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Some Aspects of Protection Further Considered

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SOME ASPECTS OF PROTECTION
FURTHER CONSIDERED

SUMMARY

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THE lack of correspondence of the theory of international trade with the commercial policy of most nations has provoked frequent comment. In noting the resurgence of protection since 1860, M. Gide suggests that, in spite of all that has been written on the subject, the matter has not yet been completely explored. "There must have been some general causes at the root of this sudden irresistible and spreading epidemic of protection," he says, "but it is not very easy to discover them." And again, "the reaction in favor of Protection is not so marked in theory as it is in trade policy . . . the greater number of economists have remained faithful to the Free Trade doctrines."¹ One may doubt

1. Gide, *Political Economy*, 3d ed., p. 349.

whether, in explanation of this phenomenon, it is necessary to look for any more recondite "general causes" than national prejudices and jealousies, private interest coupled with public indifference, and the mental inertia which, by precluding the consideration of other than obvious effects, offers an enormous tactical advantage to the advocates of protection. But accepting M. Gide's view that these are not fully adequate, the purpose of the present article is to suggest some such "general causes" as Gide seeks, causes which have perhaps played their part in the new protection and which hitherto have been somewhat obscure. The sequel will endeavor to show: (1) that the principle of comparative advantage is no infallible criterion of the best commercial policy, even from a purely economic point of view; and (2) that protection to manufactures may advantageously be continued much longer than would seem adequate to cover the infant stage, whether or not the industry could maintain itself without such aid.

Economists have perhaps been too ready to attribute protection to sheer illusion, to a Neo-Mercantilism which has less justification than its original, much as that original is divided. The cult of protection is not to be explained altogether on the basis of illusion. If all its roots lay in error, sooner or later its vogue might confidently be expected to languish. But year by year it seems to grow stronger, winning fresh adherents and strengthening its hold upon its former devotees. This penchant for protection suggests more solid origins than the common specious pleas disclose, and in fact, when all these flimsy supports have been swept away, some economic props remain.

By far the most important cause for the spread of protective measures has been the desire to encourage manufactures. The plain citizen of almost every land

idealizes, nay almost idolizes, the industrial state. A smiling and peaceful Arcadian land as a *national* ideal has no longer any charms — the fascination of the machine has changed all that — and men want their national skies black with the smoke of industry and clanging with its noises. This preference may hark back to the instinct for contrivance, it may be a search for security, it may have roots which I shall presently indicate, in great part no doubt it has no profounder basis than a crude and shallow Mercantilism. At all events it is a preference and a force and, in view of this preference, manufacturing might almost be considered an economic good in itself. With scarcely an exception non-industrial states display a strong desire to develop manufacturing within their borders, while there is nothing like the same ardor with regard to the development of agriculture. Agriculture has indeed at times been given protection in an industrialized state such as Germany, but only as a sop, and against the most strenuous opposition. No state has shown any desire to move from an industrial toward an agricultural régime, while the decline of agriculture in favor of manufacturing industry is accepted with equanimity. This widespread preference for manufactures is the secret of the “irresistible and spreading epidemic of protection,” for it is for the development of manufactures that protection has usually been invoked. And so where protection is unnecessary or ineffective to promote manufacturing, as in England, it is not popular, while its popularity remains unshaken wherever manufacturing is likely to be advanced as a result of its use.

But if the preference for manufactures is the secret of protection, what is the secret of the preference for manufactures? The typical economist scoffs at any preference for manufactures *per se*. Relying on deductive logic he

comes to conclusions which run foul of empirically obtained lay opinions to the effect that manufactures, as such, make for prosperity. These latter opinions are on this point perhaps no further from the truth than his own, which are apt to issue out of narrow and questionable premises.

For it is the premises of the free trader, not his conclusions, that have always been and always must be the object of any effective attack. It was through this hole in the free-trade armor that Hamilton and List made their most telling thrusts, but the blows of neither were as shrewd as they might have been. List's ideas of an "educative" tariff and of the development of a nation through various stages to what he regarded as its apogee, the agricultural-manufacturing-commercial phase, are fundamentally sound, and it can plausibly be maintained that the stimulus that a tariff may give in this development may well be worth a present loss, provided it sets free latent productive powers. Manufactures probably promote skill quite as much as skill promotes manufactures. But List's error (a strange one for him to make) lay in conceding too much to his opponents. For he thought of "nurturing" protection as a temporary policy merely, a temporary loss which could be compensated only by the development of the protected industry to a point where it could stand without support. If the industry could not eventually do this, List would have regarded the protection as unwisely granted, and as well that it should be withdrawn. He was in fact a free trader in principle, admitting protection as a temporary expedient only. It was on this point that he failed to make the most of his position. For, as I shall now endeavor to show, it may be to a country's economic advantage to protect an industry which could not grow up or survive without protection and which never will be

able to survive without it, an industry which has no comparative advantage when the protective duty is first levied nor ever attains one under it.

To make this clear let us assume two countries, A and B, under three distinct sets of conditions. In the first set A and B are just opening up a trade which has hitherto not existed. In the second set the trade has developed greatly, free trade between the two has obtained, and each country has specialized along lines of comparative advantage. In the third set of conditions, which are contemporaneous with the second, protective tariffs are supposed to have been levied from the beginning by B against A; A's products have been excluded, and each country has produced at home its home consumption. The trade which was being opened up under the first set of conditions has been stifled. Let us assume further that, instead of production being at constant cost, as the classical theory of international trade supposed, country A has under the first set of conditions, and retains throughout, a comparative advantage in the production of a commodity subject in the prevailing conjuncture to decreasing unit cost, — watches, let us say, — while country B's comparative advantage lies in the production of a commodity subject in the prevailing conjuncture to increasing unit cost, say wheat. This means, of course, that the effort cost per unit of A's product will decline *solely* by reason of an extension of output; while the effort cost per unit of B's product will increase for the same reason.² Assume further that the

2 These are aspects of the law of proportionality. The assumed situation is such that an increased output of watches makes possible more efficient combination of agents, while an increased output of wheat renders inevitable a less efficient combination. In the case of the commodity produced under conditions of decreasing unit cost, watches, an extension of total output may be achieved by simply increasing the number of individual producing organizations without any increase in the size of the individual organization. If this is the case, the only economies obtained will be external economies, which come slowly and appear on a considerable scale only if there be a very great increase in output. If, on the other hand, some of the existing plants share in the ex-

total sales of the commodity in which A has a comparative advantage, viz., watches, are likely to grow, while those of the commodity in which the comparative advantage lies with B, viz., wheat, will tend to remain constant. Then the three sets of conditions referred to above may be outlined as follows:

CASE I

In Country A

10 days' labor produces 40 units wheat.

10 days' labor produces 40 watches.

In Country B

10 days' labor produces 40 units wheat.

10 days' labor produces 30 watches.

Country A has a comparative advantage in watches, country B in wheat. Trade is possible on any terms between the limits 40 wheat = 30 @ 40 watches. Suppose it is opened up and equilibrium established on the basis of 40 wheat for 35 watches. Then country A, for 20 days' labor devoted to the production of watches (= 80 watches) can, by the exchange with B of 35 watches for 40 wheat, obtain *40 wheat plus 45 (80 - 35) watches*, while country B for 20 days' labor devoted to the production of wheat (= 80 wheat) can, by the same exchange, obtain *40 (80 - 40) wheat plus 35 watches*. Both

tension of output, and the tendency toward a larger-scale producing organization is increased thereby, internal economies will be obtained, and the unit cost may be diminished very considerably. The reasoning in the text simply assumes that a decreasing unit cost is obtained by an expansion of the production of watches; whether the cause of it be external or internal economies is immaterial to the theory, tho it would, of course, affect the degree of its applicability. Conversely, an expansion of the production of wheat is assumed to result in an increasing unit cost, the causes being immaterial to the present theory. As a matter of probability, the more effective combination of agents in the production of watches will be due to the increased technical efficiency which the expanded production makes possible, while in the production of wheat the less effective combination of agents will be due to the relative scarcity of good agricultural land.

3. This and all similar expressions which follow are not to be construed as factored expressions. The figures in brackets are intended to show merely how the expression immediately preceding the bracket is obtained. Thus the 45 watches are the remainder of A's total product of 80 watches after 35 watches have been exchanged with B for 40 units of wheat.

countries get 5 more watches than they could get without the international exchange of products, for without such exchange A could get for 20 days' labor equally divided between wheat and watches 40 wheat plus 40 watches instead of 40 wheat plus 45 watches, and B in a similar way would get 40 wheat plus 30 watches instead of 40 wheat plus 35 watches.

It should be noted that in the case here assumed the international exchange of products is just at its inception and so will be on a small scale. For the most part, both countries are producing their own consumption of both commodities. Let us go now to the conditions of Case II. Trade has been kept free and has developed so that both countries specialize in the lines in which they have a comparative advantage. By the extension of its output of watches (assumed to be produced at decreasing cost) A gets a lower cost per unit, while its withdrawal from wheat production (assumed to be produced at increasing cost) would give it a lower cost per unit of wheat also, if it should still produce any as an alternative to watches. B, on the other hand, by the extension of its output of wheat raises its cost per unit of this product, while its withdrawal from watch production gives it a higher cost per unit for watches also if it should still produce any as an alternative to wheat. Let the conditions be represented thus:

CASE II (*a*)

In Country A

10 days' labor produces 45 units wheat
10 days' labor produces 45 watches.

In Country B

10 days' labor produces 35 units wheat.
10 days' labor produces 20 watches.

B still has a comparative advantage in the production of wheat and may be assumed to have had it throughout

the period of transition from Case I. Specialization in wheat will be advantageous for B as things are at the moment, and will have been advantageous, it may be assumed, at any given moment throughout the period of transition. Trade is now possible on any terms between 35 wheat = 20 @ 35 watches, or, what is the same thing, 40 wheat = 22 $\frac{2}{7}$ @ 40 watches. Let us assume for the moment no change from Case I in the terms of exchange that is that 40 units of wheat exchange for 35 watches (tho in view of our premises and the changed conditions this is a ratio unduly favorable to B). Then country A for 20 days' labor devoted to the production of watches (= 90 watches) can, by exchanging 35 watches for 40 wheat, obtain 40 wheat plus 55 (90 - 35) watches; while country B, for 20 days' labor devoted to the production of wheat (= 70 wheat) can by this same exchange obtain 30 (70 - 40) wheat plus 35 watches. Under these conditions both countries will again benefit by the trade, since without it A for 20 days' labor equally divided between wheat and watches would get but 45 wheat and 45 watches as compared with 40 wheat and 55 watches obtained through trade; while without trade B would get 35 wheat plus 20 watches as compared with 30 wheat plus 35 watches obtained *with* trade. The result of the trading is to give A, ten, and B, fifteen more watches than they would have without trade, while both countries lose 5 units of wheat. But 5 units of wheat are worth not more than 5 watches in either country, so the result for both is a net gain.

Compare, however, the situation of the two countries under Case I, on the assumption that no trade had ever been opened up, with that under Case II with trade free. It is as follows:

IN COUNTRY A

Case I

20 days' labor *without* trade yields 40 wheat plus 40 watches.

Case II

20 days' labor *with* trade yields 40 wheat plus 55 watches

Here under Case II with trade A makes a clear gain of 15 watches as compared with its position under Case I without trade.

IN COUNTRY B

Case I

20 days' labor *without* trade yields 40 wheat plus 30 watches.

Case II

20 days' labor *with* trade yields 30 wheat plus 35 watches.

Here under Case II with trade free B gets 10 less wheat and 5 more watches than under Case I with no trade. This is a net *loss*, since 10 units of wheat are worth more than 5 watches in either country under either set of conditions. The specialization along lines of comparative advantage has been disadvantageous to B. At any given moment of the transition from Case I to Case II it will pay B to specialize in wheat, but the final result of the specialization is to bring about a situation in which the citizens of B get less reward for their efforts than if they had never carried on international trade at all.

To make this conclusion invulnerable, it is necessary to consider the nature of the figures given in the illustrations. If these figures be figures representing *marginal* costs, the conclusion that country B will lose by specialization is not inevitable. For the extension of the production of wheat will mean not that the cost of every unit of the product rises but merely of that part of the whole product which was not grown previous to the increase in output. All rents will be raised by the lowering

of the margin of cultivation, and while this means a lower net return to all growers who are not landlords, the change is merely one in distribution and will not affect the national income arising from the lands which had been cultivated from the first.

The *average* unit cost, however, will increase, since the new output is produced at higher cost than any part of the old; and whether country B will sustain a net loss or not depends (1) upon the rapidity with which costs rise upon an extension of output and (2) upon the magnitude of that extension. If then, instead of regarding the figures as figures of marginal unit cost, they be understood to mean average unit cost or (perhaps) the cost of representative producers, the conclusion that country B under the conditions assumed must lose by free trade is inevitable, the only effect of the differing costs of growing wheat in B being to narrow the limits within which trade could be advantageous. Thus, if the following conditions are assumed for country B,

10 days' labor will produce	40 units of wheat	on some farms.
10 " " " "	35 " " "	as an <i>average</i> .
10 " " " "	32 " " "	on the margin
10 " " " "	20 watches,	

the limits of advantageous trade with country A under Case II would be 32 wheat = 20 @ 32 watches or 40 wheat = 25 @ 40 watches, as compared with the 40 wheat = $22\frac{2}{7}$ @ 40 watches, which are the limits when 35 units of wheat are taken as the *marginal* product (see page 206). But this narrowing of limits is of no consequence, since the actual terms set by the equation of international demand are assumed to be 40 wheat = 35 watches.

The question of varying costs does not arise with regard to country A's product, watches, since an extension of output will be reflected here in a lower unit cost

for the whole product and not for the new increment merely, and all producers must have approximately equal costs or be put out of business by their competitors. For a given fluctuation in the cost of their respective marginal units, the total cost of the production of watches will fall to a greater degree than the total cost of the production of wheat will rise, since in the former case the decreased cost applies to *all* the units produced, while in the latter the increased cost applies only to the new increments and only to the full extent to the last of them. There is, of course, no reason to expect that the marginal costs in the two cases will fluctuate to the same degree. Whether the total cost and average unit cost of the commodity produced under conditions of increasing cost will mount more or less rapidly than the total and unit cost of the commodity produced under conditions of decreasing cost falls, depends upon the respective nature of those conditions. An extension of the output of wheat may mean a rapidly or slowly rising marginal and average unit cost according to the conditions in country B, and an extension of the output of watches may mean a rapidly or slowly declining unit cost according to the changes that take place in A consequent upon such increased output. In what might be considered the more normal case, the unit cost of the commodity produced at increasing cost will rise with less rapidity than the unit cost of the commodity produced at decreasing cost will fall.

But even if we adopt the case most favorable to B and proceed according to the method of limits to suppose that the increased output of wheat is produced at a unit cost no greater than prevailed before the production was expanded, it may well happen that B will lose by free trade. To make this evident let us suppose the following conditions:

CASE II (b) (marginal units)

In Country A

10 days' labor produces 45 units wheat.

10 days' labor produces 45 watches.

In Country B

10 days' labor produces 40 units wheat.

10 days' labor produces 20 watches.

Trade may be carried on advantageously on any terms between 40 wheat = 20 @ 40 watches. Assume that the play of international demand brings equilibrium on the basis of 40 wheat for 28 watches. Then country B for 20 days' labor devoted to the production of wheat will by the exchange of 40 wheat for 28 watches obtain *40 (80 - 40) wheat plus 28 watches*. But if trade had never been opened up and B had never specialized on the commodity in which it had a comparative advantage, viz., wheat, it could have had *40 wheat plus 30 watches*.

It might be contended that the declining cost of production of watches and the advancing cost of production of wheat would be reflected in a shifting of the terms of exchange not against B, as the illustration above assumes, but in B's favor, and that this shifting of the terms of exchange would cause both countries to gain instead of one gaining and the other losing. But there is no reason for supposing that this would happen. It would happen only if there were perfect mobility of labor and capital between the two countries. But the lack of any such mobility is a fundamental of the theory of international trade and is, indeed, the one thing that calls for a theory of international trade distinct from the theory of domestic trade. The play of reciprocal demand which decides the terms of exchange of the commodities entering into international trade may operate to keep prices up even when the effort cost of production

falls, or to depress them when the effort cost of production rises. If, as was assumed at the outset, the sales of watches tend to increase while those of wheat tend to remain constant, the terms of exchange will move not in favor of B but, as is here supposed, against that country.

Turn now to Case III. The hypothesis is simply that protection has been given to watches in country B while the conditions of production of Case I prevailed. If the protection is fully effective, B will do no worse than hold the productiveness of Case I, which, as has already been pointed out, leaves it in a better position at the later period represented by Case II and Case III than if trade had been left free. Protection will still be necessary if B's watch manufacture is to survive, and there is no reason to suppose that it will ever be unnecessary. Nevertheless B is economically benefited by protection and may do well to keep it indefinitely. This possibility of advantageous permanent protection was not seen by Hamilton and List, no doubt because it challenges the assumption of constant cost, an assumption which in their time was probably more consonant with facts than at present. Later economists, such as Professors Sidgwick, Edgeworth, and Carver, have attacked this assumption in one way and another, but so far as the writer is aware have not brought out the foregoing implications of increasing and decreasing cost of production.

A comparison of the figures in the cases assumed so far will show that, while country B loses as a result of specialization along lines of comparative advantage, the total production of the two countries taken together increases. With the present intensity of national feeling this general advantage will make little difference to B (if we assume that it is a country *in esse*), since B would

be unlikely to adopt a policy of free trade hurtful to its own interests merely because it could be shown to give more to other countries than B itself loses. But even if we could assume that B would be so altruistic as to do this, it might not have the opportunity. For to specialize along lines of comparative advantage may result in a net loss all round. To illustrate this point take again the conditions of Case I, with the figures representing average rather than marginal product.

In Country A

10 days' labor produces 40 units wheat (on the average).
10 days' labor produces 40 watches.

In Country B

10 days' labor produces 40 units wheat (on the average).
10 days' labor produces 30 watches.

Assume no trade. Then the total product of 20 days' labor in both countries will be: 80 (40 plus 40) wheat plus 70 (40 plus 30) watches. Now suppose conditions after trade has been opened up and specialization along lines of comparative advantage has taken place to be (solely as a result of increased production in the lines of respective comparative advantage) as follows:

In Country A

10 days' labor produces 45 units wheat (on the average).
10 days' labor produces 42 watches.

In Country B

10 days' labor produces 30 units wheat (on the average).
10 days' labor produces 25 watches.

Then the total production of 20 days' labor in both countries with trade will be: 60 (2×30) wheat plus 84 (2×42) watches. Comparing this with the production of a similar amount of labor without trade under Case I, 80 wheat plus 70 watches, it appears that under Case II with the specialization which free trade would tend to bring about there would be obtained 20 less

wheat and 14 more watches than under Case I without trade. But this is a net loss, since 20 wheat are worth more than 14 watches in either country under either set of conditions.

These figures illustrate the loss that List may have had in mind when he insisted upon the advantage of the development of productive forces. But neither List nor his followers have shown that this was anything more than an emotion, tho Patten has brought applicable instances of the sort in support of his ingenuities in defense of protection.

The upshot of the considerations advanced above is that comparative advantage is by no means an infallible guide to the maximum return in the long run to the productive effort of a nation. A rational, forward-looking policy might deliberately reject development along lines of comparative advantage. Nor is *absolute* advantage at any given moment a reliable test, Professor Patten to the contrary notwithstanding. Taking comparative advantage as a basis, modifications of that principle may be necessary according to the answers to these two questions (1) will the development of production along lines of comparative advantage bring about through specialization an absolutely less productive régime? (2) what is the trend of world demand and supply for the actual or potential products of the given nation? The first of these considerations affects the volume of a nation's product, the second, the terms on which it exchanges its products for the products of other countries. It may well be disadvantageous for a nation to concentrate in production of commodities of increasing cost despite a comparative advantage in those lines; it will the more probably be disadvantageous to do so if the world demand for goods produced at decreasing cost is growing in volume more rapidly than that for

goods produced at increasing cost, while at the same time competition in the supply of the former grows relatively less intense as compared with competition in the supply of the latter. For in this case the operation of the law of reciprocal demand will throw the terms of the exchange of commodities more and more to the disadvantage of the country producing the goods of increasing cost.

Since goods exchange in international trade on the principle of reciprocal demand, the tendency actually is for competition to restrict the gains obtained in the production and exchange of increasing-cost goods, and to enlarge the gains in the production and exchange of decreasing-cost goods. For in the production of increasing-cost goods competition develops apace, as every extension of production through specialization brings in (as a result of rising costs) hitherto impossible outside competition; while in the production of decreasing-cost goods, competition becomes more and more ineffective as costs in the specializing country fall. The quickening of competition in the marketing of increasing-cost goods and its decline in that of commodities produced at decreasing cost operates to lessen the spread between the effort cost of the former class of goods and the commodity returns received for them, while it tends to augment that spread in the case of the latter class. Conditions of supply being irrelevant in the determination of the *terms* of exchange, if we assume for the moment that the relation between the demand for the commodities of increasing and those of decreasing cost remains constant, then the country producing commodities at decreasing cost will secure a growing differential between cost and return, while the country producing commodities at increasing cost will find its gain declining. Real wages will rise in the former country as a

result of the relatively effective application of its labor, for it is a commonplace of the theory of international trade that the standard for wages in general is set in the exporting industries,⁴ and depends on their effectiveness; they will fall in the latter country for the opposite reason. This movement of wages will prevent any tendency toward a readjustment of the terms of exchange of the two types of commodities in favor of the increasing-cost goods; it is in fact but a reaffirmation of the principle that cost of production is not effective in setting those terms.

The principle just laid down may go far to explain why regions of slender natural resources devoted to manufactures often surpass in prosperity regions of much greater natural resources where extractive industry prevails, tho no great difference exists in the native ability of their respective populations. One may instance the almost constant complaint of the West in the United States during the period when its effort was almost solely devoted to extractive industry, over its "exploitation" by the East, particularly New England. This is a case strictly analogous to international exchange under free-trade conditions, since mobility of the factors of production was considerably restricted.

So far the situation has been observed from the supply side of production only, the relation between the demand for the two types of commodities being assumed to be constant. If now demand for the commodities produced at decreasing cost grows in volume relatively to that of products produced at increasing cost, the terms of exchange will move still more in favor of the producers of decreasing-cost commodities, and it should be borne in mind that the only check on this

4 Strictly, it is the standard for *money* wages that is set in the exporting industries, but increased money wages are here due to increased effectiveness in production and to more favorable terms of exchange, and so will mean increased real wages as well

movement is that set by the possibility of the home production of the imported decreasing-cost commodities by the country which is specializing in the commodities produced at increasing cost — a possibility which such a country grows ever less competent to realize, since its abandonment of the production of the decreasing-cost commodities results in higher unit cost for such an amount of these goods as it may continue to produce. The movement of the terms of exchange in favor of the producers of the increasing-cost commodities is, on the contrary, quickly checked by the increasing competence of the country which is specializing in goods of decreasing cost to meet the competition of the other in the production of the increasing-cost goods, since its abandonment of the production of increasing-cost commodities results in lower unit costs for such an amount of these goods as it may continue to produce.

Departing now from deduction let us look into actual conditions. In the main the commodities produced at lower unit cost on an increase of output are manufactured goods, while those produced at a higher unit cost are the commodities of extractive industry. England was the first country to obtain great advantages of decreasing cost. The extension of free trade tended to enlarge those advantages for England and to render her prosperous beyond any other country in which conditions were at all comparable. For England's increasing concentration upon manufactured goods was constantly tending to lower her effort cost of production, while the increasing specialization which free trade operates to bring about was tending to raise the effort cost of production of those commodities (largely extractive) which England took in exchange for her manufactures. The play of reciprocal demand, which alone sets the terms of exchange of commodities in international trade, was

probably also operating to England's advantage, since the secular trend of demand must have been increasing for manufactured goods relatively to the commodities of extractive industry, as is shown by the sheer growth of manufacturing industry since the Industrial Revolution.⁵

The spurt in England's prosperity could not be approached in old countries devoted to extractive industry, and could be matched only by new countries whose wealth of land made extractive industry highly profitable. The situation meant a quasi-monopoly position for England in her production while the countries producing extractive commodities were being subjected to increasingly severe competition. In this situation a tariff to build up industries of decreasing unit cost in these countries might well be advantageous to them, tho their comparative advantages were permanently to remain in industries of increasing unit cost. In these premises a scientific commercial policy for such countries would, on purely economic grounds, modify the principle of comparative advantage in anticipation of the trend of world demand and of the conditions of supply, and this is approximately what the bulk of tariff policies, however blindly adopted, has actually done. They were adopted, in part at least perhaps, because empirically obtained opinions pointed to their efficacy

5. This statement may perhaps be questioned. Professor Taussig in his *Free Trade, the Tariff and Reciprocity* (page 87) seems to hold the contrary view, when he attributes the relative prosperity of the United States to the fact that our exports have in the past been agricultural products largely, for which the demand has been, as he says, stable and steadily increasing in volume. The conflict is, I think, superficial only. The volume of the total demand for manufactured goods must have increased at least as rapidly. Elasticity of demand for manufactured goods is undoubtedly greater and so there would be less *stability* in the demand; but this elasticity is a prime factor in promoting a secular increase in the volume of such goods taken, and it is the secular trend which is here important. Increased demand for manufactured goods of course involves an increased demand for extractive products but it would seem that in the last century and a half the percentage of worked-up goods must constantly have been an increasing proportion of the whole. The very appearance of a great variety of new inventions is evidence of this.

to advance prosperity. The free-trade movement initiated in England in 1846 made headway outside of England for a few years only. After that it was repudiated by most old countries,⁶ and even by the new as the first exceptionally favorable conditions for the production of extractive commodities began to depart.⁷ We have seen that the opinion commonly held that manufactures mean prosperity is in some cases not without scientific foundation, and self-sufficiency may conceivably have been a justifiable policy, even on economic grounds, for the countries which adopted it.

So much for the first of the "general causes" of the epidemic of protection. There is another, which I shall now indicate. The accepted exposition of free-trade principles speaks in terms of "units of productive power," usually commuted, as in this article, to so many days' labor. But it fails to analyze the composition of those units. They are not identical in different countries but may be any combination whatever of land, labor, and capital. Suppose in country A one day's labor is equivalent in value to the use of 10 units of capital or 3 units of land, while in country B one day's labor equals in value the use of 5 units of capital or 8 units of land. The unit of productive power in the two countries will be very different things. The comparative advantage of A will lie in the production of commodities which take much capital and little land, while in B it will lie in the production of commodities which take much land and little capital. But this situation may be completely changed in B by the growth of capital relatively to the other factors. It may well be that, given the capital, the comparative advantage of country B would be in the

6. France 1871, Germany 1879, Italy 1877, Austria 1878.

7. United States 1861, Argentina 1878 onward, Canada 1879 onward, Australia 1902, Chile 1916.

production of the very things in which country A now has that comparative advantage. B's genius and resources may lie in that direction, and remain dormant because the scarcity of capital renders it uneconomic to develop them. (China is perhaps an instance in point, tho of course many other factors enter.) In such a case a country's genius and prosperity may be thwarted by a lack of capital and the all-important question is how to obtain capital most quickly.

There are, of course, the two alternatives of borrowing and saving. As to borrowing. The lending of capital and the price of its use are determined to a very considerable degree by propinquity, physical, and spiritual. If this were not so, the rate of interest would be the same the world over for investments of similar character. But it is not the same the world over (tho its fluctuations probably grow less), and its variations run in large measure according to the remoteness in space or acquaintance or good-will from the source of supply. Here again it is this factor of immobility that differentiates international from domestic trade and has given rise to a separate theory concerning it. Create a home supply of capital and you change conditions fundamentally.

Now as to saving.⁸ The confirmed free trader will contend that the direction of industry along lines of immediate comparative advantage will yield the greatest return and so promote most successfully the desired accumulation of capital and the quickest shift to the industries which will be the more productive in the long run. But this argument assumes that, because under free trade more capital *could* be saved, more *will* be

⁸ The argument developed in this and succeeding paragraphs has been in large measure anticipated by A S Johnson in an article in the Political Science Quarterly, vol xxii, No 2, p 220. The present article had been completed when this fact was brought to the writer's attention.

saved. The assumption is a dubious one for two reasons, both of which turn on the fact that not only the amount but the distribution of wealth is important in the accumulation of capital. Protection in the circumstances here assumed will affect the distribution of wealth in two significant ways: (a) it will tend to concentrate it; (b) it will concentrate it in the hands of people who are well-nigh inevitable savers. For let it be remembered that the assumption is that the long-run interests of the country require a shifting to the industries which are relatively large users of capital, that is, to the manufacturing industries in the main. Now, though no satisfactory statistics exist, so far as the writer is aware, to show clearly the effect of manufacturing industry on the distribution of wealth, we know that England, the typical manufacturing country, shows the greatest concentration of wealth⁹ and agricultural Australasia, perhaps, the least. In our own country the growth of huge fortunes seems to have been tied up in large measure with the growth of manufacturing, and the concentration of wealth seems to be increasing with our gradual transition toward an Industriestaat.¹ I shall presently adduce deductive reasons for this phenomenon, but, taking it for the moment to be a fact, then effective protection to manufactures would act as a force striking the plain of wealth distribution, and crumpling it up into hills and valleys. There is no doubt that the great bulk of saving is done by wealthy people² and that the unequal distribution of wealth is a prime factor in the accumulation of capital. (It is interesting to note in this connection that the export of capital comes from countries in which manufactures are

9. King, *Wealth and Income of the People of the United States*, p 97

1. *Ibid.*, p 74.

2. Taussig, *Principles of Economics*, vol. II, p 42.

highly developed and its import to those in which it is not.) It seems to be true that where income is evenly distributed the standard of living rises to the point where a very high proportion of the total national income is consumed immediately, to the ultimate detriment of the whole country. As Professor Friday says, quoting Keynes, "the immense accumulations of capital, which to the great benefit of mankind were built up during the half century before the war (1914), could never have come about in a society where wealth was divided equitably" ³ (that is, more equally than at present).

The chief reason for the unequal distribution of wealth which attends a manufacturing régime, as well as its concentration in the hands of men who are almost *forced* to save, is again the fact that an extension of output in manufacture is likely to be accompanied by a falling unit cost. As Professor Friday points out in the work already cited enormous additions to capital are made in the reinvestment of earnings in plant extensions.⁴ Whether by reinvestment of profits or otherwise, this saving through the force of competition is practically compulsory in an industry subject to increasing returns, for the alternative to expansion is bankruptcy. On the other hand in the extractive industries, where an extension of output is likely to be accompanied by a rising unit cost, this stimulus to expansion and increase of equipment is lacking. The form that industry takes is vital in the accumulation of capital. The processes of extractive industry are relatively direct, there is a comparatively slight need for great investments in fixed capital. The processes of manufacture on the other hand are indirect, and the

³ Friday, *Profits, Wages, and Prices* (1920), p. 66.

⁴ *Ibid*, chap. iv

extension of manufactures, even at the cost of extractive industry, is thus itself inevitably an accumulation of capital. The potential savers, the rich men, in a state given over to extractive industries, are landlords. But landlords are not good savers; on the contrary, they are in the main a "spendthrift class." The reason for this is that there is with them but slight stimulus to saving and slight opportunity to invest profitably any savings that might be made. There is a significant passage in *The Education of Henry Adams*: "The American wasted money more recklessly than anyone ever did before, and except for the railway system the enormous wealth taken out of the ground since 1840 had disappeared (in 1892). . . . West of the Alleghenies the whole country might have been swept clean and could have been replaced in better form in one or two years." ⁵ From these words it would seem that capital accumulation had been slight in the country as a whole while it was predominantly agricultural, and that the only exception was in the manufacturing East.

A considerable part of a manufacturing community is likely to be engaged in the production of producers' goods, and the self-interest of firms so engaged promotes the acquisition of capital. Every sale that they make means the formation of capital, every extension of credit that they receive from the banks based upon their anticipated output promotes capital accumulation — a condition approaching automatic saving.⁶ There is nothing like the same facility of saving in a non-manufacturing state where effort is devoted to the production of consumers' goods and saving can take place only through personal abstinence. In this latter case there

5. *Education of Henry Adams*, p. 328.

6. See Wolfe, "Savers' Surplus and the Interest Rate," *Quarterly Journal of Economics*, vol. xxxv, No. 1, p. 1 et seq.

is always competition between saving and spending, and the formation of capital involves a decision to save on the part of those who have the alternative of spending. There is no such alternative when the production of capital goods is a prevalent type of activity. The industrial and business processes themselves declare for saving, and the choice is made for capital accumulation by the nature of the industrial technique. So far as the industries indicated are concerned, it is either capital accumulation or no production at all; there is no alternative of spending open as a choice to anyone. Of course the demand for the capital goods must be present, but no one conversant with modern business methods imagines that demand is not stimulated by producers, as well as producers by demand. It is perhaps not too much to say that much of the capital found in non-industrial regions, such as farm machinery, has been created as a result of the energy and enterprise of its producers, rather than on the initiative of those who make use of it.

The promotion of manufactures by protection almost inevitably advances capital formation in yet another way. The protection which must be given to encourage men to essay untried and doubtful projects must ordinarily promise more than normal returns, and these are as a rule realized by the more effective producers. In industries of decreasing cost these producers tend to extend their operations, all the while making great gains, which they are almost certain to put back into so profitable a business. They become rich men and so save easily, they reinvest because it is a condition of success. The operation of a protective tariff would be to reduce the gains both of employers and wage earners in the naturally more advantageous industries in the conditions of the moment. It is probable that, if these are

extractive industries, this will mean diminished consumption rather than diminished capital accumulation; at least more capital is likely to be saved by the manufacturers than fails to be saved by the others. This will improve the situation all round in the long run.

The protection to infant industries argument then may perhaps be extended to an argument for the protection of infant capitalism or finance — of course a much longer process. The intimate connection of modern industry with finance may make finance and the accessibility of capital on favorable terms the factor determining comparative advantage. The growth of finance and manufacturing industry are interdependent. The latest stage of economic development is not List's final agricultural-manufacturing-commercial stage, but an agricultural-manufacturing-commercial-financial stage. Perhaps no state can with advantage permanently depend on another for its supply of capital, not only because it may be exploited thereby, but because owing to difficulties of mobility the supply is almost sure to be inadequate to the development that would be economic were capital more plentiful. There may be a considerable range of industries which would be competent industries if capital were more abundant but are in the present subordinate to industries which use relatively little capital. The immediate effect of protection to manufactures may be to increase the demand for capital and so raise its price, making these industries still less able to compete without protection than they had been before, and this incapacity may continue for a long period as new manufacturing industries are thus encouraged. The gradual gain which may be expected in the supply of capital in its race with demand may serve, however, to realize the real genius of a

people which had hitherto been unable to express itself for lack of the necessary means. In this case the protective measures would have justified themselves even tho they are necessary for a much longer time than would ordinarily seem sufficient to cover the infant stage.

It is difficult to assess the weight of the considerations advanced in this paper. They may be purely academic. It is certain that they have not been in the minds of legislators of protection. Have they been of any importance in the wide diffusion of the idea that protection makes or preserves prosperity? Has the belief that actual experience has shown protection to be good any roots in them? France, Germany, and the United States became powerful and prosperous, accumulators and lenders of wealth, along with industrialism and persistent protection — protection against England mainly, England which had the start, the comparative advantage in industries which show a strong tendency toward a lower unit cost, the rapidly accumulating capital. There can be no question that much of this development would have taken place in any event; but on the other hand protection has undoubtedly played its part, perhaps a truly economic part.

This paper has been kind to the protectionists. It may provide support for the comforting belief that the United States in its long-continued protective policy has builded better than it knew. But even assuming that all the economic advantages of protection which it indicates as possibilities have actually been realized, those possibilities are now a thing of the past. Without going into the far-reaching considerations of the most advantageous distribution of wealth from the economic point of view, or of an indefinite postponement of immediate consumption for the sake of greater productive

powers and a larger consumption in a future whose margin fades forever as we move, it is clear that now, when our export of manufactured goods has reached predominant proportions, a pervasive system of protection is no longer effective in these industries except to injure them by curtailing exports *pari passu* with the restriction of imports and by increasing cost of production in the manner made plain by the classical economists. Pervasive protection cannot now advance the interest of decreasing-cost industries as against those of increasing-cost; indeed the loss of capital in Europe consequent upon the war and our own rapid accumulation of it in the last few decades may have caused a very considerable reversal of the lines of comparative advantage which prevailed in the last century, so that *our* comparative advantage may now tend toward manufactures. In so far as there is any "need" for the protection now advocated for agriculture in this country this must be the explanation. Our present situation as a lending country shows that the stage of infant capitalism has been passed, that so far as the supply of capital is an important element in the production of any given commodity we are in a most favorable position. The interests of finance and manufacturing industry are still tied together, but they lie in the direction of freer trade. The extension of manufacturing equipment to meet the war demand has created a situation in which the productive capacity of our manufactures exceeds the proportion of those manufactures which our home population cares to take, and we cannot shift to the lines in which demand is proportionately great without the loss of much capital already irrevocably fixed. A foreign outlet as large as possible is highly desirable. The tendency of all decreasing-cost industries is of course to exceed the demands of the home market, owing to the advantages

derived from increasing output, and the huge scale attained by our manufactures has operated to throw the comparative advantage into that field of production. We are in fact in the position to the world taken as a whole, in which England found herself about a century ago, and just as free trade was adopted there to her own undoubted advantage, we too would find it working in our favor now. As a result of the operation of the forces I have indicated in this paper the high protection which has been an historical fact in this country since 1860 has perhaps not been uneconomic in the long run, but the very factors which lend a color of validity to this opinion are now working against protection. If they were of sufficient importance in the past to counteract the advantages arising from free trade by so much do they in the present reinforce the arguments for a policy of unrestricted commerce.

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