

in cost may, and ultimately must, be less in the latter case. Increase of population, therefore, constantly tends to increase the final cost of production of agricultural and mining produce.

This tendency, however, is counteracted by the

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progress in the arts of agriculture, mining, transportation and exchange, as well as by the more minute, and, therefore, more efficient sub-division of labour which accompanies increase of population. Which of these two counteracting tendencies has been more powerful in the past cannot be doubtful. Agricultural and mineral products are produced to-day at a final cost far below that of any previous period.

§ 15. LAW OF INCREASING RETURN.—

The cost of production of any manufactured commodity constantly tends to fall as population increases.

The same causes — progress of the arts and sciences and more efficient sub-division of labour — which merely counteract the law of diminishing return in agriculture and mining, hold undisputed sway in the arts of manufacture, transportation and exchange. No law of diminishing return applies to them. As population increases and more capital and labour must be applied to them, not only the additional, but the entire amount of capital and labour produces proportionally better results. In all these directions, therefore, the cost of production tends to fall with increasing population.

§ 16. RELATION BETWEEN INCREASE OF POPULATION AND COST OF PRODUCTION.—

The final outcome of increase in population, therefore, is a general decrease in the cost of production; a decrease greater in manufactured goods than in agricultural and mineral products. These latter, therefore, tend to rise in value as compared with manufactured goods. Nevertheless, the final outcome of all these tendencies is, that the more numerous the population of a country becomes, the more easily and the more fully can the wants and desires of all of them be satisfied. **The exertion required for the production of a given**

Sooner or later, however, this extension must cease and the relative increase in the value of agricultural and mining products must follow. The foregoing considerations, however, show that this relative increase of some values is by no means identical with the positive and general increase of cost of production predicted by Malthus. For, while the latter predicts that the exertion required for the production of a given amount of wealth per head must become greater as population increases, these considerations show that it must become less, and they thus relieve Political Economy of the stigma, "the dismal science," which the theory of Malthus had imposed on it.

§ 17. RELATION BETWEEN WAGES AND COST OF PRODUCTION.—

The share of the wealth produced, which can be claimed by those who take a personal part in its production, is called Wages. This share is variable.

Labourers may receive a large or small share of the wealth which they produce, according to laws which will be investigated later on. The productiveness of labour, however, its efficiency in developing the potential utility of matter, depends largely upon the share of wealth which the labourers receive. When that share is too low, the labourer deteriorates mentally, morally and physically. When that share is large, the mental, moral and physical qualities of the labourers improve, and their labour, therefore, becomes more efficient. **Moreover, high wages stimulate the use**

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of labour-saving machinery, in addition to developing the intelligence and nervous energy required for the most efficient use of many of these appliances. As a consequence of this greater efficiency of labour, the cost of production of most commodities is lower and their additional utility, *i.e.* profit on production, higher, in countries where high rates of wages prevail, than in countries where the rates of wages are lower.

The countries where the rates of wages are lowest cannot compete in the markets of the world with the countries where wages are highest, and the industrial power of nations varies with the variations in the general rate of wages; being greater where wages are higher; being smaller where wages are lower.

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amount of wealth per head becomes less as population increases.

That the tendency of agricultural and mineral products to rise in value, as compared with manufactured goods, has not generally become active during this century is due to counteracting causes. These are the extension of agriculture and mining to new and productive regions, and the wonderful progress in the art of transportation which has accompanied this extension and made it possible.