

Angell's Theory of International Prices

Author(s): Jacob Viner

Source: *Journal of Political Economy*, Oct., 1926, Vol. 34, No. 5 (Oct., 1926), pp. 597-623

Published by: The University of Chicago Press

Stable URL: <http://www.jstor.com/stable/1820262>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



The University of Chicago Press is collaborating with JSTOR to digitize, preserve and extend access to *Journal of Political Economy*

JSTOR

ANGELL'S *THEORY OF INTERNATIONAL PRICES*

I

So intimate has been the contact, at each stage of their development, between the theory of international trade and economic theory in general, that exploration in the history of the theory of international trade is well worth while, for the sake of general economic theory, as well as for its own sake. Up to the present, however, works on the historical side of the theory of international trade which were at once scholarly and comprehensive have been completely lacking. Beyond cursory and often ununderstanding allusions in the general treatises on the history of economic thought, and a few monographs, mostly by German scholars, on particular writers or restricted periods, nothing worthy of note dealing with the history of the theory of international trade was available until the appearance of the book which is the subject of the present review.¹

Angell's study, though comprehensive, is not complete. Tariff theory; the character, the measurement, and the division of the gains from international trade; the relation of the theory of international values to general psychological theories of economic value, whether "subjective cost" theories, or "utility" theories, or eclectic combinations thereof—all of these are either deliberately excluded from the scope of the study or are summarily disposed of. Foreign exchange theory is dealt with only in its most general and "theoretical" aspects. There is no discussion of the problems connected with the measurement of international balances, or of the differences between the various types of "balances." But what remains is still of impressive proportions. Angell, moreover, makes his examination of the history of the theory a preliminary to an appraisal of current doc-

¹ J. W. Angell, *The Theory of International Prices*, Wells Prize Essay, published as Vol. XXVIII of the "Harvard Economic Series" (Cambridge: Harvard University Press, 1926. Pp. xiv + 571).

trines and an ambitious "constructive" formulation of his own position. For good measure, a great deal of history of monetary theory proper is thrown in. The historical portions of the book deal, at times in considerable detail, with the relevant literature in English, French, German, and Italian, from the mercantilist period to the present day. With no important exception, Angell refers to the original sources for each writer whom he mentions. A minor criticism which I would offer, in fact, is the scanty reference, even in the bibliography, to the historical work in the field done by other writers, and especially German writers. Angell has set himself a task of major dimensions, one of the kind which it is the fashion for older men to dissuade young economists from undertaking until age has brought maturity, but which demands for its accomplishment a degree of energy and venturesomeness not likely to be accompaniments of gray hair. This book is an achievement of a high order. It is not by any means a perfect book, but it is distinctly a big, an able, and a valuable one. If in the succeeding pages I shall have much to say of its defects, I feel justified in doing so because its very merits, which are certain to make it a standard source of reference in its field, warrant a more detailed and more exacting appraisal than would be appropriate for a less worthy study.

The specifically historical portions of the book comprise some 360 pages, and Angell's formulation of his own theory, together with appendixes presenting secondary statistical material and an excellent bibliography of some 20 pages, take another 200 pages. It is impossible within the limits of even as lengthy a review as this one to deal in detail with all of Angell's material. Aside from general comments, therefore, I shall deal only with phases of his historical and constructive doctrines with which I more or less seriously disagree, and shall pass over without further mention the great mass of historical matter to which I can fully subscribe or which I accept on faith, as well as a certain amount of historical analysis and of points of historical priority or interpretation about which I have doubts. I reserve, however, for some future occasion a detailed examination of Angell's interesting and somewhat novel formulation of the

mechanism of adjustment of international balances, because the issues which it raises in my mind are largely questions of fact, not adequately answered by such statistical investigations as have as yet been made.

II

The account which Angell gives of the historical development of the theory of international trade is a valuable contribution to the literature of *dogmengeschichte*. He has, within the limits which he has himself set to the range of his inquiry, traced the major lines of development and set forth the particular contributions of the more important writers. In making known the abundant and rich Continental literature in the field he has rendered an especially valuable service to English-speaking economists, who have frequently taken for granted that there existed no such literature worthy of mention. Except for the last few years, with respect to which Angell concedes that his study has not been complete, I know of very few instances in which contributions of any importance have been overlooked. We now have what we did not have before, a substantially complete history of those phases of the theory of international trade (and of related monetary theory since Adam Smith) which come within the range of Angell's investigation. Such general criticisms of the historical portion as I feel impelled to make are not serious. The mode of organization involves a good deal of repetition, and the interpretation of a particular writer's doctrine sometimes undergoes slight mutations at each repetition. There is at times inadequate caution in the exercise of the hazardous pursuit of the discovery of absolute priorities of doctrine. The reader is often left in immediate doubt and sometimes left in ultimate doubt as to whether Angell accepts or rejects a particular bit of doctrine. The almost complete absence of direct quotations and the extreme compression in the presentation of other writers' doctrines at times impose upon the reader an unduly onerous compulsion of accepting Angell's interpretations sight unseen, or else referring to an original source which is often rare and inaccessible. In general, I feel that Angell's treatment of the English classical school is unduly harsh and unsympa-

thetic, whereas his interpretations of the Continental writers are somewhat overgenerous.

One defect of greater importance in Angell's method of appraisal of the doctrines of particular writers has unfortunate consequences on the tone in which he presents his own formulation. With the possible exception of the writings of Bastable, the literature of the theory of international trade consists of only three kinds of writings: (1) controversial tracts dealing with particular concrete problems of the moment and marked by the dogmatic and unqualified exposition characteristic of such literature; (2) academic discussions of specific points or details of theory; (3) academic generalizations more comprehensive in scope but necessarily more limited in their detail and their concreteness because of the conditions imposed by the fact that they are relatively small portions of general economic treatises. Though on specific points particular authors may have attempted to carry through their analysis to the ultimate concrete detail of immediate relevance, there exists no work on the theory of international trade which has been written on a scale sufficient to permit of such procedure for the theory as a whole. Angell treats a literature of fragments as if each writer dealt with had had the desire and the opportunity to present a formulation complete to the last detail of his theory. He often makes it appear that what previous writers did not say, they did not know, whereas they may not have had the opportunity to say it, or may have regarded it as obvious. There follow some detailed criticisms of Angell's handling of particular items in the history of the theory, and especially of his presentation of Ricardo's doctrines, which seems to me inaccurate in many respects.

Angell calls attention to the recognition by Petty (*ca.* 1671) of "invisible" items in the balance of international transactions as not being common at that time (p. 16).² In Mun's *England's Treasure by Foreign Trade*, published in 1664 but probably written about 1630, the final chapter presents a long list, which is not seriously lacking in completeness, of the invisible items

² All page references in the text are to Angell. Page references to other writers are made in footnotes.

which must be taken into account in striking the international balance. As Mun's book was familiar to the later mercantilists, it may be taken for granted that recognition of the invisible items was common after its publication, if not before. One writer³ has alleged, though with scanty supporting evidence, that the earlier the writer, the more explicit the reference to the invisible items because of their greater importance. Another writer has shown that references to invisible items were common in writers prior to Petty, and that if these items were not emphasized it was not because of ignorance of their existence, but because of their supposed minor importance at the time.⁴ The term "balance of trade," in fact, has often been used in the past, and is still often used, to signify the whole balance of international transactions and not merely the commodity balance of trade.

Angell says of a manuscript by De Bacalan (1764) that it "presents the only explicit statement in the French literature until less than a hundred years ago of the equilibrium tendency inherent in the working of the price-gold flow mechanism" (p. 225). Sismondi in 1803 presented an excellent and clear-cut exposition of the equilibrium theory of price changes and specie movements.^{4a}

In Angell's account of Ricardo's monetary doctrines I can find little resemblance to the original, largely the consequence, it appears to me, of too incautious an acceptance of Silberling's⁵ over-critical interpretations. Angell finds Ricardo guilty on several counts of "confusion and even of outright error" (p. 58). He can find in Ricardo no admission of any direct effect of an increase in paper issues on commodity prices. He ascribes to Ricardo the doctrine that an increase in inconvertible paper cur-

³ E. von Heyking, *Zur Geschichte der Handelsbilanztheorie* (Berlin, 1880), pp. 19, 20.

⁴ Br. Suviranta, *The Theory of the Balance of Trade in England* (Helsingfors, 1923), pp. 30 ff.

^{4a} J. C. L. Simonde (de Sismondi), *De La Richesse Commerciale* (Geneva, 1803), Vol. I, chap. v.

⁵ See N. J. Silberling, "Financial and Monetary Policy of Great Britain during the Napoleonic Wars," *Quarterly Journal of Economics*, XXXVIII, 421 ff.

rency affects prices only through an intermediate (i.e., prior?) effect on the relative value of paper and gold, and that it is the depreciation in the value of paper in terms of specie or bullion which causes the increase in prices. But the one passage cited from Ricardo to support this interpretation—"the effect produced on prices by the depreciation . . . amounts to the difference between the market and the mint price of gold"⁶—can reasonably be given another interpretation. Though Ricardo generally uses "depreciation" to mean the premium of coin over paper, in this sentence he appears to use it, in a sense quite common to other writers then and since, as meaning the excessive *issue* of paper which has "depreciation" in Ricardo's usual sense as one of its major consequences. There are, moreover, literally dozens of passages in Ricardo's writings and in his evidence before committees in which he speaks of the effect of increased issues of paper on commodity prices, and without any suggestion that I can find that such effect is exercised intermediately through a prior effect on the relative value of paper and gold. In at least one passage Ricardo expressly denies any difference between the mode of operation of an increase of paper on commodity prices, on the one hand, and on the price of bullion and the foreign exchanges on the other:

When the circulation consists wholly of paper, any increase in its quantity will raise the money price of bullion without lowering its value, *in the same manner*, and in the same proportion, as it will raise the prices of other commodities, and for the same reason will lower the foreign exchanges.⁷

Ricardo, it is true, emphasized the gold premium more than the changes in commodity prices in his discussion of the effects of the increased issues of paper by the Bank of England, but his reasons for so doing were clear enough. He pointed out that changes in price levels could be due to other causes than excessive issues of paper, whereas he contended that a premium on gold could not. The premium on gold was, therefore, an exact measure of the extent of depreciation, whereas the rise in prices

⁶ From "Reply to Mr. Bosanquet," pp. 134-35 in Gonner's edition of Ricardo's *Essays*.

⁷ "High Price of Bullion," p. 13, n., in Gonner's edition; italics mine.

was not. Ricardo in his *Essays* was not trying to set forth in all its ramifications a theory either of international trade or of the value of money. His one purpose was to convict the paper-issue policy of the Bank of England of responsibility for all of the existing premium on gold. Here, as elsewhere, Angell deals with a fragment as if it purported to be a complete whole.

Angell charges Ricardo with the further error, "taken over from the earlier literature," of contending that the contraction of an inconvertible paper issue will necessarily induce the importation of gold, and that an increase in inconvertible paper money will cause the disappearance of bullion, and alleges that the error consists of a confusion between the conditions under convertible and under inconvertible paper currencies, respectively (p. 58). Angell does not explain in just what the error consists, but Silberling, from whom the criticism is obviously borrowed, makes clear what is in issue:

Here [in Ricardo] we have signs of faulty reasoning in the implication that contracting an inconvertible currency will attract specie. It is true that reducing the volume of a convertible currency will tend to attract specie . . . just as expansion will tend to expel it. But a partial contraction of inconvertible paper has no effect save to alter the nominal exchange rates, which by their variations obviate the movement of specie.⁸

It is not legal convertibility of the paper currency, but its circulation at par with gold, which is important for the point at issue. An increase in an inconvertible paper currency, when paper still circulates along with and at par with gold, *will* cause an export of gold, and a contraction under these circumstances *will* cause an import of gold, other things remaining the same. Ricardo took great pains to distinguish between the effects of variations in the quantity of paper money when the paper was depreciated and constituted the entire circulation, as compared to when it circulated on a parity with gold. The passages in Ricardo relied upon by Angell to show that Ricardo held that a contraction of an inconvertible paper currency would necessarily lead to an inflow of gold, as definitely as I can locate them, are as follows:

⁸ Silberling, *op. cit.*, p. 422.

. . . . There would be no other remedy for the depreciation of paper, than the Bank withdrawing the superabundant quantity from circulation until the scarcity of circulating medium should so raise its value that it would be at par with gold. It could rise but little above that price, for from that moment importation of gold would commence.⁹

Could our currency be restored to its bullion value by any other means than by a reduction in its quantity, which should raise it to the value of the currencies of other countries; or by the increase of the precious metals, which lower the value of theirs to the level of ours? Why will not the Bank try the experiment by a reduction in the amount of their notes of two or three millions for the short period of three months? If no effects were produced on the price of bullion and the foreign exchange then might their friends boast that the principles of the Bullion Committee were the wild dreams of speculative theorists.¹⁰

. . . . If the Bank were to diminish the quantity of their notes until they had increased their value 15 per cent, the restriction might be safely removed, as there would then be no temptation to export specie.¹¹

Let the Bank be enjoined by Parliament gradually to withdraw to the amount of two or three millions of their notes from circulation, without obliging them, in the first instance, to pay in specie, and we should very soon find that the market price of gold would fall to its mint price of 3*l.* 17*s.* 10½*d.*¹²

These citations demonstrate two things: first that Ricardo maintained that, if carried to a certain point, contraction of the paper issues would result in a return of paper to parity with gold, and if carried beyond that point, it would then, *but only then*, result in an import of bullion; second, that in 1809 Ricardo maintained that a contraction of 2 to 3 millions in the paper issue would be sufficient to return paper to parity with bullion. Ricardo used this figure of 2 to 3 millions, whose smallness Silberling and Angell stress, because it was "the sum which the Bank is supposed to have added to the circulation, over and above the amount which it will easily bear."¹³ In 1809 the paper

⁹ *Three Letters on the Price of Gold*, Hollander, editor, p. 11.

¹⁰ "Reply to Mr. Bosanquet," p. 95 in Gonner.

¹¹ "High Price of Bullion," pp. 26, 27 in Gonner. Ricardo, in the same essay, cites the prevailing effective premium of gold over paper at approximately 15 per cent (£4.10.0 paper = £3.17.10½ gold).

¹² *Three Letters*, p. 14 in Hollander's edition.

¹³ "High Price of Bullion," p. 31 in Gonner.

pound was some 9 per cent below parity with silver, and the total notes outstanding of the Bank of England were 18.7 millions. Ricardo was maintaining, therefore, that a reduction in Bank of England note issue of from 10.5 to 16 per cent would wipe out a depreciation, as compared with silver, of 9 per cent. If Ricardo's collateral argument, that the volume of note issue of the country banks was controlled by the volume of note issue of the Bank of England, is accepted, this is, it seems, an adequately conservative expectation. With respect to gold, his estimate of the amount of note contraction necessary for a re-establishment of parity with bullion, at least in its lower limit, seems unduly low, for he speaks of paper's being depreciated nearly 15 per cent in 1809 as compared with gold. But he explicitly says that a contraction of 15 per cent in note issue would be necessary to remove a depreciation of 15 per cent of paper as compared with gold.¹⁴

So also with respect to Angell's (and Silberling's) claim that Ricardo maintained that an increase of an inconvertible paper currency would cause the disappearance of bullion from circulation. Ricardo, on the contrary, expressly and repeatedly maintained that after an inconvertible paper currency was depreciated, no further disappearance of bullion would result. The two passages which Angell cites in support of his claim, make no mention of the disappearance of bullion *after* paper is depreciated.¹⁵ As evidence of Ricardo's true position, I cite the following from many available passages:

When the circulation consists wholly of paper, any increase in its quantity . . . will not occasion the exportation of bullion. . . .¹⁶

There can be no limit to the depreciation which may arise from a constantly increasing quantity of paper. The stimulus which a redundant currency gives to the exportation of the coin has acquired new force, but cannot, as formerly [i.e., when gold was still in circulation and was not at a premium over paper], relieve itself. We have paper money only in circulation, which is necessarily confined to ourselves.¹⁷

¹⁴ Cf. "High Price of Bullion," pp. 57, 58 in Gonner.

¹⁵ "Reply to Mr. Bosanquet," pp. 94, 109-11 in Gonner's edition.

¹⁶ "High Price of Bullion," p. 13 n. in Gonner's edition.

¹⁷ *Ibid.*, p. 24.

The circulation can never be over full. If it be one of gold and silver, any increase in its quantity will be spread over the world. If it be one of paper, it will diffuse itself only in the country where it is issued. Its effects on prices will then be only local and nominal, as a compensation by means of the exchange will be made to foreign purchasers.¹⁸

Angell denies to Ricardo, either for metallic money or for paper currency, the possession of a quantity theory (i.e., of the relation of quantity of money to commodity prices). According to Angell, although Ricardo "is often, and perhaps usually, regarded as a straightforward quantity theorist . . . a study of his writings *other* than the *Principles*, confused and contradictory though they sometimes are, will lead to a somewhat different view" (pp. 59, 60). I cannot find a shred of evidence anywhere in Ricardo's writings that he did not accept a fairly rigid quantity theory of the usual sort, for metallic as for paper or for mixed currencies. Ricardo on a number of occasions stated the quantity theory of money in a form which, if translated into Fisher's notation, asserts that $\frac{M}{PT}$ is a constant, T being implicitly assumed to be a constant, which is as straightforward a quantity theory as can be demanded. I cite, from the writings other than the *Principles*, three expositions of a quantity theory of the usual sort, but there would be no difficulty in multiplying the number of citations several fold:

The [total] value of the circulating medium of every country bears some proportion to the [total] value of the commodities which it circulates. . . . No increase or decrease of its quantity, whether consisting of gold, silver, or paper money, can increase or decrease its value above or below this proportion.¹⁹

That commodities would rise or fall in price, in proportion to the increase or diminution of money, I assume as a fact which is incontrovertible.²⁰

The value of money, then, does not wholly depend upon its absolute quantity, but on its quantity relatively to the payments which it has to accomplish; and the same effects would follow from either of two causes—from increasing the uses for money one-tenth—or from diminishing its quantity one-tenth; for, in either case, its value would rise one-tenth.²¹

¹⁸ *Ibid.*, p. 35.

¹⁹ "High Price of Bullion," pp. 33, 34 in Gonner.

²⁰ "Reply to Mr. Bosanquet," p. 93 n. in Gonner.

²¹ "Proposals for an Economical and Secure Currency," p. 159 in Gonner.

On at least one other point Angell has permitted himself to be led astray by Silberling's curious prejudice against Ricardo. Silberling not only attempts to demonstrate that Ricardo's whole position with respect to the state of the currency during the Bank Restriction was wrong, but he attributes the error to the deliberate pursuit by Ricardo of selfish ends. In 1810, when the paper pound was depreciated, Ricardo advocated the return to the gold standard at the old par through the *gradual* contraction of the note issue of the Bank of England. In 1819, Ricardo again advocated resumption at the original mint price. Silberling, however, finds that there was a "remarkable" change in Ricardo's position between 1810 and 1819. In 1819 the depreciation of paper was only some 4 or 5 per cent.

Had it been more than this small margin in 1819 he [i.e., Ricardo] would have advised "devaluating" the pound to a new level, rather than deflation and par resumption. Having become a landed country gentleman, Ricardo now hesitated to advocate a policy which would have reacted to the disadvantage of the agricultural interests.²²

That there had been a significant change in Ricardo's position between 1810 and 1819, that Ricardo was hesitant in recommending resumption at mint par in 1819, and that his acquisition of a landed estate was significant in connection with this change of attitude, Angell also asserts, though in more restrained terms (p. 56 n.). Both writers support their position by citations to Ricardo's evidence before the Commons Committee on Bank Resumption of 1819. I have carefully examined Ricardo's evidence before this Committee, and I cannot find in it anything which supports these views. Ricardo urged resumption strongly and unqualifiedly, and I have not found any reference to what his recommendation would have been if the depreciation of paper had been 6 or 7 per cent, instead of 5 per cent.²³ Ricardo, it is true, did concede, in answer to a question, that "undoubtedly there are cases in which I think the remedy [resumption at par] would be worse than the disease," but he added, "this does

²² Silberling, *op. cit.*, pp. 437-38.

²³ Ricardo's evidence is on pp. 133-42; 227-31 of the Commons Committee's *Report*, 1819.

not appear to me to be one of that sort,"²⁴ and he did not define the circumstances under which he would not support par resumption. He stated that he would have advocated continuation of specie payments under the conditions prevalent in 1797 even in the face of signs of an impending panic.²⁵ In his evidence before the Lords' Committee of the same year, he also advocated par resumption without any reservations or qualifications that I have been able to find in the Minutes of Evidence.²⁶ But in his essay of 1822, "On Protection to Agriculture," to which neither Silberling nor Angell refers, Ricardo further discusses the question. Here also there is no indication that he would have supported devaluation if the depreciation had only slightly exceeded 5 per cent, or for that matter, if it amounted to 15 per cent, as in 1810. But he does concede that devaluation would be desirable if paper was depreciated by some 30 per cent, as it had been in 1813 and 1814, though he states that "no measure could have been so monstrous as that which some reproach the House of Commons for not having adopted, namely, of fixing the standard at 5*l.* 10*s.*; that is, in other words, after the currency had regained its value within 5 per cent of gold, under the operation of the bad system, again to have degraded it to 30 per cent below the value of gold."²⁷ But Ricardo was never blind to the consequences of a sharp deflation, and I can find nothing in Ricardo's writings to justify the view that he ever changed his position. Ricardo believed that currencies subject to manipulation and fluctuating price levels were both evils. Devaluation does not seem to have been suggested by anyone until after 1810. If he had had both alternatives, of cash resumption at par and cash resumption at a depreciated value, in mind in 1810, he might have chosen the latter alternative consistently with his position in that year. The absence of intellectual integrity on the part of Ricardo does not appear to have been serious enough to prevent him from opposing protection to agriculture after he had become a landed gentleman!

Angell says that Ricardo held that in case of trade between

²⁴ *Ibid.*, p. 141.

²⁵ Ricardo's evidence is on pp. 184 ff., 196 ff.

²⁶ *Ibid.*, p. 140.

²⁷ Pp. 270 ff. in Gonner.

two countries the benefit from trade with respect to any given commodity, i.e., the whole difference in comparative cost, was confined to one country alone, and that it remained for Mill to demonstrate that the benefit was reciprocal (pp. 54 n., 67). That the benefit from trade was mutual was a well-established doctrine at least from the time of Sir Dudley North. Angell does not support his statement by any citations, and unless I have failed to grasp his meaning, it is hard to believe that he could do so. The concept of comparative cost has no meaning except in terms of at least two commodities and two countries. Ricardo's famous arithmetical illustration, translated, without change in its substance, to the form now commonly used, is as follows:²⁸

England	Portugal
100 days labor = 100 cloth	100 days labor = 125 wine
100 days labor = $83\frac{1}{3}$ wine	100 days labor = 111 cloth

In order that all the benefit should go to Portugal, 100 cloth would have to exchange for $83\frac{1}{3}$ wine. In order that all the benefit should go to England, 100 cloth would have to exchange for 112 wine. But Ricardo concludes that English cloth will exchange for Portuguese wine at the rate of 100 cloth for 100 wine. It does seem true, however, that Ricardo establishes the ratio of exchange at a point determined by an arbitrary manipulation of his data.

Angell charges Ricardo with inconsistency (p. 70; cf. p. 88), because he supports the doctrines both that (1) prices of commodities in general, including even those articles "which are common to most countries" can maintain different levels in different countries, and that (2) the international distribution of gold is effected by an automatic process, since the only possible automatic process appears to be one which operates through the tendency of prices to find a common level. But even for internationally traded commodities the costs of carriage may explain persistent and substantial price divergences as between countries, and the tendency toward price equality will still operate to distribute gold, even though it operates only up to the limits set by such costs. I can find no indication in Ricardo that he would support the possibility of a continued divergence in price be-

²⁸ Cf. Ricardo, *Principles*, p. 82 in Everyman edition.

tween two countries of a commodity common to both beyond the limits of the costs involved in transferring the commodity and what is paid for it from one country to the other. On the page in Ricardo's *Principles* following that cited by Angell there appears the following sentence:

Suppose all nations to produce corn, cattle, and coarse clothing only, and that it was by the exportation of such commodities that gold could be obtained from the countries which produced them, or from those who held them in subjection; gold [assumed to originate in England] would naturally be of greater exchangeable value in Poland than in England, on account of the greater expense of sending such a bulky commodity as corn the more distant voyage, and also the greater expense attending the conveying of gold to Poland.²⁹

Angell suggests two different explanations of this alleged contradiction in Ricardo's thinking: first, that he did not think his problem through (p. 70 n.), and second, that he held that specie is distributed, not by the differences in its purchasing power over commodities in the one country as compared to the other, but by the differences in its price in terms of the respective currency units of the two countries (p. 71). He cites, in support of the latter interpretation, this passage from Ricardo: "the currency of any one country can never be much more valuable, *as far as equal quantities of the precious metals are concerned*, than that of another."³⁰ If this passage is to support Angell's argument, it must be interpreted to mean that the currencies of two countries cannot have greatly divergent purchasing power over bullion. In the light of Ricardo's general position, I am convinced that what he meant to convey was that the currency units of two countries, *uniform in their metallic content*, cannot have greatly divergent *general* purchasing power, whether applied to bullion or to commodities. That Ricardo held that commodity prices were the important element in the international distribution of specie it seems to me to be easy to establish beyond all reasonable doubt. The paragraph following the one from which Angell cited the above passage (and such statements are numerous in Ricardo) is as follows:

²⁹ *Principles*, p. 89 in Everyman edition.

³⁰ "High Price of Bullion," p. 6 in Gonner; italics are Angell's.

If in France an ounce of gold were more valuable than in England, and would therefore in France purchase more of any commodity common to both countries, gold would immediately quit England for such purpose, and we should send gold in preference to any thing else, because it would be the cheapest exchangeable commodity in the English market; for if gold be dearer in France than in England, goods must be cheaper; we should not therefore send them from the dear to the cheap market, but, on the contrary, they would come from the cheap to the dear market, and would be exchanged for our gold.³¹

Though he refers to a passage in Mill almost identical with Ricardo's doctrine, Angell (p. 88) expresses uncertainty about Mill's adherence to Ricardo's doctrine that prices do not tend to an absolute world-equality. Mill's position seems to me to be identical with that of Ricardo.

Ricardo confined to disturbances emanating in the currency the "Ricardian" explanation of the adjustment of trade balances to disturbing factors by means of exchange fluctuations, gold movements, and price changes. Thornton, Malthus, Mill, and almost all writers in the classical tradition since, have applied it to all disturbing factors regardless of their origin. Ricardo contended that the trade balance would adjust itself to a crop failure or a subsidy automatically and by an immediate shift in reciprocal demand. Angell concedes that Ricardo was wrong, but he minimizes the significance of the divergence of views. He says that "it is hard to find an essential distinction between the two [doctrines], except in the degree of their effects" (p. 64 n.), and that "the difference between the two views is at most one of degree; they reduce to much the same thing, in terms of the mechanisms of the market" (p. 88 n.; cf. also p. 57 n.). In his own discussion of the mechanism of adjustment of international balances to disturbances not originating in the currency, Angell emphasizes preliminary exchange-rate and price-level changes, phenomena which according to Ricardo would not occur. If Angell's comments are warranted, his whole presentation of his own position with respect to mechanism is a waste of effort, since the differences between Ricardo's doctrine and that of his critics are incomparably greater in extent and significance than those between Angell's doctrine and the doctrine which it attempts to correct.

³¹ *Ibid.*, p. 7.

Angell almost wholly ignores the substantial literature between 1820 and 1850, in which the classical theory of gold movements was supplemented and qualified so as to take account of the developments in the English banking system and in the London money market. He ascribes to a book published by Macleod in 1855 the first recognition "that the discount rate is one of the primary determinants of the foreign exchange rates, and that it may be manipulated in such fashion as to correct the exchanges" (p. 138).³² Elsewhere, he says that it was Tooke, in 1826, who showed for the first time that the Bank rate can be used as a deliberate method of correcting an excessive circulation (p. 72). The process is not purely automatic, and difficult problems are raised by the question of the relationship between the Bank rate of discount and the market rate. In order that there may be manipulation, there must be a manipulator, and many writers prior to and after Macleod have held that in England the Bank of England was the only possible one. But for a long time the Bank officials denied that there could or should be any relationship between exchange rates and their discount policy. Until 1833 the Bank was prohibited by the Usury Act from charging more than 5 per cent, and any control which it could exercise must in times of emergency necessarily have taken the form of rationing of credit. From the foundation of the Bank to 1830 there were not more than four or five occasions on which the Bank rate was changed, and I believe that in each instance the change was from 5 per cent to 4 per cent, or back to 5 per cent. Though in 1833 the Bank was freed from the restrictions of the Usury Act in order that it might more effectively control the exchange rates through its discount rate, it was not until 1844 that it deliberately adopted the policy of such control, and as late as 1848 it was criticized by a Parliamentary Committee for inadequate use of the discount rate as an instrument of control. From 1819 on, if not earlier, discussions of the possibility of control of the exchanges by means of the Bank rate, of the comparative merits of rationing of credit and of variations in the

³² Macleod himself, in characteristic fashion, claimed priority for this idea, and remarked that with it "the theory of credit and paper currency was now complete." *The History of Economics* (London, 1896), p. 145.

discount rate as control devices, and of the relation of exchange and specie movements to the market rate, were common. Among the writers who contributed to this discussion were McCulloch, J. S. Mill, Fullarton, Overstone, Tooke, James Wilson, Norman, Palmer, and especially T. H. Milner.³³

Angell exaggerates the extent to which Mill's formulation of the theory of international trade was lacking in completeness, especially with respect to short-run mechanism. In his account of Mill's doctrines, and in his specific citations to Mill, he appears to overlook chapters xxiii to xxv of Book III of Mill's *Principles*, in which Mill presented important elements of his theory.

III

Angell's formulation of his own theory is couched in terms such as to make it appear that it is in important respects in direct opposition to, or at least inharmonious with, the English classical formulations. It is more detailed, in some respects more concrete and more fully developed and integrated, than the older formulations. But I find little or nothing in it which is not to be found, at least in its basic elements, in the older formulations, except to the extent to which it consists of a specific rejection as unsound of elements in the classical theory. As will

³³ *On the Regulation of Floating Capital, and Freedom of Currency*, London, 1848. Much of the analysis of mechanism in relation to the part played by discount rates, international securities, and specie movements, which Angell first recognizes in later writers, is to be found clearly and forcefully stated in this book. It is not mentioned by Angell.

Worth mention, also, is a small pamphlet which appeared anonymously in 1847, under the significant title, *Suggestions for the Regulation of Discount by the Bank of England*. In it there appears the following passage:

"The rate of discount is always a principal agent relied upon when the Bank deems it necessary to contract its issues or operate on the exchanges. When the issues are redundant, specie becomes comparatively unnecessary; and bullion disappears;—when imports exceed exports, our money must go to pay our debts, whether melted or not; in either case to check the drain, recourse is had to a rise in the rate of discount."

This writer suggested a truly automatic rule, whereby there would be a fixed scale of rates to be applied in a prescribed fashion as the Bank's holdings of bullion changed.

W. Ruland says that the policy of the Bank of England to control the trade balance through its discount rate was known to Friedrich List. (*Die Handelsbilanz* [Berlin, 1897], pp. 56, 57.)

appear later, I believe that the classical theory either stands up well under Angell's criticism, or else that his alternative solutions are not acceptable. The main merit of Angell's formulation consists of a detailed and able integration of monetary theory, the theory of international prices, and the theory of the mechanism of international trade, into a unified and consistent body of doctrine. Though Angell exaggerates the extent to which such integration was lacking in the older formulations, the task had been inadequately attended to by the earlier writers. Like the earlier formulations, however, Angell's is essentially abstract and conceptual in character, and in spite of its repeated invocation of quantitative standards and of second-hand statistical material loosely and sketchily used, is mainly dependent upon its unverified assumptions for such plausibility as it has. Angell is as much a victim of the classical reliance upon crude observation as a satisfactory substitute for systematic investigation of the details of actual process and mechanism as are the rest of us working in this field, even though he rebels at times against the traditional abstractions from the myriad of details. In its general outlines, Angell's theory is a combination of an equilibrium theory of prices of the Walras type, though stated in non-mathematical terms, a modernized monetary theory, and a theory of mechanism which breaks from the traditional theory at some points but adheres to it in its general framework. No theory of the relationship of international prices to basic productive conditions or to subjective satisfaction or cost factors is presented, and in fact Angell denies the possibility of formulating such a theory in satisfactory terms. There follow some criticisms of elements in Angell's negative and positive doctrines, though with consideration of his theory of mechanism reserved, in general, for another occasion.

From a study made by the present writer, Angell cites data showing that interest payments by Canada during a period of great borrowings, 1900 to 1913, amounted to over 40 per cent of the total amount of Canadian borrowings (p. 171). He comments that this shows "how rapidly interest charges begin to catch up with even a large volume of new foreign investment, and how transitory any one shift in the balance of trade must

be." The facts are not especially striking. The larger part of the interest payments made by Canada during this fourteen-year period were on account of borrowings during earlier years, much of it in the eighties or earlier. The total net interest payments on account of new borrowings during the period were less than 15 per cent of the total net new borrowings during the period. In the last year, 1913, when they were at their highest, the net interest payments on account of borrowings since 1900 were only 16 per cent of the net borrowings in that year.³⁴

Angell cites, apparently with approval, the argument attributed to Marshall that a depreciating currency will not only give a temporary bounty to exporters, but will give an *equal* bounty to any other manufacturer, because of the lag of wages behind prices (p. 151; cf. also p. 157). The more rapid rate of depreciation of an expanding currency on the exchange market than in its internal purchasing power results in a bounty to the foreign buyer rather than to the exporter, if the latter sells at the domestic prices in terms of his own country's currency or its equivalent at the current exchange rates. The bounty is in the exchange market, not in the prices in domestic currency of the export goods. If the rise in wages lags behind the rise in internal prices, there results a bounty to the export industries equal to the bounty to the other manufacturers, but this is a bounty distinct from and additional to the bounty to the foreign buyer resulting from the lag of internal prices behind the rise in the price of foreign bills. There are two lags. The exporting manufacturer, or the exporter and the foreign importer combined, benefit from both of them; the producer for the domestic market benefits only from the lag of wages behind internal prices; if he uses imported raw materials, he will be injured by the lag of internal prices behind the price of foreign bills.

Angell accepts "as not open to question" the validity of the relative height of money incomes in the trading countries as a

	Millions
³⁴ Net capital borrowing, 1900 to 1913 inclusive	\$2,408
Net interest payments on these borrowings, 1900 to 1913	352
Net capital borrowings, 1913	528
Net interest payments in 1913 on net borrowings, 1900 to 1913	84
(J. Viner, <i>Canada's Balance of International Indebtedness</i> , pp. 94, 101, 139.)	

proximate measure of gain from foreign trade; the gain consists in the cheapness of the imports in terms of "real costs" to the country with the relatively high money incomes (pp. 104 ff.). But if the gains from trade consist in the advantages accruing as compared to no-trade, neither high money incomes nor cheapness of imports in terms of real costs are proof of great gains. The country A with relatively high money incomes will get its imports at a low real cost, but the excess of the cost at which A could produce them at home over the cost at which it can get them from B may be less than the excess for the low-income country B of the cost at which it could produce its imports as compared to the cost at which it imports them. The measurement of the gain for one country does not require comparison with any elements in the situation in the other trading country. Any objective measure is liable to lead to absurd results, since it may show that the gains from trade are greater than the total volume of imports (as, for instance, any attempt to measure the saving to the United States by obtaining its rubber, hemp, and tin from abroad as compared to the costs of producing the *same* amounts of these products at home). The aggregate gain from foreign trade cannot be measured except in terms of subjective analysis. Even the differential gains can be dealt with by objective concepts only crudely, and in terms of the increments of gain from marginal (small) increments of trade, the gain consisting of the saving in days' labor, materials, etc., by securing the additional imports from abroad as compared to the cost, in the same terms, of producing these additional units at home.

Angell cites with apparent approval an analysis by Schüller of the relationship between money costs and prices (pp. 352 ff.). Schüller maintains, much as does Marshall, that there tend to persist differences in the cost of production between different concerns in the same industry; and explains such persistence as due to the fact that an increase in output (from the same plant?) for the low-cost concern means increased unit costs of transportation for raw materials and finished product, dearer or less skilled labor, higher interest costs, and also, because of the increased output, lower prices for the product. There are implicit in this explanation some untraditional assumptions, such as that

the individual low-cost concern is sufficiently important appreciably to affect the market rates of labor, the area of the market, and the market price for its product, and that either there are no important economies of large-scale production, or that they are external rather than internal. Though under some circumstances the conditions may be as Schüller describes them, his explanation is clearly inapplicable to industries in which none of the concerns are of dominant size and in which most of them are located in close proximity to each other. Why does not the low-cost concern drive out the high-cost concern under these conditions, since the two are subject to uniform transportation, labor, and market conditions after as well as before the former has enlarged its output? A low-cost concern, moreover, will not ordinarily find it difficult to finance an expansion of productive capacity at a low interest cost. Marshall's insistence upon a general aversion to "spoiling the market" as explaining the failure of the low-cost concern to drive out the high-cost one seems more likely to be the sound one.

At another point (p. 380) Angell accepts another argument of Schüller's to the effect that "intermarket price differences distinctly in excess of costs of transportation or other charges are allowed to persist, without correction" by manufacturers, because, if they carry production beyond the point of "maximum" (optimum?) utilization of the existent plant and supplies, costs will rise and profits fall. They therefore keep output down, and refrain from taking advantage of every price discrepancy. First, why not increase plant facilities? Second, the characteristic situation is one in which even existent plant is not employed to maximum capacity, and while such is the case manufacturers will usually be anxious to make export sales even at a price substantially less than that prevailing in a domestic market in which competition is kept on a gentlemanly basis.

Angell argues that there is both a priori reasoning and inductive evidence to support the belief that there is in the long run a substantial similarity in the direction and degree of change of general price levels, under the same monetary standard, in the various trading countries (pp. 388 ff.). His a priori argument,

however, ignores all the factors which may operate to create dissimilar movements, such as changing transportation costs, tariff changes, shifts in reciprocal demands for the important export products of the different countries, relative changes in the basic conditions of production as between the different countries. His inductive evidence consists of an appeal to the index numbers of England, Germany, and the United States. But index numbers are heavily loaded with internationally traded commodities, notoriously the English ones, in which not a single commodity is included which is not an important item of export or import. Index numbers are necessarily constructed from quotations for staple articles, almost all of them raw materials, foodstuffs, and half-manufactured commodities, to the exclusion of immovable property, services, consumers' goods, and retail prices. Evidence from such indices is far from conclusive as to the trends of general price levels. If adequate price indices should show that there has actually been such similarity, it would merely mean that the forces tending to produce dissimilarity have been operating in different directions, and have thus offset each other. There is no necessity that such shall be the case, and the most that can be said a priori is that in the absence of special information there is some degree of probability that the forces which, if working singly, would produce dissimilarity in trend, will when operating in conjunction approximately offset each other. To cite an extreme illustration, if Chilean nitrates were to be wholly replaced by the artificial German product, the a priori probability would be that the movement of prices in Chile from the nineteenth to the twentieth centuries would diverge widely from the general world-movement.

It is not to be denied that important changes in the world-supply of gold, or in the manner of utilization of gold for monetary purposes, will tend to produce similar price trends throughout the commercial world. Violent changes from the side of gold will give the general price situation a decided trend of a substantially uniform character. But there is no a priori necessity that the deviations from the general trend resulting from factors which are not operating uniformly throughout the world

shall be of insignificant proportions.³⁵ In any case, I cannot see why Angell thinks it necessary for the validity of his general theory of international trade that such uniformity of price trend shall prevail.

Angell presents a series of objections against Mill's equation of international demand, some of them derived from other writers. I assume that, since no contrary indication is given, Angell subscribes to all of the criticisms discussed below.

First, international commodities are not directly exchanged against other similar commodities, but against money, so that the pairing of a particular export with a particular import is "impossible in theory, and absurd in practice" (p. 367). Granted, but no economist has presented the equation in terms of single transactions, and when it has been presented in terms of single commodities it has been as a convenient abstraction, on the assumption that no other commodities were exported. Mill, after starting with two countries and two commodities, introduces more commodities and more countries.³⁶ Marshall discusses the equation in terms of composite "bales" of the commodities of each country.³⁷

Angell sets forth as a further difficulty the inability of the equation to deal with service items, and especially capital (pp. 368, 451). Service items involve no special difficulty. The representative "bale" can be made to include services as well as commodities. Capital transactions do, on the surface, present a more real difficulty. In what terms can a demand for foreign loans be equated with a demand for foreign commodities, so as to get a composite demand? It seems to me that the difficulty is not a real one. The demand for a foreign commodity can affect the terms on which the country's trade is carried on only through its effect on the relative supply of, and demand for, foreign bills and the ensuing results on exchange rates, specie movements,

³⁵ Angell does not appeal to quantitative changes in the world-supply of money as a factor in bringing about substantial uniformity in price trends until later, when he states that the coincidence of the secular trends of price levels in different countries "can be accounted for in terms of the effects of changes in the volume of purchasing power and in [on?] general prices" (p. 417).

³⁶ *Principles*, Bk. III, Chap. xviii, § 4.

³⁷ *Money, Credit and Commerce*, p. 157.

bank deposits, relative price levels. All items which enter into the balance of international transactions, regardless of their character, can be equated in terms of demand for, and supply of, foreign bills. The character of the demand schedule for a specific foreign good determines how, under varying circumstances, that particular demand schedule will affect the demand for foreign bills. This holds true in the same way for the demand for foreign capital funds as for the demand for foreign wheat, or for foreign insurance services.

Finally, and here Angell unequivocally adopts the criticism as his own, the equation is indeterminate: "Under certain conditions, an infinite number of ratios may satisfy the equation" (pp. 367, 451 ff.). Let it be granted that there is no one definite point of equilibrium if inelastic demand schedules are involved, and let us confine ourselves, as does Angell, to what is presumed to be under actual conditions the more usual situation of elastic demand.³⁸ Let us also concede to Angell, for what it is worth, that even though there be one point of theoretically stable equilibrium, monopoly conditions or inertia may prevent trade from pushing through to it, concessions wholly consistent with the traditional treatment of the problem. Angell also contends (p. 456 n.) that the variable distribution of transportation costs between the trading countries leads to a further difficulty in sustaining the argument for a definite point of equilibrium. But Angell here reasons as if the division of the transportation costs is determined independently of the basic reciprocal demands of the two countries for each other's products, and on this assumption concludes that, given two countries and two traded commodities and given a single point of stable equilibrium if trade involved no transportation costs, there will nevertheless be as many points of equilibrium, when such costs exist, as there are possible, and independently determined, ratios of division of these costs. The error here is obvious. There is not one equilib-

³⁸ Followers of Mill would not deny that there may be multiple equilibrium under inelastic demand. Mill himself made too great concessions to the possibility of multiple equilibrium. (Cf. Edgeworth, *Papers Relating to Political Economy*, II, 23, 391). The concept of infinite points of equilibrium is too extreme to deserve consideration, so I will assume that Angell means, by "infinite," "multiple" or "indefinitely numerous."

rium of demand for commodities f.o.b. point of export, and another, and independent, determination of the mode of division of the transportation costs. The reciprocal demand curves for the commodities, f.o.b., when adjusted for the transportation costs, give reciprocal demand curves for the commodities delivered. The importers pay the transportation costs in the first instance, but who ultimately bears them (where, in terms of taxation, the final incidence is), depends on the reciprocal play of demand for the commodities *delivered*. Transportation costs do not operate to make the point of equilibrium indeterminate any more than do import duties. As Mill said, who will pay the transportation costs of the traded commodities will depend on "the play of international demand" *for these commodities*.³⁹

Angell maintains that comparative costs do not, of themselves alone, provide a sufficient a priori explanation of the course and terms of trade, and that they become significant only through the mediation of market prices, of actual ratios of exchange (pp. 371 ff.). He seems to regard this as a novel and significant criticism of the classical analysis. The classical theory, of course, assumed that relative prices within each country were determined by comparative labor costs,⁴⁰ and that relative prices between countries were determined by the equation of in-

³⁹ *Principles*, Bk. III, chap. xviii, § 3.

⁴⁰ There were qualifications, however, even before Cairnes, to take some account of non-competing groups within the country. As a particularly important anticipation, in an able writer not referred to by Angell, and who has, with the exception of Seligman, been overlooked by modern students, the following from Longfield is worth quoting:

" . . . The relative wages of labour in one country may vary by a different law from that which is observed in another. In one country, honesty and skill may be rare and high-priced quantities, and add much to the relative wages of the labourer who is required to possess them. In another country, the general comfortable condition of the people may render the labourer most unwilling to encounter severe toil, and a great increase of price may be necessary to induce him to engage in a disagreeable or unhealthy occupation. In this latter country, honesty, and that attentive disposition which quickly produces skill, may be the general qualifications of the people. On this supposition, if no disturbing causes exist, manufactures which require honesty and skill, will exist in the latter country; as the labourers possessing these qualities will sell their labour cheaper in proportion to its productiveness. In these two circumstances all commerce may be said to originate—namely, a difference in the proportion of the productiveness of labour of different kinds, in different countries; and the different scales by

ternational demand, operating through specie flows in such a manner that in each country those products were low in price in which that country had a comparative advantage in real cost of production. Everyone is familiar with arithmetical illustrations which demonstrate the mediation of money and prices in adjusting trade to comparative costs, on the assumption of a rigid labor-cost theory of value. But Angell claims that, even on a labor-cost theory of value, "for some articles specie flows may convert the comparative labor advantage into an absolute price advantage, but for others just the opposite situation will quite certainly appear," if many commodities, instead of only two, enter into trade (p. 373). Unfortunately, I cannot make out the arithmetical illustration which he uses to support this argument. It is possible that it can be demonstrated if the reciprocal demands of the two countries are seriously disproportionate, but there is no indication in the text that this situation is contemplated. In any case, I suspect that the objection would lose whatever validity it has, even on this ground, if the number of countries were multiplied as well as the number of commodities.

Angell does not substitute anything for the comparative-cost doctrine which he rejects. He contents himself with an explanation of the determination of the course of trade in terms of relative prices, though conceding, and rightly, that this may seem to some like contentment with an analysis which does not probe far enough beneath the surface of things. The persistence of a rigid labor-cost theory of value in the theory of international trade long after it has been abandoned in every other phase of economic analysis is a curious, and probably regrettable, phenomenon. But a theory of international trade which has nothing to say as to what forces determine what commodities shall be at a comparative price advantage fails to answer some of the most important questions which theorists will persist in asking.

which the relative wages of labour vary in different countries."—Mountifort Longfield, *Three Lectures on Commerce* (Dublin, 1835), pp. 56, 57.

An even earlier writer, Sismondi (*De La Richesse Commerciale* [1803], Vol. I, pp. 256 ff.) provides a suggestion as to how the theory could be carried still farther, so as to take into account the relative costs of factors of production other than labor, by his argument that the comparative abundance of capital and labor in different countries determines their territorial specialization as between industries requiring relatively much labor and those requiring relatively much capital.

I would seek the solution, as does Angell, in the extension to the theory of international trade of a modernized theory of value. I would try to take into account, however, not only the interrelations between the demands for different commodities, and between the supply schedules for different commodities, but also the influence exerted on the supply schedules of commodities by the supply schedules of the basic factors. As ultimate determinants of the course of trade in such an exposition of the theory, there would be presented not only the interlocking demands for various commodities, but also supply schedules for the basic factors made variable instead of fixed by the reaction of human beings to varying psychological costs of production and varying rates of remuneration. For purposes of abstract theory, such an exposition is not difficult to frame, at least in its broad outlines. For purposes of application to concrete problems, it cannot, as yet, be carried far, but must content itself with stressing the significance of certain objective manifestations of real costs, such as variations in the duration, or intensity, or monotony of labor. Such a theory must necessarily be static in large part, that is, original variations of significant degree must not be presumed to be operating for many factors at once, if, with our present command of either deductive or statistical technique, we are to be able to handle it. It can be applied, therefore, to concrete situations only if they are dominated by striking variations in a few important factors.

Angell's discussion of the theory of international trade under conditions of violently fluctuating currencies appeals to me as one of the best features in the book, and as superior to any earlier formulation of the problem which I have encountered.

Since the major part of this review has been devoted to adverse criticism of particular phases of Angell's work, with a resultant distribution of emphasis which would be misleading if the intent were to indicate my appraisal of its comparative merits and demerits by the amount of space devoted to each, I must repeat, in closing, that in my judgment this book, though by no means flawless, is a distinguished, stimulating, and valuable addition to the literature in its field.

JACOB VINER

UNIVERSITY OF CHICAGO