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CONTENTS

A NEW THEORY OF INTERNATIONAL TRADE[1]

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Translated from German* by E. Henderson

I. CRITIQUE OF THE NEO-CLASSICAL THEORY

The current theory of international trade, in its most recent and most precise formulation furnished by Haberler,[2] intends to answer two main questions. These are the questions of the principles of international division of labour and that of the rules governing international exchange.[3] The latter has to be considered from the short-term and from the long-term point of view, so that we are faced with altogether three main problems. The solutions offered rest on the three theorems[4] of comparative costs, of the transfer function of the national price level, and of the immobility of factors of production across frontiers.

The first theorem served to answer the first question by determining the import and export goods of each country; indeed, thanks to its special assumptions, the classical theory of foreign trade was able, in addition, to provide a general answer to the problem of location of production. By abstracting from distance within countries, it was simultaneously a complete theory of location. Strictly speaking, all goods were international. A country's industry and its export industry were the same thing. Each country simply produced for itself and for others those goods in the production of which it had a comparative advantage.

The first task consists in the description of equilibrium, the second in the description of the manner in which disturbances of equilibrium are overcome. Here there are two distinct sets of problems: the transfer problem is one of short-run disturbances, while long-run disturbances constitute what I shall call the combination problem, *i.e.* the problem of a new combination of the three original factors of production, land, labour and capital. The classical theory eliminated this last problem[5] by means of the assumed immobility, or at any rate very restricted mobility, of factors of production across frontiers; it tackled the second problem by means of the assumption that national price levels play an important part in transfer, *i.e.* that export surpluses are achieved by lowering the national price level and import surpluses by raising it.

The result was a mechanism of imposing simplicity and the policy rules derived from this theoretical model were the simple ones of free trade and central price policy. The mechanism described was basically very easy to understand and for that reason extraordinarily impressive; at the same time, however inadequate the old theory, the construction of a new one repeatedly foundered on the lack of sufficient preliminary research work on the economics of location. So the renovated classical theory has prevailed to this day. Nor would this paper attempt a renewed attack upon that theory, were it not that we now possess such preliminary work which enables us not only to discard what has long been seen to be untenable but was retained because it was needed, but to replace it by a new and more realistic theory.

All three of the theorems on which the neo-classical edifice rests are untenable. The theory of comparative costs is not applicable to countries at all,[6] because the latter lack inner unity and their territorial extension cannot be neglected.[7]

* "Eine neue Theorie des internationalen Handels", *Weltwirtschaftliches Archiv*, September 1939.

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1 This paper anticipates some of the results of my book *Die räumliche Ordnung der Wirtschaft*, which is to be published by Gustav Fischer, Jena. However, in the book the problems of international trade are somewhat submerged in wider problems and I have thought it right, therefore, to present in this paper a clear outline of my solution of the more special problem. Details will be found in my book.

[Editors' note: The first edition of *Die räumliche Ordnung der Wirtschaft* appeared in 1940, the second, revised edition in 1943. The English translation, made from the second edition but including those sections of the first edition which for lack of space only were omitted from the German edition, appeared as *The Economics of Location*, Yale University Press, New Haven, Conn., 1954]

2 Gottfried Haberler, *Der internationale Handel*, Berlin 1933; *The Theory of International Trade*, English translation (revised by the author) by Alfred Stonier and Frederic Benham, London/Edinburgh/Glasgow, 1936.

3 The further question of the distribution of the gain from international trade is, strictly speaking, insoluble and I shall not consider it here.

4 The proposition that the balance of payments must be in equilibrium is usually also considered a principle of international trade, but our discussion will show that it is concerned more with techniques and less with substance than are the other three theorems. In its usual formulation the principle has no regulatory content whatever. Since every claim must either be paid, carried forward or written off, the balance of payments is automatically in equilibrium in every situation. No action is needed to establish equilibrium, nor can it be prevented by any action. Balance of payments equilibrium may raise problems only if it is to be brought about in a particular manner, *i. e.* if payment is to be neither refused nor delayed. Even then equilibrium is achieved automatically, provided we deal with one currency system. If, for instance, an individual's export (*i. e.* his income) falls, he must necessarily either restrict his purchases accordingly or else dishoard. Only when payments are to be made between different countries, is the mere fact that every individual meets his obligations insufficient to establish equilibrium. His payments, which, with one currency system, would bring about equilibrium, are calculated in terms of domestic currency and need special measures to become operative in terms of foreign currency. It is, thus, only with different currencies that the principle of fair balance of payments equilibrium has any regulatory power—and even then we shall see that its influence is limited to temporary effects.

5 Only recently an opponent of the classical theory has published a comprehensive study of this problem: B. Ohlin, "Die Beziehung zwischen internationalem Handel und internationalen Bewegungen von Kapital und Arbeit", *Zeitschrift für Nationalökonomie*, Vienna, Vol. 2 (1930/31), p. 161 *et seq.* Mackenroth ("Zollpolitik und Produktionsmittelversorgung", *Weltwirtschaftliches Archiv*, Vol. 29, p. 77 *et seq.*), too, has furnished valuable results on this subject.

6 The nearest case would be that of small islands and it is therefore not surprising that the theory has its home in England. It could hardly have been constructed against the background of the experience of continental Europe, where trade is between connected areas rather than between separate places. It is significant that John Stuart Mill speaks of international trade as trade between separately situated countries or more generally between separately situated places (J. S. Mill, *Principles of Political Economy, with some of their Applications to Social Philosophy* [Ashley edition, London, New York, 1929, p. 576 *et. seq.* The phrase "between distant places" occurs in the Table of Contents, p. XLIV. Ed.])

Indeed, trade between large countries far distant from each other has some resemblance to trade between small islands. Here, too, it is the rule that one particular good is traded in one direction only. Although this case lends itself well to the classisal explanation, we can explain it more easily and without the artificial assumptions of the classical theory.

7 *Cf.* A. Lösch, "Wo gilt das Theorem der komparativen Kosten?", *Weltwirtschaftliches Archiv*, Vol. 48, p. 45 *et seq.* Nor can I agree with Ohlin's explanation (*loc. cit.*) of the international division of labour. In his view, what a country produces depends only upon what factors of production it possesses in relative abundance. This is not so. We must not look only at production, since markets are quite as important. Location is determined by an industry's ability to cover its costs, irrespective of whether these are large or small. In so far as Ohlin, too, treats countries as homogeneous units, the above remarks apply to his theory as well.

We shall presently see that national price levels do not normally break off at national frontiers; even when they do, they play no necessary part in the transfer process. Finally, it is hardly disputed any more that, contrary to the third theorem, there are broad highways of movement and road blocks both within and across national frontiers.

There is thus room for a new theory. We shall retain from the old one everything that is tenable and also, at first, the assumption that there are no political differences between countries. This assumption does not, nowadays, often correspond to reality, but it is an important one and by retaining it for the time being, we shall increase the comparability of results and guard against misinterpretation tending to explain differences in the two theories simply in terms of the realities to which they are meant to apply: one to the liberal state of the nineteenth, the other to the authoritarian state of the twentieth century. This temporary artifice will, moreover, later serve to isolate more clearly the truly political effects.[8]

II. Reformulation of the Theory of Trade

1. *The Description of Equilibrium*

If trade is considered from the spatial point of view, it is seen to take place in a host of markets: the sales markets of producers and traders, and the supply markets of commercial centres and large consumers. Under uniform conditions, these market areas would be compact regular hexagons, but in the real world they may be distorted and perforated. Instead of adjoining each other, the markets for homogeneous goods overlap to a greater of lesser degree, just as in the case of different goods, where their overlapping is self-evident. However, the quantitative importance of such overlapping of the markets for comparable goods is much overrated. Closer analysis nearly always reveals that the market nuclei no more than touch, so that the markets of one and the same good form a network. The size of the markets varies enormously. In the case of a small baker it may only be a few yards, in that of a wheat export port half the world. In between there are so many graduations that there is little point in trying to distinguish between local and world trade goods—except if both were to be taken as limiting cases. The number and location of these innumerable market areas, and more particularly of their centres, are the important subject of the theory of location.[9] Our solution of this problem will be found in the book mentioned above. Here we shall proceed for the time being on the assumption of given location.

[8] It is no more than a matter of analytical convenience whether we consider free trade as normal and treat public intervention as a disturbance, or start out from a government plan and describe the effects of economic forces within this given framework—just as either free competition or monopoly may serve as a point of departure whence to deduce the actual intermediary situation.

[9] How superior modern location theory is to the theory of comparative costs is seen from the mere fact that the former takes account not only of natural resources, but, unlike the latter, also of the effects of large-scale production as well as of the highly important advantages of geographical position.

Let us trace the actually existing political frontiers into the medley of market areas that would be found in a World State. This would make little difference in a liberal era, if political frontiers were not also tariff boundaries. Tariff boundaries have the effect of rivers or mountain chains: they occasion costs for the double reason that they can be crossed only at a few places and that they lengthen, as it were, the direct distance between supplier and buyer. Thereby they diminish the size of the markets through which they pass, cutting off areas on the far side of the production or supply centre. On that side room may thus be made for new market areas, whereas some may disappear on the near side. Tariff boundaries alter the number and position of location centres, particularly near the frontier. Much more could, of course, be said on this subject, but all we need do here is to sketch out the general prospect.

Let us assume that adjustment to the political frontiers has been made. We are then in a position to explain international division of labour. The goods that will enter international trade are those the market areas of which are traversed by the political frontiers. Goods will be imported if the production centre of their sales market lies beyond the frontier, or if the consumption centre of their supply market lies within the frontier.[10] Goods will be exported in the opposite conditions. This is the simple solution of the problem which the theory of comparative costs set itself.[11]

Let us for a moment consider the market network of one particular good. If the individual markets are small and the countries large, part of the market centres must clearly lie within the frontiers and part beyond. This means that the same good is both imported and exported, only in different parts of the same country. On the other hand, if the markets of a good are large relatively to the countries concerned and market centres perhaps even concentrated within a narrow space, such as is often the case for mineral resources, then certain countries typically export, and others typically import that good.

To my knowledge, it was Alfred Weber who was the first to build location theory into the theory of international trade, at least in outline. He did so in an excellent paper,[12] which curiously enough has received little attention. Even though the shortcomings of Weber's solution are obvious today, it is to him that belongs the credit for having taken the first decisive step beyond the theory of comparative costs. Next came Furlan,[13] with a study of particular

[10] The question is thus no longer whether any particular good will be produced in country *A* or *B*. The question is whether the sales markets of given production centres of a good reach into the neighbouring country and whether at least part of the foreign market can be acquired.

[11] The difference in the two views does not, of course, appear with equal force in all cases. For instance, it can be deduced from both solutions that the ratio of a country's foreign trade to its national income as a rule falls as the country's size increases. By contrast, only the new theory shows a country's share in other countries' foreign trade to fall in proportion to distance, whereas the theory of comparative costs would rather lead one to expect the contrary, since neighbouring countries are too similar to each other.

[12] Alfred Weber, "Die Standortslehre und die Handelspolitik", *Archiv für Sozialwissenschaft und Sozialpolitik*, Vol. 32, 1911, p. 667 *et seq.*

[13] V. Furlan, "Die Standortsprobleme in der Volks- und Weltwirtschaftslehre", *Weltwirtschaftliches Archiv*, Vol. 2, 1913 II, p. 1 *et seq.*

more theoretical problems. Later Ohlin[14] took up Weber's approach in a much broader, and perhaps for that reason less precise presentation. Ohlin's solution is not so radical, partly because he did not really break away from the theory of trade between countries (the "regions" he constructs are essentially no more than truncated countries[15]), and partly because he did not penetrate deeply enough into location theory. Ohlin gives the impression of not having completely overcome the prevailing theory's characteristic failure to think in terms of space. It was of course that failure that was the ultimate reason for the faulty application of the theory of comparative costs to the problem under review. Only by neglecting differences of distance between countries, and above all the spatial extension of countries themselves, *i.e.* by regarding the latter as mere points, could that theory, which is quite adequate in every other respect, be applied to international trade. The theory's model of the re-establishment of equilibrium after disturbance is also largely conditioned by the absence of any real notions of space.

2. *Disturbance of Equilibrium*

Short-run Disturbances

The transfer problem deals with the adjustment to temporary disturbances in the equilibrium of international trade. The solution proffered so far rests on the assumption that there exist national price levels and that they have an important transfer function. Let us suppose that Germany had to pay for additional imports from France; the argument was that, to make the transfer possible, the German price level must fall and the French one rise. If this is meant to be a description of the necessary price movements, it is wrong on two counts. First, it is most unlikely that the dividing line between falling and rising prices should coincide with the political frontier. Secondly, it is unlikely that the French price level should rise along this dividing line like a sheer cliff towering without transition above the plain of German prices. It is not enough to say, by way of excuse, that the expression "the German price level" is dictated by reasons of linguistic economy and that more refined analysis dissects the general price level into sectional ones, such as those of import, export and domestic goods. This may be allowed to pass for certain secondary purposes, but with the present state of our knowledge such unrealistic simplifications are not admissible for the theory of foreign trade proper, which, after all, should approximate as closely as possible to reality. We shall certainly not neglect the concept of price levels. But there is no point in always stressing only the incidental circumstance that certain price movements which facilitate transfer are indeed shifts in price levels; it must at long last be made clear that the price movements which are the necessary condition of transfer are of a different nature.

14 B. Ohlin, "Interregional and International Trade", *Harvard Economic Studies*, Vol. 39, 1933.

15 For a study of the theoretical structure of real economic spaces see A. Lösch, "The Nature of Economic Regions", *Southern Economic Journal*, 1938, p. 71 *et seq.* (A lecture given in December 1937 to the Econometric Society at Atlantic City).

a) *Identical Currency.* — Let us for the time being assume the same conditions that the neo-classical theory sought to explain. It is then not governments, but individuals, who make economic payments to each other. Precise analysis must therefore penetrate to the final economic units which are directly involved in the payment under consideration. Nor may the environment be summarily introduced by way of an *a priori* generalization such as "Germans and Frenchmen"; the intimacy of the business relations affecting the individuals concerned must also be considered. For example, let us suppose for a moment that Germany and France form one single economic area, in which the *Reichsmark* is the currency unit. A buyer *B* in Stuttgart, who has so far always bought his soap from a local seller *S*, suddenly orders 1000 *Marks'* worth of soap from Paris. The result will be a shortfall of purchasing power in the amount of RM 1000 in Stuttgart, and this will exert pressure on Stuttgart prices until the next economic period. From the original centre a price-reducing wave will issue forth in all directions[16] and carry with it the purchasing power deficiency. If the amounts involved are small, the wave peters out in space. But to say that is to minimize the question of the fate of the wave, not to solve it. It is true that the wave flattens as it spreads; the purchasing power deficiency is split up into negligible particles, but in principle it persists in its full measure until it meets the increase in purchasing power emanating from Paris.

This description encompasses three essential processes into which we must enquire: 1) that the wave of falling prices moves away from its origin; 2) that, in so doing, it weakens; 3) that it nevertheless does not disappear until it meets with the corresponding high tide. Let us assume additional buyers B', B'' etc., and additional sellers S', S'' etc., each of whom had in each period so far sold 1000 units of a good (it need not be soap) at a price of RM 1 each. So as not to be left with the soap he has so far always sold to *B*, *S* reduces his price by half. B' is thereby induced to buy the whole lot, so that *S* suffers only half the shortfall in demand. He is, however, still short of RM 500 and thus obliged to buy that much less from the producer *P*. Should B' and *P* be resident outside Stuttgart, the money stock in Stuttgart will now be restored: *B* had sent RM 1000 to Paris, imports (from *P*) have now been diminished by RM 500 and exports (to B') increased by an equal amount. Provided that in the next period *B* no longer buys in Paris but again locally, everything will have returned to normal and the whole episode will be closed so far as Stuttgart is concerned. Not so elsewhere. We have already seen that RM 500 of purchasing power deficiency was passed on to $P.B'$, in his turn, was able to purchase more from *S* in Stuttgart only by restricting his purchases elsewhere, say from S'. The second RM 500 of purchasing power deficiency thus hits S', who, to defend himself at least in part, reduces his price. Since, however, the deficiency which threatens him is smaller, he

16 Haberler (*op. cit.* in German p. 50, in English pp. 55/56) does occasionally mention this phenomenon, but this is not enough, since it is the essential process rather than an ephemeral by-product.

reduces his price less than *S* did. Let us assume that by selling at RM 0.60, *S'* is able to pass on RM 300 of the shortfall to S''. The remaining loss to *S'* will be RM 200, and it is by this amount that he restricts his purchases from *P'*. The episode is thus closed for *S'* too. We see that the demand deficiency gets more and more distributed with each transaction (for *S* it was RM 1000, for *S'* 500, for *S''* 300), so that the price reductions necessary for at least partial relief get smaller and smaller. But we also see that in spite of such atomization the total deficiency is still RM 1000 — borne, at the moment at which our analysis stopped, to the extent of RM 500 by *P*, RM 200 by *P'* and RM 300 by *S''*. It is, furthermore, easy to see that with each transaction the price-reducing wave moves on the average further away from Stuttgart. *S'*, who himself lives outside Stuttgart, has a better chance of selling his stock at reduced prices in the direction away from Stuttgart, because in Stuttgart itself he would meet the competition of the even lower prices of *S*, etc.

If the Paris soap producer to whom an extra RM 1000 of purchasing power has accrued, were willing to use this money to buy the soap with which *S* has been left, the real transfer, *i.e.* the balancing of the increase and the shortfall of purchasing power, would take place without any price movements at all. It is however, more likely that the Parisian and his trading partners will, in the first instance, buy only part of the goods they want from *S* and his trading partners, since even after the price reduction only few Stuttgart sales markets will reach anywhere near Paris. But the further we move in the chain of transactions away from Paris and Stuttgart, that is to say the closer the increase and the shortfall in purchasing power move to each other geographically and the more markets are therefore affected by both waves simultaneously, the more likely it becomes that settlement will take place without large price movements. Finally, there is, somewhere, a point *Z*, where the last ripples of the price-reducing wave emanating from Stuttgart and the price-raising wave emanating from Paris meet. At this point the last real transfer is completed without any price movement, here the whole disturbance is finally liquidated. There can be no doubt that *Z* exists, however long may be the chain of devolutions leading to it.[17]

Where is *Z* situated? If conditions were the same all over the world, the geometrical locus of final settlement would be not a point, but the meridian half-way between Paris and Stuttgart. It is here that the final real transfer would take place (at unchanged prices), provided it had not already taken place (at reduced prices) before high and low tide reached the meridian. They reach it first between the two cities. However, if settlement is reached there (say in Lorraine) while normal conditions have long returned to Paris and Stuttgart, the uncancelled parts of the low tide (and of the high tide) are still on the move, in the land of the Eskimos or of the Bushmen. The ripples become larger and larger, and their intersection points with the meridian

[17] It is even conceivable that small remnants of both waves may run through each other and may not cancel out until some later meeting.

circle the world in both directions, until the last transfer takes place at the antipodes of the first point of contact. Thus the price waves are propagated from the centres of origin of the increase and the deficiency of purchasing power, each wave covering half the world, until they finally disappear completely and painlessly along the seam of the two halves.

In reality, the areas of rising and of falling prices, and their dividing line, will have an irregular shape. This shape is determined not by outside factors, but by the very processes described. It may, of course, be of some interest to know what non-economic spaces are mainly affected by the price movement. As a citizen, the Stuttgart merchant has perhaps caused a fall in German average prices, as a Protestant cheapened the territory of the Lutheran as against that of the Catholic Church, as a dweller to the right of the Rhine depressed cisrhenane prices in relation to transrhenane ones. His action affects all the groups of which he forms part, but it will reduce the statistical average of prices only in those which are mainly located in the area of falling prices. We may, for instance, speak of a German price fall only if the national territory fulfils this condition. And we may regard any German price fall as the essential phenomenon of the process only if the nuclear area of the price fall lies mainly within Germany. Now, in most cases of international exchange it is hardly likely that a particular price movement should encompass one country completely and, in substance, exclusively. This could happen if international business were transacted between the centres of more or less circular countries. But in reality, the average German for instance, just as the average Frenchman, lives more than half-way away from the centre of his country. The concentric ripples emanating from his place of residence will, therefore, reach the frontier in one direction long before they reach his country's centre in the other. None the less, in countries of fairly compact shape and even population density,[18] it is the rule for changes in the statistical average of prices to have the same tendency as the price wave originating in that country. The reason is that, even though large parts of the wave may sweep across other countries and even though large parts of the first country may be affected by the opposite wave, the more important part of a wave's operating area will generally lie in its country of origin, and the major part of its country of origin in the operating area of the wave.

b) *Different Currencies.* — Do these circumstances change if we introduce currency differences, which are often regarded as the special feature peculiar to international trade? In my view, all that happens is that more prominence is gained by a process which can be observed within one and the same currency area, too, if the effects of bank credit are taken into account. This process is an initial uniform accentuation of the price movements within the entire banking area, or in our present case currency area, however much or little it may otherwise have to do with the shifts in purchasing power. This accentuation varies in degree according to the currency structure; it is weakest in

[18] Not in countries like Canada or Chile.

the case of common currencies, and grows in strength through partially to totally separate currencies.

Let us first consider the case of partially separate currencies. A gold currency country has a certain stock of world money (gold), on which is based a larger circulation of notes and an even larger one of credit. Payment from Stuttgart to Paris will in the first instance be made in gold. Thereupon the usual mechanism comes into play: the national bank raises the discount rate, note circulation and even more so bank credits contract by an amount far exceeding that originally transferred. Throughout Germany prices fall well below the level which would correspond to the mere purchasing power deficiency. The general price fall reinforces the locally varying price fall due to demand contraction, and causes the real transfer to take place rather quickly. The smaller is the customary cover for note circulation and bank credit, the sharper will be the price fall and hence the larger the additional export occasioned by the same gold payment.[19] Thus the lower the gold cover ratio, the less of the RM 1000 will actually have to be paid in gold; the rest is immediately transferred in goods, thanks to the double price fall caused by the purchasing power deficiency and the higher discount rate. Let us suppose that of the RM 1000, 200 are transferred in gold and 800 in goods. So long as the German gold is in France, and German prices hence remain lower, French demand for German goods will continue. As soon as another 200 *Marks'* worth of German goods have been sold to France, the German gold most flow back in payment. The two price levels return to normal, the transfer is completed for the moment. If the gold cover ratio is zero, *i.e.* if we have a pure paper currency, no gold at all crosses the frontier, of course; on the other hand the price fall (this time in the form of a fall in the exchange rate[20]) is so large that the whole amount is immediately transferred in goods. It would seem, therefore, that even in the absence of exchange control every currency community constitutes also a transfer community, whose members automatically render each other transfer assistance. Must we conclude that, say, East Prussia, which would have felt hardly any repercussions of the Stuttgart price fall so long as only one currency was involved, would—apparently quite unjustly—have to bear its full share of the transfer and its additional costs as soon as currencies are different?

In the first instance, the answer is yes. But this is not the whole story. The Stuttgart price-reducing wave is still on the move and will so continue until it meets the Paris price flood. Low tide and high tide are cancelled out by the final real transfer. So far as Germany is concerned, the transfer happens when the price-reducing wave crosses the frontier. But the German export surplus exceeds the necessary extent, since provisional transfer has already taken place. More gold (French gold this time) flows from France to Germany. The French price level falls, the German one rises as much above normal as it had first fallen below. Hence as many French goods move to Germany as German goods had moved to France in the provisional transfer. The French gold returns home in payment. Money stock and prices are now normal again everywhere. The transfer is finally completed.[21] The terms of trade in this rebound are just the opposite of that in the provisional transfer and all the former transfer losses are now made good by corresponding transfer gains. In the end, even when currencies are different, any particular place feels the real effects of the transfer only to the same degree as it would have done also with equality of currency[22,23]. The sole difference between the cases of different and common currency is that, where currencies are different, the transfer takes place in goods at once, whereas it is distributed over a longer period in the case of partially or wholly common currencies. Hence the price changes are sharper and shorter in the first case, and weaker but more durable in the intermediate, and even more so in the third case. In the case of different currencies the price change has two components, which must be distinguished sharply: the price waves proper and displacements in the price level due to the fact that the currency community effects a provisional real transfer by common efforts, through transfer assistance in the form of changes in the discount rate and the rate of exchange. The final real transfer in the meeting of the purchasing power waves is then greater than necessary, a rebound takes place and its opposite effects cancel the results of the transfer assistance.[24]

19 It is quite a different matter that the price reduction necessary for the achievement of the same additional export need be all the smaller, the larger is the country, or rather its output.

20 Whatever the practical differences, inside the country, between a fall in the average price level and one in the exchange rate, it all comes to the same thing relative to the foreign country.

21 It is perhaps even easier to understand the corresponding process when currencies are completely separate. If Stuttgart has a demand for an additional RM 1000 of foreign exchange, the German rate of exchange falls and raises French demand for German goods by RM 1000 (provisional real transfer). The rate of exchange then returns to its former level. Foreign exchange bought with *Reichsmark* flows to Stuttgart, which sends it to Paris (nominal transfer). On the average, German prices (in relation to abroad as well) regain their former level, though of course they are below normal in the area of the price ebb (where the RM 1000 are missing) and above normal in the rest of Germany (over the whole territory of which the RM 1000 are distributed). As soon as the two price waves balance each other (final real transfer), French demand for German currency rises by RM 1000. The German rate of exchange rises, Germany buys additional goods from France for RM 1000 (rebound). The bills France thus obtains are used to pay for the second import from Germany, which occurs when the price waves balance. These bills in the hands of German exporters in the frontier region, are met by the German importers with the RM 1000 cash which originally had left Stuttgart. The price wave is cancelled out.

22 Things are thus not as described by M. Palyi in his introduction to Taussig's classical work on international trade: "... that, so far as international trade is concerned, in the capitalist reality things come to pass as if exchange took place between countries as a whole" (F. W. Taussig, *Theorie der Internationalen Wirtschaftsbeziehungen*, German edition edited and with additions by M. Palyi, Leipzig 1929, p. X).

23 It follows, incidentally, that with paper currency the rate of exchange merely fluctuates around a constant level, so long as discount policy is left to react without autonomous changes on the money side. It follows further that with gold currency it is desirable to effect provisional transfer through short-term capital movements rather than through price shifts with their awkward side effects.

24 To that extent I am bound to agree retrospectively with Ohlin in the transfer discussion (*cf.* A. Lösch, "Eine Auseinandersetzung über das Transferproblem," *Schmoller's Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft im Deutschen Reich*, Vol. 54, 1930 II, p. 1093 *et seq.*). It is true that some price changes must take place, if only because of the purchasing power displacements; but the so-called secondary price shifts (*ibid.* p. 1097) are not *necessary* for transfer, even though they do in fact happen in the case of different currencies. This does not exclude, however, that the primary price movement can be very large or even unbearably so, if foreign countries bar the entry of German goods. Recently the view that transfer as a rule requires only small price movements is again being reinforced by very thorough theoretical research (F. W. Meyer, "Der Ausgleich der Zahlungsbilanz", *Probleme der theoretischen Nationalökonomie*, ed. by W. Eucken, Jena, 1938).

Long-run Disturbances

a) *Automatic adjustment.* — Continuing disturbances of trade are due to definite shifts in demand and supply, such as may be caused by changes in taste, exhaustion or discovery of deposits and countries, large unilateral payments, tariff increases, varying population growth etc. Such disturbances find expression in persistent deviations[25] of wages or interest rates from the old equilibrium level. They can generally[26] be overcome only through a new combination of the factors of production. Such new combination is achieved by migration of the factors of production.[27] About the direction of these flows all that can be said in general is that they move towards the price peak, or away from the price valley.

It is often mistakenly supposed that inter-area equality of wages and interest rates is the criterion for the establishment of a new equilibrium and hence for the cessation of capital and labour movements. With some qualifications, this is true of interest rates. Within one and the same market area, interest rates should indeed be uniform except for the varying costs of distance. It is the function of capital movements to smooth out the "walls" of the interest funnels (corresponding to the price funnels of ordinary goods) which form around financial centres.[28] But from one financial centre to another, the rate of interest, like the price from one commodity market to another, can fluctuate anywhere within the double costs of distance without inducing a capital flow. Now, the costs of distance may not all be objectively measurable, since they depend to some extent upon the subjective valuation of the risks of distance. Interest rates (including the risk premium) may therefore vary irregularly from place to place even in equilibrium.

As regards wages, their geographical picture gives no indication whatever whether a new state of equilibrium has been reached. Even uniform real wages as between one place and another are no guarantee, since what matters is the highest total utility and not the highest that can be purchased. For the individual this means that he will choose to settle at a place such that the extent to which he might be better off elsewhere does not make up for the costs of a move (including the leaving behind of familiar conditions). This provides no objective criterion of the equilibrium point even for the individual, let alone for the community. More particularly, all wages are unique and not comparable with each other, geographically speaking, and can therefore give no indication of the correct geographical distribution of manpower. It is only where sharp wage differences between two places are appreciated equally by a great number of people, that a uniform migration—decreasing with distance—may set in and cause a regular wage pattern. In most cases all that can be observed is that falling wages cause an outflow, and rising ones an inflow of workers; it can not, in general, be said whence the workers come or whither they go,[29] nor when the migration has established a new equilibrium. Factor movements may, but need not, replace commodity movements.[30] In fact, experience shows that in many, or indeed in most cases migration causes demand shifts[31] in favour of the country of emigration, so that the outflow of factors of production is accompanied by an increase in the export of goods.[32] It is well known that emigrants remain good customers of their home country and even become pacemakers for its exports to other peoples. Similarly, loans are largely used for purchases in the lenders' country, such use often being a condition of the loan itself. Such threefold movements of men, capital and goods all in the same direction are the rule in colonial history. For overpopulated countries the choice is thus not one of "exporting men or goods", but one of sending abroad goods only or men as well. In the second case exports are greatly facilitated, and what really has to be decided is whether to pay the price for this relief, namely loss of population.

b) *Adjustment by intervention*[33]. A government may, in opposition to the equilibrating forces, wish to maintain, impose or avoid a certain combination of factors of production. What distinguishes the economic landscape from the natural one, is the former's continual change. This may go so far that the whole landscape disintegrates, that fields are abandoned, industries find a better location and people move away. But always, and especially in the fortunate cases where economic landscapes coincide with cultural or political ones, there are forces at work tending to prevent such changes. A large part of the battles raging today, for instance, turn around the distintegration or new formation of economic spaces, or around attempts at preventing such disintegration or formation. The desire to leave everything as it is often leads to strangely nebulous objectives, such as to safeguard England's part in world trade, or to help the South in the United States, and such like. In the last-mentioned case, what is meant may be the people, the land or the economic activities, all of which together determine the present face of the South.

25 The duration of a disturbance necessary to provoke migrations is different for labour and capital movements. Even relatively short-run changes (such as occur in the wake of a transfer) may occasion movements of short-term capital, whereas proximity and duration of the disturbances are of much greater significance for labour.

26 Not, *e. g.*, in the case of reparations.

27 Capital movements help to overcome a long-run disturbance, but at the same time cause a short-run disturbance, *i. e.* a transfer problem.

28 I shall furnish statistical proof in my book. [See *The Economics of Location*, p. 461 *et seq.* p. 505 *et seq.* Ed.]

29 Distance is known to play an important part.

30 On the contrary, as Ohlin has well shown, it happens much more often that commodity movements can to some extent replace movements of factors of production.

31 Strictly speaking, demand is not newly directed to the goods of the country of emigration, but part of the demand exercised by the emigrants and by means of the emigrated capital *remains* directed to the country of emigration. What is new in the situation is merely that this demand now comes from abroad and thus leads to export.

32 The more so since it may well happen that the prices of the export goods rise. Emigration on the one hand diminishes the supply of goods produced in the country of emigration, and on the other hand—as shown above—increases the immigration country's demand for those goods. The supply curve shifts to the left and the demand curve to the right, so that the new equilibrium price may well come to lie appreciably higher.

33 This is not intended to cover the immense possibilities of eliminating friction, but rather the deliberate deviations from the results of even an ideally functioning self-regulating economy.

To help then means an attempt at maintaining the association of any two, or even of all three of these factors: people and land ("the South must retain its population"), people and economic activity ("the cotton growers of the old South must be assisted", maybe through their transplantation to the more fertile cotton fields of Texas), or economic activity and land ("the metal industry of the South must be supported"). At its worst, the objective takes the form of wishing to preserve an unique historical combination of people and land and production as a whole: the old people in their old occupations and at the old place ("in the South, negroes shall grow cotton, as they have always done"). Such forcible perpetuation of a combination which was once profitable, and particularly the complete preservation of the old conditions, creates a museum which, like all such institutions, requires considerable maintenance costs (which it may sometimes be worth, for non-economic reasons).

There are other, opposite, cases where the aim is to avoid one particular and in itself profitable combination, even though it may not be possible to prevent other regroupings taking place instead. No more than tariffs hampering the movement of goods (in particular sliding tariffs which obstinately prevent adjustment of short-run disturbances) may be needed to set the factors of production themselves in motion. People and capital leave both the protected country and the country against which the tariff is directed, since both countries suffer from the effects of the tariff. When the effects are very much weaker in the protected country, it may happen that that country attracts increased immigration of people (U.S.A.) or of capital (Canada), according to whether wages or interest rates are high in that country. The country levying the tariff will attract mostly those factors of production which look for employment in the protected industry, while those leaving the country will be recruited among the rest of the economy hit by the tariff, more particularly the export industries. If a country closes itself against the inflow of factors of production, their products will try to enter instead. A country, finally, which defends itself both against the import of goods and against an inflow of manpower *or* capital, risks an outflow of the complementary factor of production.[34] Should, for instance, the United States prevent further European immigration, North American capital will flow to South America to be combined there, though perhaps less advantageously, with the deflected flow of manpower.

Finally—and here public intervention reaches into creative spheres—the State can impose certain new combinations of the three original factors of production for public benefit, perhaps by land reclamation or internal location planning.[35]

[34] Provided, of course, that only one of the factors would have immigrated, and not both, as would be the case in new countries.

[35] The possibility of thus increasing economic success in certain cases derives from the fact that while the free initiative of economic agents guarantees that the economy will function in certain circumstances (this is a great deal, in itself!), it does not guarantee that the results will be those desired. In passing judgement on the system of free enterprise, it should always be recalled that of the two achievements which are claimed for it, namely self-regulation and maximization of the social product, it does, in ideal conditions, attain the first, while the second is not proved even theoretically. The fact that everyone is free to exploit any given situation to this own best advantage, does not exclude the possibility that a change in the overall situation due to outside intervention may improve the chances of the individual, or at any rate the position of the whole economy. It is true that it is an enormously difficult question to know *when* this may happen. In any case, the ideal model of the free economy should not be described as above, but simply in terms of freedom of choice for the individual and self-regulation of the economy, or briefly: liberty and equilibrium.

3. *Why is a Special Theory of International Trade Needed?*

The distinct economic features which, according to the prevailing theory, are separated by frontiers, have been shown not to exist or at any rate to be harmless. National economies have no inner unity, as the theory of comparative costs postulates. Nor is the mobility of the factors of production obstructed by political frontiers as such. Finally, national price levels themselves have only a somewhat doubtful statistical existence and in any case play no necessary part in the transfer mechanism. Contrary to widespread opinion, national currency differences have been shown to be harmless. In so far as the mechanism we described functions without friction, even a common currency does not, in principle, endow "national economies" with economic unity. In essence, the processes of national and international trade are the same.[36]

All these differences resting on the mere existence of the State, which have so far played a prominent part in the theory of international trade, have been shown to be incidental. The economic effects of truly political factors can thus be seen all the more clearly. The political frontier acquires real economic significance only when the State not merely exists and possibly reacts, as is the case with discount policy, but when it takes autonomous action. Tariffs, exchange control and the placing of orders by public authorities arbitrarily curtail the size of foreign markets; conversely, the acquisition of colonies and trading privileges extends the size of domestic markets. Both in turn affect the nature and the location of domestic production. Measures to promote exports or imports may replace the price waves[37] described and may cause foreign trade changes quite different from those which would result in a free economy. Power politics cause areas of common political fortunes to be also areas of common general capital risks, objects or subjects of blockade, etc. Briefly, it is possible and indeed highly likely that public intervention and power politics divert, obstruct or push trade at the political frontier.

Some of these public influences (*e.g.* the effect of tariffs) can easily be explained in terms of the theoretical model elaborated above. Others, such as the elimination of the price mechanism, seem to run counter to all the rules of foreign trade which can be deduced from the free economy. However, there are certain basic circumstances which are independent of the nature of the economic system, and these circumstances condition the behaviour of all economies alike; at least they do so in substance, if not in form. For

[36] It is, however, not my concern to apply the theory of international trade to domestic trade, as has often been done. On the contrary, I am deducing from domestic trade laws which are valid for international trade as well.

[37] In a planned authoritarian economy the government assumes the role which is played by prices in a free economy. *Cf.* Ch. R. Whittlesey, "Governmental Controls and the Theory of International Trade and Finance", *Quarterly Journal of Economics*, Vol. 51, 1936/37, p. 90 *et seq.*

instance, in a free economy an increase in exports is achieved by price reduction; if domestic prices are fixed, then export subsidies must be increased. Another example: a foreign trade monopoly, in contrast to an individual entrepreneur, can extend its sales markets as far as it wishes, but that does not mean that it will be immune against the effects of distance. There is always a loss involved in supplying too distant buyers; the only difference is that such dumping losses look less distasteful when they can be socialized. Here we have a feature truly peculiar to public intervention. The latter can do what common currency cannot do, namely fuse the economy within the national frontier into a community with common fortunes.

All these phenomena do not happen in international trade only. The main reason why a special theory of international trade has survived all attacks to this day, probably lies in the fact that the theory of trade as such looks most attractive in this garb. Processes of international trade raise incomparably greater interest than do the fully analogous processes of domestic trade.

III. What Remains of the Classical Theory?

Neo-classical theory has either failed to solve the three basic problems of international trade or the proposed solutions are partly untenable and partly inexact. The combination problem has not been solved at all. The explanation of the international division of labour appears untenable. And the transfer problem has, at best, been treated without precision. To go into this last point in detail: The classical theory's statements on the form and extent of price movements are, strictly speaking, not correct. First of all price movements do not, in essence, generally take the form of a general rise or fall, like the rise or fall of a water level. Where fluctuating exchange rates or central credit policy do temporarily produce such an effect, it is later necessarily cancelled, with all its results, by a rebound movement. The *necessary* price movement, on the contrary, takes the form of a price wave moving outwards from its origin or, in the case of continuing disturbances, of a gradually declining price pattern.[38] Secondly, the areas covered by these price movements do not normally coincide with political areas. It follows that prices in different parts of the same country must be expected to move in opposite directions, though it is true that the average of the price movements may often accord with the classical theory. In its time, the classical approach was a great advance in knowledge. But it was only a first approximation to reality, a rule of thumb. At best it described what happened *on the average*. Now we have to show the details of what goes on. If physicists today examine to their profit the delicate processes behind the crude laws of classical mechanics, so we, too, can gain by penetrating beyond calculated averages to the meaningful differences of reality. We need to know all the more about them, the more we guide the economy from unruly growth to conscious planning. The classical view is engaging by its simplicity, but if economic policy were to stop there, it would be like a hat manufacturer who makes hats of only one size, namely to fit the average head.

As in the case of the price level, so analysis of different currency systems, of different mobility of the factors of production, of natural differences between countries and the very definition of world trade goods, also reveals gradual rather than sharp transitions. Live and real individuality takes the place of the outdated auxiliary view of uniform mass phenomena. No longer may we simply consider whole countries as economic units. Instead of treating them as points, we now insert them into our argument in their full territorial extension and manifoldness. We take space seriously.

38 Haberler, too, (*loc. cit.* p. 64 *et seq.*) uses this expression occasionally, but obviously in another sense. (Editors' note: The German expression used by the author and by Haberler, is *Preisgefälle*; the English rendering in *The Theory of International Trade*, p. 74 *et seq.*, *price discrepancies*, does not, as the German does, convey the notion of gradual decline, as of a river bed). He means those price differences which rest only on frictions and can therefore not last, or indeed cannot occur at all in an ideal market.