

DECEPTIVE STATISTICS.

In a recent issue of the Chicago Tribune, an attempt was made editorially, upon the basis of the Aldrich report on wages and prices, to show that the gold standard has increased wages. I agree with the Tribune that the free coinage of gold and silver, instead of benefiting, would injure our industrial classes. But I take exception to the Tribune's method of opposing free coinage—a method which is unfortunately common with gold standard advocates.

The strength of the free silver movement lies in the fact that it is a protest against existing economic conditions, and it cannot be met by an array of fallacious statistics intended to demonstrate that the deplorable conditions complained of do not exist. These statistics fill no empty stomachs, and they deceive but very few wage-earners. Workingmen know from observation and personal experience that facts differ from the figures.

While such statistics as those from which the Tribune's anti-silver argument is made may soothe people in comfortable circumstances, whose opportunities for observation are limited, they only excite the animosity of wage-earners against men who either ignorantly or willfully thus misrepresent their condition. By so discrediting the cause they advocate, opponents of free silver have done more to confirm wage-earners in the opinion that free coinage is desirable, than have the avowed advocates of that policy. Knowing the fallacy of the statistics from their own observation and experience, wage-workers very naturally conclude that a cause which is generally supported in that manner must necessarily be a bad one.

The Tribune editorial referred to above, assumed \$500 as the average annual earnings of all classes in 1878, and claimed an increase in 1890 to \$680—a sum more than double the probable average earnings of wage-earners in that year. The probabilities in this respect are confirmed by the census report on the subject of agriculture.

Agriculturists are our largest industrial class. Theirs is a class which

comprises about 40 per cent. of all persons having gainful occupations. Yet the average earnings of this class amounted in 1890 to but little more than one-fourth the sum set up by the Tribune as the average earnings of all classes of wage-workers.

Let us examine the census figures on the subject. The value of farm products in the census year, 1890, was \$2,460,107,454. Dividing this amount by the number of persons reported as engaged in agriculture, 8,565,926, we have as the gross value of the product per worker, \$286. Now, the value of the agricultural investment—land, improvements, live stock and implements—is reported at \$15,982,267,689. Computing interest on this amount at five per cent., and allowing ten per cent. of the value of machinery and implements (\$151,587,638) for renewal and repairs, and then deducting these amounts from the value of the agricultural product, there remains as the earnings of 8,565,926 agricultural workers, the average annual sum of only \$188.

This is without making any deduction whatever for repair of buildings, fences and other fixed improvements. And while it is true that some small agricultural earnings are not included in the census, it is also true that a large body of labor (1,913,373), returned as not specified, is partly accounted for by this foot note: "In agricultural districts agricultural laborers are often reported simply as laborers." The agricultural laborers thus included in the unspecified class, but not considered in the above computation, would more than correct the influence in the same computation of the omission of any small agricultural earnings. It is a safe conclusion, therefore, that according to the eleventh census, the earnings of farm workers, comprising about 40 per cent. of the industrial class, did not exceed in 1889 an average of \$188. That sum is very far short of the \$680 which the Tribune assures its readers was the average earnings of all classes of workers in that year.

Turning from the census report regarding all farmers to the statistician of the department of agriculture (see report No. 4, Misc. Series, Dep't of Agriculture), regarding farm labor-

ers, we find that average farm wages in 1890, without board, were \$18.33 per month. This was the average only while the laborers were employed. If we assume constant employment the year around—and it is well known that in fact employment was not constant—the average annual earnings of this numerous class of wage-earners in 1890, as found by a republican statistician after careful and extended investigation, were only \$219.96 per year, or less than one-third the amount set forth by the Tribune as the average earnings of wage-earners in all occupations.

The same agricultural statistician further shows that, instead of a gradual advance of three per cent. a year, the amount the Tribune claims for all wages, farm wages fell from \$19.87 a month in 1875 to \$16.42 in 1889. They rose to \$18.94 in 1882, but after that there was no increase down to 1892, and in 1892 they had fallen to \$18.60.

In the face of the statistical data regarding agricultural earnings and farm wages, showing that instead of having risen they have fallen, it could hardly be expected that other wages would have risen. There is no reason why the course of wages should greatly differ in other industries from the course of wages in agriculture. And an investigation of the data of the Aldrich report shows that no such advance in general wages has been made as the summaries of that report indicate and the Tribune claims.

In the Aldrich report the data are juggled for the purpose of concealing a decrease in the rate of wages in recent years. But even the juggled summary which the Tribune cites as its authority indicates an increase of less than six per cent. from 1872 to 1891, by simple average; and it is only ten per cent. even when averaged according to the statistician's fallacious estimate of relative importance. Either increase is very much less than an average increase of three per cent. a year, the increase claimed by the Tribune.

But the data of the Aldrich report are astonishingly inadequate. Table 45, which may be found on page 176, Part I., of that report, professes to

show "relative wages in gold in all occupations." Yet for agriculture, our most important industry, there is not a solitary wage quotation. The figures of the table for three periods are as follows, the year 1860 being taken as the base with an average of 100:

Year.	Simple Average.	Average According to Importance.
1872	152.2	153.2
1879	139.9	139.4
1891	160.7	168.6

According to the statistician's estimate of relative importance, the increase shown for 11 years is only 20.9 per cent., or less than 2 per cent. annually; while by simple average the total increase is but 14.9 per cent.

It is out of these figures that the Tribune computes an average increase of three per cent. a year. It does so by finding the difference between 1879 and 1891 to be, according to the statistician's average, 29.2—or, roughly, 30—and dividing by the number of years, thus producing as a rough result the average increase of three per cent. a year. But per centum means per hundred, and an increase from 139.4 to 168.6 per cent., though it is nearly 30 in amount, is nowhere near 30 per cent., as the Tribune makes it out to be. To get the increase of percentage, we do not subtract the lower from the higher percentage, as the Tribune has done; we must divide the amount of increase by the amount on which the increase is reckoned. Neglecting to compute percentage correctly, it is not strange that the Tribune's editorial writer failed to discover the true character of the summary of the data of the Aldrich report.

But the figures of this report themselves are deceptive. They do not represent, as they purport to do, either the increase in the average rates of wages in all industries or in any industry.

A little intelligent examination will reveal this fact.

If the wages of the foreman of an establishment increase during a given period 100 per cent., and the wages of the other employes increase during the same period ten per cent., there has not been an increase in wages for the establishment equal to the av-

erage of these two percentages of increase—namely, 55 per cent. Or, if the foreman's wages have increased 100 per cent. and those of the other employes, say 100 in number, have decreased ten per cent., there is not an increase for the establishment of 45 per cent. To argue the contrary would be absurd. Yet it is by means of precisely such a method of computation that the statistician of the Aldrich report has shown an increase in wages since 1872.

He puts the foremen and overseers of departments each in a class by themselves, and gives to their increased wages—which represent not increased pay for the same service, but increased pay for increased skill and responsibilities—the same weight as the increase or decrease in the rates of wages of classes embracing a large number of employes. The rates of wages for each class in 1860 being taken as the basis, and represented by 100, the ratio of wages to 1860 of each class is computed separately for each year. The ratios of each separate class are then equated or averaged, and the amount thus obtained is taken as the average wages of the industry. And thereupon the averages so obtained for each industry are equated or averaged, and the result adopted as the average wages for all industries!

In one brewery establishment, which may serve for illustration, the wages paid to the brewer increased from 1855 to 1891, 650 per cent. This brewer being put in a class by himself, his increase of wages is given equal weight with the wages of each of four other classes which in 1891 embraced 70 employes. In consequence of this deceptive method of computation, there is an apparent increase of wages for the whole establishment of 165.9 per cent.; whereas if we omit from the calculation the class comprising but the one brewer, the averages for the remaining classes show an increase for the same period of only 90 per cent. Thus, the increase in the wages of but one man—an increase which does not indicate that he is getting better pay for the same work, but only that he is getting better pay for a position of increased responsibility requiring greater skill and efficiency—is made to nearly double the apparent

average increased wages for the entire brewing industry, an industry for which this one establishment stands as the sole representative in the Aldrich report.

The brewer in the illustration, who received \$23.96 per day in 1891, was evidently a salaried official, and probably the principal owner of the stock of the concern; yet he was included as a wage-earner, just as in the manufacturing statistics of the last census the salaried officials of the corporations and the estimated value of the services of employers are included in the wage account for the purpose of making in annual earnings an apparent increase for which in fact there is no foundation.

The census computations which purport to show annual average wage earning in the manufacturing industries are obtained by dividing the total amount paid as wages by the average number of employes. But, inasmuch as the total wages are the earnings of the whole number of employes, the true average annual earnings can be obtained only by dividing the total wages, not by the average number of employes, but by the total number.

Nevertheless, these census statistics, juggled though they are for the purpose of indicating an increase of wages, show no such annual earnings as the Tribune assumes to be the average for all occupations. The average annual earnings of operators proper—that is, omitting officers, firm members and clerks—were \$444.90. As this amount was obtained by dividing the total wages by the average instead of the total number of employes, it in fact represents the average earnings only of the few who had constant employment. A consideration of the partially employed would very much reduce that average. If we assume that there was only 25 per cent. of unemployment, that is that wage-earners were employed three-fourths of the time, the average annual earnings would be reduced to \$333.30, which is probably not far from the mark.

The fallacious character of the census computations of annual earnings in manufacturing industries I have irrefutably demonstrated in the Jour-

nal of Sociology and the Journal of Political Economy, publications of the University of Chicago, and to my articles in those magazines I respectfully refer the Tribune editor and all other persons who may need or desire information upon the subject.

In the mining industries, the census presents no summary of wages; but in the volume devoted to those industries we may find that in the three principal ones, wages, including superintendence and office force, were as follows:

	Total Average Number of Employes.	Total Wages.
Coal	299,552	\$112,286,099
Iron ore.....	38,227	14,409,151
Stone	82,374	30,555,877
	420,153	\$157,251,127

The apparent average earnings, therefore, in those three mining industries, were only \$374.27. This average is too large, since it is obtained by taking the average number of operators instead of the total number, as the divisor. But that vice enters into all the estimates of wages, and the result corresponds substantially with the result in the other industries. Allowing for unemployment and the fact that the salaries of superintendents and of the office force are here included in the data, the wages thus shown agree fairly well with those in the agricultural and manufacturing industries.

Instead, then, of an increase in wages from \$500 in 1878 to \$680 in 1890, wages in 1890, even according to the data of the census and the Aldrich report were considerably below \$374.

To this I might add that in the Bulletin of the Department of Labor for September, 1898, at page 669, Col. Wright shows that wages were higher in 1892 than they have been since. Upon his authority they rose slightly from 1890 to 1892, but ever since then have steadily declined, and were lower in 1898 than in 1872, measured both years in gold.

The statistical pretense that wages have been increasing is supplemented by the equally false pretense that the purchasing power of wages has also increased, and the deceptive compu-

tation of the Aldrich report and of the census bureau are responsible for both deceptions.

It is true that the prices of many commodities have decreased, as the result of improved methods of production. But it is also true that many things have become necessities of life that were not necessities formerly, notably car fares; and that the wage-earner has been obliged to increase his outgo in many other ways, notably for rent.

To sum up the whole matter: Better than any statistics for the purpose of showing the condition of the laborer, is the fact, patent to every intelligent observer, that it is no longer possible, as it formerly was, for the wage-earner to rear a large family respectably. To eke out his scant earnings he is compelled to send his little ones to the factory or the department store when they should be at school. Improved methods of production, which should naturally result in increased wages, notoriously have the contrary effect. By depriving the laborer of employment, labor-saving machinery increases the competition of the labor market.

The data of the Aldrich report, which show a large increase of wages prior to 1872, show a decrease, measured in gold, since that date. Badly juggled as these data are, it is only by ignoring 1872 as the date of highest wages, and mingling the decrease since then with the increase before, that an average increase is made to appear at all. But worse than the decrease of wages since 1872 is the lack of employment since that year, at any wages at all. Wage-earners at Virden but recently engaged in a sanguinary struggle for an opportunity to work at wages scarcely above the starvation point; and the Virden case is not exceptional.

The advocates of free silver coinage offer that policy as a panacea for the bad condition of wage-workers. What has the Chicago Tribune to offer? Nothing at all, but a lot of statistics doctored for the purpose of making it appear, in the face of what every intelligent man knows to be the truth, that the condition of wage workers is improving. Is it any won-

der that such advocates of the gold standard drive away more working people than they convert? that they make more free silver men among the working classes than free silver advocates do?

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NEWS

Later returns from the recent elections do not to any important extent alter the results as we reported them last week. Nevada, which was for some days in doubt, remains in the fusion group where we placed it, and William M. Stewart is confident of reelection as a senator in congress. The fusion governor was elected. West Virginia, which we placed in the democratic group, though very close, is likely to remain in that group. Gov. Atkinson, a republican, has conceded the legislature to the democrats. The democrats also elect a congressman in one of the four districts, thus displacing a republican. But Nebraska, which we gave to the republicans last week, has been carried by the fusionists by a small majority in a reduced vote. The republican candidate for governor received 83,569 votes, being 13,735 less than were cast for McKinley in 1896, and 440 less than the republican candidate for supreme court judge received in 1897. On the other side, the fusion candidate for governor received 91,108 votes, which is less by 24,772 than Bryan received in 1896, and by 11,720 than the fusion candidate for supreme court judge received in 1897. As compared with 1896, the percentage of loss is 21 to the fusionists and 13 to the republicans. The fusion plurality, which was 13,576 in 1896, is this year 2,539. Both parties claim the legislature, and therefore the United States senator.

The political complexion of the states as indicated by the latest returns is as follows:

REPUBLICAN STATES.

California.	New Hampshire.
Connecticut.	New Jersey.
Delaware.	New York.
Illinois.	North Dakota.
Indiana.	Ohio.
Iowa.	Pennsylvania.
Kansas.	Rhode Island.
Massachusetts.	Wyoming.
Michigan.	Washington.
Maryland.	Wisconsin.

DEMOCRATIC STATES.

Alabama.	Montana.
Arkansas.	North Carolina.