

of living and others. The isolation of Mexico during several centuries, and the want of cheap and easy means of communication, prevented the development of agriculture, trade, and industries and made many communities self-supporting; that is, they had to raise the necessary articles of food for their own maintenance, and sometimes to weave the cotton and woollen goods required for clothing. This isolation, of course, prevented the development of the natural resources of the country and kept wages necessarily very low; because the demand for its products being very limited—just enough to supply the needs of a small community—and the supply very great, the price of labor had necessarily to be very low. The question of wages is settled by natural laws, and there is a natural level for them. In isolated districts, not subject to the general law governing wages, as most of Mexico was before the railway era, the rule is that in a cheap country, where the necessaries of life are but little, wages are comparatively low, while in a dear country wages have to be proportionately high, because in any case a man has to earn enough to sustain life. When a laborer can satisfy his needs by working little he has no inducement to go beyond that; but when to support himself and his family, he needs to exert himself as much as he can then he has to produce a comparatively large amount of commodities to earn higher wages. The laborer's wants not only depend, in such isolated districts, upon the natural conditions of the country, but also on the degree of civilization which the people have reached. Of course, competition in manufactures which go to international markets controls wages in commercial and manufacturing countries. These considerations explain why wages in Mexico are so low, as compared with wages in the United States, and it suffices to say that, now that our railways are built and the country has entered on the path of prosperity, as the old conditions are changing, wages are increasing and tend to increase considerably.

It must be borne in mind that the climatic influences in both countries are so different that their respective inhabitants, and especially the wage-earning classes, cannot be judged by the same standard. The mild climate of Mexico, for instance, does not require all the provisions for winter and the corresponding increased expense for that season that are needed in this latitude. Almost all over that country, excepting in the most northern States, the difference in the seasons is so slight that we do not need to change our style of clothing from winter to summer. We do not need to heat our houses, not even in the City of Mexico, which is nearly 8000 feet above the level of the sea and located in what we call the cold region; and, therefore, we do not have the expenses unavoidable in a northern climate where houses have to be heated during the winter. The benignity of the Mexican climate renders unnecessary expensive houses for the poor people, that

is, houses which can be hermetically closed in winter to keep them warm; on the contrary, in the temperate and hot climates, what is desirable is to keep the houses cool. Building materials, namely, adobe, which is unburnt brick of very large size, is very cheap, and all this contributes to make living in Mexico much cheaper than in the United States. In a great many localities in Mexico even shoes are not indispensable, and may be considered as an article of convenience or luxury, not a necessity. So far as food is concerned, nature has provided, too, an abundant supply of fruits, a fertile soil, which in some localities yields as many as four crops a year; and the maintenance of a family is, as compared with the same needs in the United States, exceedingly cheap. Therefore, what would be considered as starvation wages in this country would supply a working family in Mexico with all the necessaries and even with some of the luxuries of life; and these natural conditions cannot be altered or changed by legislation, or by any artificial means.

I consider the assumption that the tendency of wages in Mexico is to become lower as a very mistaken one. The contrary assumption is the correct one. Wages in Mexico could not be any lower than they are, and in every kind of work there is a marked tendency to increase, and I know by personal experience that an increase, and a very decided one, has taken place during the past fifteen years.

Difference in Amount of Work Accomplished by Mexican and American Workmen.—It is a fact that wages in Mexico are far lower in many instances than those paid for the same industries in the United States, although sometimes, that is, in the case of skilled laborers, they are as high or higher; but this ought not to appear strange when it is considered that this country pays probably the highest wages in the world; not even the foremost manufacturing nations of Europe, as England, France, Germany, and Belgium, being equal in this regard. Yet while it is true that labor in European countries is not so well remunerated as in the United States, it must be taken into account that the same amount of labor produces there less than here. I am assured by competent persons that a bank-bill printer, for instance, does not print in England more than 1000 sheets per week, while the average work done by the American workman is 6000 sheets per week; and it is stated in the *Journal des Economistes* that a French weaver can take care of only four looms, a Belgian of five, an English weaver of six, and one from this country of eight, while a Mexican weaver cannot attend to more than two looms. But the actual production during a given working time is in Mexico far less than in the United States, or even in Europe.

The day's work of a Mexican laborer, very likely, represents in many cases only one-fourth of what is accomplished during the same time by

a laborer in the United States. A Mexican laborer working from ten to eleven hours a day, for instance, accomplishes less work, or produces less, than a European or an American laborer in seven or nine hours, and in some instances the disproportion is as great as one to five. I have been assured that a Mexican bricklayer in eleven hours' work does not lay more than 500 bricks, while a bricklayer in the United States lays 2500 in nine hours. Mr. Enrique Creel, of Chihuahua, a prominent Mexican gentleman, of American parentage, stated in an interview published by the Denver, Colorado, *News*, of October 25, 1896, that a St. Louis contractor, who was executing a large contract for the Mexican Government, told him that a Mexican bricklayer could lay, on an average, 500 bricks daily, while an American bricklayer is able to lay 5000 daily. Under such conditions the high wages of \$3 a day paid in the United States are no higher than the wages of 50 cents paid in Mexico, so far as the product of labor is concerned.

The principal causes for this difference in working capacity are, in my opinion, the following: (1) the Mexican laborer is not so well fed as his fellow-laborer in this country; (2) he generally works until he is exhausted, and his work is not, therefore, so productive; (3) he is not, on the whole, so well educated as the average laborer in the United States; (4) he has fewer wants to satisfy, and therefore less inducement to work. Perhaps there is, in addition to these causes, at least in some localities, another, a climatic influence, the enervating character of the tropical climate and the high altitude above the level of the sea, and the consequent lower atmospheric pressure at which a large portion of the population of Mexico is located. I am inclined to believe that this is a factor in the case, as a similar difference is noticed among animals. A plough drawn by one horse in this country would, in Mexico, require two or three horses to accomplish the same work in similar soil; and this shows that the difference in working strength may be due, at least in part and in some places, to natural causes or climatic influences.

Low Wages Mean High Cost of Production.—It is now time to show that the low wages paid in Mexico do not always produce cheap commodities, and could not therefore, by competition, lower the compensation of labor, or the cost of similar articles manufactured in the United States.

We pay in Mexico, in some cases, wages amounting to about a sixth of what is paid here for similar work, and yet production in Mexico, with such low wages, is a great deal more costly than the production of similar articles in the United States, with probably the highest wages in the world.

It is true that wages are one of the principal factors in the cost of production of all kinds of merchandise, but they are not the only, and, in many cases, not even the principal one. The question of wages is

very complex, and it seems that, in comparing the wages of this country with those paid in Mexico, two important factors are generally overlooked: first, the amount of commodities produced in each country by the same unit of work, either because of the greater capacity or the greater physical strength of the laborer, or through the use of machinery, which increases the amount of production and cheapens it enormously; and, second, the cost of living in each country, and, as a consequence of the same, the purchasing power of the currency in each. When these two factors are taken into account it will be found that the high wages paid here are often no higher for the work performed, perhaps in some cases even lower, than those paid in Mexico and in other countries; and only in that way can we explain how this country, with its high wages, can produce many articles—as, for instance, watches and clocks—which compete successfully with those made in Switzerland, where wages are comparatively low.

The cost of production, too, depends on other circumstances, varying in different countries, all of which must be considered in order to arrive at a proper understanding of the subject. I should need more space than I can reasonably use in this article to mention all the causes which affect wages, and to show how far they influence the cost of production; and I shall only present some practical and suggestive examples taken from the tables of the cost of living which I will presently insert, to show that some commodities produced in this country, with high wages, cost less, and therefore are sold at a lower price, than similar articles produced in Mexico with low wages.

One of the best illustrations of the correctness of this statement is afforded by the working of the mines in both countries. Although the wages of miners in Mexico are probably one-third or one-fourth of those paid in the United States, the production of silver costs much less here than there. Mr. Thomas H. Carter, a very competent judge, stated, during the first session of the Fifty-first Congress, that miners' wages here were \$3 a day, while he fixes at 50 cents per day the wages of the Mexican miners. I do not think his statement correct so far as Mexican mining wages are concerned, as miners there can earn larger wages than field hands. That our production of silver is more costly than it is here is shown by the fact that mines similar to those which we abandon because it does not pay for us to work them, either on account of the low grade of silver which they yield, or for other reasons, are operated in the United States with profit. This is in a great measure because in the United States machinery is largely used in mines, which diminishes the cost of production and increases its amount; but this very fact shows that wages are not the only factor affecting the cost of production, and also that with high wages it is possible, and even easy, to produce at a less cost than with low wages.

Cotton culture is another example. I am aware that the cotton-growers of the United States hold that what they call their cotton belt has peculiar conditions for the production of their staple, which in their opinion do not exist in any other portion of the world, and they believe, therefore, that nobody can compete with them in this regard. Without any intention on my part to depreciate the advantages of the cotton belt of this country, I am yet of the opinion that there are in Mexico lands as well adapted to the production of cotton as the best in this country, and in some other regions perhaps even better; yet, notwithstanding these advantages and although our wages are low, cotton is produced at less cost in this country, and is sold with profit by the planters for one-half the price that it commands in Mexico. So great is the difference in the price of this staple in the two countries that notwithstanding an import duty on cotton of seven cents per kilogram, gross weight, or nearly four cents per pound, which is equivalent to fifty per cent. ad valorem, we import from this country almost one-half of the cotton used in our home manufactures. I do not overlook the fact that cotton is raised here by negro labor, which is considerably cheaper than white labor; but, even assuming that wages in this case be the same in both countries, the difference in cost is so great that labor is not the only factor in the expense of production.

Something similar happens with sugar. Here it is produced with high wages, and—although the culture of the sugar-cane in Louisiana is an artificial one, since frosts prevail there, since the cane has to be planted every year or two, and the ground tilled at considerable expense several times a year, so that such culture is an artificial one—yet the Louisiana planters sell their sugar in New York with profit at from six to seven cents per pound, while in the City of Mexico and other places in my country it commands twice and even three times that price.

The same is the case with tobacco. Although the climate and soil are very likely better fitted for its culture in Mexico than in this country, tobacco costs there, on an average, $24\frac{1}{2}$ cents per pound, while it is sold here at $8\frac{1}{2}$ cents per pound.

I shall not speak of the products of the cold climate, such as wheat, barley, oats, etc., because the climate and soil of this country are naturally adapted for such culture, while for tropical products the conditions are decidedly in favor of Mexico; but despite the fact that we also have cold regions in Mexico, and notwithstanding the difference in wages, wheat is worth there twice as much as here, and there is about the same difference in the price of corn.

It is much the same with manufactured articles, like common printing-paper, which in the United States is worth about three cents a pound and in Mexico fifteen cents, although we have abundant raw material and water-power for its manufacture. To encourage the

making of paper, we established an import duty on foreign unsized and half-sized paper of ten cents per kilogram, or over five cents per pound, equivalent to almost one hundred per cent. ad valorem, which was reduced by our present tariff to five cents per kilogram for the unsized, keeping the duty of ten cents on the half-sized paper; and notwithstanding this, we import printing-paper from this country, where the wages are so high compared with ours. Something similar happens with cotton and cotton prints, the former being worth five cents per yard in this country and from ten to fifteen cents per *vara* of thirty-three English inches in Mexico, and the latter, which are sold here at eight cents per yard, being worth in Mexico about twenty cents per yard.

The same exactly happens with almost everything else produced in Mexico as compared with this country. I have built houses in both countries, and by personal experience I can assure that substantially the same house will cost in the United States about one-third of what it costs in Mexico, notwithstanding that the wages of bricklayers, carpenters, and other mechanics employed in building a house are very much lower there than they are here.¹

It is a well-known principle that the fewer the hands employed in the manufacturing of a commodity, the less will be the cost of such commodity. If in manufacturing a commodity a skilled man can do in a factory the work requiring five men in another, the former factory will need a much smaller building to accommodate its operatives than the latter, and that implies a large saving of expense, not only in constructing its buildings, in heating, lighting, cleaning, and repairing them, but also in insurance, taxes, etc., the difference being so great that the smaller building can afford to produce the same commodity at a much lower rate than the larger building, independently of the amount paid in wages.

¹ These facts, in my opinion, support Mr. John Richards's theory on wages, as laid down in his book, *The Law of Wages, the Rate and Amount*, in which he asserts that wages are controlled by certain principles uniform all over the world, and that wages could not be high or low from any other cause than the efficiency of workmen, the implements they employ, and what they produce. He naturally makes a distinction between the amount of wages and the rate of wages, showing that the amount does not depend upon the rate. By amount of wages he designates that part of the cost of commodities which is paid for labor. By rate of wages he designates the rate per day, week, or month, paid to workmen for their services. He appears to prove that a high tariff and dear material do not produce high wages, as is the general belief, and that the labor cost of products is less in this than in any other country. He sets forth the following principles:

First.—All manufactured articles of every kind are made up of three elements or components, namely: material, wages, and expenses.

Second.—All staple articles of manufacture, such as enter into the world's trade, must have a nearly uniform value or international value.

Third.—The amount of wages entering into the cost of manufactured commodities is also nearly uniform, irrespective of the rate of wages paid for their production.

I believe that the preceding facts show beyond all doubt that unless there is a material change in the present conditions of Mexico, there need be no fear of competition in the United States from Mexican manufactures or agricultural or mining products obtained by us with cheap labor.

One reason why Mexican products were so high was that before they reached the markets they had to pay the local duty called *alcabala*, levied in coming into the cities. Unfortunately, the internal commerce of Mexico was not free, as in the United States, where such freedom has contributed very much, in my opinion, to the marvellous prosperity of the people. Our Constitution of 1857 prescribed the abolition, from the first of July, 1858, of the interior duties and custom-houses throughout the country, but it was not until recently that this measure could be carried out. Since the first of July, 1895, commerce in Mexico is as free as in the United States, the interior duties and custom-houses having been abolished.

Use of Modern Implements and Machinery by Mexicans.—I have often heard the remark made by public men of the United States, also contained in Mr. Foster's report of October 9, 1878, to Mr. Carlisle Mason, President of the Manufacturers' Association of Chicago, that the Mexicans were generally opposed to the use of agricultural implements, and I considered this an error arising from want of sufficient knowledge of the Mexican laborer.¹ As the Mexican people have not

Fourth.—The rate of wages depends mainly upon what workmen produce, varying with efficiency of labor and cost of material and expense.

Mr. Richards asserts that prices are subject to general principles which tend to make them uniform, and that it would not be possible to have high wages in a country while others paid low ones, because labor from the latter countries would flow to the former and establish the proper level, and he further states that if the rate of wages is lower in some countries, it is because workmen produce there less than in others.

Long before I read Mr. Richards's book, I had come to adopt views similar to his, although they did not occur to me exactly in the same manner in which he presents them in his book.

¹ Mr. Foster's report was communicated to Mr. Evarts, Secretary of State of the United States, on October 9, 1878, and published among "Papers relating to Foreign Relations of the United States, Transmitted to Congress with the Annual Message of the President of December 2, 1878," pp. 636-654. This report, which in my opinion contains several serious mistakes concerning Mexico, compelled me to write, as Secretary of the Treasury of that country, an official and full answer to the same, dated January 15, 1879, addressed to our Department of State, for the purpose of rectifying Mr. Foster's mistakes, and explaining points which were not made sufficiently clear in his report. My answer, entitled "Report of the Secretary of Finance of the United States of Mexico of the 15th of January, 1879, on the Actual Condition of Mexico, and the Increase of Commerce with the United States, Rectifying the Report of the Hon. John W. Foster, Envoy Extraordinary and Minister Plenipotentiary of the United States in Mexico, the 9th of October, 1878, to Mr. Carlisle Mason, President of the Manufacturers' Association of the City of Chicago, in the State of Illinois, of the United States of America," was published in English in New York in 1890, in a book in quarto of 325 pages, and was freely circulated in this country.

used machinery or implements for hundreds of years, not only because most of them have been invented or applied only recently, but because the cheapness of labor there made them unnecessary in many cases, it is natural that they should not have shown a preference for their use. Some have, besides, the fear, natural in ignorant men, that the use of machinery might diminish the number of hands employed on the farms or in industries, and that therefore a great many of them might be left without employment. But this is a natural feeling, prevailing not only in Mexico, but in every other country. Whenever the Mexican people have seen, however, that the use of machinery or implements diminishes their labor, not only without destroying, but, on the contrary, rather increasing their wages, they have shown themselves as willing to use them as any people in the world, and so far as their ability to handle them is concerned, they are second to none. A proof of this is the fact that we have now in Mexico quite a large number of cotton and woollen mills and other manufacturing plants using improved machinery and worked entirely by Mexican hands. A Mexican laborer may not be so expert as one from this country in attending to several looms at the same time, but he is quite competent to attend to a few, and in the course of time his ability will be developed, and he will be able to do whatever anyone else can do.

One of the reasons why agricultural machinery has not been more used in Mexico is a very simple one, which I know by personal experience, as I myself was engaged in agricultural pursuits for some years. I believe it is a fact well known to farmers and also to manufacturers in this country that agricultural machines and implements have to vary according to the conditions of the soil, that is, not only in accordance with the heaviness or lightness of the soil, but with the topographical position of the ground. It must be considered whether it is level, undulating, or hilly; whether stumps remain in the ground or whether it has been cultivated for some time, and so is entirely free from them; whether stones are or are not mixed with the vegetable earth; and implements which work well in soil possessing certain conditions, may be utterly useless in other ground having different conditions, requiring perhaps only some slight changes to adapt them to a different soil. When an order is sent to the United States for agricultural implements or machinery, sufficient care is not taken to explain the conditions of the ground, and the manufacturer may send—and does so frequently—articles which are utterly useless when they arrive at their destination. I myself found that my invoices of machinery and agricultural implements were often entirely useless, doubtless because they were not adapted to the condition of the soil to which they were applied.

Another objection to the extensive use of agricultural machinery