,333,-

<sup>1</sup> For definition of income see: King, Willford, *The National Income and Its Purchasing Power*, National Bureau of Economic Research, p. 42.

<sup>2</sup> This figure omits expenditures for public institutions for the blind, deaf, feeble-minded, and delinquent. No exact figures are available at this time as to the cost of these institutions but it is estimated at something less than \$50,000,000.

TABLE 1.—YEARLY INCOME AND PUBLIC SCHOOL COSTS IN THE UNITED STATES IN 1928

| Item                            | Amount           | Percent of income |
|---------------------------------|------------------|-------------------|
| Total national income .....     | \$89,419,000,000 | 100.00            |
| Cost of public schools:         |                  |                   |
| Elementary and secondary .....  | 2,184,336,638    | 2.44              |
| Colleges and universities ..... | 264,296,923      | .30               |
| Total .....                     | 2,448,633,561    | 2.74              |

Sources: School costs calculated from various reports of the U. S. Department of Interior, Office of Education; income figure is that of Willford I. King, *The National Income and Its Purchasing Power*, National Bureau of Economic Research, p. 74.

838,538. Something less than two percent of our wealth is in the form of school property.

Table 2 gives figures in greater detail as to the nation's total wealth and the value of the property of public schools and colleges. This table shows that for every \$100 of wealth possessed by the nation, \$1.55 is invested in the buildings, grounds, and equipment of public elementary and secondary schools and an additional \$.24 is invested in the plants of public colleges and universities. The property of public schools of all types accounts for \$1.79 of

each \$100 of the nation's wealth.

*At the beginning of this section the question was asked: "How much of our income and wealth is invested in public education?" The answer is clear. For every \$100 of yearly income we expend \$2.74 for public education. One dollar and seventy-nine cents, out of every \$100 of wealth, exists in form of public school property. From whatever angle the question is studied it is clear that a minor fraction of our economic power and capital is invested in public education.*

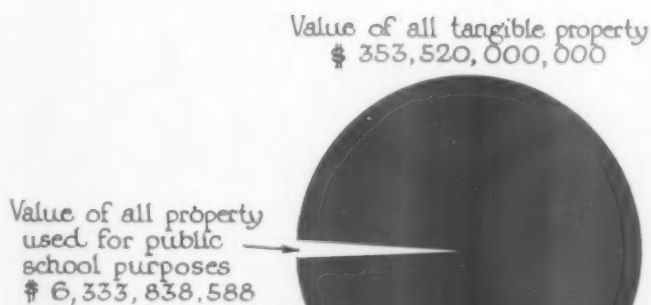
TABLE 2.—WEALTH AND VALUE OF SCHOOL PROPERTY IN THE UNITED STATES IN 1928

| Item                                          | Amount            | Percent of wealth |
|-----------------------------------------------|-------------------|-------------------|
| Wealth (value of all tangible property) ..... | \$353,520,000,000 | 100.00            |
| Value of property of public schools:          |                   |                   |
| Elementary and secondary .....                | 5,486,938,599     | 1.55              |
| Colleges and universities .....               | 846,899,989       | .24               |
| Total .....                                   | 6,333,838,588     | 1.79              |

Sources: Value of school property from various reports of the U. S. Department of Interior, Office of Education; wealth figure is an estimate of the National Industrial Conference Board as given in *The Conference Board Bulletin*, February 25, 1930.

CHART II

## WEALTH and SCHOOL PROPERTY IN THE UNITED STATES



*Research Division, National Education Ass'n*

Sources of data: Wealth figure is an estimate of the National Industrial Conference Board; value of public school property calculated from figures of the U.S. Department of Interior, Office of Education.

## The Facts for Individual States

To what extent does the conclusion stated just above hold true for individual states? An

answer to this question may be obtained for each state by consulting Tables 3 and 4. Table 3 estimates the yearly income of each state in 1928 and compares it with the amount ex-

TABLE 3.—SCHOOL EXPENDITURES AND INCOME BY STATES IN 1928

|                           | Expended for public elementary and secondary schools | Receipts for tax-supported universities, colleges; and expenditures for tax supported teacher-training institutions | Total cost of public schools, elementary, secondary, and collegiate | Estimated income 1928 | Percent school cost is of income | Index of percentage relationship of school costs to income |
|---------------------------|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------|----------------------------------|------------------------------------------------------------|
| 1                         | 2                                                    | 3                                                                                                                   | 4                                                                   | 5                     | 6                                | 7                                                          |
| United States.....        | \$2,184,336,638                                      | \$264,296,923                                                                                                       | \$2,448,633,561                                                     | \$89,419,000,000      | 2.74                             | 100.0                                                      |
| Alabama.....              | 20,195,693                                           | 4,344,973                                                                                                           | 24,540,666                                                          | 894,190,000           | 2.74                             | 100.0                                                      |
| Arizona.....              | 8,308,734                                            | 1,862,411                                                                                                           | 10,171,145                                                          | 277,198,900           | 3.67                             | 133.9                                                      |
| Arkansas.....             | 14,147,283                                           | 1,799,026                                                                                                           | 15,946,309                                                          | 625,933,000           | 2.55                             | 93.1                                                       |
| California.....           | 144,243,237                                          | 13,925,831                                                                                                          | 158,169,068                                                         | 4,864,393,600         | 3.25                             | 118.6                                                      |
| Colorado.....             | 24,865,072                                           | 3,990,632                                                                                                           | 28,855,704                                                          | 876,306,200           | 3.29                             | 120.1                                                      |
| Connecticut.....          | 33,081,759                                           | 2,099,897                                                                                                           | 35,181,656                                                          | 1,430,704,000         | 2.46                             | 89.8                                                       |
| Delaware.....             | 3,278,738                                            | 819,933                                                                                                             | 4,098,671                                                           | 214,605,600           | 1.91                             | 69.7                                                       |
| District of Columbia..... | 11,594,043                                           | 346,083                                                                                                             | 11,940,126                                                          | 670,642,500           | 1.78                             | 65.0                                                       |
| Florida.....              | 30,460,813                                           | 3,040,046                                                                                                           | 33,500,859                                                          | 581,223,500           | 5.76                             | 210.2                                                      |
| Georgia.....              | 17,763,241                                           | 3,393,010                                                                                                           | 21,156,251                                                          | 1,207,156,500         | 1.75                             | 63.9                                                       |
| Idaho.....                | 10,457,109                                           | 2,138,496                                                                                                           | 12,595,605                                                          | 312,966,500           | 4.02                             | 146.7                                                      |
| Illinois.....             | 147,268,954                                          | 10,290,224                                                                                                          | 157,559,178                                                         | 6,921,030,600         | 2.28                             | 83.2                                                       |
| Indiana.....              | 71,108,982                                           | 8,958,498                                                                                                           | 80,067,480                                                          | 2,038,753,200         | 3.93                             | 143.4                                                      |
| Iowa.....                 | 49,812,389                                           | 11,633,984                                                                                                          | 61,446,373                                                          | 1,609,542,000         | 3.82                             | 139.4                                                      |
| Kansas.....               | 42,908,395                                           | 6,423,348                                                                                                           | 49,331,743                                                          | 1,162,447,000         | 4.24                             | 154.7                                                      |
| Kentucky.....             | 22,517,495                                           | 5,074,438                                                                                                           | 27,591,933                                                          | 1,207,156,500         | 2.29                             | 83.6                                                       |
| Louisiana.....            | 21,689,011                                           | 3,496,407                                                                                                           | 25,185,418                                                          | 965,725,200           | 2.61                             | 95.3                                                       |
| Maine.....                | 10,843,613                                           | 1,776,520                                                                                                           | 12,620,133                                                          | 652,758,700           | 1.93                             | 70.4                                                       |
| Maryland.....             | 21,672,063                                           | 5,607,918                                                                                                           | 27,279,981                                                          | 1,385,994,500         | 1.97                             | 71.9                                                       |
| Massachusetts.....        | 83,200,816                                           | 3,346,664                                                                                                           | 86,547,480                                                          | 4,685,555,600         | 1.85                             | 67.5                                                       |
| Michigan.....             | 109,313,771                                          | 18,372,620                                                                                                          | 127,686,391                                                         | 3,254,851,600         | 3.92                             | 143.1                                                      |
| Minnesota.....            | 49,595,509                                           | 10,643,786                                                                                                          | 60,239,295                                                          | 1,698,961,000         | 3.55                             | 129.8                                                      |
| Mississippi.....          | 18,162,198                                           | 4,766,608                                                                                                           | 22,928,806                                                          | 581,223,500           | 3.94                             | 143.6                                                      |
| Missouri.....             | 52,795,170                                           | 5,514,464                                                                                                           | 58,309,634                                                          | 2,369,603,500         | 2.46                             | 89.8                                                       |
| Montana.....              | 13,004,923                                           | 1,852,141                                                                                                           | 14,857,064                                                          | 375,559,800           | 3.96                             | 144.5                                                      |
| Nebraska.....             | 26,897,792                                           | 4,929,725                                                                                                           | 31,827,517                                                          | 804,771,000           | 3.95                             | 144.2                                                      |
| Nevada.....               | 2,296,534                                            | 680,276                                                                                                             | 2,976,810                                                           | 89,419,000            | 3.33                             | 121.5                                                      |
| New Hampshire.....        | 6,736,965                                            | 1,863,103                                                                                                           | 8,600,068                                                           | 402,385,500           | 2.14                             | 78.1                                                       |
| New Jersey.....           | 105,018,108                                          | 5,148,025                                                                                                           | 110,166,133                                                         | 3,442,631,500         | 3.20                             | 116.8                                                      |
| New Mexico.....           | 5,283,846                                            | 2,004,346                                                                                                           | 7,288,192                                                           | 214,605,600           | 3.40                             | 124.1                                                      |
| New York.....             | 301,212,050                                          | 11,034,416                                                                                                          | 312,246,466                                                         | 14,780,960,700        | 2.11                             | 77.0                                                       |
| North Carolina.....       | 38,990,052                                           | 8,057,139                                                                                                           | 47,047,191                                                          | 1,073,028,000         | 4.38                             | 159.9                                                      |
| North Dakota.....         | 15,549,062                                           | 3,092,188                                                                                                           | 18,641,250                                                          | 304,024,600           | 6.13                             | 223.7                                                      |
| Ohio.....                 | 140,139,457                                          | 12,759,591                                                                                                          | 152,899,048                                                         | 5,007,464,000         | 3.05                             | 111.3                                                      |
| Oklahoma.....             | 29,358,677                                           | 7,148,947                                                                                                           | 36,507,624                                                          | 1,117,737,500         | 3.27                             | 119.3                                                      |
| Oregon.....               | 19,988,549                                           | 4,283,583                                                                                                           | 24,272,132                                                          | 733,235,800           | 3.31                             | 120.8                                                      |
| Pennsylvania.....         | 177,441,493                                          | 10,582,446                                                                                                          | 188,023,939                                                         | 8,530,572,600         | 2.20                             | 80.3                                                       |
| Rhode Island.....         | 12,688,611                                           | 840,152                                                                                                             | 13,528,763                                                          | 715,352,000           | 1.89                             | 69.0                                                       |
| South Carolina.....       | 15,812,645                                           | 3,700,254                                                                                                           | 19,512,899                                                          | 616,991,100           | 3.16                             | 115.3                                                      |
| South Dakota.....         | 14,928,546                                           | 2,632,671                                                                                                           | 17,561,217                                                          | 304,024,600           | 5.78                             | 210.9                                                      |
| Tennessee.....            | 22,768,369                                           | 4,138,111                                                                                                           | 26,906,480                                                          | 1,046,202,300         | 2.57                             | 93.8                                                       |
| Texas.....                | 65,917,564                                           | 12,767,220                                                                                                          | 78,684,784                                                          | 3,067,071,700         | 2.57                             | 93.8                                                       |
| Utah.....                 | 10,678,498                                           | 1,543,690                                                                                                           | 12,222,188                                                          | 312,966,500           | 3.91                             | 142.7                                                      |
| Vermont.....              | 5,079,837                                            | 938,814                                                                                                             | 6,018,651                                                           | 268,257,000           | 2.24                             | 81.8                                                       |
| Virginia.....             | 22,478,887                                           | 8,342,463                                                                                                           | 30,821,350                                                          | 1,180,330,800         | 2.61                             | 95.3                                                       |
| Washington.....           | 32,546,003                                           | 6,228,373                                                                                                           | 38,774,376                                                          | 1,385,994,500         | 2.80                             | 102.2                                                      |
| West Virginia.....        | 25,774,628                                           | 4,357,479                                                                                                           | 30,132,107                                                          | 938,899,500           | 3.21                             | 117.2                                                      |
| Wisconsin.....            | 48,340,345                                           | 10,737,443                                                                                                          | 59,077,788                                                          | 2,002,985,600         | 2.95                             | 107.7                                                      |
| Wyoming.....              | 6,121,109                                            | 968,510                                                                                                             | 7,089,619                                                           | 214,605,600           | 3.30                             | 120.4                                                      |

Read table thus: In 1928 the income of California is estimated to have been \$4,864,393,600. Expenditures for public elementary and secondary schools in California in 1928 were \$144,243,237; for public colleges, etc., California expends \$13,925,831; making a total of \$158,169,068 expended for all public schools in California, or 3.25 percent of the total income of that state. In the nation as a whole, the corresponding percent was 2.74 percent. If this last percent is given the value 100 as in column 7, then the percent for California (3.25) has the value 118.6. Similarly interpret figures for other states.

Sources of data: Figures of columns 2, 3, and 4 from U. S. Department of the Interior, Office of Education, Bulletin 1929, Nos. 14 and 38, and Bulletin 1930, No. 5. The total cost of public education as given in column 4 omits, because of lack of data, expenditures of certain institutions, for example, institutions for the deaf, blind, and feeble-minded, etc. Also note that figures representing the collegiate costs are receipts rather than expenditures. In this Bulletin these figures have been treated as expenditures.

The figure as to total national income is the estimate of the National Bureau of Economic Research. This total was distributed among the states of the union on the bases of the most reliable indices available.

pended for public schools. Table 4 similarly compares the percent of the wealth of the state represented by the value of school property. For example, the total expenditure for all public schools in Alabama in 1928 was \$24,-540,666 and its income for the same year is

estimated at \$894,190,000. Alabama's school bill in 1928 was, therefore, 2.74 percent of its total income. Table 4 similarly compares the total wealth with school wealth. In Alabama in 1928, the total value of all school property is estimated at \$56,673,027, whereas the value of

TABLE 4.—VALUE OF PUBLIC SCHOOL PROPERTY AND WEALTH BY STATES IN 1928

| States                    | Value of public school property, elementary, secondary, and collegiate | Wealth (value of all tangible property) | Percent school property is of wealth | Index of percentage relationship of value of school property to wealth |
|---------------------------|------------------------------------------------------------------------|-----------------------------------------|--------------------------------------|------------------------------------------------------------------------|
| 1                         | 2                                                                      | 3                                       | 4                                    | 5                                                                      |
| United States.....        | \$6,333,838,588                                                        | \$353,520,000,000 <sup>1</sup>          | 1.79                                 | 100.00                                                                 |
| Alabama.....              | 56,673,027                                                             | 3,304,000,000                           | 1.72                                 | 96.09                                                                  |
| Arizona.....              | 22,819,335                                                             | 1,568,000,000                           | 1.46                                 | 81.56                                                                  |
| Arkansas.....             | 35,498,937                                                             | 2,866,000,000                           | 1.24                                 | 69.27                                                                  |
| California.....           | 438,785,990                                                            | 16,973,000,000                          | 2.59                                 | 144.69                                                                 |
| Colorado.....             | 74,173,036                                                             | 3,505,000,000                           | 2.12                                 | 118.44                                                                 |
| Connecticut.....          | 92,510,763                                                             | 6,152,000,000                           | 1.50                                 | 83.80                                                                  |
| Delaware.....             | 12,554,642                                                             | 722,000,000                             | 1.74                                 | 97.21                                                                  |
| District of Columbia..... | 31,254,123                                                             | 1,854,000,000                           | 1.69                                 | 94.41                                                                  |
| Florida.....              | 83,357,083                                                             | 2,887,000,000                           | 2.89                                 | 161.45                                                                 |
| Georgia.....              | 60,490,346                                                             | 4,421,000,000                           | 1.37                                 | 76.54                                                                  |
| Idaho.....                | 29,588,468                                                             | 1,818,000,000                           | 1.63                                 | 91.06                                                                  |
| Illinois.....             | 422,226,464                                                            | 24,276,000,000                          | 1.74                                 | 97.21                                                                  |
| Indiana.....              | 114,860,710                                                            | 9,869,000,000                           | 1.16                                 | 64.80                                                                  |
| Iowa.....                 | 144,742,335                                                            | 11,352,000,000                          | 1.28                                 | 71.51                                                                  |
| Kansas.....               | 104,798,310                                                            | 6,771,000,000                           | 1.55                                 | 86.59                                                                  |
| Kentucky.....             | 62,746,651                                                             | 3,979,000,000                           | 1.58                                 | 88.27                                                                  |
| Louisiana.....            | 69,927,103                                                             | 3,847,000,000                           | 1.82                                 | 101.68                                                                 |
| Maine.....                | 34,868,509                                                             | 2,303,000,000                           | 1.51                                 | 84.36                                                                  |
| Maryland.....             | 75,005,229                                                             | 4,517,000,000                           | 1.66                                 | 92.74                                                                  |
| Massachusetts.....        | 252,996,240                                                            | 14,955,000,000                          | 1.69                                 | 94.41                                                                  |
| Michigan.....             | 347,603,929                                                            | 13,223,000,000                          | 2.63                                 | 146.93                                                                 |
| Minnesota.....            | 191,823,446                                                            | 9,481,000,000                           | 2.02                                 | 112.85                                                                 |
| Mississippi.....          | 52,171,541                                                             | 2,464,000,000                           | 2.12                                 | 118.44                                                                 |
| Missouri.....             | 173,082,497                                                            | 11,261,000,000                          | 1.54                                 | 86.03                                                                  |
| Montana.....              | 36,218,029                                                             | 2,547,000,000                           | 1.42                                 | 79.33                                                                  |
| Nebraska.....             | 95,765,693                                                             | 5,800,000,000                           | 1.65                                 | 92.18                                                                  |
| Nevada.....               | 7,288,244                                                              | 568,000,000                             | 1.28                                 | 71.51                                                                  |
| New Hampshire.....        | 23,686,445                                                             | 1,587,000,000                           | 1.49                                 | 83.24                                                                  |
| New Jersey.....           | 272,836,431                                                            | 13,514,000,000                          | 2.02                                 | 112.84                                                                 |
| New Mexico.....           | 14,574,794                                                             | 959,000,000                             | 1.52                                 | 84.92                                                                  |
| New York.....             | 790,834,125                                                            | 40,570,000,000                          | 1.95                                 | 108.94                                                                 |
| North Carolina.....       | 125,670,590                                                            | 5,396,000,000                           | 2.33                                 | 130.17                                                                 |
| North Dakota.....         | 51,653,105                                                             | 2,576,000,000                           | 2.01                                 | 112.29                                                                 |
| Ohio.....                 | 328,919,635                                                            | 21,281,000,000                          | 1.55                                 | 86.59                                                                  |
| Oklahoma.....             | 98,092,103                                                             | 4,261,000,000                           | 2.30                                 | 128.49                                                                 |
| Oregon.....               | 51,598,133                                                             | 3,828,000,000                           | 1.35                                 | 75.42                                                                  |
| Pennsylvania.....         | 536,230,738                                                            | 32,610,000,000                          | 1.64                                 | 91.62                                                                  |
| Rhode Island.....         | 32,340,223                                                             | 2,205,000,000                           | 1.47                                 | 82.12                                                                  |
| South Carolina.....       | 52,042,042                                                             | 2,749,000,000                           | 1.89                                 | 105.59                                                                 |
| South Dakota.....         | 45,403,767                                                             | 3,401,000,000                           | 1.34                                 | 74.86                                                                  |
| Tennessee.....            | 43,046,029                                                             | 4,930,000,000                           | .87                                  | 48.60                                                                  |
| Texas.....                | 230,183,913                                                            | 10,898,000,000                          | 2.11                                 | 117.88                                                                 |
| Utah.....                 | 32,518,486                                                             | 1,757,000,000                           | 1.85                                 | 103.35                                                                 |
| Vermont.....              | 14,985,956                                                             | 943,000,000                             | 1.59                                 | 88.83                                                                  |
| Virginia.....             | 86,133,843                                                             | 5,637,000,000                           | 1.53                                 | 85.47                                                                  |
| Washington.....           | 98,406,041                                                             | 5,704,000,000                           | 1.73                                 | 96.65                                                                  |
| West Virginia.....        | 81,582,866                                                             | 5,348,000,000                           | 1.53                                 | 85.47                                                                  |
| Wisconsin.....            | 178,741,376                                                            | 8,923,000,000                           | 2.00                                 | 111.73                                                                 |
| Wyoming.....              | 20,527,267                                                             | 1,160,000,000                           | 1.77                                 | 98.88                                                                  |

Read table thus: In 1928 the value of all tangible property in Alabama is estimated to have been \$3,304,000,000. The value of public school buildings, elementary, secondary, and collegiate, in Alabama in 1928 was \$56,673,027 or 1.72 percent of the value of all tangible property. In the nation as a whole, the corresponding percent was 1.79. If this last percent is given the value 100, as in column 5, then the percent for Alabama (1.72) has the value 96.09. Similarly interpret data for other states.

Sources of data: The figures of column 2 are from the U. S. Department of the Interior, Office of Education, Bulletin 1929, Nos. 14 and 38, and Bulletin 1930, No. 5. Figures as to wealth are estimates of the National Industrial Conference Board as given in The Conference Board Bulletin, February 25, 1930.

<sup>1</sup> Excludes \$6,542,000,000 which consists of (1) value of ships belonging to the United States Navy, (2) value of privately-owned waterworks, and (3) value of gold and silver coin and bullion, not distributed by states.

all property in the state was \$3,304,000,000. For each \$100 worth of tangible property in Alabama there is \$1.72 invested in public school property. One may conclude, therefore, that a minor fraction of Alabama's income and wealth is invested in public schools.

Tables 3 and 4 offer a basis whereby the investment in education of each state may be viewed in relation to its economic resources. In studying these figures it is well to have in mind that whether a state spends a large or a small percent of its income for schools is of little significance in itself. One cannot condemn with too much vigor the shallow thinking back of the conclusion that a state should be commended simply because it spends a small percent or a large percent of its income for education.

Clear thinking on this whole problem should begin with the realization that expenditures for education are an investment. When this money is properly invested its effect is, like other good investments, to increase rather than to decrease the income of a community. Those who contend that the effect of school expenditures is to reduce the total amount of income which we have to expend, have little support for their viewpoint, either in economic theory or reliable facts. A broad vision of the influence of good education suggests that instead of constituting an economic loss, money expended for good schools partakes both of the nature of sound investment and of insurance protection.

Such expenditure is an investment in that it lays the intellectual foundation upon which an efficient economic system must be based. Ignorant citizens make neither good producers nor good consumers. The economic superiority of the United States and the high standard of living which we are able to maintain are the result of efficient organization, intelligent cooperation by the rank and file of workers, and the use of labor-saving machinery. Each of these is dependent upon the maintenance of a high general level of social intelligence, which is one of the products of an efficient system of education.

Viewed in this light, money spent for education is an investment of the highest order. Our yearly national income now approaches ninety billion dollars. That this income is ninety billions, rather than fifty or sixty billions, is very largely due to human factors, special capabilities possessed by the nation's citizenry, which

are the result of such agencies as good schools. These qualities have not been developed in a day or a decade. To the extent that they are an outcome of schooling, they are the product of many decades. The creation of a superior culture in any direction is the work of many generations. The nation since its beginning has maintained educational facilities so that an increasing percent of the population might have opportunities to develop its potentialities. The fruit of this devotion to education is now being harvested.

Our annual investment in schools is now about two and one-half billion dollars. Due to the special aptitudes which the schools have assisted in capitalizing, our income has been increased by ten, twenty, or more billions a year. If the schools have had even a small share in discovering and developing these special aptitudes, the investment made in them has been an exceedingly profitable one.

This conception of the place of schools and education in our economic system emphasizes the importance of protecting our human assets. It suggests that we look upon expenditures for education as payments to a depreciation or insurance fund which it is the sheerest folly to neglect. The special human aptitudes which are principally responsible for the economic position of the United States are of a perishable rather than a permanent quality. This all-important asset may be lost in one generation. Were it not for education, our whole complex civilization would disappear and we would return to savagery. To be sure, savagery is not the only alternative to our present highly organized civilization. We could return to the level of economic efficiency obtaining before 1900. But most of us would prefer not to do this. We would prefer to maintain recent gains and to advance still further. To do this we must maintain and improve our human assets. This can be done only by keeping our educational facilities in first-class condition.

It is important, therefore, that the schools of today be not merely good schools, but very good schools. Anything less is likely to mean a depreciation in those human factors—those human assets—which are the prepotent cause of the advance of the United States to a position of economic leadership.

Money expended for good schools by a state, therefore, rather than constituting an economic

loss, represents a most excellent investment. It also represents a replacement or insurance payment, which protects from depreciation our most valuable assets.

It is in the light of these considerations that the tables of this *Bulletin* should be examined. Does an analysis of the figures presented indicate that your state looks upon the maintenance of first-rate schools as a matter of major significance? Or, does the proportion of your state's income devoted to educational support indicate that this function is considered a minor project? Has every reasonable effort been made to place the financing of your schools on a sound basis? Or, are some features of your state school system less effective than they should be, due to inadequate financial support? Is education receiving as large a share of your state's expenditures for public purposes as its importance justifies? It is in considering questions such as these that the tables of this *Bulletin* will be suggestive.

The tables are so arranged that a state's position may be compared with that of other states. This arrangement does not mean to imply that uniformity among the states is necessarily desirable in the items with which the tables deal. It is probably highly desirable that some states should invest a higher percent of income in education than others. This will certainly be necessary or some states will offer their children a decidedly inferior educational opportunity. Some states have from five to six times as much wealth and income behind each child to be educated as others.<sup>1</sup> This means that the less wealthy states must choose between two alternatives:

1. Offer their children educational opportunities decidedly inferior to those which some states offer.

2. Allot a higher percent of income to school support—that is, accept relatively high tax rates for schools.

It is of increasing importance that the less wealthy states choose the latter course. In our early history a state's natural resources were the principal factors determining its economic position. Its supply of natural resources determined its wealth. This is becoming less and less true. Human resources are rapidly replacing natural

resources as the prepotent factor in determining a state's economic status. A state poor as to natural resources can compensate by building up an efficient citizenry. A state's natural resources cannot be increased, its human resources can. And an efficient school system is the agency which can do most to bring about the changes in a state's citizenry which mean progress.

Hence variation in the percent of income devoted to school support is to be expected. There is no particular amount or percent of income which can be suggested as the desirable one for a state to allot to education.

It is of the greatest importance that every state shall constantly examine its school system in order to remove weak spots and to bring it to the highest possible point of efficiency.<sup>2</sup> Neither cost nor other obstacles should be allowed to prevent achievement of this result. If it can be attained with a low tax rate, well and good. If high tax rates and real sacrifice are necessary they should be accepted. The cost of poor schools in the long run is likely to be far greater than the cost of good schools. *The question should not be: Can we afford good schools? Rather it should be: Can we afford not to have good schools?*

If a state really believes that education is a function of major importance it will see that early in the process of budgeting its income for various purposes, both public and private, sufficient financial support is allotted to schools. This will mean the rebuilding of the fiscal system in many states. It may be necessary to replace an obsolete, unfair scheme for raising revenue by one which is up to date and equitable. But this is not an insuperable thing to accomplish. It has already been accomplished by some states.

If difficulty is encountered in your state in securing the revenue necessary to desirable educational organization, is it due to lack of resources to tax, to an obsolete and inefficient method of financing public services, or to a lack of willingness to pay the price? *In short, does your state look upon education as a matter of first importance or of minor importance?*

<sup>1</sup> Norton, John K. *Ability of the States to Support Education*, National Education Association, Washington, D. C.

<sup>2</sup> States will find the following references helpful in this connection:—"A Self-survey Plan for State School Systems—Part I: Checklists," and "Part II: Handbook". *Research Bulletin* 8: March and May, 1930. National Education Association, Washington, D. C.

## How Do Expenditures for Public Schools Compare with Certain Other Expenditures?

A comparison of school expenditures and the value of school property with the amount of income and wealth in the United States reveals that a minor fraction of our economic power and capital is invested in education. What are some of the other important bills which the nation is paying annually and how do these compare with the bill for the support of public schools? This question can be answered by comparing the nation's school expenditure with expenditures for certain other purposes.

### The Cost of Life Insurance

The nation's bill for life insurance in 1928 was \$3,145,584,000. This figure may be compared with \$2,448,633,561 expended for public schools of all types—elementary, secondary, and collegiate. The nation's annual bill for life insurance is, therefore, considerably larger than that paid for public education. Out of every \$100 which we have to spend, we pay \$2.74 for public schools and \$3.52 for life insurance

premiums.

In making this comparison there is no thought of depreciating the importance of life insurance. Through life insurance we purchase a form of protection that is indispensable to millions of families. It constitutes one of the important forms of saving and investment which many people make. The fact that there were 28,136,515 ordinary life and 85,843,734 industrial life insurance policies in force in 1928, and that these policies protected the lives of the nation's people to the amount of \$95,205,000,000 calls for optimism. These figures indicate increasing thrift on the part of the nation's citizens.

But however highly we rate the service rendered to the nation by the life insurance business, the question may be raised whether it is any more important than that rendered by the service of public education. The fact is that we invest considerably more in life insurance than in public education.

CHART III

## IMPORTANT BILLS PAID ANNUALLY IN THE UNITED STATES

|                                                      |                  |
|------------------------------------------------------|------------------|
| Public Schools—Elementary, Secondary, and Collegiate | \$2,448,633,561  |
| Life Insurance                                       | \$3,145,584,000  |
| Certain Luxuries                                     | \$6,401,650,000  |
| Building Construction                                | \$7,065,000,000  |
| Passenger Automobiles                                | \$12,500,000,000 |

*Research Division, National Education Ass'n.*

Calculations based on the following sources: U.S. Department of Interior, Office of Education for school costs; the Spectator Co. for Life Insurance; U.S. Treasury Department for luxuries; F.W. Dodge Corporation for building construction; and National Automobile Chamber of Commerce and American Automobile Association for passenger automobiles.

*For each \$1.00 expended for public schools, we spend \$1.28 for life insurance. Does this fact indicate that we invest a larger part of the nation's income in public schools than their importance justifies?*

### The Bill for Building Construction

The nation's expenditures for buildings, homes and other structures in 1928 was \$7,065,000,000.<sup>1</sup> This is three times the \$2,448,633,561 expended for public education in the same year.

In making this comparison the desire is not to depreciate the importance of substantial investments in building construction. A well-constructed home, building, or factory is serviceable for many years. Expenditures for such structures, when wisely made, constitute an important permanent investment. It would be folly to allow this portion of the nation's wealth to deteriorate. Such deterioration can be prevented only by making substantial expenditures to replace worn-out or out-of-date structures with modern ones. The close relation under our present economic organization of building operations to general prosperity is also recognized.

But in accepting these important and easily understood facts, let us not overlook the even more fundamental truth that the value of our human resources far exceeds that of our buildings. The total value of all buildings in the United States is, at the present time, probably something less than \$120,000,000,000. To protect and enhance this investment we are spending something over seven billion dollars a year for building construction. The total value of human resources of the United States has been roughly estimated at \$1,500,000,000,000.<sup>2</sup> To protect and enhance the portion of this asset represented by our intellectual resources we spend \$2,500,000,000 for public education. Let us not forget that the resources of a nation which exist in the form of knowledge and intelligence are extremely perishable. Willford King, the well-known economist, emphasizes this fact as follows:

Some of the most expensive and important forms of saving are not tangible but consist of such things as accumulated scientific knowledge and the train-

ing of the human mind. Savings of the last-mentioned variety are extremely perishable, since they are constantly being lost through the death of the persons possessing the education.<sup>3</sup>

Public education is the principal means whereby we protect the extremely valuable and highly perishable human assets of the types described in the foregoing quotation. In the light of these facts the investment of two and one-half billion dollars to protect our intellectual assets seems reasonable when compared with an investment of seven billion dollars a year for the protection of capital existing in the form of buildings.

*For every \$1.00 we invest in public education, we invest \$2.89 in building construction. Does this fact indicate that the investment in public education is greater than we are able to afford?*

### What the States Invest in Life Insurance and Building Construction

The facts in the preceding paragraphs show that the nation as a whole invests considerably larger sums in life insurance and building construction than in public education. Facts similar to those presented for the nation as a whole are given for individual states in Table 5. The relation of the investments for life insurance and education varies considerably in different states. For example, the expenditure which Illinois and West Virginia make for public education is but 39 percent as much as these states pay for life insurance. For each \$1.00 invested for public education in these states, more than \$2.50 is invested in life insurance. The sparsely settled states of the west generally show a relationship in the other direction. The situation in these states may be due to the fact that the cost per pupil to educate a child is relatively high in sparsely settled communities, that these states undervalue life insurance, that they protect their future through other means, or to the existence of other special situations.

Table 5 also gives figures showing the investment in building construction by states. The ratio of the investment in education to that in building construction again varies widely. States like New York and Illinois spend five times as much annually in the construction of new buildings as is invested in public educa-

<sup>1</sup> This figure is an estimate of the F. W. Dodge Corporation as given in the *Graphic Review*, Supplement Fourth Quarter, 1928 January, 1929.

<sup>2</sup> This figure is an estimate by Louis I. Dublin as given in *Health and Wealth*, p. 6.

<sup>3</sup> Willford I. King, "The Net Volume of Saving in the United States," *American Statistical Association Journal*, 1922, p. 307.

**TABLE 5.—THE STATES' ANNUAL BILLS FOR PUBLIC SCHOOLS, LIFE INSURANCE, AND BUILDING CONSTRUCTION IN 1928**  
(School building expenditures included in building costs)

| States                    | Cost of public education, elementary, secondary, and collegiate in 1928 | Expenditures for life insurance in 1928 | Percent cost of schools is of expenditures for life insurance | Expenditures for building construction | Percent cost of schools is of expenditures for building construction | Index of percentage relationship of school expenditures to |                                        |
|---------------------------|-------------------------------------------------------------------------|-----------------------------------------|---------------------------------------------------------------|----------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------|
|                           |                                                                         |                                         |                                                               |                                        |                                                                      | Payments for life insurance                                | Expenditures for building construction |
| 1                         | 2                                                                       | 3                                       | 4                                                             | 5                                      | 6                                                                    | 7                                                          | 8                                      |
| United States.....        | \$2,448,633,561                                                         | \$3,145,584,000                         | 77.84                                                         | \$7,065,000,000                        | 34.66                                                                | 100.00                                                     | 100.00                                 |
| Alabama.....              | 24,540,666                                                              | 28,939,373                              | 84.80                                                         | 82,999,400                             | 29.57                                                                | 108.94                                                     | 85.31                                  |
| Arizona.....              | 10,171,145                                                              | 4,718,376                               | 215.56                                                        | 15,241,300*                            | 66.73                                                                | 276.93                                                     | 192.53                                 |
| Arkansas.....             | 15,946,309                                                              | 16,042,478                              | 99.40                                                         | 43,164,500                             | 36.94                                                                | 127.70                                                     | 106.58                                 |
| California.....           | 158,169,068                                                             | 153,819,058                             | 102.83                                                        | 249,232,600*                           | 63.46                                                                | 132.10                                                     | 183.09                                 |
| Colorado.....             | 28,855,704                                                              | 25,164,672                              | 114.67                                                        | 30,439,000*                            | 94.80                                                                | 147.32                                                     | 273.51                                 |
| Connecticut.....          | 35,181,656                                                              | 51,273,019                              | 68.62                                                         | 119,124,100                            | 29.53                                                                | 88.16                                                      | 85.20                                  |
| Delaware.....             | 4,098,671                                                               | 8,807,635                               | 46.54                                                         | 12,128,100                             | 33.79                                                                | 59.79                                                      | 97.49                                  |
| District of Columbia..... | 11,940,126                                                              | 21,075,413                              | 56.65                                                         | 73,730,300                             | 16.19                                                                | 72.78                                                      | 46.71                                  |
| Florida.....              | 33,500,859                                                              | 25,793,789                              | 129.88                                                        | 72,261,600                             | 46.36                                                                | 166.86                                                     | 133.76                                 |
| Georgia.....              | 21,156,251                                                              | 43,094,501                              | 49.09                                                         | 76,119,400                             | 27.79                                                                | 63.07                                                      | 80.18                                  |
| Idaho.....                | 12,595,605                                                              | 6,291,168                               | 200.21                                                        | 15,241,300*                            | 82.64                                                                | 257.21                                                     | 238.43                                 |
| Illinois.....             | 157,559,178                                                             | 407,667,686                             | 38.65                                                         | 843,259,600                            | 18.68                                                                | 49.65                                                      | 53.89                                  |
| Indiana.....              | 80,067,480                                                              | 75,808,574                              | 105.62                                                        | 134,931,000                            | 59.34                                                                | 135.69                                                     | 171.21                                 |
| Iowa.....                 | 61,446,373                                                              | 72,662,990                              | 84.56                                                         | 59,730,400                             | 102.87                                                               | 108.63                                                     | 296.80                                 |
| Kansas.....               | 49,331,743                                                              | 29,883,048                              | 165.08                                                        | 53,638,300                             | 91.97                                                                | 212.08                                                     | 265.35                                 |
| Kentucky.....             | 27,591,933                                                              | 40,263,475                              | 68.53                                                         | 62,916,500                             | 43.85                                                                | 88.04                                                      | 126.51                                 |
| Louisiana.....            | 25,185,418                                                              | 28,624,814                              | 87.98                                                         | 50,993,000                             | 49.39                                                                | 113.03                                                     | 142.50                                 |
| Maine.....                | 12,620,133                                                              | 19,188,062                              | 65.77                                                         | 23,489,700                             | 53.73                                                                | 84.49                                                      | 155.02                                 |
| Maryland.....             | 27,279,981                                                              | 49,700,227                              | 54.89                                                         | 100,112,200                            | 27.25                                                                | 70.52                                                      | 78.62                                  |
| Massachusetts.....        | 86,547,480                                                              | 130,541,736                             | 66.30                                                         | 255,838,800                            | 33.83                                                                | 85.17                                                      | 97.61                                  |
| Michigan.....             | 127,686,391                                                             | 101,602,363                             | 125.67                                                        | 325,587,000                            | 39.22                                                                | 161.45                                                     | 113.16                                 |
| Minnesota.....            | 60,239,295                                                              | 60,395,213                              | 99.74                                                         | 54,917,600                             | 109.69                                                               | 128.13                                                     | 316.47                                 |
| Mississippi.....          | 22,928,806                                                              | 14,784,245                              | 155.09                                                        | 35,609,700                             | 64.39                                                                | 199.24                                                     | 185.78                                 |
| Missouri.....             | 58,309,634                                                              | 91,851,053                              | 63.48                                                         | 224,026,400                            | 26.03                                                                | 81.55                                                      | 75.10                                  |
| Montana.....              | 14,857,064                                                              | 9,436,752                               | 157.44                                                        | 17,948,900*                            | 82.77                                                                | 202.26                                                     | 238.81                                 |
| Nebraska.....             | 31,827,517                                                              | 21,704,530                              | 146.64                                                        | 37,510,500                             | 84.85                                                                | 188.39                                                     | 244.81                                 |
| Nevada.....               | 2,976,810                                                               | 1,258,234                               | 236.59                                                        | 1,572,200*                             | 189.34                                                               | 303.94                                                     | 546.28                                 |
| New Hampshire.....        | 8,600,068                                                               | 11,324,102                              | 75.94                                                         | 50,118,300                             | 17.16                                                                | 97.56                                                      | 49.51                                  |
| New Jersey.....           | 110,166,133                                                             | 134,945,554                             | 81.64                                                         | 365,948,600                            | 30.10                                                                | 104.88                                                     | 86.84                                  |
| New Mexico.....           | 7,288,192                                                               | 2,831,026                               | 257.44                                                        | 7,686,200*                             | 94.82                                                                | 330.73                                                     | 273.57                                 |
| New York.....             | 312,246,466                                                             | 393,512,558                             | 79.35                                                         | 1,523,534,100                          | 20.49                                                                | 101.94                                                     | 59.12                                  |
| North Carolina.....       | 47,047,191                                                              | 44,981,851                              | 104.59                                                        | 101,471,300                            | 46.37                                                                | 134.37                                                     | 133.79                                 |
| North Dakota.....         | 18,641,250                                                              | 8,493,077                               | 219.49                                                        | 10,412,100                             | 179.03                                                               | 281.98                                                     | 516.53                                 |
| Ohio.....                 | 152,899,048                                                             | 296,943,130                             | 51.49                                                         | 435,269,600                            | 35.13                                                                | 66.15                                                      | 101.36                                 |
| Oklahoma.....             | 36,507,624                                                              | 32,084,957                              | 113.78                                                        | 100,307,200                            | 36.40                                                                | 146.17                                                     | 105.02                                 |
| Oregon.....               | 24,272,132                                                              | 20,446,296                              | 118.71                                                        | 33,539,600*                            | 72.37                                                                | 152.51                                                     | 208.80                                 |
| Pennsylvania.....         | 188,023,939                                                             | 281,215,210                             | 66.86                                                         | 602,330,300                            | 31.22                                                                | 85.89                                                      | 90.08                                  |
| Rhode Island.....         | 13,528,763                                                              | 26,737,464                              | 50.60                                                         | 35,131,600                             | 38.51                                                                | 65.01                                                      | 111.11                                 |
| South Carolina.....       | 19,512,899                                                              | 20,131,738                              | 96.93                                                         | 31,929,200                             | 61.11                                                                | 124.52                                                     | 176.31                                 |
| South Dakota.....         | 17,561,217                                                              | 8,493,077                               | 206.77                                                        | 7,272,700                              | 241.47                                                               | 265.63                                                     | 696.68                                 |
| Tennessee.....            | 26,906,480                                                              | 38,690,683                              | 69.54                                                         | 66,377,300                             | 40.54                                                                | 89.34                                                      | 116.96                                 |
| Texas.....                | 78,684,784                                                              | 53,789,486                              | 146.28                                                        | 231,408,800                            | 34.00                                                                | 187.92                                                     | 98.10                                  |
| Utah.....                 | 12,222,188                                                              | 7,549,402                               | 161.90                                                        | 11,966,000*                            | 102.14                                                               | 207.99                                                     | 294.69                                 |
| Vermont.....              | 6,618,651                                                               | 9,436,752                               | 63.78                                                         | 11,878,500                             | 50.67                                                                | 81.94                                                      | 146.19                                 |
| Virginia.....             | 30,821,350                                                              | 36,803,333                              | 83.75                                                         | 110,287,500                            | 27.95                                                                | 107.59                                                     | 80.64                                  |
| Washington.....           | 38,774,376                                                              | 38,690,683                              | 100.22                                                        | 46,946,700*                            | 82.59                                                                | 128.75                                                     | 238.29                                 |
| West Virginia.....        | 30,132,107                                                              | 77,381,366                              | 38.94                                                         | 39,148,100                             | 76.97                                                                | 50.03                                                      | 222.07                                 |
| Wisconsin.....            | 59,077,788                                                              | 57,564,187                              | 102.63                                                        | 163,372,800                            | 36.16                                                                | 131.85                                                     | 104.33                                 |
| Wyoming.....              | 7,089,619                                                               | 3,145,584                               | 225.38                                                        | 6,900,100*                             | 102.75                                                               | 289.54                                                     | 296.45                                 |

\*Estimated

Read table thus: In 1928 there was \$24,540,666 paid as life insurance premiums in the state of Alabama. Expenditures for public elementary, secondary, and collegiate schools in Alabama in 1928 were 84.80 percent as much as was paid for life insurance in that state. In the nation as a whole, expenditures for public schools were 77.84 percent of the amount paid for life insurance premiums. If this last percent is given the value 100, as in column 7, then the percent for Alabama (84.80) has the value 108.94. Similarly interpret data for other columns and other states.

Sources of data: The figures of column 2 are from the U. S. Department of Interior, Office of Education, Bulletin 1929, Nos. 14 and 38, and Bulletin 1930, No. 5. The figures representing collegiate costs are receipts rather than expenditures. Expenditures for these institutions are not available. Figures as to life insurance are from *Insurance Yearbook, 1929*, The Spectator Co. The figures of column 5 are from *The Graphic Review*, Supplement Fourth, January, 1929. The figures given as to cost of building construction in the United States include cost of school buildings, which is approximately \$400,000,000 a year for public elementary, and secondary schools. The percent which the cost of public education is of the cost of building construction will be slightly increased if the cost of school buildings is deducted from construction cost of all building construction.

tion. In all but seven states the amount expended for buildings is larger than that expended for schools.

*Do the figures for your state as to invest-*

*ments in life insurance, building construction, and public education indicate that too much emphasis is being placed upon the education of your children?*

TABLE 6.—THE STATES' ANNUAL BILLS FOR SCHOOLS AND PASSENGER AUTOMOBILES IN 1928

| States                    | Cost of public schools elementary, secondary, and collegiate in 1928 | Expenditures for passenger automobiles in 1928 | Percent cost of schools is of expenditures for passenger automobiles | Index of percentage relationship of school cost to expenditures for passenger automobiles |
|---------------------------|----------------------------------------------------------------------|------------------------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| 1                         | 2                                                                    | 3                                              | 4                                                                    | 5                                                                                         |
| United States.....        | \$2,448,633,561                                                      | \$12,500,000,000                               | 19.59                                                                | 100.00                                                                                    |
| Alabama.....              | 24,540,666                                                           | 132,769,600                                    | 18.48                                                                | 94.33                                                                                     |
| Arizona.....              | 10,171,145                                                           | 50,082,500                                     | 20.31                                                                | 103.68                                                                                    |
| Arkansas.....             | 15,946,309                                                           | 102,114,200                                    | 15.62                                                                | 79.73                                                                                     |
| California.....           | 158,169,068                                                          | 949,762,800                                    | 16.65                                                                | 84.99                                                                                     |
| Colorado.....             | 28,855,704                                                           | 150,673,300                                    | 19.15                                                                | 97.75                                                                                     |
| Connecticut.....          | 35,181,656                                                           | 159,953,600                                    | 21.99                                                                | 112.25                                                                                    |
| Delaware.....             | 4,098,671                                                            | 23,854,300                                     | 17.18                                                                | 87.70                                                                                     |
| District of Columbia..... | 11,940,126                                                           | 67,832,500                                     | 17.60                                                                | 89.84                                                                                     |
| Florida.....              | 33,500,859                                                           | 171,685,900                                    | 19.51                                                                | 99.59                                                                                     |
| Georgia.....              | 21,156,251                                                           | 158,467,400                                    | 13.35                                                                | 68.15                                                                                     |
| Idaho.....                | 12,595,605                                                           | 54,695,700                                     | 23.03                                                                | 117.56                                                                                    |
| Illinois.....             | 157,559,178                                                          | 783,985,200                                    | 20.10                                                                | 102.60                                                                                    |
| Indiana.....              | 80,067,480                                                           | 407,637,500                                    | 19.64                                                                | 100.26                                                                                    |
| Iowa.....                 | 61,446,373                                                           | 379,582,100                                    | 16.19                                                                | 82.64                                                                                     |
| Kansas.....               | 49,331,743                                                           | 268,360,800                                    | 18.38                                                                | 93.82                                                                                     |
| Kentucky.....             | 27,591,933                                                           | 154,768,400                                    | 17.83                                                                | 91.02                                                                                     |
| Louisiana.....            | 25,185,418                                                           | 126,336,600                                    | 19.94                                                                | 101.79                                                                                    |
| Maine.....                | 12,620,133                                                           | 81,788,200                                     | 15.43                                                                | 78.76                                                                                     |
| Maryland.....             | 27,279,981                                                           | 160,559,200                                    | 16.99                                                                | 86.73                                                                                     |
| Massachusetts.....        | 86,547,480                                                           | 385,635,100                                    | 22.44                                                                | 114.55                                                                                    |
| Michigan.....             | 127,686,391                                                          | 628,963,300                                    | 20.30                                                                | 103.62                                                                                    |
| Minnesota.....            | 60,239,295                                                           | 333,861,000                                    | 18.04                                                                | 92.09                                                                                     |
| Mississippi.....          | 22,928,806                                                           | 119,158,100                                    | 19.24                                                                | 98.21                                                                                     |
| Missouri.....             | 58,309,634                                                           | 366,798,200                                    | 15.90                                                                | 81.16                                                                                     |
| Montana.....              | 14,857,064                                                           | 60,480,000                                     | 24.57                                                                | 125.42                                                                                    |
| Nebraska.....             | 31,827,517                                                           | 203,091,600                                    | 15.67                                                                | 79.99                                                                                     |
| Nevada.....               | 2,976,810                                                            | 12,844,600                                     | 23.18                                                                | 118.33                                                                                    |
| New Hampshire.....        | 8,600,068                                                            | 51,796,000                                     | 16.60                                                                | 84.74                                                                                     |
| New Jersey.....           | 110,166,133                                                          | 384,423,800                                    | 28.66                                                                | 146.30                                                                                    |
| New Mexico.....           | 7,288,192                                                            | 36,489,600                                     | 19.97                                                                | 101.94                                                                                    |
| New York.....             | 312,246,466                                                          | 1,079,320,200                                  | 28.93                                                                | 147.68                                                                                    |
| North Carolina.....       | 47,047,191                                                           | 236,620,600                                    | 19.88                                                                | 101.48                                                                                    |
| North Dakota.....         | 18,641,250                                                           | 85,613,100                                     | 21.77                                                                | 111.13                                                                                    |
| Ohio.....                 | 152,899,048                                                          | 846,935,800                                    | 18.05                                                                | 92.14                                                                                     |
| Oklahoma.....             | 36,507,624                                                           | 265,204,100                                    | 13.77                                                                | 70.29                                                                                     |
| Oregon.....               | 24,272,132                                                           | 130,660,700                                    | 18.58                                                                | 94.84                                                                                     |
| Pennsylvania.....         | 188,023,939                                                          | 848,540,700                                    | 22.16                                                                | 113.12                                                                                    |
| Rhode Island.....         | 13,528,763                                                           | 64,911,300                                     | 20.84                                                                | 106.38                                                                                    |
| South Carolina.....       | 19,512,899                                                           | 108,746,300                                    | 17.94                                                                | 91.58                                                                                     |
| South Dakota.....         | 17,561,217                                                           | 96,867,800                                     | 18.13                                                                | 92.55                                                                                     |
| Tennessee.....            | 26,906,480                                                           | 166,973,500                                    | 16.11                                                                | 82.24                                                                                     |
| Texas.....                | 78,684,784                                                           | 602,109,100                                    | 13.07                                                                | 66.72                                                                                     |
| Utah.....                 | 12,222,188                                                           | 48,330,900                                     | 25.29                                                                | 129.10                                                                                    |
| Vermont.....              | 6,018,651                                                            | 46,839,800                                     | 12.95                                                                | 65.59                                                                                     |
| Virginia.....             | 30,821,350                                                           | 174,315,700                                    | 17.68                                                                | 90.25                                                                                     |
| Washington.....           | 38,774,376                                                           | 200,933,600                                    | 19.30                                                                | 98.52                                                                                     |
| West Virginia.....        | 30,132,107                                                           | 124,780,600                                    | 24.15                                                                | 123.28                                                                                    |
| Wisconsin.....            | 59,077,788                                                           | 375,433,800                                    | 15.74                                                                | 80.35                                                                                     |
| Wyoming.....              | 7,089,619                                                            | 28,411,300                                     | 24.95                                                                | 127.36                                                                                    |

Read table thus: In 1928 the expenditures for passenger automobiles in Alabama are estimated to have been \$132,769,600. Expenditures for public schools—elementary, secondary, and collegiate—in Alabama during this same period were \$24,540,666 or 18.48 percent as much as was expended for passenger automobiles. In the nation as a whole the corresponding percent was 19.59. If this last percent is given the value 100.00 as in column 5, then the percent for Alabama (18.48) has the value 94.33. Similarly interpret data for other states.

Sources of data: Figures of column 2 from U. S. Dept. of Interior, Office of Education, Bulletins 1929, Nos. 14 and 38, and Bulletin 1930, No. 5. Figures representing collegiate cost are receipts rather than expenditures. Expenditures for these institutions are not available. Figures as to expenditures for passenger automobiles are estimates based principally on figures from The National Automobile Chamber of Commerce, R. L. Polk and Co. and Iowa State College of Agriculture and Mechanic Arts, Bulletin 91, August 28, 1929. Figures include the cost of operation and maintenance, and depreciation for all passenger automobiles.

## The Cost of Automobiles

Some look upon the automobile as a necessity of life; others call it a luxury. Both viewpoints are justified in some instances. Much of the money which we spend for passenger automobiles deserves to be considered as a wise investment. Some of it verges on extravagance, and we would be better off without it.

But whatever allocation we may make of automobile expenditures under the heads of necessities or luxuries, who would say that it is more important to make full provision for all possible passenger automobile needs than for our educational needs? Yet we are spending several times more each year for automobiles than for all public schools. In 1928 there were 21,379,125 passenger automobiles in operation in the United States. We own 77 percent of all the automobiles of the world. Excluding motor trucks from consideration, we expended in 1928 approximately \$12,500,000,000 for the purchase, operation, and upkeep of passenger automobiles.

*The public school bill represents an investment of \$2.74 out of each \$100 of income; the passenger automobile bill claims \$13.98 out of each \$100 of income. Do these facts indicate that public school expenditures represent an over-valuation of the importance of education?*

### Automobile Costs by States

Table 6 gives an approximate estimate by states of the expenditures for passenger automobiles in 1928 in such form that they may be readily compared with the cost of public schools. For example, in 1928 Texas expended \$602,109,100 for passenger automobiles. The total amount expended by this state for public education—elementary, secondary, and collegiate—during this same year was \$78,684,784. In other words, for every \$1.00 spent for public education of all types Texas spends \$7.65 for passenger automobiles.

The facts show that the various states in the Union are expending from four to seven times as much for passenger automobiles as for public schools.

*Do the figures as to the cost of automobiles and the cost of schools in your state indicate that too much money is being spent for education?*

## Billions for Luxuries

Another major national bill is that annually paid for luxuries. There is given below an approximate estimate of the expenditures of the nation for five groups of articles in the luxury class. Although the figure given far from represents the total expenditure of the nation for all types of luxuries, the bill is a sizable one.

|                                                      |                 |
|------------------------------------------------------|-----------------|
| Tobacco .....                                        | \$2,141,220,000 |
| Soft drinks, ice cream, candy, and chewing gum ..... | 1,850,240,000   |
| Theaters, movies, and similar amusements .....       | 1,082,790,000   |
| Jewelry, perfumes, and cosmetics....                 | 827,740,000     |
| Sporting goods, toys, etc.....                       | 499,660,000     |
| Total .....                                          | \$6,401,650,000 |

In presenting these figures, it is not implied that one should limit himself wholly to the necessities of life. Modern economic organization makes it possible to produce not only an adequate supply of the necessities of life, but also a generous quantity of nonessentials. Only the most austere would decry the consumption of a reasonable amount of nonessentials. Acknowledgement of these truths is quite a different matter, however, from being willing to give luxuries preference over essentials in the spending of our income. In developing the policy of the nation with reference to the budgeting of its income, who would call it wise to limit the provision made for the education of children in order that we might continue to increase our expenditures for such items as candy, chewing gum, tobacco, and theater attendance?

Our luxury bill far exceeds that for all public schools. If we had the total bill for all articles and amusements in the luxury class, it would probably be not less than four or five times what we expend for public schools. For the limited list of articles and amusements listed above, we expend \$6,401,650,000 each year while all public schools are allotted \$2,448,633,561.

*For every \$1.00 spent for schools, \$2.61 is spent for candy, chewing gum, theaters, and similar items. Do these facts indicate that we overvalue education—that we invest more in the education of our children than we can afford?*

Various criticisms have been made of the

TABLE 7.—THE STATES' ANNUAL BILL FOR CERTAIN LUXURIES IN 1928

| States           | Tobacco         | Soft drinks,<br>ice cream,<br>candy, and<br>chewing gum | Theaters,<br>movies, and<br>similar<br>amusements | Jewelry,<br>perfumes,<br>and<br>cosmetics | Sporting<br>goods,<br>toys, etc. | Estimated<br>total expendi-<br>tures for<br>luxuries<br>(Columns<br>2 to 6) | Percent<br>cost of<br>schools<br>is of<br>expendi-<br>tures for<br>certain<br>luxuries | Index of<br>percent<br>relation-<br>ship of<br>school<br>costs to<br>cost of<br>certain<br>luxuries |
|------------------|-----------------|---------------------------------------------------------|---------------------------------------------------|-------------------------------------------|----------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 1                | 2               | 3                                                       | 4                                                 | 5                                         | 6                                | 7                                                                           | 8                                                                                      | 9                                                                                                   |
| United States... | \$2,141,220,000 | \$1,850,240,000                                         | \$1,082,790,000                                   | \$827,740,000                             | \$499,660,000                    | \$6,401,650,000                                                             | 38.25                                                                                  | 100.00                                                                                              |
| Alabama.....     | 17,986,248      | 15,542,016                                              | 9,095,436                                         | 6,953,016                                 | 4,197,144                        | 53,773,860                                                                  | 45.64                                                                                  | 119.32                                                                                              |
| Arizona.....     | 6,209,538       | 5,365,696                                               | 3,140,091                                         | 2,400,446                                 | 1,449,014                        | 18,564,785                                                                  | 54.79                                                                                  | 143.24                                                                                              |
| Arkansas.....    | 13,917,930      | 12,026,560                                              | 7,038,135                                         | 5,380,310                                 | 3,247,790                        | 41,610,725                                                                  | 38.32                                                                                  | 100.18                                                                                              |
| California.....  | 130,186,176     | 112,494,592                                             | 65,833,632                                        | 50,326,592                                | 30,379,328                       | 389,220,320                                                                 | 40.64                                                                                  | 106.25                                                                                              |
| Colorado.....    | 19,270,980      | 16,652,160                                              | 9,745,110                                         | 7,449,660                                 | 4,496,940                        | 57,614,850                                                                  | 50.08                                                                                  | 130.93                                                                                              |
| Connecticut....  | 33,831,276      | 29,233,792                                              | 17,108,082                                        | 13,078,292                                | 7,894,628                        | 101,146,070                                                                 | 34.78                                                                                  | 90.93                                                                                               |
| Delaware.....    | 3,854,196       | 3,330,432                                               | 1,949,022                                         | 1,489,932                                 | 899,388                          | 11,522,970                                                                  | 35.57                                                                                  | 92.99                                                                                               |
| Dist. of Colum.. | 16,701,516      | 14,431,872                                              | 8,445,762                                         | 6,456,372                                 | 3,897,348                        | 49,932,870                                                                  | 23.91                                                                                  | 62.51                                                                                               |
| Florida.....     | 15,202,662      | 13,136,704                                              | 7,687,809                                         | 5,876,954                                 | 3,547,586                        | 45,451,715                                                                  | 73.71                                                                                  | 192.71                                                                                              |
| Georgia.....     | 25,052,274      | 21,647,808                                              | 12,668,643                                        | 9,684,558                                 | 5,846,022                        | 74,899,305                                                                  | 28.25                                                                                  | 73.86                                                                                               |
| Idaho.....       | 6,851,904       | 5,920,768                                               | 3,464,928                                         | 2,648,768                                 | 1,598,912                        | 20,485,280                                                                  | 61.49                                                                                  | 160.76                                                                                              |
| Illinois.....    | 180,933,090     | 156,345,280                                             | 91,495,755                                        | 69,944,030                                | 42,221,270                       | 540,939,425                                                                 | 29.13                                                                                  | 76.16                                                                                               |
| Indiana.....     | 51,817,524      | 44,775,808                                              | 26,203,518                                        | 20,031,308                                | 12,091,772                       | 154,919,930                                                                 | 51.68                                                                                  | 135.11                                                                                              |
| Iowa.....        | 47,106,840      | 40,705,280                                              | 23,821,380                                        | 18,210,280                                | 10,992,520                       | 140,836,300                                                                 | 43.63                                                                                  | 114.07                                                                                              |
| Kansas.....      | 27,835,860      | 24,053,120                                              | 14,076,270                                        | 10,760,620                                | 6,495,580                        | 83,221,450                                                                  | 59.28                                                                                  | 154.98                                                                                              |
| Kentucky.....    | 23,767,542      | 20,537,664                                              | 12,018,969                                        | 9,187,914                                 | 5,546,226                        | 71,058,315                                                                  | 38.83                                                                                  | 101.52                                                                                              |
| Louisiana.....   | 22,054,566      | 19,057,472                                              | 11,152,737                                        | 8,525,722                                 | 5,146,498                        | 65,936,995                                                                  | 38.20                                                                                  | 99.87                                                                                               |
| Maine.....       | 12,204,954      | 10,546,368                                              | 6,171,903                                         | 4,718,118                                 | 2,848,062                        | 36,489,405                                                                  | 34.59                                                                                  | 90.43                                                                                               |
| Maryland.....    | 29,548,836      | 25,533,312                                              | 14,942,502                                        | 11,422,812                                | 6,895,308                        | 88,342,770                                                                  | 30.88                                                                                  | 80.73                                                                                               |
| Massachusetts..  | 104,705,658     | 90,476,736                                              | 52,948,431                                        | 40,476,486                                | 24,433,374                       | 313,040,685                                                                 | 27.65                                                                                  | 72.29                                                                                               |
| Michigan.....    | 84,149,946      | 72,714,432                                              | 42,553,647                                        | 32,530,182                                | 19,636,638                       | 251,584,845                                                                 | 50.75                                                                                  | 132.68                                                                                              |
| Minnesota.....   | 43,680,888      | 37,744,896                                              | 22,088,916                                        | 16,885,896                                | 10,193,064                       | 130,593,660                                                                 | 46.13                                                                                  | 120.60                                                                                              |
| Mississippi..... | 11,348,466      | 9,806,272                                               | 5,738,787                                         | 4,387,022                                 | 2,648,198                        | 33,928,745                                                                  | 67.58                                                                                  | 176.68                                                                                              |
| Missouri.....    | 62,951,868      | 54,397,056                                              | 31,834,026                                        | 24,335,556                                | 14,690,004                       | 188,208,810                                                                 | 30.98                                                                                  | 80.99                                                                                               |
| Montana.....     | 9,421,368       | 8,141,056                                               | 4,764,276                                         | 3,642,056                                 | 2,198,504                        | 28,167,260                                                                  | 52.75                                                                                  | 137.91                                                                                              |
| Nebraska.....    | 24,838,152      | 21,462,784                                              | 12,560,364                                        | 9,601,784                                 | 5,796,056                        | 74,259,140                                                                  | 42.86                                                                                  | 112.05                                                                                              |
| Nevada.....      | 2,141,220       | 1,850,240                                               | 1,082,790                                         | 827,740                                   | 499,660                          | 6,401,650                                                                   | 46.50                                                                                  | 121.57                                                                                              |
| New Hampshire..  | 7,708,392       | 6,660,864                                               | 3,898,044                                         | 2,979,864                                 | 1,798,776                        | 23,045,940                                                                  | 37.32                                                                                  | 97.57                                                                                               |
| New Jersey.....  | 70,446,138      | 60,872,896                                              | 35,623,791                                        | 27,232,646                                | 16,438,812                       | 210,614,285                                                                 | 52.31                                                                                  | 136.76                                                                                              |
| New Mexico....   | 3,640,074       | 3,145,408                                               | 1,840,743                                         | 1,407,158                                 | 849,422                          | 10,882,805                                                                  | 66.97                                                                                  | 175.08                                                                                              |
| New York.....    | 363,793,278     | 314,355,776                                             | 183,966,021                                       | 140,633,026                               | 84,892,234                       | 1,087,640,335                                                               | 28.71                                                                                  | 75.06                                                                                               |
| North Carolina.. | 22,054,566      | 19,057,472                                              | 11,152,737                                        | 8,525,722                                 | 5,146,498                        | 65,936,995                                                                  | 71.35                                                                                  | 186.54                                                                                              |
| North Dakota...  | 8,779,002       | 7,585,984                                               | 4,439,439                                         | 3,393,734                                 | 2,048,606                        | 26,246,765                                                                  | 71.02                                                                                  | 185.67                                                                                              |
| Ohio.....        | 128,473,200     | 111,014,400                                             | 64,967,400                                        | 49,664,400                                | 29,979,600                       | 384,099,000                                                                 | 39.81                                                                                  | 104.08                                                                                              |
| Oklahoma.....    | 22,696,932      | 19,612,544                                              | 11,477,574                                        | 8,774,044                                 | 5,296,396                        | 67,857,490                                                                  | 53.80                                                                                  | 140.65                                                                                              |
| Oregon.....      | 19,913,346      | 17,207,232                                              | 10,069,947                                        | 7,697,982                                 | 4,646,838                        | 59,535,345                                                                  | 40.77                                                                                  | 106.59                                                                                              |
| Pennsylvania.... | 192,067,434     | 165,966,528                                             | 97,126,263                                        | 74,248,278                                | 44,819,502                       | 574,228,005                                                                 | 32.74                                                                                  | 85.59                                                                                               |
| Rhode Island...  | 13,917,930      | 12,026,560                                              | 7,038,135                                         | 5,380,310                                 | 3,247,790                        | 41,610,725                                                                  | 32.51                                                                                  | 84.99                                                                                               |
| South Carolina.. | 13,061,442      | 11,286,464                                              | 6,605,019                                         | 5,049,214                                 | 3,047,926                        | 39,050,065                                                                  | 49.97                                                                                  | 130.64                                                                                              |
| South Dakota...  | 10,920,222      | 9,436,224                                               | 5,522,229                                         | 4,221,474                                 | 2,548,266                        | 32,648,415                                                                  | 53.79                                                                                  | 140.63                                                                                              |
| Tennessee.....   | 23,981,664      | 20,722,688                                              | 12,127,248                                        | 9,270,688                                 | 5,596,192                        | 71,698,480                                                                  | 37.53                                                                                  | 98.12                                                                                               |
| Texas.....       | 65,307,210      | 56,432,320                                              | 33,025,095                                        | 25,246,070                                | 15,239,630                       | 195,250,325                                                                 | 40.30                                                                                  | 105.36                                                                                              |
| Utah.....        | 7,922,514       | 6,845,888                                               | 4,006,323                                         | 3,062,638                                 | 1,848,742                        | 23,686,105                                                                  | 51.60                                                                                  | 134.90                                                                                              |
| Vermont.....     | 4,924,806       | 4,255,552                                               | 2,490,417                                         | 1,903,802                                 | 1,149,218                        | 14,723,795                                                                  | 40.88                                                                                  | 106.88                                                                                              |
| Virginia.....    | 25,694,640      | 22,202,880                                              | 12,993,480                                        | 9,932,880                                 | 5,995,920                        | 76,819,800                                                                  | 40.12                                                                                  | 104.89                                                                                              |
| Washington....   | 33,188,910      | 28,678,720                                              | 16,783,245                                        | 12,829,970                                | 7,744,730                        | 99,225,575                                                                  | 39.08                                                                                  | 102.17                                                                                              |
| West Virginia... | 21,840,444      | 18,872,448                                              | 11,044,458                                        | 8,442,948                                 | 5,096,532                        | 65,296,830                                                                  | 46.15                                                                                  | 120.65                                                                                              |
| Wisconsin.....   | 48,819,816      | 42,185,472                                              | 24,687,612                                        | 18,872,472                                | 11,392,248                       | 145,957,620                                                                 | 40.48                                                                                  | 105.83                                                                                              |
| Wyoming.....     | 4,496,562       | 3,885,504                                               | 2,273,859                                         | 1,738,254                                 | 1,049,286                        | 13,443,465                                                                  | 52.74                                                                                  | 137.88                                                                                              |

Read table thus: In 1928 the expenditure for tobacco in Alabama is estimated to have been \$17,986,248; expenditures for soft drinks, ice cream, candy, and chewing gum are estimated to have been \$15,542,016; etc. The total expenditures for the above luxuries in Alabama are estimated to have been \$53,773,860 in 1928. Expenditures for public schools in Alabama were 45.64 percent of this amount. In the nation as a whole, the corresponding percent was 38.25. If this last percent is given the value of 100.00 as in column 9, then the percent for Alabama (45.64) has the value 119.32. Similarly interpret data for other states.

Sources of data: The figures given for the United States are estimates based principally on figures of the U. S. Treasury Department. The total national expenditure for these articles was distributed among the states on the basis of an average of the percentage of the national totals of the following items found in each state: Value of tangible wealth, average annual income, taxes paid in connection with admission to theaters, and taxes paid in connection with the purchase of jewelry. The amounts given for each state should be looked upon as approximations rather than exact estimates. The fact that the taxes collected on luxuries are in many cases paid at the place of manufacture rather than at the place of purchase, makes it impossible to estimate exactly the amount expended in each state for each item in the luxury list given above.

practice of comparing the nation's bill for luxuries with that for public schools. It has been properly pointed out that there is no economic legerdemain whereby humans trained for, and factories built for the production of luxuries, can be overnight converted into teachers and schoolhouses. The presentation of figures comparing school costs and luxury expenditures represents no rejection of this or other sound principles of economic theory.

When one witnesses the tremendous amount of money which is expended for cheap commercialized amusement and compares these sums with the amount expended for education, the time has come to raise some question as to the choices the American people are making. It seems pertinent to ask, would it not be a wise decision if the American people during the coming decades should spend less than the facts reveal we are spending for wasteful and luxurious purposes, and more for the type of education which results in the appreciation of the higher, permanent, and frequently less expensive forms of pleasure and recreation?

The schools are the most effective means thus far discovered for influencing such a decision. Whether that influence will be weak or powerful will to a large degree depend upon the financial support received by these schools. An educational system employing cheap teachers with little education and culture, housed in buildings which are an affront to beauty, working with obsolete equipment cannot expect to compete with the glitter of modern commercialized recreation. Higher appreciations than those upon which most commercial amusement depends cannot be created by schools which are stupid and uninteresting. Teachers capable of transmitting true refinement cannot be employed for wages comparable to those paid common laborers. School buildings which set an example of beauty cannot be erected without paying the price for architectural services, labor, and building materials. Yet that is what some of the critics of school costs seem to expect. In return for financial support measured in cents, they expect the schools to do work which dollars alone will finance. When the impossible is not accomplished they would cut down even the cents allowed. It cannot be done this way. The influence of the school in promoting social progress will never be what it should until its development is based upon a far more adequate

plan for financing public education than that now in effect. The school's contribution will fall short of what it might be until it is able to compete in the open market on equal terms with other great national interests for the services of a fair share of the most capable people as well as for the other prerequisites to the maintenance of modern schools in the best sense of the term.

These facts need to be kept in mind by the intelligent voters in every state, by legislators, by boards of education, and by all who influence or determine the financial support received by public schools. If they allow themselves to be swayed by the short-sighted counsel of professional tax reductionists, the result will be oxcart schools in an aeroplane civilization. The schools will lag far behind social progress and will influence its direction little or not at all.

If on the other hand, the proper support of public education is made a matter of primary concern, there is justification for expecting public schools to wield a significant influence in determining the tastes of our people and in influencing the trends of our development. Incalculable are the dividends which come to a nation from investments in the right kind of public schools. But a prerequisite to the right kind of schools is adequate financial support.

### The Luxury Bill in Each State

Table 7 gives an approximate estimate of the expenditures of each of the states for a number of articles in the luxury class. The ratio between the expenditures for schools and for luxuries varies in different states, but there is not a state which does not expend more for the five classes of luxuries listed than it does for the education of its children. For example, California expends \$389,220,320 for the luxury items listed in Table 7. The total bill for public education in the same state in 1928 was \$158,169,068. For each \$1.00 which California expends for public schools, it expends \$2.46 for tobacco, soft drinks, theaters and the other items listed in Table 7. What do similar figures for your state show?

*Does a comparison of the annual bill for luxuries in your state with that expended for public schools indicate that too large an amount is being invested in the education of your children?*

## What Part of the Nation's Income is Devoted to the Payment of Taxes and How Does the United States Compare with Other Nations on This Item?

Some who are inclined to be critical of the amount invested in public education in the United States readily accept the fact that school support requires but a minor fraction of the nation's wealth and income. They point out, however, that school costs are but a part of the total tax bill and contend that this bill is too large. Continuing from this conclusion, they state that the expenditures for all public service must be reduced, education among them.

Before considering the justification of this general viewpoint, let us look at the facts. The total tax collections in the United States in 1928, the last year for which complete figures are available, were \$9,289,000,000.<sup>1</sup> Of this sum the federal government collected \$3,194,000,000 or 34.4 percent; the state governments, \$1,465,000,000 or 15.8 percent; and the municipal, county, and various other local governments, \$4,630,000,000 or 49.8 percent. The nation's income was \$89,419,000,000 in 1928. Federal tax collections in this year, therefore, constituted 3.6 percent; state tax collections, 1.6 percent, and local tax collections, 5.2 percent of our income. A summation of these percents indicates that total tax collections in the United States in 1928 were 10.4 percent of our national income. See Table 8.

### Income and Taxes in the United States and Other Countries

No major country in the civilized world, for which figures are available, spends as small a percentage of its income for taxes as does the United States. The average percent of income collected for taxes in the other countries of the world, for which figures are available, is 18.4 percent. The principal nations of the world comparable to the United States as to level of

civilization, spend nearly twice as large a percent of their income for public purposes as does the United States. While the United States spends approximately 10 percent of its income, Great Britain expends 22 percent; Germany, 20 percent; Italy, 18 percent; France, 17 percent; or approximately twice that of the United States in each case.<sup>2</sup>

The disparity between the effort required by the United States and by other countries to support their public activities is even greater than these figures indicate. A man with a yearly income of \$5,000 is able to pay 5 percent of his income for taxes with less effort than a man with an income of \$1,000. In the first case the tax payment probably requires little personal sacrifice, that is, reduction in the consumption of necessary food, clothing, and shelter. The payment of such a tax by the man of small income may involve such sacrifice, since his income is close to the level of subsistence.

The United States in comparison with other countries is in the position of a rich man. Our yearly per capita income and our accumulated countries is in the position of a rich man. Our country. The yearly income per person in the United States is 1.76 times that of Great Britain which ranks second. The income per capita in the United States is more than three times that of such countries as France and Germany. The per capita wealth, that is, the value of tangible property in the United States is more than twice that of any nation in the world except Great Britain, and is appreciably larger per capita in the United States than in the latter country. These facts suggest that the effort involved in the support of public enterprises in the United States is considerably less than in other countries.

<sup>1</sup> Tax collections and public expenditures are used synonymously in this Bulletin. It should be held in mind, however, that the amount collected in taxes in a given year may differ from the amount expended for public purposes in the same year. This may be due to the fact that more or less money is collected than is expended in the year concerned. It is a frequent practice in calculating public expenditures to give gross figures, which results in counting some public expenditures twice, in that expenditures financed by borrowing are charged when they are made and also when bonds or loans are redeemed. For this reason, tax collections are preferred to gross expenditures as an indication of the cost of government. During the war period the large amount of borrowing made gross governmental expenditures far exceed tax collections. The two are now approaching equivalence. In 1927, gross governmental expenditures by federal, state, and local governments were \$12,189,900,000, including \$1,519,200,000 for debt redemption and \$1,470,200,000 for interest. If these latter items are omitted, the net expenditure for all public purposes is reduced to \$9,200,500,000, which approximates the total tax collections of the same year, which amounted to \$9,059,000,000.

<sup>2</sup> For a discussion of certain factors involved in comparing taxation in different countries see: Norton, John K. "Taxes in the United States and Other Countries." *Journal of the National Education Association* 17: 195, June, 1928.

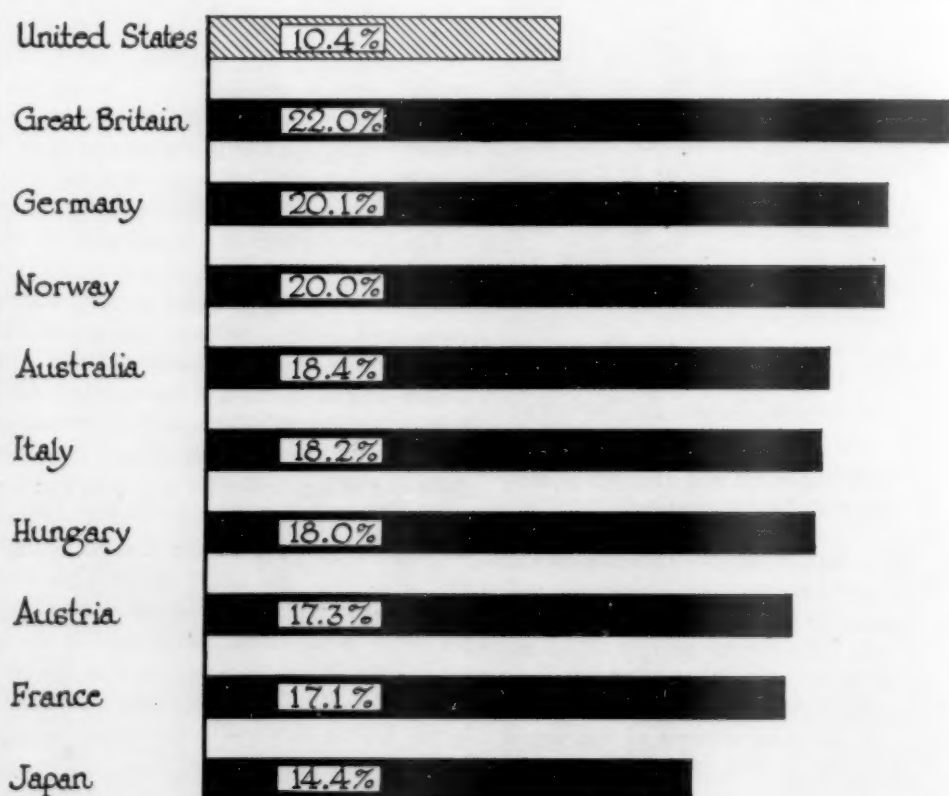
Whereas other countries expend approximately 18 cents out of every dollar for the support of public enterprises, the United States votes 10 cents out of every dollar for public purposes. Do these facts indicate that the portion of income expended in the United States for public purposes is more than the nation can afford?

## Income, Wealth, and Tax Collections by States

Table 8 gives figures by states as to the amount of income and taxes collected in each state. The figures indicate a smaller ratio between tax collections and income in practically every state in the Union than is found in other civilized countries of the world. In studying

CHART IV

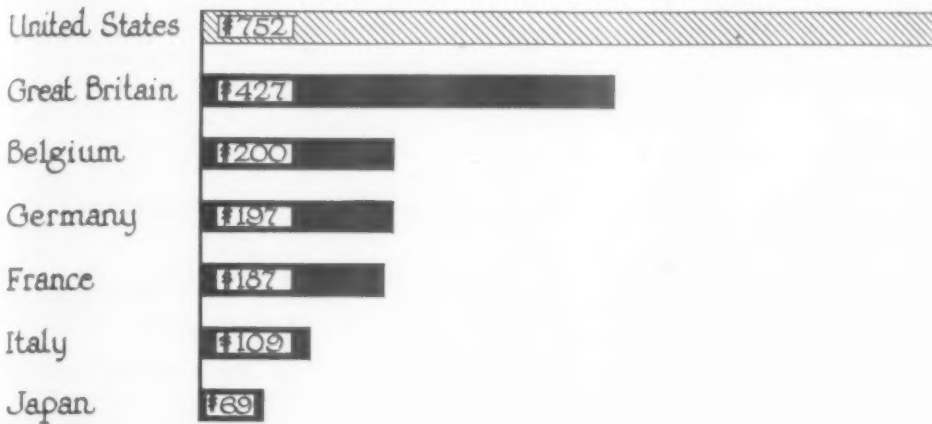
# PERCENT OF NATIONAL INCOME EXPENDED for ALL PUBLIC PURPOSES



Research Division, National Education Ass'n.

Figures for foreign countries from *The Literary Digest*, April 26, 1930, p.15 and the *Annals of the American Academy of Political and Social Science*, November, 1927, p.40; those for the United States based on figures of National Industrial Conference Board and National Bureau of Economic Research.

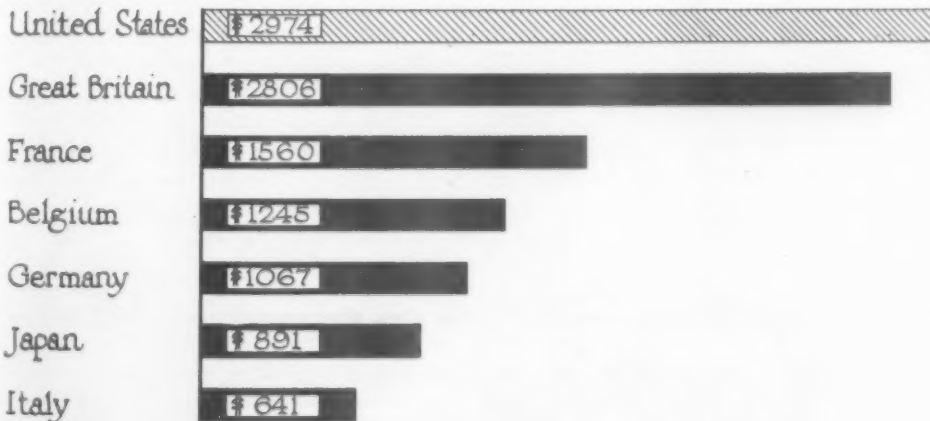
## ESTIMATED INCOME PER CAPITA UNITED STATES and OTHER NATIONS



*Research Division, National Education Ass'n.*

Calculations based on figures of the National Industrial Conference Board and the World Almanac.

## ESTIMATED WEALTH PER CAPITA UNITED STATES and OTHER NATIONS



*Research Division, National Education Ass'n.*

Calculations based on figures of the National Industrial Conference Board, National Bureau of Economic Research, and the World Almanac.

this table it is important that one have in mind the peculiar situation as regards federal taxes in the United States. It is impossible to trace accurately the true incidence of these taxes. For example, many large corporations, doing business in practically every state in the Union, pay their federal taxes in one state, in many instances, New York. Although these taxes are collected in New York, they only in a slight degree represent a burden upon the citizens of that state. The taxes collected in New York by the federal government from a national corporation are really paid by the people throughout the forty-eight states who purchase the commodities which this corporation distributes. Or let us take another example: In the state of North Carolina the federal government collected in 1928 tobacco taxes to the amount of approximately \$204,000,000. This amount does not represent a tax burden upon the people of North Carolina. Every time a person buys a package of cigarettes, a box of cigars, or other tobacco products, in any one of the forty-eight states, he pays a part of this tax through the stamp which is attached. In short, the fact that the federal government collects taxes within a state does not mean that the real burden of these taxes rests within that state.

This fact needs to be held in mind in studying the figures of Table 8 as to the ratio of income to taxes collected in the various states. Column 7 showing the ratio of federal taxes collected to income is of little practical value in indicating the tax burden involved in any particular state. For example: Federal taxes are collected in North Carolina to the amount of one-fifth the total income of this state. As pointed out above, however, most of the tobacco taxes collected in North Carolina are

paid by the tobacco consumers scattered throughout the forty-eight states.

The figures in column 8 give a better picture of the ratio of income to taxes collected. It should be held in mind, however, that the percentages of column 8 represent an understatement of the tax burden in each state by the amount of the federal taxes which may be properly apportioned to each state. There is at present, however, no reliable method for determining just what this apportionment should be. Column 7 of Table 8 shows that for the nation as a whole federal tax collections represent 3.57 percent of income. It is unlikely, however, that this average would apply to each of the states.

### Wealth and Taxes Collected in the United States

Table 9 gives figures whereby the taxes collected in the various states may be compared with the estimated wealth of these states. Wealth as explained earlier in this *Bulletin* refers to the value of all tangible property such as land, buildings, and other physical property. All taxes collected in the United States in 1928 constituted a sum which was 2.62 percent of the estimated value of the wealth of the nation.

The estimate of the wealth of the various states given in this table in most cases is considerably above the value of "taxable" property in the state. The difference is due to the fact that property is assessed below its real value in many states, that some of it escapes assessment due to faulty taxation machinery, that some forms of property are legally exempted from taxation, and to other causes.

It will be of interest to compare the total value of tangible property in your state as given in this table with the total value of all property as assessed for taxation.

**I**N GENERAL, the expansion of the school system is something more than a heaping up of costs. It is a growth at once in extension and intensity. The numbers reached at are much larger than before; the quality of what is offered them has greatly improved. These factors go far to explain why the public pays for its schools so much more than it did thirty-five years ago.—*National Industrial Conference Board, The Conference Board Bulletin, September, 1927, p. 71.*

TABLE 8.—INCOME AND TAXES COLLECTED IN THE STATES IN 1928

| States                 | Estimated income | Taxes collected in 1928 by: |                  |                  | Total           | Percent taxes collected by federal govt. is of income | Percent taxes collected by local and state govt. is of income |
|------------------------|------------------|-----------------------------|------------------|------------------|-----------------|-------------------------------------------------------|---------------------------------------------------------------|
|                        |                  | Federal government          | State government | Local government |                 |                                                       |                                                               |
| 1                      | 2                | 3                           | 4                | 5                | 6               | 7                                                     | 8                                                             |
| United States.....     | \$89,419,000,000 | \$3,194,000,000             | \$1,465,000,000  | \$4,629,845,000  | \$9,288,845,000 | 3.57                                                  | 6.82                                                          |
| Alabama.....           | 894,190,000      | 19,930,560                  | 20,782,406       | 31,317,000       | 72,029,966      | 2.23                                                  | 5.83                                                          |
| Arizona.....           | 277,198,900      | 3,928,620                   | 7,958,997        | 15,393,000       | 27,280,617      | 1.42                                                  | 8.42                                                          |
| Arkansas.....          | 625,933,000      | 12,935,700                  | 16,148,788*      | 22,080,000       | 51,164,488      | 2.07                                                  | 6.11                                                          |
| California.....        | 4,864,393,600    | 150,948,440                 | 81,420,202       | 304,999,000      | 537,367,642     | 3.10                                                  | 7.94                                                          |
| Colorado.....          | 876,306,200      | 16,225,520                  | 13,379,693       | 44,002,000       | 73,607,213      | 1.85                                                  | 6.55                                                          |
| Connecticut.....       | 1,430,704,000    | 41,873,340                  | 27,977,484       | 64,751,000       | 134,601,824     | 2.93                                                  | 6.48                                                          |
| Delaware.....          | 214,605,600      | 21,112,340                  | 7,341,298        | 5,096,000        | 33,549,638      | 9.84                                                  | 5.80                                                          |
| Dist. of Columbia..... | 670,642,500      | 18,844,600                  |                  | 27,307,000       | 46,151,600      | 2.81                                                  | 4.07                                                          |
| Florida.....           | 581,223,500      | 28,618,240                  | 20,795,290*      | 78,202,000       | 127,615,530     | 4.92                                                  | 17.03                                                         |
| Georgia.....           | 1,207,156,500    | 28,043,320                  | 20,766,116       | 39,809,000       | 88,618,436      | 2.32                                                  | 5.02                                                          |
| Idaho.....             | 312,966,500      | 3,545,340                   | 4,845,766        | 19,523,000       | 27,914,106      | 1.13                                                  | 7.79                                                          |
| Illinois.....          | 6,921,030,600    | 244,788,160                 | 70,524,724       | 307,691,000      | 623,003,884     | 3.54                                                  | 5.46                                                          |
| Indiana.....           | 2,038,753,200    | 47,494,780                  | 33,013,333       | 124,569,000      | 205,077,113     | 2.33                                                  | 7.73                                                          |
| Iowa.....              | 1,609,542,000    | 22,549,640                  | 29,570,654       | 98,985,000       | 151,105,294     | 1.40                                                  | 7.99                                                          |
| Kansas.....            | 1,162,447,000    | 26,765,720                  | 19,776,417       | 79,858,000       | 126,400,137     | 2.30                                                  | 8.57                                                          |
| Kentucky.....          | 1,207,156,500    | 34,495,200                  | 25,026,965       | 44,384,000       | 103,906,165     | 2.86                                                  | 5.75                                                          |
| Louisiana.....         | 965,725,200      | 22,389,940                  | 22,026,503       | 47,203,000       | 91,619,443      | 2.32                                                  | 7.17                                                          |
| Maine.....             | 652,758,700      | 11,690,040                  | 13,851,838*      | 23,658,000       | 49,199,878      | 1.79                                                  | 5.75                                                          |
| Maryland.....          | 1,385,994,500    | 37,114,280                  | 16,727,408*      | 52,005,000       | 105,846,688     | 2.68                                                  | 4.96                                                          |
| Massachusetts.....     | 4,685,555,600    | 119,806,940                 | 45,120,632       | 233,969,000      | 398,896,572     | 2.56                                                  | 5.96                                                          |
| Michigan.....          | 3,254,851,600    | 186,210,200                 | 78,642,774       | 232,092,000      | 496,944,974     | 5.72                                                  | 9.55                                                          |
| Minnesota.....         | 1,698,961,000    | 38,839,040                  | 42,968,390       | 109,125,000      | 190,932,430     | 2.29                                                  | 8.95                                                          |
| Mississippi.....       | 581,223,500      | 10,859,600                  | 10,818,460*      | 46,229,000       | 67,907,060      | 1.87                                                  | 9.82                                                          |
| Missouri.....          | 2,369,603,500    | 78,061,360                  | 34,057,036       | 102,488,000      | 214,606,396     | 3.29                                                  | 5.76                                                          |
| Montana.....           | 375,559,800      | 6,100,540                   | 6,163,345        | 24,424,000       | 36,687,885      | 1.62                                                  | 8.14                                                          |
| Nebraska.....          | 804,771,000      | 11,849,740                  | 17,132,224       | 56,153,000       | 85,134,964      | 1.47                                                  | 9.11                                                          |
| Nevada.....            | 89,419,000       | 1,117,900                   | 2,048,545        | 4,913,000        | 8,079,445       | 1.25                                                  | 7.79                                                          |
| New Hampshire.....     | 402,385,500      | 5,908,900                   | 7,312,706        | 18,262,000       | 31,483,606      | 1.47                                                  | 6.36                                                          |
| New Jersey.....        | 3,442,631,500    | 117,730,840                 | 74,874,418       | 226,333,000      | 418,938,258     | 3.42                                                  | 8.75                                                          |
| New Mexico.....        | 214,605,600      | 2,555,200                   | 3,313,920*       | 7,408,000        | 13,277,120      | 1.19                                                  | 5.00                                                          |
| New York.....          | 14,780,960,700   | 769,306,840                 | 207,738,753      | 745,605,000      | 1,722,650,593   | 5.20                                                  | 6.45                                                          |
| North Carolina.....    | 1,073,028,000    | 227,764,140                 | 32,152,468       | 63,732,000       | 323,648,608     | 21.23                                                 | 8.94                                                          |
| North Dakota.....      | 304,024,600      | 3,705,040                   | 7,806,965        | 27,335,000       | 38,847,005      | 1.22                                                  | 11.58                                                         |
| Ohio.....              | 5,007,464,000    | 163,756,380                 | 35,401,087*      | 297,522,000      | 496,679,467     | 3.27                                                  | 6.65                                                          |
| Oklahoma.....          | 1,117,737,500    | 30,470,760                  | 22,005,032       | 68,715,000       | 121,190,792     | 2.73                                                  | 8.12                                                          |
| Oregon.....            | 733,235,800      | 9,901,400                   | 18,615,619       | 44,843,000       | 73,360,019      | 1.35                                                  | 8.65                                                          |
| Pennsylvania.....      | 8,530,572,600    | 279,506,940                 | 120,599,628      | 328,016,000      | 728,122,568     | 3.28                                                  | 5.26                                                          |
| Rhode Island.....      | 715,352,000      | 17,279,540                  | 9,650,028        | 23,675,000       | 50,604,568      | 2.42                                                  | 4.66                                                          |
| South Carolina.....    | 616,991,100      | 12,169,140                  | 16,179,615       | 27,255,000       | 55,603,755      | 1.97                                                  | 7.04                                                          |
| South Dakota.....      | 304,024,600      | 3,896,680                   | 10,467,248       | 31,153,000       | 45,516,928      | 1.28                                                  | 13.69                                                         |
| Tennessee.....         | 1,046,202,300    | 28,394,660                  | 19,084,848       | 43,787,000       | 91,266,508      | 2.71                                                  | 6.01                                                          |
| Texas.....             | 3,067,071,700    | 69,820,840                  | 58,282,919*      | 122,037,000      | 250,140,759     | 2.28                                                  | 5.88                                                          |
| Utah.....              | 312,966,500      | 5,972,780                   | 8,483,791        | 14,723,000       | 29,179,571      | 1.91                                                  | 7.42                                                          |
| Vermont.....           | 268,257,000      | 3,800,860                   | 6,511,243        | 10,307,000       | 20,619,103      | 1.42                                                  | 6.27                                                          |
| Virginia.....          | 1,180,330,800    | 91,348,400                  | 31,092,151       | 44,383,000       | 166,823,551     | 7.74                                                  | 6.39                                                          |
| Washington.....        | 1,385,994,500    | 19,291,760                  | 29,873,241       | 61,804,000       | 110,969,001     | 1.39                                                  | 6.61                                                          |
| West Virginia.....     | 938,899,500      | 22,900,980                  | 18,705,303       | 49,097,000       | 90,703,283      | 2.44                                                  | 7.22                                                          |
| Wisconsin.....         | 2,002,985,600    | 59,216,760                  | 34,781,426       | 124,387,000      | 218,385,186     | 2.96                                                  | 7.95                                                          |
| Wyoming.....           | 214,605,600      | 3,162,060                   | 3,182,303        | 9,241,000        | 15,585,363      | 1.47                                                  | 5.79                                                          |

\* Independently estimated.

Read table thus: In 1928 the income of Colorado is estimated to have been \$876,206,200. In this state the taxes collected by the federal government during the same year were \$16,225,520; by the state government, \$13,379,693; by the local governments, \$44,002,000; making a total of \$73,607,213 taxes collected. The federal taxes in this state constitute a sum equal to 1.85 percent of the income of all the people of Colorado; state and local taxes constitute a sum equal to 6.55 percent. Similarly interpret data for other states.

Sources of data: Figures as to total national income is an estimate of the National Bureau of Economic Research. This total was distributed among the states of the union on the basis of the most reliable indices available. The total figures for the United States as to amount of taxes collected by the federal, state, and local governments, are those of the National Industrial Conference Board as given in Table 28, p. 64 of *Cost of Government in the United States, 1927-28*. Total federal taxes were distributed among the states on the basis of the percent of federal taxes collected in each state as given in Table 38, p. 84-5 of *Cost of Government in the United States, 1927-29*. Figures as to taxes collected by state governments in the various states are from United States Department of Commerce, Bureau of Census. Figures as to amount of taxes collected by local governments in the various states are from Table 35, p. 77, of *Cost of Government in the United States, 1927-28*.

TABLE 9.—WEALTH AND TAXES COLLECTED IN THE STATES IN 1928

| States              | Estimated wealth               | Taxes collected in 1928 by: |                  |                   | Total           | Percent taxes collected by:     |                                         |
|---------------------|--------------------------------|-----------------------------|------------------|-------------------|-----------------|---------------------------------|-----------------------------------------|
|                     |                                | Federal government          | State government | Local governments |                 | Federal government is of wealth | State and local government is of wealth |
| 1                   | 2                              | 3                           | 4                | 5                 | 6               | 7                               | 8                                       |
| United States....   | \$353,520,000,000 <sup>1</sup> | \$3,194,000,000             | \$1,465,000,000  | \$4,629,845,000   | \$9,288,845,000 | .90                             | 1.72                                    |
| Alabama.....        | 3,304,000,000                  | 19,930,560                  | 20,782,406       | 31,317,000        | 72,029,966      | .60                             | 1.58                                    |
| Arizona.....        | 1,568,000,000                  | 3,928,620                   | 7,958,997        | 15,393,000        | 27,280,617      | .25                             | 1.49                                    |
| Arkansas.....       | 2,866,000,000                  | 12,935,700                  | 16,148,788*      | 22,080,000        | 51,164,488      | .45                             | 1.33                                    |
| California.....     | 16,973,000,000                 | 150,948,440                 | 81,420,202       | 304,999,000       | 537,367,642     | .89                             | 2.28                                    |
| Colorado.....       | 3,505,000,000                  | 16,225,520                  | 13,379,693       | 44,002,000        | 73,607,213      | .46                             | 1.64                                    |
| Connecticut.....    | 6,152,000,000                  | 41,873,340                  | 27,977,484       | 64,751,000        | 134,601,824     | .68                             | 1.51                                    |
| Delaware.....       | 722,000,000                    | 21,112,340                  | 7,341,298        | 5,096,000         | 33,549,638      | 2.92                            | 1.72                                    |
| Dist. of Col.....   | 1,854,000,000                  | 18,844,600                  |                  | 27,307,000        | 46,151,600      | 1.02                            | 1.47                                    |
| Florida.....        | 2,887,000,000                  | 28,618,240                  | 20,795,290*      | 78,202,000        | 127,615,530     | .99                             | 3.43                                    |
| Georgia.....        | 4,421,000,000                  | 28,043,320                  | 20,766,116       | 39,809,000        | 88,618,436      | .63                             | 1.37                                    |
| Idaho.....          | 1,818,000,000                  | 3,545,340                   | 4,845,766        | 19,523,000        | 27,914,106      | .20                             | 1.34                                    |
| Illinois.....       | 24,276,000,000                 | 244,788,160                 | 70,524,724       | 307,691,000       | 623,003,884     | 1.01                            | 1.56                                    |
| Indiana.....        | 9,869,000,000                  | 47,494,780                  | 33,013,333       | 124,569,000       | 205,077,113     | .48                             | 1.60                                    |
| Iowa.....           | 11,352,000,000                 | 22,549,640                  | 29,570,654       | 98,985,000        | 151,105,294     | .20                             | 1.13                                    |
| Kansas.....         | 6,771,000,000                  | 26,765,720                  | 19,776,417       | 79,858,000        | 126,400,137     | .40                             | 1.47                                    |
| Kentucky.....       | 3,979,000,000                  | 34,495,200                  | 25,026,965       | 44,384,000        | 103,906,165     | .87                             | 1.74                                    |
| Louisiana.....      | 3,847,000,000                  | 22,389,940                  | 22,026,503       | 47,203,000        | 91,619,443      | .58                             | 1.80                                    |
| Maine.....          | 2,303,000,000                  | 11,690,040                  | 13,851,838*      | 23,658,000        | 49,199,878      | .51                             | 1.63                                    |
| Massachusetts.....  | 4,517,000,000                  | 37,114,280                  | 16,727,408*      | 52,005,000        | 105,846,688     | .82                             | 1.52                                    |
| Michigan.....       | 14,955,000,000                 | 119,806,940                 | 45,120,632       | 233,969,000       | 398,896,572     | .80                             | 1.87                                    |
| Minnesota.....      | 13,223,000,000                 | 186,210,200                 | 78,642,774       | 232,092,000       | 496,944,974     | 1.41                            | 2.35                                    |
| Mississippi.....    | 9,481,000,000                  | 38,839,040                  | 42,968,390       | 109,125,000       | 190,932,430     | .41                             | 1.60                                    |
| Missouri.....       | 2,464,000,000                  | 10,859,600                  | 10,818,460*      | 46,229,000        | 67,907,060      | .44                             | 2.32                                    |
| Montana.....        | 11,261,000,000                 | 78,061,360                  | 34,057,036       | 102,488,000       | 214,606,396     | .69                             | 1.21                                    |
| Nebraska.....       | 2,547,000,000                  | 6,100,540                   | 6,163,345        | 24,424,000        | 36,687,885      | .24                             | 1.20                                    |
| Nevada.....         | 5,800,000,000                  | 11,849,740                  | 17,132,224       | 56,153,000        | 85,134,964      | .20                             | 1.26                                    |
| New Hampshire.....  | 563,000,000                    | 1,117,900                   | 2,048,545        | 4,913,000         | 8,079,445       | .20                             | 1.23                                    |
| New Jersey.....     | 1,587,000,000                  | 5,908,900                   | 7,312,706        | 18,262,000        | 31,483,606      | .37                             | 1.61                                    |
| New Mexico.....     | 13,514,000,000                 | 117,730,840                 | 74,874,418       | 226,333,000       | 418,938,258     | .87                             | 2.23                                    |
| New York.....       | 959,000,000                    | 2,555,200                   | 3,313,920*       | 7,408,000         | 13,277,120      | .27                             | 1.12                                    |
| North Carolina..... | 40,570,000,000                 | 769,306,840                 | 207,738,753      | 745,605,000       | 1,722,650,593   | 1.90                            | 2.35                                    |
| North Dakota.....   | 5,396,000,000                  | 227,764,140                 | 32,152,468       | 63,732,000        | 323,648,608     | 4.22                            | 1.78                                    |
| Ohio.....           | 2,576,000,000                  | 3,705,040                   | 7,806,965        | 27,335,000        | 38,847,005      | .14                             | 1.37                                    |
| Oklahoma.....       | 21,281,000,000                 | 163,756,380                 | 35,401,087*      | 297,522,000       | 496,679,467     | .77                             | 1.56                                    |
| Oregon.....         | 4,261,000,000                  | 30,470,760                  | 22,005,032       | 68,715,000        | 121,190,792     | .72                             | 2.13                                    |
| Pennsylvania.....   | 3,828,000,000                  | 9,901,400                   | 18,615,619       | 44,843,000        | 73,360,019      | .26                             | 1.66                                    |
| Rhode Island.....   | 32,610,000,000                 | 279,506,940                 | 120,599,628      | 328,016,000       | 728,122,568     | .86                             | 1.38                                    |
| South Carolina..... | 2,205,000,000                  | 17,279,540                  | 9,650,028        | 23,675,000        | 50,604,568      | .78                             | 1.51                                    |
| South Dakota.....   | 2,749,000,000                  | 12,169,140                  | 16,179,615       | 27,255,000        | 55,603,755      | .44                             | 1.58                                    |
| Tennessee.....      | 3,401,000,000                  | 3,896,680                   | 10,467,248       | 31,153,000        | 45,516,928      | .11                             | 1.22                                    |
| Texas.....          | 4,930,000,000                  | 28,394,660                  | 19,084,848       | 43,787,000        | 91,266,508      | .58                             | 1.28                                    |
| Vermont.....        | 10,898,000,000                 | 69,820,840                  | 58,282,919*      | 122,037,000       | 250,140,759     | .64                             | 1.65                                    |
| Virginia.....       | 1,757,000,000                  | 5,972,780                   | 8,483,791        | 14,723,000        | 29,179,571      | .34                             | 1.32                                    |
| Washington.....     | 943,000,000                    | 3,800,860                   | 6,511,243        | 10,307,000        | 20,619,103      | .40                             | 1.78                                    |
| West Virginia.....  | 5,637,000,000                  | 91,348,400                  | 31,092,151       | 44,383,000        | 166,823,551     | 1.62                            | 1.34                                    |
| Wisconsin.....      | 5,704,000,000                  | 19,291,760                  | 29,873,241       | 61,804,000        | 110,969,001     | .34                             | 1.61                                    |
| Wyoming.....        | 5,348,000,000                  | 22,900,980                  | 18,705,303       | 49,097,000        | 90,703,283      | .43                             | 1.27                                    |
|                     | 8,923,000,000                  | 59,216,760                  | 34,781,426       | 124,387,000       | 218,385,186     | .66                             | 1.78                                    |
|                     | 1,160,000,000                  | 3,162,060                   | 3,182,303        | 9,241,000         | 15,585,363      | .27                             | 1.07                                    |

\*Independently estimated.

Read table thus: In 1928 the wealth of Connecticut is estimated to have been \$6,152,000,000. In this state the taxes collected by the federal government during the same year were \$41,873,340; by the state government, \$27,977,484; by the local governments, \$64,751,000; making a total of \$134,601,824 taxes collected. The federal taxes collected in this state constitute a sum equal to sixty-eight hundredths of one percent (.68 percent) of the wealth of the state; state and local taxes collected constitute a sum equal to 1.51 percent of the wealth of the state. Similarly interpret figures for other states.

Sources of data: The figures of column 2 are estimates of the National Industrial Conference Board as given in *The Conference Board Bulletin*, February 25, 1930. The total figures for the United States as to amount of taxes collected by the federal, state, and local governments, are those of the National Industrial Conference Board as given in Table 28, p. 64 of *Cost of Government in the United States, 1927-28*. Total federal taxes were distributed among the states on the basis of the percent of federal taxes collected in each state as given in Table 38, p. 84-5 of *Cost of Government in the United States, 1927-28*. Figures as to taxes collected by state governments in the various states are from United States Department of Commerce, Bureau of Census. Figures as to amount of taxes collected by local governments in the various states are from Table 35, p. 77, of *Cost of Government in the United States, 1927-28*.

<sup>1</sup> Exclude \$6,542,000,000 which consists of (1) value of ships belonging to the United States Navy, (2) value of privately-owned waterworks, and (3) value of gold and silver coin and bullion, not distributed by states.

## What Part of the Nation's Taxes is Allotted for the Support of Public Schools?

Total tax collections in the United States, federal, state, and local, in 1928, the last year for which figures are available, was \$9,289,000,000. Expenditures for public elementary, secondary, and collegiate institutions in the same year were \$2,448,633,561. The support of the schools, therefore, requires approximately one-fourth of all taxes collected.

Confusion often arises as to the portion of tax money expended for public education. This comes from the fact that three types of governmental units, federal, state, and local, collect taxes. The mistake is sometimes made of comparing all school costs with the taxes collected by one or at most two of these three governmental units, with resulting exaggeration of the proportion of tax money going to the schools. In a given local community, the cost of local governmental enterprises such as roads, may be divided between the local government, the state, and the federal government, while schools may be almost wholly supported by a local tax. Approximately eighty percent of school revenue comes from taxes levied in local jurisdictions. On the other hand, but fifty percent of all taxes is collected by governmental units smaller than the state.

*The annual investment in public education in the United States is 26 percent of the taxes collected for all public purposes. For every dollar expended for public schools we expend*

*nearly three dollars for other public purposes. Do these facts indicate that too large a proportion of our public revenue is expended for the education of the nation's children?*

### Tax Collections and School Costs in the Various States

Table 10 presents a picture of tax collections and school expenditures in the United States in 1928 and the ratio of school costs to tax collections by the various governmental units. For example, in Connecticut the total tax collections in 1928 by the federal, state, and local governments were \$134,601,824. In the same year this state expended \$35,181,656 for public elementary, secondary, and college education. The amount expended for schools was, therefore, 26.14 percent of all tax collections in this state, or, if federal tax collections are excluded, 37.94 percent of the taxes collected by the state and by the local governmental units. For every dollar expended for public schools in this state approximately three dollars are collected for the support of other public enterprises. Similar figures are given for every state in the Union.

*Do the figures as to taxes collected in your state as compared with expenditures for public schools indicate that education is being overemphasized?*

**THE SUCCESSFUL** and prosperous modern state holds its title to wellbeing through an effective school system of some sort. In the event of disaster it recovers, provided it has this or some equivalent means of conserving and handing on the essentials of a sound civilization. Effective schools are primarily schools which reach the masses of the population, and none but state schools are ordinarily capable of achieving this purpose. Nevertheless, particularly in a democracy, in which both school attendance and the means of supporting schools are primarily economic in import, the development of schools is determined by the existing economic conditions and in turn prosperity in the economic sense is intimately tied up with the effectiveness of the school system. Those writers who would account for American prosperity in terms of our natural resources and geographic position alone seem to be singularly unaware of this relation of interaction to which reference is made. There will readily occur to the reader regions noted for rich natural resources, and favorable location, and either no schools at all or poor schools, which are still economically weak and socially primitive.—Henry C. Morrison, *School Revenue*, p. 18.

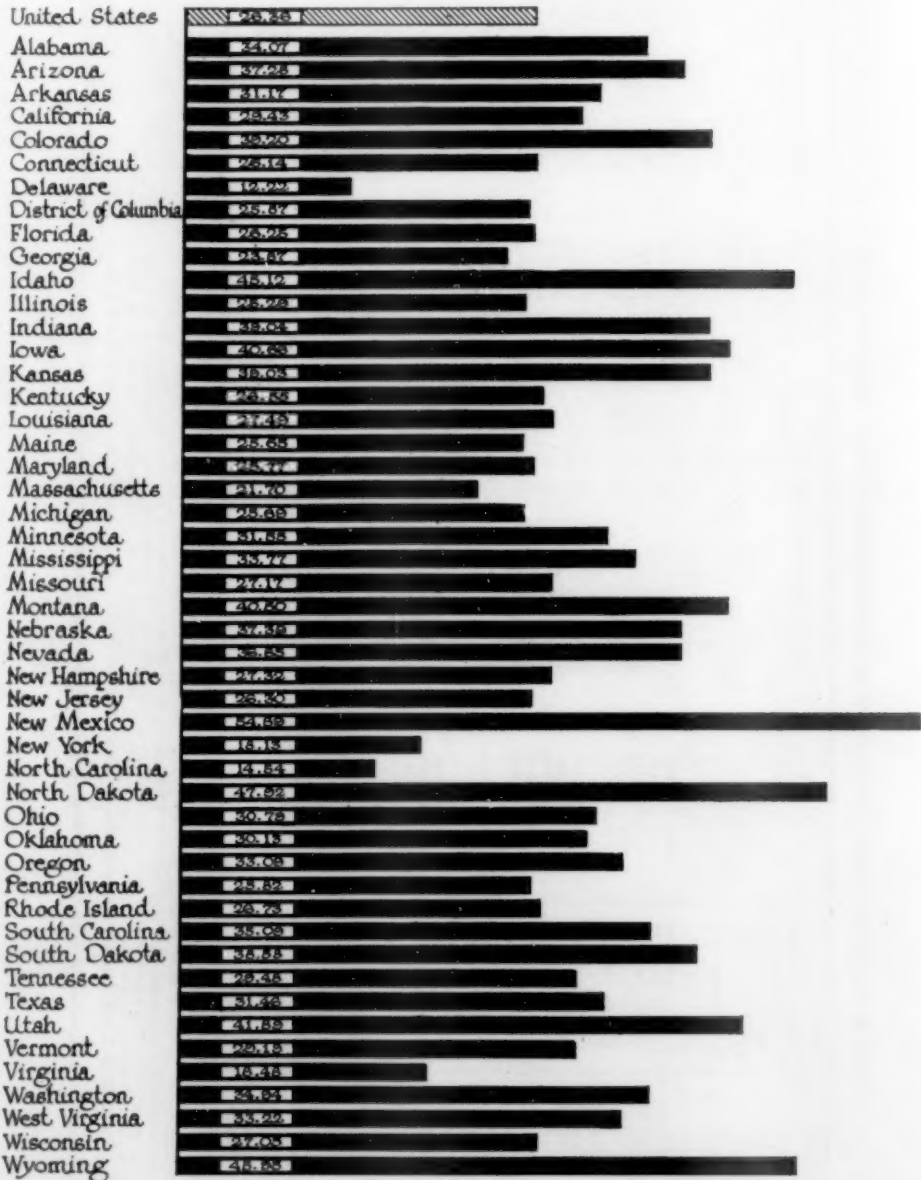
TABLE 10.—TAX COLLECTIONS AND SCHOOL COSTS IN THE STATES IN 1928

| States                    | Cost of public elementary, secondary, and collegiate in 1928 | Taxes collected in 1928 by: |                  |                  |                                      | Percent cost of schools is of tax collections of: |                             |                                       |
|---------------------------|--------------------------------------------------------------|-----------------------------|------------------|------------------|--------------------------------------|---------------------------------------------------|-----------------------------|---------------------------------------|
|                           |                                                              | Federal government          | State government | Local government | Federal, state, and local government | Federal government                                | State and local governments | Federal, state, and local governments |
| 1                         | 2                                                            | 3                           | 4                | 5                | 6                                    | 7                                                 | 8                           | 9                                     |
| United States.....        | \$2,448,633,561                                              | \$3,194,000,000             | \$1,465,000,000  | \$4,629,845,000  | \$9,288,845,000                      | 76.66                                             | 40.18                       | 26.36                                 |
| Alabama.....              | 24,540,666                                                   | 19,930,560                  | 20,782,406       | 31,317,000       | 72,029,966                           | 123.13                                            | 47.10                       | 34.07                                 |
| Arizona.....              | 10,171,145                                                   | 3,928,620                   | 7,958,997        | 15,393,000       | 27,280,617                           | 258.90                                            | 43.56                       | 37.28                                 |
| Arkansas.....             | 15,946,309                                                   | 12,935,700                  | 16,148,788*      | 22,080,000       | 51,164,488                           | 123.27                                            | 41.71                       | 31.17                                 |
| California.....           | 158,169,068                                                  | 150,948,440                 | 81,420,202       | 304,999,000      | 537,367,642                          | 104.78                                            | 40.93                       | 29.43                                 |
| Colorado.....             | 28,855,704                                                   | 16,225,520                  | 13,379,693       | 44,002,000       | 73,607,213                           | 177.84                                            | 50.29                       | 39.20                                 |
| Connecticut.....          | 35,181,656                                                   | 41,873,340                  | 27,977,484       | 64,751,000       | 134,601,824                          | 84.02                                             | 37.94                       | 26.14                                 |
| Delaware.....             | 4,098,671                                                    | 21,112,340                  | 7,341,298        | 5,096,000        | 33,549,638                           | 19.41                                             | 32.95                       | 12.22                                 |
| District of Columbia..... | 11,940,126                                                   | 18,844,600                  | .....            | 27,307,000       | 46,151,600                           | 63.36                                             | 43.73                       | 25.87                                 |
| Florida.....              | 33,500,859                                                   | 28,618,240                  | 20,795,290*      | 78,202,000       | 127,615,530                          | 117.06                                            | 33.84                       | 26.25                                 |
| Georgia.....              | 21,156,251                                                   | 28,043,320                  | 20,766,116       | 39,809,000       | 88,618,436                           | 75.44                                             | 34.93                       | 23.87                                 |
| Idaho.....                | 12,595,605                                                   | 3,545,340                   | 4,845,766        | 19,523,000       | 27,914,106                           | 355.27                                            | 51.69                       | 45.12                                 |
| Illinois.....             | 157,559,178                                                  | 244,788,160                 | 70,524,724       | 307,691,000      | 623,003,884                          | 64.37                                             | 41.66                       | 25.29                                 |
| Indiana.....              | 80,067,480                                                   | 47,494,780                  | 33,013,333       | 124,569,000      | 205,077,113                          | 168.58                                            | 50.81                       | 39.04                                 |
| Iowa.....                 | 61,446,373                                                   | 22,549,640                  | 22,570,654       | 98,985,000       | 151,105,294                          | 272.49                                            | 47.80                       | 40.66                                 |
| Kansas.....               | 49,331,743                                                   | 26,765,720                  | 19,776,417       | 79,858,000       | 126,400,137                          | 184.31                                            | 49.51                       | 39.03                                 |
| Kentucky.....             | 27,591,933                                                   | 34,495,200                  | 25,026,965       | 44,384,000       | 103,906,165                          | 79.99                                             | 39.75                       | 26.55                                 |
| Louisiana.....            | 25,185,418                                                   | 22,389,940                  | 22,026,503       | 47,203,000       | 91,619,443                           | 112.49                                            | 36.38                       | 27.49                                 |
| Maine.....                | 12,620,133                                                   | 11,690,040                  | 13,851,838*      | 23,658,000       | 49,199,878                           | 107.96                                            | 33.65                       | 25.65                                 |
| Maryland.....             | 27,279,981                                                   | 37,114,280                  | 16,727,408*      | 52,005,000       | 105,846,688                          | 73.50                                             | 39.69                       | 25.77                                 |
| Massachusetts.....        | 86,547,480                                                   | 119,806,940                 | 45,120,632       | 233,969,000      | 398,896,572                          | 72.24                                             | 31.01                       | 21.70                                 |
| Michigan.....             | 127,686,391                                                  | 186,210,200                 | 78,642,774       | 232,092,000      | 496,944,974                          | 68.57                                             | 41.09                       | 25.69                                 |
| Minnesota.....            | 60,239,293                                                   | 38,839,040                  | 42,968,390       | 109,125,000      | 190,932,430                          | 155.10                                            | 39.61                       | 31.55                                 |
| Mississippi.....          | 22,928,806                                                   | 10,859,600                  | 10,818,460*      | 46,729,000       | 67,907,060                           | 211.34                                            | 40.19                       | 33.77                                 |
| Missouri.....             | 58,309,634                                                   | 78,061,360                  | 34,057,036       | 102,488,000      | 214,606,396                          | 74.70                                             | 42.70                       | 27.17                                 |
| Montana.....              | 14,837,064                                                   | 6,100,540                   | 6,163,345        | 24,424,000       | 36,687,885                           | 243.54                                            | 48.57                       | 40.50                                 |
| Nebraska.....             | 31,827,517                                                   | 11,849,740                  | 17,132,224       | 56,153,000       | 85,134,964                           | 268.59                                            | 43.43                       | 37.39                                 |
| Nevada.....               | 2,976,810                                                    | 1,117,900                   | 2,048,545        | 4,913,000        | 8,079,445                            | 266.29                                            | 42.76                       | 36.85                                 |
| New Hampshire.....        | 8,600,068                                                    | 5,908,900                   | 7,312,706        | 18,262,000       | 31,483,606                           | 145.54                                            | 33.63                       | 27.32                                 |
| New Jersey.....           | 110,166,133                                                  | 117,730,840                 | 74,874,418       | 226,333,000      | 418,938,258                          | 93.57                                             | 36.57                       | 26.30                                 |
| New Mexico.....           | 7,288,192                                                    | 2,555,200                   | 3,313,920*       | 7,408,000        | 13,277,120                           | 285.23                                            | 67.98                       | 54.89                                 |



CHART VII

# PERCENT · PUBLIC · SCHOOL · COSTS IN · THE · VARIOUS · STATES · IS · OF TOTAL · TAX · COLLECTIONS · IN · 1928



*Research Division, National Education Ass'n.*

Calculations based on figures of the National Industrial Conference Board and the U. S. Department of Interior, Office of Education.

## What Is the Trend as to the Percent of Income Represented by Expenditures for Public Schools?

The answer to this question may be found in Table 11. The figures in this table are the same as those previously cited except that school costs as given in column 4 include only public elementary and secondary school expenditures. The cost of publicly supported colleges is omitted since reliable figures for earlier years are not available on this item. Expenditures of colleges constitute approximately 11 percent of the total bill for public education. This table reveals that since 1922 the fraction of income expended for public education has remained practically stationary.

It is a practice of some critics of the schools to condemn any increase in school expenditures irrespective of what the cause may be. Such an attitude is indefensible. To make the point plain, let us suppose, for example, that Mr. Ford and Mr. Sloan were confronted with the fact that the national bill for purchasing and operating passenger automobiles increased some fifteen fold between 1913 and 1929, rising from less than a billion in 1913 to twelve billions in 1929. Suppose one were to say to these gentlemen: "This enormous increase is scandalous. It is going to bankrupt the nation. The fads and frills of the automobile industry must be done away with. Paint all automobiles black. Stop the unnecessary changes in body styles. Four brakes are an extravagance: two brakes will stop any automobile. The nearer an automobile approximates an engine and four wheels the better. Fire your research men and your high salaried executives and get down to es-

sentials." What would Mr. Ford and Mr. Sloan say?

They would say that the fifteen-fold increase in automobile costs was justified. They would point out that we had only 1,500,000 passenger automobiles in 1913, as compared with 23,000,000 today. They would tell us that steel and other basic industries depend upon the automotive industry for their prosperity. They would expand upon how essential the automobile is in modern life, both in business and recreation. As for the fads and frills, the body style changes, and all the rest, they would contend that these are but steps toward progress in automobile design. They would make no apology for the fact that for every dollar they took from the pockets of the American people in 1913, they now take fifteen dollars. They would conclude by telling of their plans for making the American people spend still more for automobiles in the future.

And so let us conclude that a mere increase in the amount spent for a national service is not to be condemned in itself. The importance of the enterprise needs to be considered, the amount of service furnished needs to be known, and the causes of the increase have to be studied.

These same principles apply to school costs. The nation's school bill, like its bill for passenger automobiles, and for many other things, has increased since the war. This increase has been in response to legitimate causes.

Let us recall that during the war nearly one

TABLE 11.—INCOME, TAX COLLECTIONS, AND SCHOOL EXPENDITURES, 1922 TO 1928

| Year      | Estimated national income | Total tax collections in the United States | Expenditures for public elementary and secondary schools | Percent tax collections is of national income | Percent public school expenditures is of national income | Percent public school expenditures is of tax collections |
|-----------|---------------------------|--------------------------------------------|----------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
| 1         | 2                         | 3                                          | 4                                                        | 5                                             | 6                                                        | 7                                                        |
| 1922..... | \$65,925,000,000          | \$7,502,000,000                            | \$1,580,671,296                                          | 11.38                                         | 2.40                                                     | 21.07                                                    |
| 1923..... | 74,337,000,000            | 7,234,000,000                              | 1,700,707,616*                                           | 9.73                                          | 2.29                                                     | 23.51                                                    |
| 1924..... | 77,135,000,000            | 7,812,000,000                              | 1,820,743,936                                            | 10.13                                         | 2.36                                                     | 23.31                                                    |
| 1925..... | 81,931,000,000            | 7,884,000,000                              | 1,946,096,912                                            | 9.62                                          | 2.38                                                     | 24.68                                                    |
| 1926..... | 85,548,000,000            | 8,605,000,000                              | 2,026,308,190                                            | 10.06                                         | 2.37                                                     | 23.55                                                    |
| 1927..... | 88,205,000,000            | 9,059,000,000                              | 2,103,322,414*                                           | 10.27                                         | 2.39                                                     | 23.24                                                    |
| 1928..... | 89,419,000,000            | 9,289,000,000                              | 2,184,336,638                                            | 10.39                                         | 2.44                                                     | 23.52                                                    |

\*Estimated.

Source of data: Figures as to national income are estimates of the National Bureau of Economic Research as given in Willford I. King, *The National Income and Its Purchasing Power*, National Bureau of Economic Research, p. 74. Figures of column 3 from *Cost of Government in the United States, 1927-28*, National Industrial Conference Board, p. 64. Figures of column 4 from various reports of the U. S. Dept. of Interior, Office of Education.

in every four of our young men was rejected for various physical disabilities, most of which competent physicians state could have been prevented by the right kind of health education and medical care. We also remember that a fourth of those called in the draft had had so little schooling that for all practical purposes they were illiterate. Having discovered these facts, the nation resolved to remove the deficiencies which the gross neglect of public schools in many communities had brought about, and to realize the solid returns which come from investing in efficient public schools.

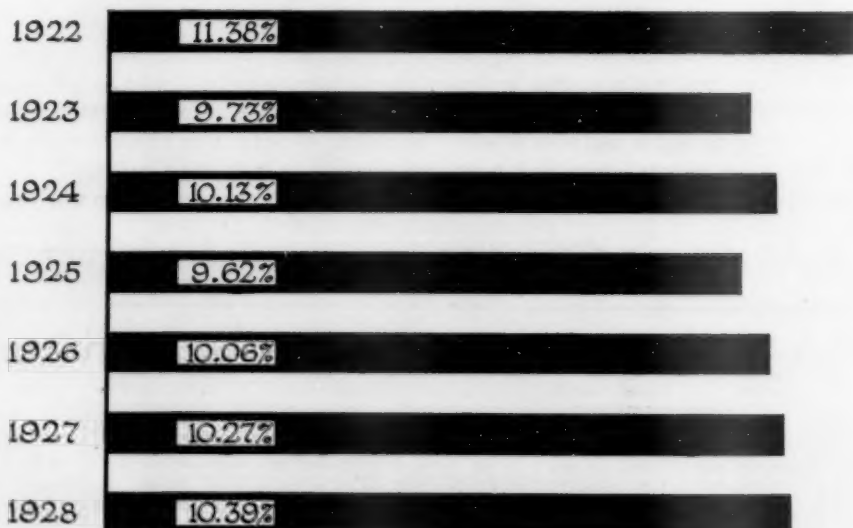
It has cost more money to be sure. It has cost more money first, because many more children are attending school. The increase in school attendance alone justifies a doubling of public school costs over the pre-war level. Second, it

has cost more money because the dollar now has but 59 percent of its 1913 purchasing power. Consequently, it takes more dollars to provide a given amount of schooling, just as it takes more money to buy a pound of meat or a suit of clothes. These two legitimate and inescapable causes, larger attendance and loss in purchasing power of the dollar, alone account for most of the increase in school costs over the pre-war level.

It is sometimes stated or implied that there is some inherent merit in the expenditure of portions of our income for private purposes and some peculiar demerit in expending portions of this income for public purposes. This attitude has no sound basis in economic theory. There are two fundamental criteria in the light of which should be examined every claim, pub-

CHART VIII

## PERCENT OF NATIONAL INCOME PAID FOR TAXES



*Research Division, National Education Ass'n.*

Based on figures of National Industrial Conference Board and National Bureau of Economic Research.

lic or private, for a share of the total income. These are:

1. Does this article or service contribute to increase the happiness and general welfare of individuals and of the community as a whole?
2. Is the cost of this article or service no larger than is necessary for its efficient provision?

These tests apply both to private and public activities. For example, we do not hesitate to forbid private industry to manufacture and distribute for other than medical purposes such harmful drugs as cocaine. The state prohibits or limits the production of any commodity or service which is inimical to the public welfare.

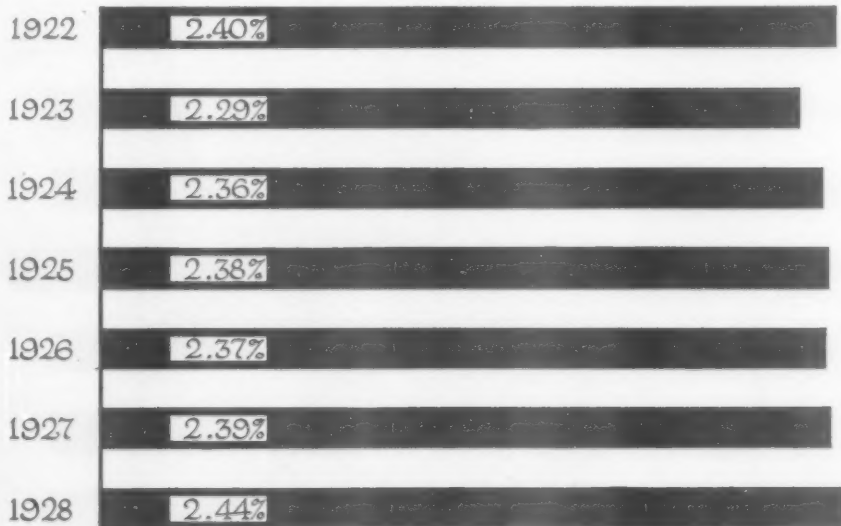
Likewise, the state does not hesitate to regulate the amount of money which may be collected in connection with the production of a commodity or the furnishing of a service. The

amount that the railroads may charge for the important service which they render the country is regulated. The rates which utilities may charge are controlled. Companies are prevented from charging more than their investment and efficient operation justifies.

These principles apply with no less force to public activities. No public activity that cannot justify its worth under the test of contributing to individual and general welfare should be supported by taxation. Nor is the obligation of efficient operation of public activities any less than holds in the case of private activities. Every honest effort to appraise critically the character and worthwhileness of these things which are paid for from the public purse is to be commended. Every constructive effort which is made to increase the efficiency of the operation of public enterprises is to be supported.

CHART IX

## PERCENT OF NATIONAL INCOME EXPENDED for PUBLIC ELEMENTARY AND SECONDARY SCHOOLS



*Research Division, National Education Ass'n.*

Based on figures of U.S. Department of Interior, Office of Education and National Bureau of Economic Research.

These principles, however, are either consciously or unconsciously rejected in many of the discussions issued by those anxious to starve the schools. We hear talk about reducing the amount of school expenditures in order that more money will be available for "productive" industry. What is really meant is—let us deny children a fair chance in life in order that the next quarterly dividend may be swollen. No industry, public or private, is more productive than an efficient school system. The attitude which looks upon school expenditures as a social loss, and school taxes as a necessary evil, has no justification except when the schools fail to function efficiently. When the latter is the case the remedy is to take the steps, which are open to every voting citizen in order that the situation may be corrected.

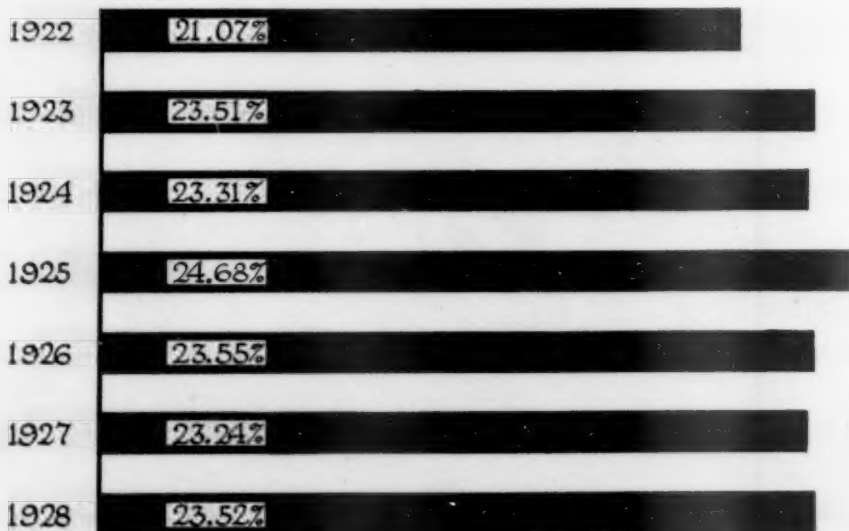
These considerations are pertinent to a study

of the figures of this section. The United States is a growing nation. This fact, as well as the additional consideration that public interest makes necessary a re-allotment of income from time to time, will result in changes in the percent of income invested for a particular purpose. As these changes occur they need to be appraised in the light of the criteria which have been stated above. The mere fact that the percent of income expended for schools, for automobiles, for insurance or for any other purposes has changed, means nothing in itself. The question is, is the increase justified? Does it advance the welfare of the people of the United States?

*Since 1922 the nation's income and school costs have increased at approximately the same rate. Does this fact indicate that we have been*

CHART X

## PERCENTAGE OF ALL TAX COLLECTIONS IN THE UNITED STATES EXPENDED FOR PUBLIC ELEMENTARY & SECONDARY SCHOOLS



*Research Division, National Education Ass'n.*

Calculations based on figures of the U. S. Department of Interior,  
Office of Education and the National Industrial Conference Board.

placing too high a value on education in the post-war decade?

### How Does the Increase in Public School Costs Compare With the Increase in Other Important Items?

Table 12 gives estimates which answer this question. The costs of public elementary and secondary schools have increased 38.2 percent.<sup>1</sup>

<sup>1</sup> Figures are not available as to the increase of collegiate costs during the same period. They have probably been somewhat more rapid than the expenditures for the lower schools. But since the expenditures for higher education constitute but a small fraction of total expenditures for public education, this factor did not greatly affect the figure given as to the percentage increase in school costs.

TABLE 12.—AMOUNT AND PERCENT OF INCREASE OF CERTAIN ITEMS IN THE UNITED STATES—1922-1928

| Items                                                | 1922            | 1928            | Percent increase |
|------------------------------------------------------|-----------------|-----------------|------------------|
| 1                                                    | 2               | 3               | 4                |
| Public school costs (elementary and secondary).....  | \$1,580,671,296 | \$2,184,336,638 | 38.19            |
| National income.....                                 | 65,925,000,000  | 89,419,000,000  | 35.64            |
| Life insurance yearly premiums.....                  | 1,686,000,000   | 3,145,584,000   | 86.57            |
| Expenditures for building construction.....          | 4,750,000,000   | 7,065,000,000   | 48.74            |
| Purchase and operation of passenger automobiles..... | 6,950,000,000   | 12,500,000,000  | 79.86            |

The figures given in this table are based upon the most reliable sources of information available, as cited in other tables in this Bulletin.

CHART XI

## PERCENT INCREASE IN SCHOOL COSTS AND OTHER IMPORTANT ITEMS, 1922 to 1928



Research Division, National Education Assn.

Calculations based on the most reliable sources of information available

## Good Schools Pay Their Own Way

The purpose of this *Bulletin* is to provide material for answering two questions concerning current expenditures for education. First, can the nation afford to pay the price of good schools? Second, are the results obtained through education worth the money expended? The first of these questions was considered in the preceding section. The facts presented indicate that the United States can afford to offer every child a first-class educational opportunity.

Granted, then, the economic ability to provide good schools, the question is whether education is worth its price. How, and to what extent, does education pay back the investments made in it? What place in its scale of values should a great nation assign to the education of its children? Of what value is the public school to America?

In attacking such a problem as this it is necessary to recognize at the outset that the most important contributions of education are intangible and as yet not subject to objective and statistical demonstration. To illustrate, the public high school in Rochester, Minnesota, about half a century ago gave four years of general training to Charles Horace Mayo. At public expense Charles Mayo was prepared to enter college and to bring his unusual talents to their fruition in medical school. Today he is chief of the staff of one of the most famous hospitals in the world. His skill, both directly and indirectly, has prolonged thousands of human lives, relieved suffering, and substituted useful and productive life for tragic loss and waste. It probably cost the State of Minnesota and the city of Rochester about \$500 to give four years of high-school training to Charles Mayo. Has the investment yielded one hundred, five hundred, or a thousand times its original amount? No one can say, because the services of the skilled physician are not measurable in terms of dollars and cents. Suppose Charles Mayo had not been given high-school education; suppose that he had never entered medical school nor taken up the practice of medicine, what would be the loss to the people of the nation? Again, no one can predict what might have happened. But everyone will certainly agree that money thus invested brings in dividends which are none the less real and important be-

cause they extend beyond mere arithmetical calculation. If the entire public school system had to be operated merely to educate a few hundred great leaders in science, art, and statesmanship, it would be worth its cost. The only way to be sure that the contributions of some great mind are not lost to the world for lack of education is to offer educational opportunity to everyone. This is what the American free public school system attempts to do.

Public schools are not, however, maintained solely to educate a few great leaders, although the work of the schools could well be economically justified on this score alone. Schools serve everyone. The butcher, the baker, the policeman, the street car conductor, the farmer, the day laborer are all in large part a product of their education. Through these people, each rendering his own small service to the community, the schools contribute to the welfare of us all just as surely as through the more spectacular achievements of some great statesman, scientist, philosopher, or teacher. What does it profit a man to live in an educated and literate community? What price shall we set on our thousand daily contacts with decent, cleanly, literate, responsible people? No one can estimate the worth of these things, but life itself would certainly be worth but little without them. General education has done much, even in a few generations, to lift the level of human relationships and to accelerate cultural progress. Without an educated public to work with, even the more brilliant and highly-trained leaders are relatively helpless. Charles Mayo could not have rendered his great services to the people of the thirteenth century even had he possessed twentieth century skill. Herbert Hoover expressed the contribution of education to civilized life in these words: "If we were to suppress our educational system for a single generation the equipment would decay, the most of our people would die of starvation, and intellectually and spiritually we would slip back four thousand years in human progress." America perceives that maximum advantage comes from educating not merely the few great minds but the great mass of her people as well.

The answer to the question as to whether education is worth its price, therefore, must

be sought in large part in terms of imponderable values. Various approaches to the question might be used. In this bulletin the problem will be considered in terms which closely parallel the themes to be used in the observance of American Education Week, November 10-16, 1930. We shall approach the question of how good schools pay their own way in contributions to American life by considering these seven questions:

1. How do the schools contribute to the enrichment of human life?
2. How do the schools promote patriotism and world understanding?
3. What did the schools of yesterday contribute to America's development?
4. What is the day-by-day contribution of the schools?
5. What will the schools of tomorrow mean to America?
6. How have the schools contributed to individual achievement and happiness?
7. How have the schools contributed to American national life, prosperity, and culture?

### 1. How Do the Schools Contribute to the Enrichment of Human Life?

The gift of the machine age to America is a degree of leisure time which has never been enjoyed by any nation or people before. The growth of the five-day week is but one of the striking indications of the spread of leisure. Table 13 shows the spread of this idea between 1926 and 1928. Both capital and labor predict its extensive adoption in this country by 1940.

Those who attempt to interpret the American scene may take either one of two characteristic views of this and other evidences of the increase in leisure. Those with a pessimistic outlook regard the extra hours as a threat. They assert that the great mass of relatively uneducated men and women do not understand how they can wisely utilize their spare time. It is declared that the mob falls prey to various forms of undesirable and commercialized entertainment and that therefore the general standard of culture is lowered. The remedy proposed is the limiting of cultural opportunities to the few who, it is said, are ready to appreciate them. This is no new viewpoint. Such pessimism is the philosophical descendant of Governor Berkeley of colonial Virginia. In 1671 Berkeley was asked by the English government concerning the education of the Virginia people. After stating that each man instructed his own children "according to his own ability," the Governor concluded:

But I thank God there are no free schools and printing, and I hope we shall not have them these hundred years, for learning has brought disobedience and heresy and sects into this world, and printing has divulged them and libels against the best government. God keep us from both.<sup>1</sup>

The spirit of the gloomy Governor is still abroad in the twentieth century.

Others adopt a far more hopeful view. They point, for instance, to the circulation statistics of public libraries, statistics of enrolment in night schools, and the vast ramifications of the

<sup>1</sup> Clapp, Frank L., Chase, Wayland J., and Merriman, Curtis. *Introduction to Education*. Ginn and Co., Boston. 1929 p. 45-6.

TABLE 13.—PREVALENCE OF 5-DAY WEEK IN CERTAIN INDUSTRIES IN 1926 AND 1928<sup>1</sup>

| Industry                         | Percent of establishments operating on 5-day week |         | Percent of employees working 5 days a week |                   |
|----------------------------------|---------------------------------------------------|---------|--------------------------------------------|-------------------|
|                                  | 1926                                              | 1928    | 1926                                       | 1928              |
| 1                                | 2                                                 | 3       | 4                                          | 5                 |
| Men's clothing.....              | 49                                                | 53      | 32.3                                       | 33                |
| Automobile.....                  | No data                                           | No data | 1.5 <sup>2</sup>                           | 30                |
| Organized building trades.....   | No data                                           | No data | 6.6                                        | 14.6 <sup>3</sup> |
| Granite and stone trades.....    | No data                                           | No data |                                            | 12.9 <sup>4</sup> |
| Iron and steel.....              | No data                                           | No data | 2.1                                        |                   |
| Foundries and machine shops..... | 3.8                                               | 4.2     | 3.5                                        | 4.1               |

<sup>1</sup> United States Department of Labor, Bureau of Labor Statistics. "Progress of the 5-Day Week." *Monthly Labor Review*, June, 1929; and "Prevalence of the Five Day Week." *Ibid*, December, 1926.

<sup>2</sup> 1925 figure.

<sup>3</sup> Important extensions of the five-day week in the building trades, since May 15, 1928, when these data were collected, have been reported.

<sup>4</sup> Part of year only.

adult education movement as conclusive evidence that the extra hours are not a threat but a promise.

Will the machine enslave us or make us free? The outcome of this controversy must be left for time to decide. The decision on this issue is being profoundly influenced by what the schools are doing to train youths and adults in the wise use of their leisure time. The schools are making a major contribution to the enrichment of human life by teaching how the added hours of leisure time may be used for activities which are creative and cultural rather than destructive and enervating. The schools teach how to make use of library facilities. The schools teach how to find enjoyment in whole-

some games and sports. They make their students dissatisfied with a meager intellectual life. They help students to grow in appreciation of nature, of art, music, and literature. The school building serves as a community center for a wide variety of adult activities. The schools are the greatest single force in America interested primarily in the enrichment of human life. It may well be that the schools will prove to be the deciding factor in the conflict now being waged between materialism and idealism for the control of the extra hours.

The effect of the schools in teaching how to use leisure time cannot be directly measured. There are, however, certain facts which reflect the accomplishments of education in the

CHART XII

## PER CAPITA EXPENDITURES FOR RECREATION 1911~1927

Cities over 30,000 in Population



*Research Division, National Education Assn.*

Source of data: U.S. Department of Commerce, Bureau of the Census. *Financial Statistics of Cities, 1927*

field. That our people are learning an appreciation of the value of recreation is shown by the increasing expenditures for recreation in the larger cities. Chart XII shows that per capita public expenditures for recreation purposes in cities with populations of 30,000 and over increased from \$0.65 in 1911 to \$1.40 in 1927. Other factors have contributed to this increase but the work of the schools in teaching the value and necessity of wholesome recreation has been of major importance.

Another indirect index of the effect of education in the enrichment of human life is found in the statistics of library circulation. These are shown in Chart XIII. It should be remembered, too, that the circulation of library books represents less than 2 percent of our national reading. There are 7,200 magazines published in the United States and Canada. Twenty-five of these magazines have over a million circulation with a combined yearly circulation for the twenty-five of 846,252,000 copies.<sup>1</sup>

Enrolment in night schools is a third in-

dication of the way in which the schools are creating a desire to continue learning and providing a means for satisfying this desire. Table 14 shows for 31 states the enrolment and cost of instruction in public night schools. The actual known enrolment in 31 states amounted to 833,054 persons in 1927-28. It is certainly well over a million at the present time. The modern night school is no longer an institution merely for illiterates or near-illiterates, nor is it solely a vocational training school. The typical night school offers a wide variety of cultural subjects along with its vocational and elementary courses. Thus reorganized it offers help to everyone in the enrichment of his life through effective use of leisure time.

While the library and the evening school are among the most important of the educational agencies sponsoring a better utilization of leisure time, they by no means complete the list. Correspondence schools, university extension classes, women's clubs, parents' study groups, workers' study clubs, and museums are

<sup>1</sup> Keator, A. D., "The Popularity of American Magazines." *Library Journal* 55:499-501; June 1, 1930.

CHART XIII

## PER CAPITA CIRCULATION OF PUBLIC LIBRARY BOOKS 1876-1928



Sources of data: Population figures used in calculating the above per capitas were those of the U.S. Census Bureau. Figures as to public library circulation for 1876 and 1923 are from U.S. Department of Interior, Bureau of Education, 1926, No. 9. The 1925 figure is from American Library Association, Library Extension, 1926. The 1928 circulation figure is independently estimated.

only a few of the many other educational enterprises actively at work in the field of voluntary adult education. This *Bulletin* does no more than name these agencies and to point out that they constitute powerful allies in the vast and widely ramified program for the continued enrichment of human life through education.

**TABLE 14.—ENROLMENT AND COST INSTRUCTION IN PUBLIC NIGHT SCHOOLS, 1927-28, IN 31 STATES REPORTING**

| State                           | Enrolment | Cost of instruction |
|---------------------------------|-----------|---------------------|
| 1                               | 2         | 3                   |
| Alabama.....                    | 4,033     | \$73,992            |
| California.....                 | 245,037   |                     |
| Colorado.....                   | 12,209    |                     |
| Connecticut.....                | 20,643    | 267,626             |
| Delaware.....                   | 1,683     | 49,369              |
| District of Columbia.....       | 10,749    | 91,697              |
| Georgia.....                    | 9,458     | 22,142              |
| Idaho.....                      | 1,211     | 3,542               |
| Illinois.....                   | 56,000    | 573,634             |
| Indiana.....                    | 10,632    | 52,430              |
| Kansas.....                     | 7,291     | 36,117              |
| Louisiana.....                  | 10,281    | 62,676              |
| Maine.....                      | 3,729     | 39,696              |
| Maryland.....                   | 12,717    | 126,693             |
| Massachusetts.....              | 85,759    | 533,781             |
| Minnesota.....                  | 7,747     | 41,220              |
| Nevada.....                     |           | 1,578               |
| New Hampshire.....              | 2,507     | 20,644              |
| New Jersey.....                 | 43,745    | 684,459             |
| New York.....                   | 155,064   | 1,897,625           |
| North Carolina.....             |           | 39,627              |
| North Dakota.....               | 626       | 2,012               |
| Ohio.....                       | 50,838    | 439,072             |
| Oklahoma.....                   |           | 68,324              |
| Rhode Island.....               | 12,138    | 106,720             |
| South Carolina.....             | 9,775     | 30,316              |
| Utah.....                       |           | 36,803              |
| Virginia.....                   | 7,332     | 66,798              |
| Washington.....                 | 13,001    |                     |
| Wisconsin.....                  | 36,214    | 452,844             |
| Wyoming.....                    | 2,635     |                     |
| Total for states reporting..... | 833,054   | \$5,821,497         |

Source of data: U. S. Department of the Interior, Office of Education. *Statistics of State School Systems, 1927-1928*. Bulletin 1930, No. 5, p. 29.

## 2. How Do the Schools Promote Patriotism and World Understanding?

From the earliest days schools have been recognized as a basic factor in civic life. James Madison represented the views of the founders of the nation when he asserted, "A popular government without popular information or the means of acquiring it is but a prologue to a farce or a tragedy." Such quotations could be multiplied indefinitely. Every great American statesman has favored wide extension of educational opportunities.

Today every citizen is faced with problems

of the most complex and searching nature. How can wise laws be secured and enforced? How can public revenues be equitably raised? What relations should America maintain with the other nations? What is the proper relationship of the government to business? In a democracy the ultimate decision on such questions as these rests with the electorate. Obviously an uneducated people is appallingly unfit to make such decisions. In fact, intelligent citizenship now demands not merely mastery of reading, writing, and arithmetic but a grasp of the social sciences,—history, political science, and economics—and, above all, the ability and willingness to interpret and to solve national problems in the light of reason. The problems of democracy thus become the opportunities of the school. By building up an educated citizenship the schools are rendering an unique service to the preservation of democratic ideals.

In 1929, 307,255 aliens landed in the United States and took up their residence. The schools will help these people to become American citizens. The schools will teach the children of these people American ideals and customs. The preparation of aliens for citizenship is only one of a number of important civic functions of the public school system. Nevertheless it constitutes a most significant contribution of the schools to citizenship training.

The integration of civic life and thought which makes it possible for 120,000,000 people scattered over 3,000,000 square miles of territory to feel and to act as a single nation is the joint product of modern means of communication and transportation plus general citizenship training. In other nations a state church may help to perform the integrating function, but America has no state church and her people adhere to some 50 major religions and to some 200 minor religious sects. In many of the European countries compulsory military training for all young men makes a definite contribution to certain aspects of national solidarity but such training has never been accepted in America and it is unlikely that it will be. The American school is the only all-extensive integrating agency in which civic service and the integration of national life is the major purpose. The school, therefore, bears the brunt of the responsibility for educating the alien and his children in American

political and social ideals and customs, for lending unity and coherence to American life, for providing the information and habits needed by all good citizens, and for giving practice in the application of these habits in daily life.

In order to do this work successfully the schools have made many changes in their procedures. They have radically revised the curriculum in the social studies, substituting active practice in the attitudes and skills of good citizenship for routine learning of unrelated facts concerning the machinery of government. The objectives of citizenship training have been appraised. Modern schools teach the importance of factual material when attacking social and political issues, the necessity of tolerance, the value of cooperation, and the wider aspects of patriotism which visualize the nation in its relation to all humanity. Such services entitle the schools to rank in the first line of national defense.

Much remains to be done before this potent defense and preservation agency can attain its maximum effectiveness. The present crisis in law enforcement demands that the duties of citizenship be brought home more effectively than ever before. The obligations imposed by universal suffrage must be realized more keenly. It is not enough to carry on campaigns to "get out the vote." The number of persons who actually go to the polls and cast a ballot may doubtless be increased by effective propaganda methods. But only education can insure that when the ballot is cast it represents an intelligent decision on the issues involved. Washington's statement, in his farewell address, that "In proportion as the structure of a government gives force to public opinion, it is essential that public opinion be enlightened," is even more cogent under the complex civic and social conditions of the twentieth century.

### 3. What Did the Schools of Yesterday Contribute to America's Development?

The most obvious and perhaps the most fundamental difference between the America of 1774 and the America of 1930 is one of geography. The nation began as little more than a series of small settlements scattered along a narrow strip of the Atlantic seaboard.

The total area of the thirteen original states is 326,378 square miles; in 1930 the entire United States covered 3,026,789 square miles of territory. This great national development involved the winning of a continent and a ten-fold expansion of area in less than a century and a half.

As the nation expanded westward, the district school followed the pioneer's homestead. Judged by modern standards these frontier schools left something to be desired. They were poorly housed, open for short periods, and taught by untrained teachers. They were, however, the natural outgrowth of frontier conditions, serving well the people of their day and standing as a visible symbol of their faith in education.

Education was not only an accompaniment of westward expansion; it was also a factor in it. The young men who left the farms of New England for the Western prairies or the gold mines of the Pacific coast had received instruction at least in the essentials of citizenship and learning in their district schools. Many, too, were academy or college trained. This educational background led to the immediate establishment of popular government wherever they went and greatly facilitated the development of the new territories and states. The pioneers transplanted to their new homes the political and social institutions which their schools had taught them to understand and to admire.

That the ideal of public education should be both an accompaniment and a condition of the winning of the West was to be expected. The vigorous democratic spirit of the West, which in 1828 swept Andrew Jackson into the hitherto aristocratic presidential office, emphasized in no uncertain way the right of every man to make the most of his powers. The democratic revolution which culminated in the elevation of Jackson was predicated upon the extension of the suffrage to all white men. The educational significance of this enfranchisement was profound. It meant, eventually, the end of the *laissez-faire* attitude of the states towards education. General education for all in the elements of citizenship and the tools of wider learning became a duty which the state owed to its own preservation. This new attitude was reflected by the constitutions of the new states and by revisions in the laws of the older commonwealths. The

spirit of the frontier and the rise of new social problems in the growing Eastern cities thus combined to awaken the nation as a whole to its need for public education.<sup>1</sup>

Once founded in the West, the ideal of free public education itself began to aid in the material and cultural development of the newly-won territory. The isolated district schools, later coordinated into county, township, and state systems of education, placed at least the tools of learning in the hands of every boy and girl who attended them. Later, the colleges of agriculture, mechanic arts, mining, and commerce made their contributions to the development of the new states by encouraging the use of scientific methods and by training young people in the use of these methods. At the same time the secondary schools and the liberal arts colleges were laying the foundations of a national culture.

A further relationship between national expansion and public education is found in the land grants for public education which began with the admission of Ohio in 1802 and continued through the admission of Arizona, the 48th state, in 1912. These grants were at first accepted by the new states as a compromise to their demand for the right to tax federal public lands.<sup>2</sup> That the states were willing to accept this compromise and to devote the income of the grants to education shows the value placed on schools by the frontier. This great endowment for public education amounted to some 73,000,000 acres.<sup>3</sup> Sales of part of it have already yielded well over a hundred million dollars, and unsold lands worth approximately four times as much still remain.<sup>4</sup> The area of land granted for education (not including that for colleges and charitable institutions) is about as large as the states of Ohio, Indiana, and Illinois combined. Though the endowment has too often been badly managed and lost for the schools,<sup>5</sup> yet the Northwest Ordinance of 1787 and the acts admitting the new states since that date

stand as concrete evidence of the reciprocal relationship between the schools and the expanding nation. The developing nation fostered education and this force in turn responded by accelerating the rate of national development.

#### 4. What is the Day-by-Day Contribution of the Schools?

No institution has higher purposes or works with greater faithfulness for their fulfillment than the American public school. These are the objectives toward which 832,000 public school teachers are striving daily as they work with the nation's 25,000,000 children: (1) Sound health, (2) worthy home membership, (3) mastery of the tools of learning, (4) good citizenship, (5) vocational efficiency, (6) wise use of leisure, (7) ethical character.

*How the schools promote health.* Health is the foundation of national welfare and personal happiness. The contribution of the school is fundamental to solid progress in health work. Health as a rule is a purchasable commodity and the initial price is education. New physiological and medical discoveries are of little value until education incorporates them in the lives of the people through health habits and attitudes. The modern school teaches the child only the essential facts of anatomy and physiology but devotes much time to encouraging him in the practice of health habits during twenty-four hours of each day.

The importance of health and physical education is one of the lessons brought home to us by the World War. A recent study shows an increase of about 50 percent, between 1914 and 1926, in the amount of time allotted to physical training in the elementary grades.<sup>6</sup>

Figure 1 shows some of the ways in which the schools are contributing to the greater physical effectiveness of our future citizens.

*How the schools train for worthy home membership.* The home and the school are

<sup>1</sup> For a more extended evaluation of the influence of the frontier on the history of American public education, see: Cubberley, Ellwood P. *Public Education in the United States*. Houghton Mifflin Co., Boston. 1919. p. 71-81, 110-12. See also Knight, Edgar W. *Education in the United States*. Ginn and Co., Boston. 1929. p. 182-8.

<sup>2</sup> *Ibid*, p. 59-60.

<sup>3</sup> Swift, Fletcher Harper. *Federal Aid to Public Schools*. United States Department of the Interior, Bureau of Education, Bulletin 1922, No. 47. Government Printing Office, Washington, D. C. p. 10.

<sup>4</sup> Cubberley, Ellwood P., and Elliott, Edward C. *State and County School Administration*. Macmillan Co., New York. 1915. p. 71-9.

<sup>5</sup> Swift, Fletcher Harper. *A History of the Public Permanent Common School Funds in the United States, 1795-1905*. Henry Holt and Co., New York. 1911. 493 p.

<sup>6</sup> Mann, Carleton Hunter. *How Schools Use Their Time*. Bureau of Publications, Teachers College, Columbia University, New York City. 1929. p. 115.

the two great social institutions which jointly share responsibility for the protection and development of childhood. These two institutions bear reciprocal relations; each should strive to build up and magnify the other.

What is the typical American home of today and what will it be in the future? The schools are seeking to develop within the child, by means of home economics courses and in other ways, an appreciation of the family group and a better understanding of the part which he must play as a member of that group if home-making ideals are to be maintained.

Parent and teacher, also, are learning each to appreciate and understand the other's point of view. The growth of the movement for cooperation between school and home is shown by the increase in membership of the National Congress of Parents and Teachers. In 1920, 190,183 persons were enrolled as members; in 1925, 875,240; and in 1930, 1,481,105.

Figure 2 shows some of the ways in which the schools are training children for more worthy home membership.

*What schools are doing to encourage learning and thinking.* The schools transmit to each new generation a command of the fundamental processes. They teach the basic skills of life: the interpretation of written and spoken lan-

guage, the manipulation of numbers, and the oral and written expression of thought. They give skill in these operations and, by providing favorable conditions for their practice, make skills into lifelong habits.

Criticisms directed against the modern curriculum, branding it as impractical, and too much concerned with "fads and frills," are numerous. Such criticisms usually reveal ignorance of what is really being taught in the schools of today. A recent study shows that while the proportion of time allotted to the three R's in the elementary school has dropped from 91 percent in 1826 to 51 percent in 1926, three-fourths of this decrease took place prior to 1866. According to the same study, the ground apparently lost by the three R's has been more than made up by the increased length of school term on the one hand and the increased length of school life per pupil on the other.<sup>1</sup> The curriculum of today is changing so that it can concern itself not only with actual daily living but also can look to the future and attempt to educate for a changing civilization.

Effective methods used by the schools in encouraging learning and thinking are summarized in Figure 3.

*How schools develop vocational efficiency.* Education is essential to vocational effective-

<sup>1</sup> *Op. cit.*, p. 42, 50.

FIGURE 1

## How Schools Promote Health

### What the Schools Do

1. Cooperate with parents to have every beginner enter school free from remediable defects.
2. Provide clean comfortable beautiful buildings and playfields.
3. Provide a wholesome and happy atmosphere and routine.
4. Train in health habits.
5. Teach facts of personal and public health.
6. Provide health examinations.
7. Provide special facilities for handicapped children.

For helpful references bearing on any one of the above contributions of the schools, write to the National Education Association, 1201 Sixteenth Street, N. W., Washington, D. C.

ness. The schools not only teach the basic technics of various trades and professions but also by emphasizing the joy and dignity of work and the necessity for intelligent planning in every occupation help to discover new and improved methods and to develop right attitudes toward work.

Ways in which the schools promote vocational effectiveness are shown in Figure 4.

*How the schools prepare for faithful citizenship.* The success of democratic government depends implicitly on education. No amount

of rhetoric about "the dangers of over-education," should be allowed to obscure the fact that ignorance is a menace to republican institutions. The contributions of the schools to citizenship are so important that a separate section of this *Bulletin* is devoted to them.<sup>1</sup> By way of summary, some of the ways in which the schools prepare for faithful citizenship are indicated in Figure 5.

*How the schools train for the wise use of leisure.* This topic is also of such great importance that it has been selected for separate at-

<sup>1</sup> See, "How do the Schools Promote Patriotism and World Understanding?" p. 202.

FIGURE 2

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <h2 style="text-align: center;">How Schools Improve Homes</h2> <hr/> <h3 style="text-align: center;">What the Schools Do</h3> <hr/> <ol style="list-style-type: none"> <li>1. Make the school a worthy example of cleanliness, order, and beauty.</li> <li>2. Maintain an atmosphere of cooperation among children.</li> <li>3. Teach home-management, home-skills, and home-budgeting.</li> <li>4. Provide model kitchens, dining rooms, and sleeping rooms in the schools.</li> <li>5. Bring school and home together in organized cooperation.</li> </ol> <hr/> <p style="font-size: small;">For helpful references bearing on any one of the above contributions of the schools, write to the National Education Association, 1201 Sixteenth Street, N. W., Washington, D. C.</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

FIGURE 3

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <h2 style="text-align: center;">How Schools Encourage Learning and Thinking</h2> <hr/> <h3 style="text-align: center;">What the Schools Do</h3> <hr/> <ol style="list-style-type: none"> <li>1. Provide skilled and well-trained teachers.</li> <li>2. Revise curriculums constantly to fit modern needs.</li> <li>3. Use psychologically effective teaching methods.</li> <li>4. Provide laboratories, libraries, and other equipment to facilitate learning.</li> <li>5. Lay the basis for lifelong learning.</li> </ol> <hr/> <p style="font-size: small;">For helpful references bearing on any one of the above contributions of the schools, write to the National Education Association, 1201 Sixteenth Street, N. W., Washington, D. C.</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

tention in another section of this *Bulletin*.<sup>1</sup> At this point a summary of some ways in which the schools train for creative use of leisure is given in Figure 6.

*How the schools build character.* The schools build character in two ways—by instruction and by example. The teaching of honesty, thrift, respect for property, appreciation of beauty and other desirable characteristics is a definite part of the program in the schools. Fully as important as the direct instruction is

the effect of the example of teachers whose everyday life is a character lesson for their pupils. No one can teach more than he is. The high type of membership in the teaching profession is one of the most potent factors in the development of worthy ideals of conduct.

The effect of the example of the teacher in building character has been noted by the last two presidents. Mr. Coolidge told the National Education Association in 1924 that:

<sup>1</sup> See, "How do the Schools Contribute to the Enrichment of Human Life?" p. 199.

FIGURE 4

## How Schools Develop Vocational Efficiency

### What the Schools Do

1. Discover each child's special interests and capacities.
2. Provide exploratory courses which reveal vocational aptitudes.
3. Give specific vocational training.
4. Offer advice and guidance in choice of a vocation.
5. Render placement and follow-up services to graduates.

For helpful references bearing on any one of the above contributions of the schools, write to the National Education Association, 1201 Sixteenth Street, N. W., Washington, D. C.

FIGURE 5

## How Schools Prepare for Citizenship

### What the Schools Do

1. Make school administration a democratic example.
2. Provide increasing opportunities to learn self-government.
3. Teach the facts about voting and other civic duties.
4. Show how to approach civic problems objectively.
5. Help young people to grow in goodwill and appreciation of international relationships.
6. Develop an appreciation of American ideals of democratic government.

For helpful references bearing on any one of the above contributions of the schools, write to the National Education Association, 1201 Sixteenth Street, N. W., Washington, D. C.

The main factor of every school is the teacher. Teaching is one of the noblest of professions. It requires an adequate preparation and training, patience, devotion, and a deep sense of responsibility. Those who mold the human mind have wrought not for time, but for eternity. The obligation which we all owe to those devoted men and women who have given of their lives to the education of the youth of our country that they might have freedom through coming into a knowledge of the truth, is one which can never be discharged. They are entitled not only to adequate rewards for their service, but to the veneration and honor of a grateful people.<sup>1</sup>

President Hoover made the same point most effectively when, as Secretary of Commerce,

<sup>1</sup> Coolidge, Calvin. "Address." *Proceedings* 62:218; 1924.

he spoke before the Department of Superintendence of the National Education Association in 1926.

The teaching of ideals is by its nature spontaneous and unstudied. And it has to be sincere. The public school teacher cannot live apart; he cannot separate his teaching from his daily walk and conversation. He lives among his pupils during school hours, and among them and their parents all the time. He is peculiarly a public character under the most searching scrutiny of watchful and critical eyes. His life is an open book. His habits are known to all. His office, like that of a minister of religion, demands of him an exceptional standard of conduct. And how rarely does a teacher fall below that standard! How seldom does a teacher figure in a

National Education Association, Washington, D. C.

FIGURE 6

## How Schools Train for Wise Use of Leisure

### What the Schools Do

1. Teach use of books and libraries.
2. Provide good books for recreational reading.
3. Teach values in wholesome sports and games.
4. Cultivate a love for the outdoors.
5. Encourage development of creative social contacts.
6. Serve as a center for a worthwhile community life.

For helpful references bearing on any one of the above contributions of the schools, write to the National Education Association, 1201 Sixteenth Street, N. W., Washington, D. C.

FIGURE 7

## How the Schools Build Character

### What the Schools Do

1. Make ethical character the ultimate goal of all education.
2. Teach highest ideals of health, home, learning, citizenship, work, and play.
3. Surround children with teachers who themselves possess high character qualities.

For helpful references bearing on any one of the above contributions of the schools, write to the National Education Association, 1201 Sixteenth Street, N. W., Washington, D. C.

sensational headline in a newspaper! It is truly remarkable, I think, that so vast an army of people—approximately eight hundred thousand—so uniformly meets its obligations, so effectively does its job, so decently behaves itself, as to be almost utterly inconspicuous in a sensation-loving country. It implies a wealth of character, of tact, of patience, of quiet competence, to achieve such a record as that.<sup>1</sup>

Some of the things the schools do to build character are listed in Figure 7.

### 5. What Will the Schools of Tomorrow Mean to America?

We have recorded what the schools of yesterday did to foster the development of a new nation and we have briefly passed in review some of the contributions of the schools of today. What of the future? All indications point to the increased development of the school of tomorrow. These are some of the characteristics which will mark the school of tomorrow:

a. *The schools of tomorrow will make an earlier start.* The importance of preschool laboratories and nursery schools is constantly receiving attention. Psychological investigations show that the first six years of the child's life are of great importance for educational purposes. The schools of tomorrow will reach down into these early years of infancy, cooperating with the home in establishing basic habits and emotional patterns which underlie a happy and useful life. The rapid growth of the nursery school or prekindergarten idea is shown in Chart XIV. In 1929-30 the United States Office of Education secured enrolment statistics from 146 of those schools which showed a total of 2,995 children in them.

b. *The schools of tomorrow will keep their doors open longer.* Many of them will be open for service all year round. The discrimination against the rural child which, through short terms, often forces him to attempt to accomplish eight years' work in six years or less will

<sup>1</sup>Hoover, Herbert. "Education as a National Asset." *Proceedings* 64:729-30; 1926. National Education Association Washington, D. C.

CHART XIV

## NUMBER OF NURSERY SCHOOLS IN THE UNITED STATES 1918-1929\*



Research Division, National Education Ass'n

Sources of data: United States Office of Education Circular No. 1, *Nursery Schools in the United States*. Both public and private nursery schools are included.

\* Eight schools which did not report date of establishment not included.

be abolished. Chart XV shows how the average length of school term has increased from 130.3 days in 1880 to 171.5 days in 1928. But it should not be forgotten that this chart deals with averages. There are still states and communities which are still in the nineteenth century as far as length of school term is concerned. Table 15 shows the wide contrast between states in this respect. By comparing Chart XV and Table 15 it is possible to determine the development of this aspect of the states' educational programs. Thus, for example, New Jersey with a yearly session of 188 days stands at the top, Vermont is a little above the 1925 level, Arkansas is about at the level of 1900, Mississippi has not yet reached the twentieth century average. Study of Table 15 further shows the extent of the average

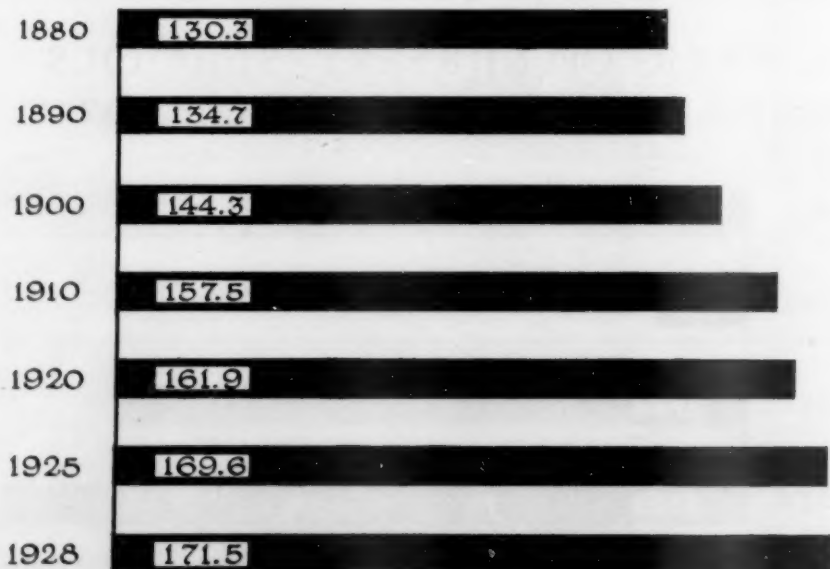
handicap of the children of certain states. Mississippi children have to go to school ten years to get as much schooling as the average child in the United States gets in eight years. Children in New Jersey have had as much schooling in nine years as those in South Carolina get in eleven and one half years. Similar interesting comparisons may be drawn for any state from a study of Chart XV and Table 15.

c. *The schools of tomorrow will protect the entire period of childhood.* Children will attend schools until they are better prepared for adult life. The nation will look back with amazement and with perhaps a little tolerant pity at a generation which is permitting serious unemployment and child labor to exist side by side.

Just what the statistical relationship between

CHART XV

## NUMBER of DAYS SCHOOLS WERE in SESSION 1880-1928



Source of data: U. S. Department of the Interior, Office of Education, Bulletin, 1930, No. 5.

unemployment and child labor is at the present time cannot be accurately determined. However, it is certain that the unemployment situation is seriously aggravated by present child-labor conditions. The President's committee on recent economic changes estimated the average minimum volume of unemployment in the United States in 1927 at 2,055,000 persons.<sup>1</sup> No statistics or estimates as recent as this are available on child labor conditions. The 1920 census revealed 1,060,858 children between 10 and 15 years, inclusive, employed in gainful occupations.<sup>2</sup> The present number of employed children is almost certainly in excess of a million. In 1927-28 the number of children 5-17 years of age, inclusive, was estimated by the United States Office of Education at 30,887,167. Of these children 25,179,696 were reported as enrolled in public elementary and secondary schools and 2,576,157 in private schools of sub-collegiate grade.<sup>3</sup> This leaves approximately three million children unaccounted for.

A small number of these are attending higher institutions, a few are receiving instruction at home, a few are confined to hospitals, a few are located in isolated places where school attendance is impossible. However, when every allowance is made for such exceptions as these there must still remain well over 2,000,000 children not in school. It is certain that a great proportion of these are gainfully employed. It seems reasonable to suppose that the enactment and enforcement of adequate child labor legislation in every state would go far towards mitigating the condition of chronic unemployment which menaces the country.

d. *The schools of tomorrow will lift the teaching profession to a new plane of recognition.* The training of teachers will become more scientific and standards for their selection more rigid. Salaries will be higher and the teaching profession will be made more attractive through greater social recognition, through greater security of tenure, through old age re-

<sup>1</sup> Report of the Committee on Recent Economic Changes in the United States, vol. 2, p. 478.

<sup>2</sup> United States Children's Bureau, Publication 197, p. 194.

<sup>3</sup> Statistics of State School Systems, 1927-1928. U. S. Office of Education, Bulletin 1930, No. 5.

TABLE 15.—NUMBER OF DAYS SCHOOLS WERE IN SESSION BY STATES, 1928

| States                    | Average number of days schools were in session | Rank in col. 2 | States              | Average number of days schools were in session | Rank in col. 5 |
|---------------------------|------------------------------------------------|----------------|---------------------|------------------------------------------------|----------------|
| 1                         | 2                                              | 3              | 4                   | 5                                              | 6              |
| United States.....        | 171.5                                          |                | Montana.....        | 177.2                                          | 22             |
| Alabama.....              | 147.9                                          | 46             | Nebraska.....       | 177.3                                          | 20.5           |
| Arizona.....              | 168.5                                          | 31             | Nevada.....         | 167.3                                          | 33             |
| Arkansas.....             | 145.5                                          | 48             | New Hampshire.....  | 177.3                                          | 20.5           |
| California.....           | 181.1                                          | 11             | New Jersey.....     | 188.0                                          | 1              |
| Colorado.....             | 178.0                                          | 16             | New Mexico.....     | 180.0                                          | 13.5           |
| Connecticut.....          | 181.2                                          | 10             | New York.....       | 184.0                                          | 6              |
| Delaware.....             | 185.0                                          | 5              | North Carolina..... | 149.4                                          | 43             |
| District of Columbia..... | 180.5                                          | 12             | North Dakota.....   | 168.0                                          | 32             |
| Florida.....              | 154.1                                          | 40             | Ohio.....           | 178.1                                          | 15             |
| Georgia.....              | 148.0                                          | 45             | Oklahoma.....       | 149.0                                          | 44             |
| Idaho.....                | 177.9                                          | 17             | Oregon.....         | 174.3                                          | 25             |
| Illinois.....             | 186.8                                          | 3              | Pennsylvania.....   | 181.5                                          | 9              |
| Indiana.....              | 174.0                                          | 26.5           | Rhode Island.....   | 182.0                                          | 8              |
| Iowa.....                 | 173.0                                          | 28             | South Carolina..... | 146.0                                          | 47             |
| Kansas.....               | 166.4                                          | 34             | South Dakota.....   | 174.0                                          | 26.5           |
| Kentucky.....             | 164.4                                          | 37             | Tennessee.....      | 164.0                                          | 39             |
| Louisiana.....            | 153.3                                          | 41             | Texas.....          | 152.9                                          | 42             |
| Maine.....                | 177.5                                          | 19             | Utah.....           | 164.1                                          | 38             |
| Maryland.....             | 187.1                                          | 2              | Vermont.....        | 170.6                                          | 30             |
| Massachusetts.....        | 183.3                                          | 7              | Virginia.....       | 165.0                                          | 36             |
| Michigan.....             | 186.7                                          | 4              | Washington.....     | 180.0                                          | 13.5           |
| Minnesota.....            | 177.8                                          | 18             | West Virginia.....  | 165.6                                          | 35             |
| Mississippi.....          | 138.9                                          | 49             | Wisconsin.....      | 176.1                                          | 23             |
| Missouri.....             | 175.7                                          | 24             | Wyoming.....        | 171.6                                          | 29             |

Source of data: Figures as to average number of days schools were in session are from U. S. Department of the Interior, Office of Education, *Bulletin* 1930, No. 5, Table 8, p. 23, column 11.

tirement, through sabbatical leaves for travel and other forms of intellectual refreshment,<sup>1</sup> and through the provision of clerks and ma-

chines to do routine work so as to leave the teacher free to concentrate on the professional aspects of his calling. Certain statistics concern-

<sup>1</sup> For summaries of recent laws affecting the teacher's status, see: "State School Legislation, 1929," *Studies in State Educational Administration*, No. 1, Research Division, National Education Association, Washington, D. C., December, 1929, Mimeographed, 57 p. William G. Carr, "Recent Laws That Affect the Teacher Directly," *Nation's Schools* 5:53-5; May, 1930. Ward W. Keesecker, "Review of Educational Legislation, 1926-28," United States Office of Education, Bulletin, 1929, No. 29. *Report of the Tenure Committee of One Hundred*, National Education Association, 1928. 12 p. *Report of the Committee on Retirement Allowances*, National Education Association, 1929. 24 p. *Report of the Committee on Sabbatical Leaves for Teachers*, National Education Association, 1927.

CHART XVI

# The DEVELOPING PROFESSION OF EDUCATION

## Teachers' Salaries



## Summer School Attendance



## Members of National Education Association



## Teachers' College Enrolment



## Number of Teachers' Colleges



Source of data: U. S. Department of the Interior, Office of Education, and from National Education Association.

\* Estimated.

ing the developing status of the teaching profession are shown in Chart XVI.

e. *The schools of tomorrow will offer opportunity for all the nation's children.* That America offers an equal educational opportunity for all is one of the comfortable superstitions of the present age. The rural child, generally speaking, has a shorter school term, a less-trained teacher, an incomparably more meager school equipment than the city child. Some communities make excellent provision for the education of their children; others unwillingly meet the bare legal minimum requirements. Some communities can provide good schools with a tax which is hardly felt; other communities tax themselves almost beyond endurance to provide inferior facilities. The schools of tomorrow will be administered and financed in such a way as to eradicate these differences in opportunity. The accidents of birth and residence will not be permitted to handicap the life of a child from the start. Individual communities will be encouraged to develop their educational offerings to as high a point as they can but the minimum acceptable conditions will be raised far beyond present standards. This means that school revenues will be collected over larger units and that these revenues will be apportioned to the local units so as to minimize or eliminate differences in educational opportunity.

## 6. How Have the Schools Contributed to Individual Achievement and Happiness?

Children nowadays like to go to school. This fact has been discovered by nearly everyone in the nation except the newspaper cartoonists, who still choose to picture the unwilling school-boy plodding mournfully along to school as the summer vacation comes to an end. Everyone who has visited a modern school or who has had any contact with the children who attend it knows that the children look forward eagerly to the time when school opens.

Good schools help to make children happy and healthful. If they did nothing more than remove children from the city streets, schools would be abundantly worth the price we pay for them. Let anyone who doubts this statement visit the less-favored areas of any large city on a Saturday morning. Some of the values of school attendance are outlined in poster form in Figure 8.

Probably the greatest single contribution of the schools to individual achievement and happiness is increased physical effectiveness. As a nation we are slowly increasing our expenditures for health and sanitation and a large portion of this increased public recognition of the value of health doubtless arises from the health instruction in schools. Chart XVII shows

FIGURE 8

| What School Attendance Means to Children                             |                                                                                 |
|----------------------------------------------------------------------|---------------------------------------------------------------------------------|
| A Child in School<br>is                                              | A Child on the Streets<br>is                                                    |
| 1. Under the influence of trained and capable advisers and teachers. | 1. Under the influence of the knockabouts of the streets—generally undesirable. |
| 2. Safe from traffic hazards.                                        | 2. In danger of injury.                                                         |
| 3. Guarded against infection and ill health.                         | 3. Exposed to probable unsanitary conditions.                                   |
| 4. Gaining respect for the law.                                      | 4. Tempted to disobey the law.                                                  |
| 5. Acquiring habits of industry and punctuality.                     | 5. Acquiring habits of idleness and shiftlessness.                              |

how the per capita expenditures for health in cities of over 30,000 population have increased from \$1.21 in 1903 to \$4.31 in 1927. Have these additional expenditures, the schools' persistent teaching of health values, and instruction in how to keep well been productive of results? They have. These factors combined with increased medical skill have pushed down

the death rate and raised the life expectancy of the American people. They have saved millions of dollars which would otherwise have been lost through lives cut short and impaired efficiency. Chart XVIII shows two of the effects of this emphasis on health. The schools are responsible for much of the gain shown by this chart (p. 215).

CHART XVII

## PER CAPITA EXPENDITURES for HEALTH and SANITATION, 1911 -1927 Cities over 30,000 in Population



*Research Division, National Education Assn.*

Source of data: U.S. Department of Commerce, Bureau of the Census. *Financial Statistics of Cities, 1927.*

## 7. How Have the Schools Contributed to American National Life, Prosperity, and Culture?

Education has been a powerful stimulus to industrial productivity. Economic theory recognizes that the educated man produces more, and consumes more. Professors Fairchild, Furniss, and Buck declare, in their textbook on economics, that:

The economic effects of public education are scarcely capable of exaggeration. As producers and claimants of their respective shares of the product and as consumers of wealth, the whole character of a people is governed by the degree and the nature of the education which it enjoys. The economic

superiority of the United States and the other leading nations of the world, or equally the economic inferiority of such nations as China and India, is without doubt largely to be ascribed to differences in education.<sup>1</sup>

Conversely, it is pointed out by Carver that "we have to charge ignorance with a great waste of human talent, that is, of talent which goes to waste because it is imperfectly employed."<sup>2</sup>

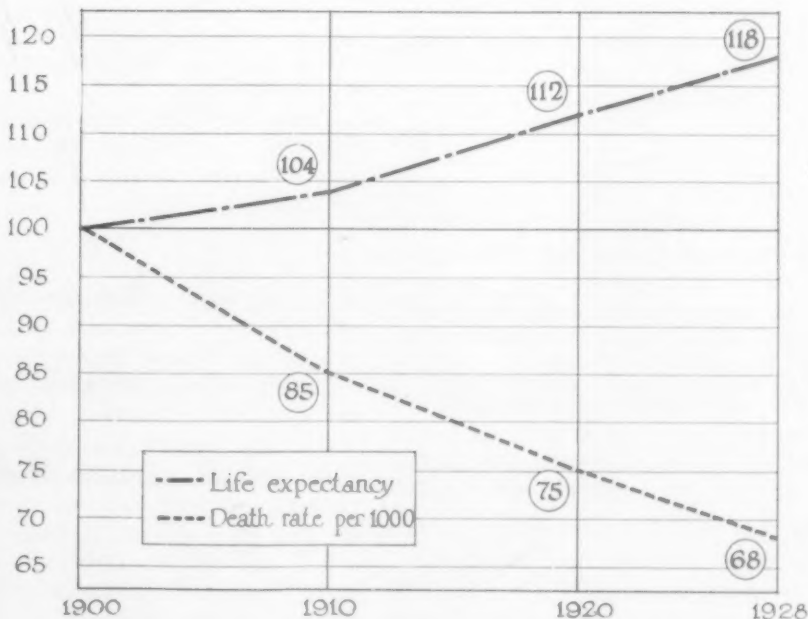
Reliable estimates place the present annual income of the United States at about 90 billion dollars. This total income is increasing and has steadily increased over a long period of years. That all of this increase is due to

<sup>1</sup> Fairchild, F. R., Furniss, E. S., and Buck, N. S. *Elementary Economics*. Macmillan Co., New York. 1926. p. 20.

<sup>2</sup> Carver, Thomas Nixon. *The Economy of Human Energy*. Macmillan Co., New York. 1924. p. 167.

CHART XVIII

### DECREASING MORTALITY RATES AND INCREASING LIFE EXPECTANCIES 1900 - 1928



Research Division, National Education Ass'n.

Calculated from figures of the U.S. Department of Commerce, Bureau of Census.

the greater effectiveness of the educated worker would be claimed by few; that it is due in considerable part to such effectiveness few will deny.

Other items, especially the development of natural resources, have undoubtedly been important factors in developing American economic power and industrial productivity. It is obviously impossible at present to evaluate in an objective or statistical way the interrelated effects of each of the many factors contributing to America's economic leadership. The scattering evidence available, however, agrees in attaching great significance to the value of education. After a statistical study of wealth, income, and illiteracy in the several states as compared with school expenditures, the United States Bureau of Education concluded that:

Notwithstanding obvious difficulties of proving such matters statistically, it seems clear that properly applied expenditure for education is profitable to the state because it tends to increase income and wealth, aids in the decrease of illiteracy, and gives to the individual better opportunities for self-development and achievements, as well as a higher standard of living.<sup>1</sup>

Such statistical evidence as is available is amply reinforced by the mature opinion of men of wide economic and social vision. Charles M. Schwab, Chairman of the Bethlehem Steel Corporation, recently declared that "The national assets which I believe insure for us continued prosperity are in a sense imponderables. That is to say, I cannot put a value upon them or record them in terms of dollars or barrels or tons."<sup>2</sup> Mr. Schwab then lists, as one of five imponderables, "the most extensive free school system in the world, and the most general desire for education." He goes on to point out that the schools have given us a public capable of recognizing the new economic code, ready to make its operation effective, and qualified to furnish leadership for its further development.<sup>3</sup> Mr. Schwab concludes that, while the contribution of education cannot be measured by ordinary book-keeping methods, it "would have to be estimated as worth several billions of dollars."

President Hoover, writing as Secretary of Commerce in the 1928 *Commerce Yearbook*, said:

The fact that national output per capita has long been greater in the United States than in most other countries is in some measure owing to the abundance of agricultural land in proportion to the population, and the abundance and variety of mineral resources. During the earlier history of the country its progress was in considerable part owing to the opening up of new resources. The increase in output during recent decades, however, cannot be attributed to this cause. There have been some new discoveries of minerals, notably of petroleum, but these contributions have been offset by the partial using up of other resources and by the necessity, with the growth of population, of extending cultivation to somewhat inferior lands. The principal factors in the recent increase in productivity are, therefore, human as distinguished from natural factors.

Among these factors is the advance in education and scientific research. Taking account both of the proportion of the children in school and of the average duration of attendance, the amount of elementary and secondary instruction given in 1926, per person of school age, was 151 percent greater than in 1870, and 90 percent greater than in 1890. In 1890 about 5½ percent of the children between the ages of 14 and 17 years were in high schools and academies; in 1926 over 38½ percent. Of persons 18 to 21 years of age about 1½ percent were in colleges and universities in 1890, and nearly 9 percent in 1924. Meantime instruction has become much better in quality and especially more practical and more conducive to thinking power and to productive capacity.<sup>4</sup>

The effects of education on productivity are both direct and indirect. The direct effect of trained workers is only one way in which the schools have increased industrial production. The indirect effect which arises from the presence of an educated class of consumers is equally significant. The ignorant savage is satisfied with food and warmth. Educated men and women demand the finer things of life.

Mary's mother, uneducated and conservative, is content to clean her rugs with a carpet-beater. Mary studies home-making at the high school and uses a vacuum cleaner when she starts her own home. The beater cost 50 cents; the cleaner 50 dollars. If Mary and Mary's friends had not studied home-making they would be satisfied with the carpet-beater. Since modern industry, generally speaking, is not

<sup>1</sup> *Education Pays the State*. U. S. Bureau of Education, Bulletin 1925, No. 33, p. 27.

<sup>2</sup> *San Francisco Examiner*. December 2, 1928. p. 1.

<sup>3</sup> *Ibid*, p. 23.

<sup>4</sup> U. S. Department of Commerce, *Commerce Yearbook*, 1928.

producing to meet an existing demand, but creating demands in order to absorb its rapid production,<sup>1</sup> Mary's purchase of a vacuum cleaner acts to stimulate the production of

vacuum cleaners. So it is with thousands of other products. The schools play an increasingly important part in increasing demand and stimulating production.

<sup>1</sup> "In the manufacturing industries it seems probable that there is at least 25 percent overcapacity for production for which there is no consumer demand *even during prosperous years*,"—Paul H. Hystrom. *Economic Principles of Consumption*, p. 18. Italics ours.

**IT IS NOT** merely by increasing productiveness that education contributes to making the state a better place in which to make a living. Education of the consumer increases demands and thus furnishes work for others. Many shortsighted economists in their enthusiasm for the development of foreign markets for our goods lose sight of the fact that the best market, and ultimately the only one that can continue to pay for what it buys without disturbing exchange, is here at home.—Thomas H. Briggs. *The Great Investment—Secondary Education in a Democracy*. The Inglis Lecture, 1930, p. 47.

**RACIAL PROGRESS** marches upon the feet of healthy and instructed children. There should be no child in America that is not born and does not live under sound conditions of health; that does not have full opportunity of education from the beginning to the end of our institutions; that is not free from injurious labor; that does not have every stimulation to accomplish the fullest of its capacities.—*Herbert Hoover*.

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