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by

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in the University of Cambridge



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PREFACE

The pieces here gathered together were all written in the years 1952-5. Except the first, all have been previously printed; the original place of appearance of each is indicated in footnotes, and my thanks are due for the courteous manner in which my desire to reprint has been met by those concerned.

I do not think anybody who is not fairly familiar with the jargons and techniques used by professional economists would be wise to attempt any of the pieces in Group I, even No. 4, which, though lighter in tone than the rest, is really the most esoteric. But I hope the pieces in Group II may appeal also to anyone who takes a general interest in economic affairs.

D. H. R.

*Trinity College,
Cambridge.*

April, 1956.

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PART ONE

I

SOME RECENT (1950-5) WRITINGS ON THE THEORY OF PRICING¹

FRISCH. 'Marshall's Theory of Value', *Quarterly Journal of Economics* (November 1950).

GUILLEBAUD. 'Marshall's Principles of Economics', *Economica* (May 1952).

WOLFE. 'The Representative Firm', *Economic Journal* (June 1954).

MACHLUP. *The Economics of Sellers' Competition* (1952).

SCITOVSKY. *Welfare and Competition* (1952).

CHAMBERLIN. 'Monopolistic Competition Revisited', *Economica* (August 1951).

CHAMBERLIN. '“Full Cost” and Monopolistic Competition', *E. J.* (June 1952).

JOAN ROBINSON. 'Imperfect Competition Revisited', *E. J.* (September 1953).

HARROD. *Economic Essays* (1952). No. 8, 'Theory of Imperfect Competition Revisited'.

HICKS. 'The Process of Imperfect Competition', *Oxford Economic Papers* (February 1954).

MRS PAUL. 'Notes on Excess Capacity', *O.E.P.* (February 1954).

H. R. EDWARDS. 'Price Formation in Manufacturing Industry and Excess Capacity', *O.E.P.* (February 1955).

ANDREWS. 'Industrial Analysis in Economics', Chapter IV of *Oxford Studies in the Price Mechanism* (1951).

KAHN. Review of the above, *E. J.* (March 1952).

BRUNNER. 'Competition and the Theory of the Firm', *Economia Internazionale* (August and November 1951).

AUSTIN ROBINSON, FARRELL, SILBERSTON. 'The Pricing of Manufactured Products', *E. J.* (December 1950 and June 1951).

WILSON. 'The Inadequacy of the Theory of the Firm', *O.E.P.* (February 1952).

R. S. EDWARDS. 'The Pricing of Manufactured Products', *Economica* (August 1952).

¹ Two lectures delivered in the Universities of Copenhagen and Aarhus in September 1955, and not hitherto printed. The audiences were furnished with the reading list (acknowledged to be incomplete) and the diagrams here reproduced. Except when otherwise stated, quotations from an author are from the indicated page of his work included in the list.

I

I thank you for your very kind welcome. I wish I had something better to offer in return than these two rather arid lectures. But the fact is that in one's seventh decade one does not have many new or bright thoughts, and that most of one's mental energy is used up in trying to make out what one's younger colleagues are saying. I have made one or two attempts in recent years to set out, primarily for my own clarification, what seemed to be the state of the debate about certain economic topics of high importance such as the Rate of Interest and the Concept of Utility, and the results have been published in various places. This year I made up my mind I wanted to try to do the same thing about a branch of economics to which I have never myself tried to make a contribution, except for one or two haphazard incursions thirty years ago – namely the 'Theory of Value or Theory of Pricing or whatever the proper name now is. I felt that you would not wish me to let my visit here interrupt that attempt, but would be kind enough to let me go on arranging my thoughts, so to speak, in your hearing. But I am rather ashamed of the result. I have not discovered anything which you do not all, I am sure, even the most junior – or perhaps I should say even the most senior – of you, already know; but at the same time the subject itself is of such a crabbed and forbidding nature that I am afraid my remarks may sometimes be difficult to follow. So I ask for your patience and indulgence.

All modern work, at any rate in England and America, on the theory of pricing goes back, if only sometimes by way of dissatisfaction and rebellion, to Alfred Marshall. But it is not always at all easy to be sure exactly what Marshall was trying to say. I have therefore put at the head of my list two notable expositions of Marshall's system which have become generally available during the period, one by a faithful disciple, my colleague Claude

Guillebaud; the other, on which I shall concentrate your attention, by an entirely independent witness, the great Norwegian innovator Ragnar Frisch, whose tribute, reproduced from his Oslo lectures of twenty years ago, to the essential soundness of Marshall's method of approach, has given me especial pleasure to read.

Some of the devices which Frisch adopts to sharpen up the admitted verbal haziness of Marshall's treatment seem to me legitimate and helpful; about others, as will be seen, I am not so sure. Let us begin with the 'short period' – an interval of time in which the firm can alter its output upwards or downwards in response to a change in demand, but only within the limits set by the existing size of its 'plant' – a word which I shall use broadly throughout to denote the fixed equipment and specialized human organization of the firm. Frisch brings out very clearly, what so many critics have ignored, that Marshall is expounding two different theories according to whether the new level of demand stands above or below that to which the size of the plant has been adapted. In the first case the firm normally expands its output up to the point at which it finds that the price which it can get just covers its marginal variable costs for labour, materials and wear and tear of plant. But in the second case, that of depressed demand, some firms at least contract their output *beyond* the point at which the reduced price which they would get would just cover their reduced marginal variable costs. They contract it to a point at which the price stands *above* that level and makes a larger contribution than it otherwise would – a contribution which in the circumstances they regard as reasonably satisfactory – towards covering the annual cost of the fixed plant. If no such price appears obtainable, they may even, to use Marshall's word, 'suspend' production altogether. Thus, if we knew the facts, we could draw for each firm a short-period supply curve, coinciding to the right of the point of normal equilibrium with its curve of marginal variable costs, but to the left of

the said point lying above the said curve and ultimately becoming a horizontal straight line. And we could draw a short-period supply curve for the industry by aggregating horizontally these individual supply curves.

There are one or two terminological points about the Marshall-Frisch apparatus to be got out of the way before considering its deeper implications. First, Marshall describes the industry curve which I have just mentioned as a curve showing the 'true marginal supply price for short periods'. Though Frisch does his best to justify it, I think the use of the word 'marginal' here is at best redundant, and at worst apt to mislead. The supply price of a given output is by definition the smallest price which will elicit that output, and needs no qualifying adjective. And the use of the word marginal tends to obscure Marshall's own doctrine that the price in question is *not* in all circumstances equal to the marginal cost of all or indeed any of the firms concerned.

Secondly, Frisch seeks to point his exposition by using one half, and thereby to the initiated suggesting the other half, of a dichotomy of which he was, I believe, the pioneer – that between the 'quantity-adapter', who adjusts output in the light of a given price, and the 'price-adapter', who sets a price at which he is prepared to sell. I do not complain of this; but it is to be noted that Marshall himself (and in this Frisch reports him faithfully) represents his producer as being in all circumstances, including those of depressed demand, in the literal sense a quantity-adapter, i.e. as accepting or rejecting, as the case may be, orders placed at a particular price rather than as setting a price himself. The fact, if fact it be, that actual price-setting by producers has become commoner since Marshall wrote, alters the form of the doctrine rather than the substance, and renders it more easily amenable to treatment in terms of Frisch's dichotomy.

About one implication of Marshall's theory of short-period value under depressed demand there is, I think,

no doubt. It is not compatible with the supposition of a completely perfect market, for it contemplates that the producer can indulge in what Frisch calls a 'restrictive strategy' with a good hope of favourably affecting, by-and-by if not immediately, the price which will be offered him by what Marshall calls (*Principles*, p. 374) 'his own customers'. Marshall was quite ready to hammer this in by saying that in certain industries 'the particular demand curve of [a producer's] own special market' might be steeper, not – be it noted – than the horizontal demand curve of pure competition, which does not even receive a mention, but than 'the general demand curve for his commodity in a wide market' (*ibid.*, p. 458, n.). In this respect there was surely less for the later writers on market imperfection to set right than some of them supposed.¹

It is not so clear to my mind whether the theory necessarily implies an element of oligopoly, in the sense in which that ugly word is now used to denote (whatever the numbers involved) a regard by the producer for the effect of his actions on the price or output policy of his competitors. It seems to be not so much of their trade policy that Marshall's typical producer moves in fear, as of their personal behaviour to him (and no doubt to his wife) when he meets them outside the chapel or in the club. Anyway, on this group aspect of the policy of not 'spoiling the market' there was undoubtedly a good deal left for later writers to say.

Now let us move from the short period into the long – that in which there is time for the scale of the firm's plant to be adapted, upwards or downwards, to a change in the level of demand, and also for the number of firms in the industry to increase or diminish. Frisch has undoubtedly seized the essence of Marshall's thought. The curve of

¹ In a recent controversy, however, Professor Chamberlin (*E.J.*, 1952, 320) has cited Marshall's 'true marginal supply price for short periods' in making (as I think) legitimately merry over a passage (*Economics of Imperfect Competition*, p. 48) in which Mrs Robinson condemns as a 'confusion of thought' that very notion of the influence of long-run costs on short-run value on which Marshall laid such stress.

long-run normal supply price for the industry shows the price which *would* be established in response to each given level of demand if all the forces concerned had time to work themselves out. That price would be such as to afford a normal profit to a firm which is 'representative' of the industry in respect of age, luck and ability of management. The higher the level of demand, the greater will be the economies of production at the disposal of such a firm, some of these economies depending on its own size and some on that of the whole industry. If these economies are sufficiently great, the curve of long-run supply price for the industry will still be sloping downwards at the point of equilibrium.

This long-run equilibrium, even if attained, would not necessarily imply stationariness of production, but rather steady growth in harmony with the general growth of population and wealth. If Frisch had been writing in 1955, when all economists are thinking it necessary constantly to remind one another of what Marshall took for granted – that we are interested in the problems of growth – he might perhaps have thought it advisable to lay more stress on the passage (*Principles*, p. 511) in which this is explained, and which he duly quotes. And he might perhaps have emphasized more insistently that even such a dynamic equilibrium is not to be conceived of as necessarily being ever actually attained, since before it can be attained the forces tending to establish it will themselves probably have suffered change. Here we may digress for a moment to Mr Guillebaud, who tells us (126–7) that in his view Marshall used the term 'the long period' in two quite distinct senses, one in which it stands realistically for any period in which there is time for *substantial* alterations to be made in the size of the plant, and one in which it stands conceptually for the Never-never land of unrealized tendency. I have no doubt that out of his great knowledge of Marshall's text he could quote passages in support of this dichotomy.

But to return to Frisch. What we must now ask is whether he has cleared up for us the two closely allied problems about which one may rise even from a hundredth reading of Marshall with a certain muzziness in the head, and which I may summarize for your attention as follows.

(1) How, when the long-run supply curve of an industry slopes downwards, does equilibrium contrive to be compatible with the persistence of competition – why does not one firm, if it gets a good start, get a monopoly of the whole trade?

(2) How are we to reconcile the proposition that the long-run supply price of an industry represents the *average* costs (including normal profit) of a representative producer with the account given (*Principles*, p. 460) of such a producer 'reckoning whether it would be worth his while to add a certain new line to his undertakings, whether he should instal a new machine and so on' – the cost of such an extension being described as 'the true long-period *marginal cost*' (my italics) and identified with the long-run supply price of the industry?

Frisch's method of facing these problems is to draw for

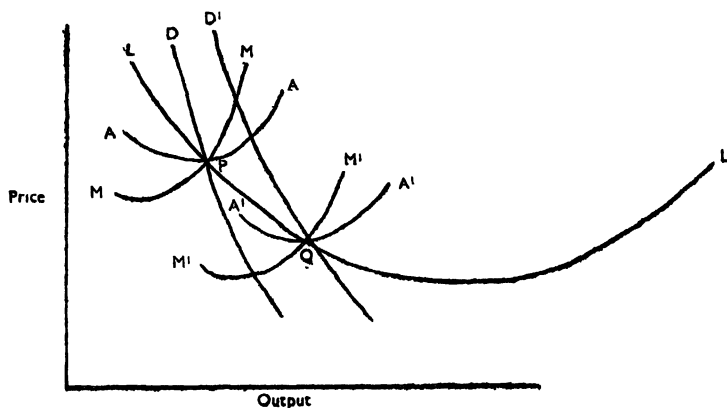


Figure (1) – Frisch.

the representative firm a pair of long-period demand and supply curves whose abscissae are a constant fraction of those of the industry. At a point of intersection of these curves P , the firm is in long-period equilibrium, with price equal not merely to its short-period marginal costs M but to its full average costs (including normal profit) per unit of output A . If the demand curve were to shift outwards to D^1 , the short-run effect would be a rise in price along the line M ; but the long-run effect would be a reorganization of production leading to a new long-run equilibrium at Q , with output considerably larger than at P and price lower, but still equal to the short-run average and marginal costs of the firm as they work out in the new more advantageous situation.

Before looking closely into the rationale of this whole set-up, let us observe a minor disturbing feature of it. Suppose demand shrinks again to D . The first effect, according to the wholly acceptable Marshall-Frisch short-period theory which we have examined, is a retreat along a line (not drawn) lying somewhere between A^1 and M^1 . But the long-run effect is a retreat along a line something like L to a point something like P . I say 'something like', because Frisch faithfully follows Marshall in emphasizing that not all the economies won during the advance will be lost in the retreat, so that to be valid for a retreat L must be re-drawn somewhat lower down. But he gives no hint that it must be drawn so much lower down as to cease to cut A^1 . For unless it is, we reach the paradoxical result that as output is reduced below Q , average cost will be greater if reorganization is undertaken and the scale of plant appropriately reduced (as per L) than if it is left unchanged (as per A^1). This alone might be enough to make us regard the diagram with suspicion; but it is not the main point, which is a threefold one.

First, by what right does Frisch endow an individual producer, even if he be a representative one, with a sloping demand curve? It is true, as I have said, that Marshall has

nowhere committed himself in words to the completely horizontal one of a perfect market, even for purposes of a broad general survey; but equally it is only in the temporary conditions of depressed demand that Frisch has hitherto invited us to suppose that there is significant departure from a perfect market, involving adoption by producers of a 'restrictive strategy'. What he seems to have done now in his diagram is to adopt tacitly the assumption which some post-Marshallian writers have made explicitly, namely that the representative producer will be aware that only a proportionate share of any increment of demand in the whole market will fall to his lot to satisfy. If that *is* the assumption, it needs a great deal more arguing than it has here received.

Secondly, consideration of a special case will at once lead us to question whether the same *supply* curve can be made to serve, by a mere alteration of scale, for the whole industry and for the representative firm. Suppose the latter cannot expand output even in the long run except at increasing cost, owing to overwhelming difficulties of management and co-ordination. It is nevertheless possible that the industry should grow simply by multiplication of firms of the existing size. In this case the long-run curve for the industry may well be horizontal, while that for the representative firm is rising. No doubt this *is* a special case, but it directs our attention to something which seems to have been left out in Frisch's treatment, namely the possibility of change in the number of firms.

Thirdly, consider the shape Frisch gives to his supply curve for the representative firm. Note first that in alluding to Marshall's account (*Principles*, p. 344) of the way in which a producer setting up in business will estimate his long-run supply price, he first (515) quotes verbatim Marshall's statement that as output increases 'the supply price may increase or diminish, or it may even alternately increase and diminish', but a little later (518), still appealing to Marshall's authority, interprets the latter part of

this sentence as meaning that the curve '*at first falls and then rises*',¹ and gives it accordingly, like the short-run curve, the U shape which post-Marshallian treatments have made familiar. Personally I do not object to this, but I do not think it is Marshallian – the diagram on *Principles*, page 344, gives no hint that Marshall thought in this way. But having given it this shape we are naturally led on to ask why, unlike the short-run curve, it has not been endowed with a marginal companion, and we cannot but arrive at the most disturbing conclusions about what would happen to the whole apparatus if it had, especially if, concurrently, a pair of horizontal or nearly horizontal demand curves were substituted for Frisch's D and D¹.

Sympathetically as Frisch has dived into Marshall's mind, I cannot help thinking that the geometrical systematization with which he has emerged is a failure, and leaves us with our questions unanswered. Let us therefore emigrate backwards outside our period to see if others have been more fortunate. It was, to the best of my belief, Marshall's closest disciple, Professor Pigou, who in 1928 first endowed the representative firm with a pair of *long-run* U-shaped curves, the marginal cutting the average, by that blessed dispensation of mathematics now familiar to us all, at the latter's lowest point. To the use which he makes of this apparatus I shall return shortly; enough for the moment that it offers the *possibility* of price being equal both to the long-run marginal and the long-run average costs of the representative firm. What Marshall would have said to it is another matter; I must concede that such an apparatus is latent in his treatment of short-run value, but I do not myself believe he ever extended it in thought to the long run. As I have already said, I can detect no trace of U-ness in his diagram (*Principles*, p. 344) illustrating the behaviour of the representative producer; and I believe that when he said, in a passage quoted by Frisch, that in a stationary state 'the normal expenses of pro-

¹ My italics.

duction, the marginal expenses and the average expenses (rent being counted in) would be the same thing for long periods and for short' (*Principles*, p. 497) he was, as indeed the allusion to rent indicates, thinking of something quite different, namely the double sense of the word cost (or expenses) according as it is or is not used to include payments made to factors of production whose total supply is permanently fixed.

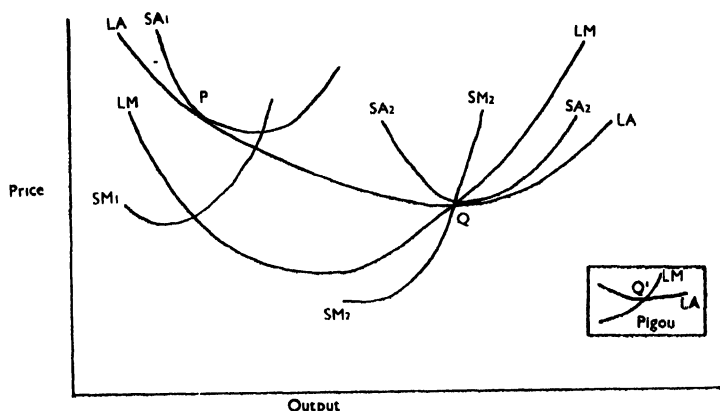


Figure (2) - Harrod

To Professor Viner, I believe, belongs the credit of being the first, in an article published in 1931, to fit each point of equilibrium with its complete outfit of four curves, two long run and two short, two average and two marginal; and to Mr Harrod (1932)¹ the credit of bringing out the apparently paradoxical truth that, with the declining individual demand curve which he explicitly uses and defends, the scale of plant with which at such a point it would be most economical for the representative firm to

¹ Essay reprinted as No. 7 of *Essays in Economics*.

be working would be one which was not being used up to its full capacity. To Harrod's present attitude towards his discovery I shall return next time. For the moment the point is that his completely logical set-up leaves us face to face with the old dilemma. *Either* the representative firm is not working, even from a long-run point of view, in a perfectly competitive market, and in this case price in long-run equilibrium stands above not merely its short-run but its long-run marginal cost. *Or*, if the market is perfectly competitive, and price therefore equal to long-run as well as short-run marginal cost for the representative firm, then for such a firm, and therefore for the whole industry, at the point of equilibrium the economies of scale have ceased to operate, and the long-run supply curve of the industry cannot be drawn as still declining.

From this dilemma Pigou had already sought to rescue us with the aid of Marshall's concept of external economies – those which depend on the size not of the individual firm but of the whole industry. And he had broadened this concept to include a type of economy which I ventured to christen external-internal, because they *do* depend proximately on the size of the individual firm, but the individual firm would not have been in a position to reap them by growing had not the whole industry been growing also. Pigou's duplex curves, that is to say, while they are true long-period ones in the sense that the firm is conceived of as free to vary the scale of its plant, are to be regarded as valid only for a certain scale of the whole industry. As the scale of the industry increases they must be continually re-drawn and their point of intersection shifted downwards, and probably also shifted to the right. Thus, without assuming any imperfection of the market, we can picture the representative firm as working in equilibrium under conditions of increasing long-run marginal cost, that is to say with no present motive to expand the scale of its plant; yet we shall know that if demand *were* to expand, its costs *would* be reduced, and, probably,

a motive restored to expand the scale of its plant.

I do not know what Marshall would have said to this brilliant piece of expertise. I think perhaps he would have accepted it as formalizing one vein in his own thought, and Mr Harrod's sloping demand curve as formalizing another. But I like to think he would still have cautioned that the mathematics left something out. For I have myself always ventured to emphasize a third element in his thought, which so far as I can see eludes capture in mathematical terms. That element is the complex of notions of time, friction, change and decay which is inherent in the concept of the representative firm, and which is not dealt with simply by drawing long-period curves instead of short-period ones. It takes *time* to reap many even of the strictly internal economies of large scale, and before any actual firm which might seem to be in a position to grow has had time to do so, it may have lost its luck or its vigour, so that not it but some other firm does the growing. The firm which is representative this year will have ceased to be representative next year; and *the* representative firm which figures in the argument is not some particular firm whose name is to be found in the Directory but a succession of firms, rather in the same way – to vary Marshall's own metaphor of the trees of the forest – as a thing which we call a wave, as it travels over the ocean, comes to consist in succession of a number of different collections of water-drops.

It is twenty-five years since I first attempted to expound this way of looking at things in an article which contained so bad a blunder – duly pounced on by Mr Sraffa – that I have never reprinted it. But I have continued to talk on these lines in my lectures; for I still believe this to have constituted the most important element in Marshall's complex picture – more important than the sloping demand curve which has been developed by the imperfect competition theorists, more important than the external economies aggrandized and formalized by Pigou. And I

have been delighted lately to find what I regard as support for it in the closing pages of that latest contribution in these fields by the arch curve-tamer Mr Harrod of which I shall have more to say later in other connexions. 'The preponderating answer', he writes (184), 'to the question of why an entrepreneur does not move forwards along his increasing returns curve is [as follows. He] avers that he could in principle and indeed hopes in practice to produce twice (or ten times) his present output at a substantially lower cost per unit, but cannot do so immediately. His enterprise is a delicate organism with complicated labour relations and managerial relations. There is an optimum rate at which labour can be diluted and management formalized in the way required for larger scale. . . . It is somewhat difficult to categorize this condition, which is widely prevalent. From the point of view of the economy as a whole, it is an instance of analytic increasing returns. . . . But for the particular source of supply . . . this happy combination of the relevant factors can only be made by a process which takes considerable time. . . . It is doubtful, therefore, whether, when we apply [the phrase] "increasing returns" to a firm which cannot achieve higher returns per unit of cost save by a slow process of growth, these are increasing returns in the analytic sense.'

That seems to me a good statement of *part* of this part of Marshall's vision – not, even now, of the *whole* of this part, for there is no hint here that Messrs Smith and Jones may *never* find those economies 'in the bag', while Messrs Brown and Robinson, overtaking from behind, may successfully realize them all. And perhaps it is this part of Marshall's vision which Frisch too is meaning to convey when he deprives his long-run average cost curve for the representative firm of the marginal companion for which it (unlike the long-run average cost curve for the whole industry) seems to cry out. If so he would, I hope, if he were to hear of it, forgive my captiousness at the expense of his attempt at geometrical representation, and accept

me as a humble (though sometimes puzzled and occasionally exasperated) co-drawer of water from the Marshallian well.

May I now set the stage for tomorrow's lecture, which I am afraid will be rather longer than today's?

Apart from the sharpening-up operations by Pigou and Viner to which I alluded just now, the post-Marshallian history of the theory of pricing can be dramatized as a revolution followed by a counter-revolution, the counter-revolution consisting partly in an edging back towards older ways of thought and partly in a plunge into fresh complexities. All this of course had happened well before 1950; and the harvest of the last quinquennium which I propose tomorrow to pass briefly in review comprises three articles by pioneers of the revolution re-visiting the scene of their former triumphs, several attempts by workers in the more conservative wing of the counter-revolution to systematize its intellectual foundations, and a couple of major treatises designed to inform the student where, as a result of all this pother, we have now really got to. If I am to get anything said in fifty minutes about this mass of material, I must evidently select and simplify; and I shall try to concentrate my remarks around two major topics, which I shall label respectively 'excess capacity' and 'profit maximization'.

II

The two chief bibles of the revolution, Professor Chamberlin's *Theory of Monopolistic Competition* and Mrs Robinson's *Economics of Imperfect Competition*, covered wide and largely non-overlapping fields; and it is natural that in seeking to absorb their message the well-intentioned reader should have seized on a model which appeared to be common to both of them. This is a model of a group of producers whom I will venture to call an 'industry', selling a class of goods which I will venture to call a

'product'. They are in active competition with each other, but each producer has a kind of limited and conditional monopoly depending on the fact that some buyers are attached to him by geographical propinquity, by rational or irrational preference for his particular variety of the product, or simply by sheer force of habit. He realizes that his rivals are similarly protected, and he thus feels himself to be faced with a falling demand curve. In pursuit of maximum profits, he will therefore normally check his rate of output at a point at which his average full costs per unit are still falling; but pursuit of this policy will not enable him to make any exceptional profit, since there is no special difficulty about entering the industry, so that, for any given grade of business ability, the level of profit obtainable in it cannot for long exceed that obtainable elsewhere. One result of the whole situation is the existence in the industry of something called 'excess capacity', which is *prima facie* a source of social waste.

What the layman like myself looks for to the specialist writers of the last quinquennium, including of course the pioneers themselves, is guidance in forming an opinion as to how widely prevalent is this state of affairs and how important the social waste involved. But before searching in your company these recent scriptures, I must try to escape being rapped on the knuckles by pointing out certain differences between the two original rival or complementary bibles in their presentation of the matters at issue.

(1) The first is to my mind unimportant, though Chamberlin in one of his 're-visits' (*E. J.*, p. 322) has laid some stress on it. Mrs Robinson, like Marshall, generally represents her producer as adjusting his output in the light of a known price; Chamberlin generally (not always) represents his as setting a price and producing what he can sell at that price. The difference would, I think, scarcely be worth mentioning had not one of our treatise-writers, Professor Scitovsky (19-22), taken the setting of

prices as being actually the hallmark of imperfect as contrasted with perfect (or, as I prefer, of pure as contrasted with impure) competition. This terminology is perhaps rather unfortunate; it is not, I concede, really very likely to make us doubt that Mrs Robinson's producers, like Chamberlin's, are in impure competition; but it may, I think, tempt us to suppose that some producers who are technically price-setters are in a much less purely competitive situation than they really are, since they may really have very little choice about what price they will set.

(2) Next, Mrs Robinson's producers are not oligopolistic, i.e. they do not attempt to take account of the effect of their own actions on the actions of their rivals. Chamberlin's producers, after a preliminary canter in which the same is true of them, settle down in a second model in which they *do* make such an attempt; and it is held to be likely that as a result they will fix a higher price and produce a smaller output than if they did not.

(3) Next, it was 'of the essence' of the English presentation, according to Professor Austin Robinson's retrospective testimony (1950, 773), that 'entry was assumed to be sufficiently free to ensure that average revenue did not exceed average costs including "normal" profits'. In Chamberlin's treatment this is the situation in which the geometrical analysis culminates; but attention is also given to the more general case in which obstacles to freedom of entry are sufficiently formidable to leave 'monopoly profits scattered throughout the group' (*T.M.C.*, p. 113).

(4) Finally, Mrs Robinson in retrospect (590) frankly criticizes her own treatment for its 'failure to deal with time'. Well, nobody can deal with everything in one book; though this admitted timelessness might perhaps have been expected to moderate the confidence with which the treatment was originally offered as a substitute for a treatment so redolent of time as that of Marshall. Chamberlin's treatment is, I think, in intention 'long period', but not quite consistently so; for it would seem from his discussion

of 'excess capacity' (*T.M.C.*, p. 109) that his rival producers never scale down their inflated plants in the light of the restricted share of the market which experience shows to fall to their lot. But a third pioneer, Mr Harrod, did, as we have seen, with his double system of duplex curves, attempt to deal meticulously with time and to clarify the somewhat complex notion of social waste. In the final equilibrium, he concluded, the typical firm would be working with too *small* a plant, and would also be working that plant at less than its optimum intensity. In the latter respect this final situation can properly be described as one in which there is 'excess capacity'; but in the former it is rather one in which there has been time for 'excess capacity' to be obliterated in the light of disillusionment. Professor Hicks (44) has recently christened these two types of 'excess capacity' as static and dynamic respectively.

Clearly in the light of these diversities of treatment we must make up our minds what is the state of affairs about whose alleged prevalence and wastefulness we are anxious to form an opinion. I suggest that it will be of most interest to concentrate on Chamberlin's second model – that which excludes the making of monopoly profits in the ordinary sense, but which recognizes the tendency of producers to take account of the effect of their own actions on the policies of their rivals – after all, as Mrs Robinson has told us (584), she only left this out because, like most of us, she found it too difficult to handle. If we want to conduct our enquiry with the aid of the concept of 'excess capacity', I think we must recognize that it is an inadequate symbol to express the whole complex of unexhausted economies of scale and under-utilization of plant revealed by Harrod's treatment. *Per contra*, I do not think it is convenient to follow Chamberlin in excluding from it, if I understand him aright (*T.M.C.*, pp. 109, 171), any capacity which might appear to be excess even in his first model – that from which oligopolistic action is excluded,

and which he treats as 'a sort of ideal' (ibid., pp. 99, 104).¹

I think it is fair to say that, apart from one very important aspect of the matter to which I shall return, there is a tendency in most of the recent writings to play down, as compared with the charges which were originally made, if not the commonness then at any rate the wastefulness of the condition selected for examination. In retrospect, indeed, Professor Austin Robinson may tell us (773) that in Cambridge at least the analysis was always meant to be one of a 'highly competitive, though not perfectly competitive, situation', and that it was only for the convenience of printers that those individual demand and cost curves were drawn with such steep negative slopes. I do not find that that quite accords with my own recollection, and I have much sympathy with the passionate outcry in which Mr Wilson (42, n.) complains that his generation of students was gravely misled. Yet it was always somewhat difficult to see why one and the same group of firms should, to put it the most significant way round, find it so easy to resist invasion of one another's markets and yet be so vulnerable to competition from outside. Professor Machlup in his treatise (338-9) defends the whole set-up against an extreme criticism made in the early days by Mr Kaldor to the effect that the same conditions, namely perfect divisibility of investable resources, which would permit *really* free entry to the group would also obliterate the possibilities open to its existing members of establishing 'private' markets for their own varieties of the 'product'. Nevertheless Machlup, after a most thorough and instructive analysis, under nine separate headings, of the advantages, long term and short term, which might have to be surrendered by members of the group under the pressure of free entry, sums up (330) by saying that 'until empirical evidence to the contrary is forthcoming, [he] is inclined

¹ In this I am fortified by the example of Machlup, who hangs his entire discussion of 'excess capacity' (322-36) on to the Robinsonian case of *simple* market imperfection plus free entry. Mr H. R. Edwards (102) goes farther and says that it is *only* in this case that 'excess capacity' will necessarily arise; Mrs Paul (39) appears to take a similar view.

to take the "waste" story lightly'. In much the same vein Professor Scitovsky (349) concludes that 'examples of the excess capacity caused by free competition¹ are not easy to point to'.

More spectacular is the flat repudiation by Mr Harrod, in his 1952 book, of the whole notion of excess capacity as a consequence of imperfection of the market. He starts – I do not criticize, for I have personally profited by the reminder – by flogging a dead red herring. In some circumstances, so-called 'capacity' can be made to appear, misleadingly, to be under-used simply by treating the whole of a true monopoly profit as a fixed cost which could be spread more thinly over output if output were greater than it is. Perhaps if some of the other revolutionaries had been more content (as Harrod is) to deal in terms of 'the representative firm', this particular red herring need never have emerged from the sea.

But Harrod's main point is a much more fundamental one. He professes himself thoroughly converted to the view, about which he originally had misgivings, that the conditions described as 'market imperfection' and 'free entry' can, and indeed very commonly do, co-exist – laying particular stress, as Mr Andrews has done (167), on the probability that in the modern world competition with a particular 'product', or, if you prefer, class of products, will be readily forthcoming not only from new firms but from established firms in other lines of business, on the look-out for opportunities to extend their range of operations. But the charge which he makes against the 'excess capacity' party is that while they have been ready to deal in terms of long-run as well as short-run *costs*, they have not been sufficiently ready to deal in terms of long-run *demands*. They have presented a picture of a firm taking advantage of the imperfection of the market to make abnormal profits which it knows, or should know, will be

¹ This is Scitovsky's name for market imperfection, without oligopoly, combined with free entry.

competed away from it as soon as the process of irruption by outsiders fully gets to work. How much more likely, says Harrod, that it will refrain from pursuing a price policy which would provoke the irruption! In this case the situation which is alleged to lead to the industry becoming littered with uneconomically small plants, and those under-used, will never arise.

Evidently this argument raises very fundamental questions about the motivation of entrepreneurs to which we shall have to return under my second heading – profit maximization; for the moment let us stick to the question of excess capacity. I do not feel sure that Harrod states quite correctly the position which he is attacking. I do not interpret Chamberlin, for instance, in the relevant passage (p. 84) of his book, as setting out to write a universal history – as saying that in all cases firms *first* make abnormal profits, *then* those profits are competed away. Rather he is saying, as a theorist should, ‘*if* they did make abnormal profits, then those profits *would be* competed away’; and indeed he specifically mentions the possibility that his group equilibrium will be reached *from below*, i.e. ‘through an exodus of firms caused by the realization of losses’. However it is reached we seem to arrive at the old conclusion, which Harrod with his pretty envelope did so much to clarify, namely that if there is imperfection of the market the representative firm will be working with a smaller plant, less fully utilized, than if there is not. Indeed Harrod himself seems to feel that his case is incomplete, for in the last section of his article (181) he has felt constrained to flatten out his envelope towards the right into a horizontal line of constant returns, thus bringing his firm securely into equilibrium with no under-utilization of plant and no unexhausted economies of scale. He may or may not have noticed that Chamberlin (*T.M.C.*, p. 78, n.) considered this possibility and rejected it as highly improbable.

Professor Hicks, in his characteristically subtle and in-

genious elaboration and qualification of Harrod's results, likewise concentrates our attention on a group of cases in which a new firm (41) is initially in a position to make abnormally large profits, whether or not it elects to do so – an interesting, but not, I should have thought, entirely characteristic situation.

While I should like therefore to suspend judgment on the reasonings of these two eminent quasi-counter-revolutionaries, I am, so far as the argument yet goes, in considerable sympathy with their disposition to play down market imperfection, when divorced from other features such as outright collusion or restriction of entry, as a source of social waste. There is, however, another aspect of the whole matter which it is impossible to neglect, and which has indeed long appeared to me to be the most important one. However carefully one lists the other possible causes, it is, I think, difficult to make much headway towards an explanation of the phenomenon of the multi-product firm – be it I.C.I. or the village grocer – without recourse to the principle of market imperfection. Though it was sanctioned by Marshall and Pigou, I was never happy with that usage of words which distinguished sharply between conditions of *joint* cost, when two or more things *had* to be produced together, even though it might be in variable proportions, and conditions of *common* cost, when they were produced together only because 'it was cheaper to produce them together than separately'. For it is not enough to show that if x units of A and y units of B are produced together, the cost per unit of each will be less than if these quantities were produced separately. Would not the cost per unit be lower still if $2x$ units of A were produced by one firm and $2y$ units of B by another? And what is the obstacle, if it be not market imperfection? Are not the main wastes of the latter to be found not in failure to make any use of the economies of scale, but in the need imposed by the limitation of the market to make use of them in an imperfect manner by indulging in what

I have been in the habit of calling commercial, as contrasted with physical, joint supply?

'The division of labour,' observed Adam Smith, 'is limited by the extent of the market'; whence it comes about that 'the country carpenter deals in every sort of work that is made of wood; . . . [he] is not only a carpenter but a joiner, a cabinet-maker, and even a carver in wood, as well as a wheel-wright, a plough-wright, a cart and waggon-maker'. This line of thought, therefore, is scarcely new; but to Mr Kaldor, writing in *Economica* in 1935, seems to belong the chief credit for emphasizing its relevance to the post-Marshallian 'revolution'. With a few exceptions, I do not find much emphasis on it in the most recent literature; but one of those exceptions is important, for it is none other than Mrs Robinson herself. 'Dropping the fiction of the one-commodity firm,' she writes in her 'revisit' (580), 'destroys the simplicity of the analysis of imperfect competition, but enlarges its scope. Cases where the imperfection of markets combined with ease of entry lead to an excessive number of businesses with low turn-over occur mainly in special fields (service and bespoke trades, small shops, petrol-filling stations), whereas every efficiency expert who comments on British manufacturing industry points out the almost universal prevalence of uneconomically short runs and small batches in the output of individual lines of production.' This change of emphasis in the presentation of the problem is in my view a welcome one.

There remains of course the most important and controversial question of all – how much variety of product is worth how much technical waste, whether the waste takes the form of unreaped economies of scale or of imperfect specialization. The concept of 'variety of product' extends all the way from the most concrete compulsions of geography to the most tenuous filaments of habit, and at every point there is room for differences of judgment. Much progress had been made in sorting out these issues, if not

in solving them, in earlier years (I have in mind specially Professor Kahn's 1935 article on 'Ideal Output'), and I cannot find that the most recent writings have much to add. Chamberlin, as we have seen, has never hesitated to describe his first model, that free from oligopoly, as 'a sort of ideal',¹ suggesting that the amount of diversity which consumers get is just about what they are prepared to pay for; and in his main 're-visit' (*Economica*, p. 354) he has taken occasion to reassert this point of view. Mrs Robinson, on the other hand, in her 'revisit' (581) still seems to sigh for a 'rationalizing monopsonist' to act as 'the best pilot to find a channel between the Scylla of competitive inefficiency and the Charybdis of monopolistic exploitation'.

Among the newer treatise-writers Machlup (340-4) argues forcibly against attempting to cure the defects of imperfection by any type of restriction of entry; while Scitovsky, in weighing up the merits and defects of various types of market structure, concludes (435) that 'consumers' preferences, even if they are not always informed and not wholly rational . . . are nevertheless the best standard we have by which to judge the composition of the consumers' goods output'. In my own lectures I am in the habit of admitting that there still seem to me to be some fields in which it is insufficiently possible to choose how much or how little 'selling effort' one will buy with one's purchase, whether that selling effort is embodied in the article itself in the form of decoration or gadgets, or whether it pervades the circumstances of its sale, as in the case of the superfluous amenities provided by some shipping companies and some large shops. But I then go on to confess my own bias towards looking with some suspicion on the sterner denouncers of the vices of impure competition, who want to make me walk a mile to buy my cigarettes, and to flatten out all sorts of pleasant little

¹ It is presumably for this reason that he is reluctant to apply the condemnatory word 'excess' to any of the 'capacity' developed under that model.

pockets of consumers' surplus lurking under those – after all not so very steeply – sloping demand curves.

I must now turn to the second label which I have chosen for today's lecture – profit maximization. This leads me to say something more about what I have called the counter-revolution, and about the attempts which have been made to harmonise its results with those of the revolution.

The counter-revolution may be said to have set in earnest in 1939, when a group of Oxford economists satisfied themselves that business men in manufacturing industry do not commonly conceive of themselves as maximizing their profits by weighing up increments of receipts and costs at the margin of production; rather – I put the proposition in its most non-committal form – they arrive at a price after reckoning up average direct costs per unit of output and adding thereto an appropriate percentage for indirect costs and profits, and then sell all they can at the price so set. The article in which Messrs Hall and Hitch announced this discovery and made some attempt to give it an analytical interpretation is still, I think, the most important document of the counter-revolution. But I shall be more concerned with a later formulation, that by another member of the Oxford group, Mr Andrews, in his book *Manufacturing Industry*, since it is this which has generated, within our period, on the one hand a number of bewildered and hostile comments; on the other three further attempts, one by Andrews himself and two by his disciples, to expound the principles of the counter-revolution.

Let me say at once that, if the earlier expositions of the counter-revolution were lacking in clarity, the early reactions of the revolutionists also in my view left something to be desired. Machlup's commentary on the Hall-Hitch results, which he concludes (72) can be 'fully harmonized with marginal analysis', is penetrating and constructive;

but if he was going to tease the Oxford enquirers for their *naïveté*, he might I think have found room for a word of reproach to the prophets of the revolution, if they really knew all about these business costing practices, for not having thought it worth while to mention them, but left the unfortunate student to discover and deal with them for himself in the light of the methodological principle that 'the analytical description of a process is not the same thing as the actual process in everyday life'. Chamberlin, who unlike Machlup regards these practices as *prima facie* inconsistent with profit maximization, claims that he *did* mention them on page 105 of his book: but I must confess that they there seem to me to be treated as an occasional aberration, playing a very small part in the whole analysis. Robinson (1950, 774), in his protest against the implications of Andrews's theories, was betrayed into a claim that in order to survive and prosper a firm must maximize its short-run profits – a position from which, after being rapped on the knuckles by Farrell (1951, 424–5), he gracefully receded to the opposite extreme, explaining that those short-run demand curves are best taken as 'including, suitably discounted, all the various repercussions of the future upon the present' – which is rather a large order!

I must now try, though it is not at all easy, to give a brief account of what we are now instructed to call the 'normal cost' theory of pricing, as it has developed in the later writings of Mr Andrews and his associates. The typical manufacturer, we are assured, does indeed go through the process of calculating his full average costs; but 'to say that he uses his own costs in determining price is not to say that he will not revise this [figure] downwards immediately if he discovers that other firms are quoting below it' (Brunner, 734); his calculations may have to be 'over-ridden' (Mr H. R. Edwards's word, 112) by regard for what others are doing. He does not simply cost, he adopts a 'costing policy' (Andrews, 163), and the

gross profit margin used in his calculations will be that which 'can be obtained' (Brunner, loc. cit.). And what 'can be obtained' will be narrowly circumscribed; for while he doubtless has a particular circle of customers attached to him by 'goodwill', 'goodwill does not in itself give the power to raise prices' (Brunner, 519). In effect, the price which he nominally 'sets' is determined for him, given the general market demand, by the costs, including a normal profit, of an efficient competitor, whether that competitor exists in fact or only in apprehensive imagination.

So far we are virtually back in the theory of pure competition. Will the producer, then, be producing so much as to equate the price so fixed with his marginal costs? By no means. Normally he is working under conditions of decreasing short-run costs, because he has deliberately kept a bit of capacity in reserve; but even if he finds himself in a tract where his short-run costs increase, he will ignore such 'extraordinary' increments of cost and not attempt to charge a price to cover them (Brunner, 522). His long-run costs are also falling, though more slowly:¹ but he will not be in a position to expand his output appreciably at the going price, nor will he be at all disposed to cut price, partly because his rivals are protected from his inroads by *their* umbrellas of 'goodwill', and partly – a point to which I shall return – because he has inhibitions about moving along his long-run cost curve (Brunner, 737).

Andrews himself, I think – I am not sure about his interpreters – would not allow such a firm, even if it had 100 per cent of the usual hallmarks of 'representativeness' in respect of age, size, luck and efficiency, to be said to be in any sense in equilibrium (168): but he *would*, I think, allow the industry of which such a firm is representative to be so described.

¹ This seems to be in direct conflict with Harrod's 'envelope' set-up, in which the long-run curve falls more sharply than the short.

I offer the following brief and provisional comments on this theory.

(1) It does seem to offer an explanation of how, under some conditions, if business men are far-sighted enough, a relatively stable state of affairs, and a more healthy state than that depicted in the Chamberlinian theory, may come to be established in an industry through a kind of short-circuiting process, enabling something like a stable equilibrium to be established without the actual irruptions and ejections of firms which would be necessary to achieve it if business men thought only in more short-sighted terms.

(2) On the other hand, I think the theory goes much too far in rejecting altogether one-half of the Marshallian short-period theory of value, which I cannot agree was meant to apply only to commodity markets (Brunner, 738) or even only to extractive industries (Andrews, 152). I do not believe that Marshall was the victim of hallucination when he saw substantial quasi-rents in excess of normal profits emerging from time to time in manufacturing industries!

(3) The theory leans very heavily on the Hall-Hitch doctrine of what has been called oligopolistic pessimism. To justify it the producer must live in perpetual fear that the smallest rise in price will lose him all his custom, while no cut in price will help him to expand his sales. Plausible as this asymmetry is as an explanation of fairly prolonged stickiness, I find it hard to accept it as the basis of a *really* long-run theory.

(4) Special interest therefore, to my mind, attaches to Andrews's auxiliary explanation of why it is that one of his firms, working as it is under decreasing cost, does not nip ahead and collar the whole market; and I shall quote it at length. 'It would be wrong in a realistic theory of price-determination to let long-run cost changes have the full force that abstract theory might suggest that they possessed. In actual conditions costs will always be liable

to chance fluctuations, and the uncertainty within which the business man plans is such that his estimates will be tentatively used. More important, perhaps, is the consideration that it will always take time for a business to consolidate itself at a significantly enlarged scale, and some time must elapse before costs can be got down to the level which the business man may have estimated as possible in the end. Meanwhile he could not postulate that the other factors in his calculations would remain unchanged.' Here, as I think, we have the most essential element in Marshall's reconciliation of decreasing cost with competitive equilibrium, of which I have already in my first lecture noted an echo in Harrod's most recent essay.

(5) If the 'revolutionary' theory of market imperfection gains in plausibility as we pass from the one-product to the many-product firm, so also, I think, does the 'counter-revolutionary' theory of pricing according to, or at any rate after consideration of, average full cost. The business man who attempts to allocate to each of his numerous products its 'fair share' of supplementary expenses is not behaving so idiotically as some modern textbooks try to persuade the student that he is.¹ For in a long enough run his alternative to producing a particular product is not to produce nothing but to produce something else, which amounts analytically to quitting one 'industry' and entering another: and that is a type of decision to which it has always been held that the relation of price to *average*, not to marginal, cost is relevant.

It is time for me to try to assess the present state of the debate. We now have Miss Brunner (511) definitely proclaiming that 'what normally drives [the entrepreneur] is the profit motive, and that therefore we may take it as a reasonable assumption that business men aim to maximize their profits'; we now have Mrs Robinson (582) opining that 'the most valid simple generalization is that the aim

¹ See, e.g., Cairncross, *Introduction to Economics*, 2nd ed., p. 275.

of the entrepreneur is for the firm first to survive, and secondly to grow. To this end he must pursue profit, but he must avoid action which, though profitable in the present, will damage his future position.' It does not look as if there was so great a gap between the revolutionaries and the counter-revolutionaries after all. And perhaps if the former could get over their excessive excitement about falling demand curves and their eagerness to short-circuit the work of that leisurely old gentleman Time, while the latter were to become a little more cynically alive to the propensity of business men (without always telling their accountants) to make a bit of hay while the sun shines, there would not be so great a gap between either of the modern sects and the Marshallian set-up which, with Frisch's help, I was trying to analyse yesterday.

But don't let me be thought to be trying to persuade you that agreement is closer and more cordial than it is. Broadly as we may interpret the concept of profit-maximization, we must surely not stretch it so far as to cover all the possible motives which may animate business men, thereby robbing the proposition that business men normally pursue profit of all empirical content, since profit has now become whatever the business man pursues. This is the trap from which Machlup (48) tries to save us in advising us not to attempt to reduce 'non-pecuniary' sacrifices and rewards to terms of money equivalent – and into which Silberston (1951, 428), after a most instructive contribution to the debate, seems to me to end by falling.

And once we recognize this, I am afraid that behind the so-encouraging eirenicons we may still detect rumbles of ideological thunder. 'What a piece of work is a business man!' grateful Nuffield College, Oxford, echoing a famous Prince of Denmark, sometimes seems to be exclaiming; 'how noble in reason, in action how like an angel! He does not always make as big profits as he might!' 'What is the use of the business man,' captious King's College, Cambridge, in the persons of Professor Kahn (123) and Mrs

Robinson (*E.J.*, 1952, p. 325) seems sometimes to be growling, 'if he can't be trusted even to maximize profits and so to get the nation's resources into the right uses?'

So those of you who enjoy controversy need not fear the horrors of perpetual peace.

II

UTILITY AND ALL WHAT?¹

Some three years ago I ventured to put together, for the benefit of those whom I called my fellow-idiot, a very amateurish Child's Guide to some of the then recent writings on the broad range of subjects which I described as Utility and All That. Since that date much more has been written on these themes; some of this I have read, some tried to read and failed, some I have realized it would be useless for me to attempt. But I am still eager to hear what is being thought and said about these matters, and I thought I would take the opportunity of my visit here to open a discussion about them, even though, as anyone who has read my previous paper will know, I am in no position to do so authoritatively, or even perhaps intelligently.

Let me say at once that I do not think my own standpoint has changed much, if at all, since that earlier paper was written. In his comment on Boulding's contribution on Welfare Economics to the second American *Survey of Contemporary Economics*,² Samuelson launches a characteristic shaft at 'a few utilitarians, drunk on poorly-understood post-Newtonian mathematical moonshine'. Let me hasten to fit that delightful cap on my own head before anyone is kind enough to do it for me.

I

There seem to be three sub-tracts of this large area where the kettle of discussion has still been boiling pretty vigorously. The first is the pure theory of consumer's choice under conditions of certainty. Very pure, in the hands of the dominant schools, has this theory now become –

¹ A paper read to the Sheffield University Economics Society, February 27th, 1954, and printed (with some changes) in the *Economic Journal*, December, 1954.

² P. 38

little more, indeed, than an attempt to express the logical implications of the assumption that the consumer acts consistently in accordance with an invariable scale of preferences. As regards the terms in which the theory is to be expressed, Little's attempt to retreat into pure behaviourism,¹ and to get rid of the idea of the consumer as trying to maximize something, has not, I think, caught on. The heads of the two main sub-schools – the partisans respectively of Concealed Indifference and Revealed Preference – continue to exchange mutual compliments on the elegance of one another's methods, and mutual assurances that there is no inconsistency between their several procedures and results; but each retains, naturally enough, a predilection for his own approach. Hicks delivered some lectures at the London School of Economics in 1951, the text of which I have seen and am permitted to allude to as long as I explain that the treatment in his forthcoming book will not be found to conform to it in all respects. In one of these lectures he in effect said that Samuelson's horse Revealed Preference was a wonderful performer on the flat, but was unable to jump fences.

Samuelson, on the other hand, points out that Hicks's horse Indifference Analysis requires certain luxury foods called continuity assumptions which his own hardier animal can do without; and about a year ago,² I suppose in response to Hicks's challenge, he succeeded in putting his horse over a fence. It turned out not to be a very high fence, being none other than the simple proposition that generally – not always, mark you, but generally – a fall in the price of a commodity, everything else remaining unchanged, will lead to an increase in the amount of it demanded. Still we know now that the animal can lift its

¹ Let me acknowledge here, as I ought to have done in my previous essay, the guidance I received from Mr Charles Kennedy (*Oxford Economic Papers*, January 1950, pp. 124–5) in laying stress on the peculiar twist given by Little to the word 'choice'.

And let me mention here also the excellent review of Little's book by Mr Kingsley Laffer in the *Australian Economic Record* for December 1951, pp. 213–29, with a large part of which I find myself in cordial agreement.

² In *Economica*, February 1953, pp. 1–9.

body off the ground, even though it gets no continuity-cake to sweeten its oats.

I need hardly add that neither animal is admitted to need the smallest admixture of *cardinality*-cake with its oats. Now I have never permitted myself to question this conclusion -- the conclusion namely (to drop my race-course metaphor) that in order to explain the ordinary behaviour of consumers in the market, it is not necessary to suppose that utility possesses cardinal, as distinct from merely ordinal, magnitude. That issue, in my judgment, only becomes acute in later connexions. And yet, even in the present connexion -- individual consumer's choice under conditions of certainty -- there seems to be something more to be said about it.

First, let me tell you a little story. When I tried, in *Utility and All That*,¹ to give an acceptable summary of the theory of revealed preference, I listed, on what seemed to be good authority, among its assumptions the assumption that 'there is no collection of available goods for which, in some situation in respect of income and prices, [the consumer] will not reveal a preference over some other collection of goods'. This assumption, I explained, was necessary to ensure the consequences ensured in other formulations by the law of diminishing utility and the law of diminishing marginal rates of substitution. Mr Houthakker, who kindly vetted my text, shook his head gently at this passage, and said that if I retained it I must explain that when I said this state of affairs was assumed, what I meant was that we agreed to confine our attention to situations of which it was true. My unruly instinct was to reply, 'Why the hell should I agree to do anything of the sort, unless I know already, from introspection of myself and observation of others, that a law of diminishing absolute marginal utility exists?' But I am very humble in the presence of Mr Houthakker, and I did as I was told. I wonder if I need have done. For I have been delighted

¹ P. 20.

to come across, in a recent writing by a convinced and eminent ordinalist, Mr K. J. Arrow,¹ the following nostalgic passage about the justification for the assumption commonly made that – to put it briefly – indifference curves are always convex throughout towards the origin. A common justification, he says, is that given by Hicks,² namely that for every commodity bundle there is a set of prices and an income-level for which that bundle will be demanded. ‘It may be doubted,’ he goes on, ‘that this assumption is really empirically verifiable, and in any case it is an assumption of a totally different logical order from that of utility maximization itself. The older discussions of diminishing marginal utility as arising from the satisfaction of more intense wants first make more sense, although they are bound up with the untenable notion of measurable utility. However, their fundamental point seems well taken.’

But Arrow is not the only distinguished economist whom the extraction of the tooth of cardinality has left with an ache in the gums. You may remember that in my paper,³ basing myself on what I believed to unimpugnable mathematical authority,⁴ I pointed out in simple language that repudiation of cardinal utility involves surrender of the claim that the consumer can compare *differences between situations*, as contrasted with comparing situations, in respect of their utility. This is a surrender which most ordinalists appear to be quite happy to make; but not so Lionel Robbins, who in the course of his generous review⁵ of my paper dismisses my argument as a *non sequitur*, and claims that he *is* able to compare differences of preference without involving himself in a numerical scale. Hicks, appealed to as arbiter, has now⁶ come down on my side on what I regard as the essential point. Unfortunately he

¹ *An Extension of the Basic Theorems of Classical Welfare Economics*, Cowles Commission Papers, New Series, No. 54, p. 529.

² *Value and Capital*, pp. 23–4.

³ *Utility and All That*, p. 18.

⁴ *Inter alios*, Bowley, Allen, Hicks and Lange.

⁵ *Economica*, May 1953, pp. 99–111.

⁶ *Economica*, May 1954, p. 155.

then goes on, as it seems to me, to confuse the issue by taking advantage of Robbins's somewhat *outré* illustration – the ranking of expensive works of art – to remake the old point that when we have to do with acts of expenditure which are large in relation to total money income, money ceases to serve as a satisfactory external measuring-rod of utility, and we have no other available. That is true, but as it seems to me irrelevant to the point at issue.

But I must not crow prematurely over Robbins, for I must now draw your attention to another recent development, of which, when he wrote his review of me, he was presumably unaware, or he might have called it to his aid. In my former paper I ventured at one point to ask a somewhat ironic question. 'Will the semantic snarl [about ordinalism and cardinalism],' I asked, 'perhaps be resolved by a semantic dodge? Will someone perhaps announce the face-saving discovery that all along the word "ordinal" has carried the connotation not only of being ordered but of being ordered in an orderly manner, i.e. with a divisible space between any two ordered points?' Apparently, this is exactly what has happened. Boulding, in a footnote to his article already mentioned,¹ citing one C. L. Coombs, alludes to utility as an 'ordered metric' magnitude; 'we can not only order the alternative choices in a rank of preferences, but we can order the intervals between successive alternatives.' 'Come, come,' I hope you will cry out, 'that is black magic – a barefaced attempt to have the best of both worlds.' But now here is Mr Charles Kennedy of Oxford² arriving apparently at a very similar position, and bringing up a very big mathematical howitzer, no less than Bertrand Russell, in support. Utilities themselves, so his argument runs, are indivisible and non-addable; and the concept of marginal utility is bosh. Nevertheless, the distances between pairs of *magnitudes* of utility can be subjected to a mysterious process called

¹ *Second Survey of Contemporary Economics*, p. 10, n. 11.

² 'Concerning Utility', in *Economica*, February 1954, pp. 43–56.

'relational' addition or subtraction. So having murdered marginal utility to please the rigid ordinalists, we can quietly slip into his place *not* the wretched Hicksian changeling of a law of diminishing marginal rates of substitution between an infinity of different commodities, but an actual law of diminishing distance between magnitudes of utility, and can then proceed exactly as we used to do before.

On the strength of an earlier article of his, to which I shall allude again presently, I had written to Kennedy offering to send him the club tie of my Cardinal Club. In kindly offering me a preview of his later article, he offered me instead a place in his rival establishment, possessing, so he claimed, all the same amenities, but not insisting on the same initiation rites. After careful reflection, I have felt obliged to decline; for, fortified by a letter from that excellent mathematician and economist Professor Charles Carter, I still seem to find myself free from the fundamental trouble which appears to have driven Kennedy to found his highly peculiar establishment. He, apparently, cannot permit himself to conceive of two utilities being merged (Carter's word) together to form a single whole – for him they can simply, so to speak, be laid side by side.¹ Hence the need for his detour through his queer 'relational' world. Rough and woolly (Carter's word again) as I know my own valuation processes to be, I feel no need to follow Kennedy in his journey, nor see any reason to believe that if I did so my valuations would gain in clarity and crispness.

And now, before leaving this sub-tract of the individual consumer under conditions of certainty, let me call one more witness² in defence of my own obstinacy. In an im-

¹ Op. cit., p. 49.

² There is yet another witness whom I might call, but I hesitate to do so lest he should embarrass me by proving too much! In an article in the *Quarterly Journal of Economics*, August 1952, pp. 366–84, that noted Scottish metaphysician Professor Marcus Fleming claims to establish the cardinality, not of utility but of welfare, by means of an intricate argument which he regards as being equally valid whatever view is taken of the nature of welfare – even, for instance, if it is conceived as consisting exclusively in loving-kindness.

portant recent paper on Complementarity,¹ which I must admit myself to be very far from having assimilated, I find the distinguished mathematical economist Professor Georgescu-Roegen taking a very tolerant attitude towards the cardinality of utility, and giving equality of treatment to the Edgeworth-Pareto definition of complementarity which assumes it and the Hicks-Allen definition which does not – indeed, in effect, giving primacy of treatment to the former. For, says he in a footnote,² ‘evidently the point of view that measurability of utility is not necessary anyhow for a theory of consumers’ equilibrium still largely prevails. It is, however, very weak scientifically. Could we refuse to take account of animals with more than two feet, on the ground that two feet only are necessary for walking?’ It is on the note struck by this homely metaphor that I should like to bring this section of my remarks to an end. I cannot help thinking, and in this too I acknowledge gratefully a stiffening received privately from Professor Carter, that in this field of consumer’s choice under conditions of certainty there has been a good deal too much hacking about with Occam’s razor. It is not, I have agreed, until we reach other pastures that the issue of the measurability of utility becomes of great practical importance. But the primary business of the economist is to understand the world, not to set it right; and it still seems to me to accord better with what we know about ourselves and other people to suppose that the consumer goes about equipped with a law of diminishing absolute marginal utility from individual commodities and from real income in general than to suppose that he goes about clad in a ready-made network of innumerable marginal rates of substitution. The fact that the latter hypothesis, the more complicated of the two psychologically, happens to be the more economical logically,³ affords no guarantee whatever that it is the nearer to the truth.

¹ *Southern Economic Journal* (U.S.A.), July 1952, pp. 1–20. ² Loc. cit., p. 2, n. 7.

³ At Mr Baumol’s suggestion, I have substituted these words for those which I used in my lecture, namely ‘the neater mathematically’. For indeed, as Hicks has admitted (*Economica*, May 1954, p. 157), the ordinal set up appears to be by no means mathematically neat.

II

The next region in which the kettle of discussion still seems to be boiling vigorously is that concerned with the behaviour of people when faced with choices involving uncertainty. I shall not linger very long here, for alas! much of the steam emitted floats well above my head. An admirable guide for the idiot to the whole region, though one which makes considerable demands upon him, and though I do not agree with every word that is written in it, is Arrow's essay *Alternative approaches to the theory of choice in risk-taking situations*.¹ I shall confine myself to those treatments which are content to deal in terms of measurable probability, and which accordingly have a bearing on the subject I have just been discussing – the measurability of utility.

Here the position seems to be this. Two pairs of eminent mathematical economists, Messrs Neumann and Morgenstern and Messrs Friedman and Savage – I shall allude to them henceforth as N and M, and F and S – have in recent years been maintaining that a plausible account of the way people behave in the face of uncertainty is to say that they act as if they were trying to maximize the mathematical expectation of utility, i.e. the average of the several utilities promised by the several possible outcomes of their action, each utility being weighted by the probability of its occurrence. I do not think either pair of authors maintains either that people always act in this way, or that, when they do, it is always as a result of elaborate conscious calculations; like many other economic theories, the theory is put forward as an account of *reasonable* behaviour, to which actual behaviour in the mass may be supposed to approximate. If the theory is valid, it can be shown to require, in a way that the theory of choice under conditions of certainty does *not* require, that the utilities of

¹ Cowles Commission Papers, New Series, No. 51 (1952)

which the expectation is thus averaged are measurable things, i.e. that once we have decided on a scale and a point to start from, they must be expressed by a particular series of cardinal numbers. To repeat the very simple illustration given in my previous paper, if a man cannot make up his mind between the certainty of event B and an even chance of events A and C , that means that to him the difference of utility between A and B is equal to the difference of utility between B and C ; if the chance were 2 to 1 in favour of A , that would mean that the utility difference AB is one-half the utility-difference BC ; and so on. *Pace* Mr Kennedy, we are back in a cardinal world.

But is the theory sound? Let me begin by recording that that famous inquisitor Professor Samuelson began by urging certain technical objections to it, which he has since withdrawn¹ as a result of having persuaded himself to swallow a little pill which he calls 'the strong independence axiom'. What this appears to mean, roughly speaking (I am not attempting to be watertight), is that if a man prefers an even chance of A and C to an even chance of B and C , we can be sure he prefers A to B ; his ordering of A and B is not 'contaminated' by bringing C into the story. That certainly seems to me to slip down the throat all right. It also seems to me that Samuelson is somewhat too coy about the way his admission brings back cardinality into the picture; but I agree with what I take to be his view that this rather esoteric point is not really the heart of the matter, and that we must dig deeper.

Does the theory find room for the familiar phenomena of fair (or nearly fair) gambling and insurance? We all know Marshall's answer² – plenty of room for insurance but none for gambling. This is because in Marshall's hands the theory is combined with a law of diminishing

¹ *Utility, Preference and Probability* (abstract of paper read at conference on 'Les Fondements et Applications de la Théorie du Risque en Économétrie', March 1952. Cf. also 'Probability, Utility and the Independence Axiom', in *Econometrica*, 1952, pp. 670 ff.).

² *Principles*, pp. 135, 843.

marginal utility of income, from which it follows straight away that an even chance of, say, £50 or £100 is a less efficient generator of mathematical expectation of utility than a certainty of £75. Marshall therefore calls gambling an 'economic blunder'; but it is not at all clear that he is entitled to do so, for he goes on to admit that the pleasure associated therewith may exceed the loss of expected utility, and he falls back in the end on the moral judgment that this pleasure is of an unwholesome kind. In any case the theory becomes in his hands a theory of – in some sense – *proper* behaviour rather than of representative actual behaviour.

I do not think the attitude of N and M differs greatly from that of Marshall. They are aware that their theory leaves something out, and at the end of the appendix to the second edition of their book¹ they hold out a hope that their treatment may some day be extended to include it; but so far as I am aware they have not yet seen their way to make the extension.

F and S,² on the other hand, claim to have incorporated gambling firmly within the four walls of the theory by dropping the assumption of a continually decreasing marginal utility of income. A fairly poor man, so the argument runs, living in a tract where this marginal utility *is* decreasing, will take out insurances and eschew small gambles like a good Marshallian; but he sees some way ahead of him, so to speak, a tract wherein, as he lifts himself into a new social class, the marginal utility of income will increase. For him therefore to make a bold gamble whose successful outcome would land him in this tract may be perfectly consistent with the theory. A quite rich man, on the other hand, who has left this tract behind him or never trodden it, while he will also take out insurances, will not be attracted by gambles of any

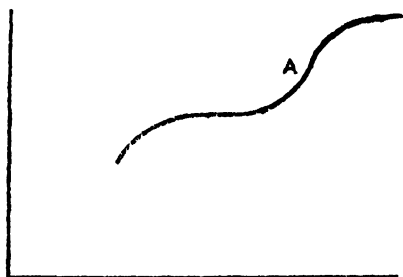
¹ *The Theory of Games and Economic Behaviour*, 2nd edition, p. 632.

² 'The Utility Analysis of Choices Involving Risk', in *Journal of Political Economy*, 1948, pp. 279–304; reprinted in A.E.A. *Readings in Price Theory*, pp. 57–96.

kind – for him the marginal utility of income is again decreasing.¹

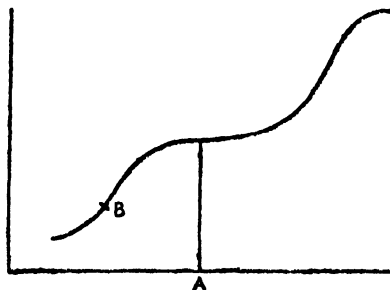
More recently Mr H. Markowitz² has produced an ingenious variant of the F and S hypothesis according to which, for every individual *whatever his place in the income-scale*, the marginal utility of income appears as increasing for small additions to his customary income and decreasing for larger ones, while for small *deductions* from his customary income it appears also as increasing and for larger ones as decreasing.³ Thus the Markowitz man will always take out insurances, while the F and S man will not do so

¹ Thus the representative curve of *total* utility of income is supposed to be of this shape (A = 'climber's tract').



² 'The Utility of Wealth', in *Journal of Political Economy*, 1952, pp. 151–8

³ Thus for every man, *A* being his actual income, the curve of *total* utility of income is like this. The inflexion *B*, which seems to me the most dubious of the three, may be interpreted as meaning that the man will stand the chance of a *frightfully* large loss rather than pay a *large* insurance premium.



when he is on the 'climber's tract'; and the Markowitz man will always be ready for a *small* flutter, which the F and S man seldom is.¹

Let us suppose for the moment – I do not want to pre-judge the question – that we can accept either the F and S or the Markowitz hypothesis, or perhaps some other variation on the same theme. The question still arises, does that dispose of the whole issue? In other words, was the law of diminishing utility of income the sole obstacle to our accepting the principle of maximization of mathematical expectation of income as an all-embracing explanation of representative action, or at least of rational action, in the face of uncertainty? I do not believe that it was. Let us allow ourselves for the moment to suppose the marginal utility of income to be *invariable*, so that there is no discrepancy between the mathematical expectation of income and the mathematical expectation of utility derived therefrom. It seems to me probable that we should still find some people taking a pleasure in facing uncertainty and others a displeasure, Mr *A* still preferring the certainty of £75 to an even chance of £50 or £100 and Mr *B* the reverse. In framing something which is much more important than our theory of fair gambles, namely our theory of business enterprise and profits, we should still have to take this diversity of attitude into account. And we should still, I think, do well to pay special heed to the old suggestion that, without positing more inconsistency than it is decent for human nature to display, we should expect to find the representative man approximating more closely in his business life to Mr *A* the lover of certainty, even though in his leisure hours he sometimes puts on the

¹ I have a certain tenderness for the Markowitz variant, because forty years ago, feeling rather revolutionary, I suggested that, since everybody feels he could very easily do with a bit more money than he has got and only with difficulty with any less, the curve of marginal utility of income must be regarded as kinked  at the point of existing income; only to find myself outdone by a very 'orthodox' economist, Sir Sydney Chapman, who was, I think, the first to champion the notion of increasing marginal utility over a certain range. See my *Study of Industrial Fluctuation*, p. 135, and Chapman in *Economic Journal*, 1912, pp. 25-35.

motley of the gambler Mr *B*. Thus, even on our provisional assumption of an invariant marginal utility of income, we might well find that, in his business life, an uncertain prospect yielding an expectation of say £80 or £90 was needed to make him turn his back on a certainty of £75.

For this reason, i.e. because they ignore the pleasures or pains of uncertainty-bearing *per se*, I am less excited than, as a member of the Cardinal Club, I should wish to be by the additional evidence in favour of cardinalism which has been turned out by the N and M and F and S machines. But what I find it hard to see is why F and S themselves, who, as I have said, claim to account for the phenomena of gambling without having recourse to those pleasures or pains, should be so concerned to proclaim that their results carry 'no welfare implication at all',¹ even for the individual. I am very doubtful whether they have produced the baby they say they have produced, though if I thought they had I should welcome him with open arms. *They*, having as they believe produced the baby, are inclined to treat him as a little illegitimate of no account in the world, and even to apologize for calling him by his true and honourable name Utility, for fear of suggesting that he is of some normative interest. Surely in this disclaimer they go much too far.

III

With that impertinent remark I reach the third, last and most diffused region of debate, the connexion between

¹ 'The Expected Utility Hypothesis and the Measurability of Utility', in *Journal of Political Economy*, 1952, p. 473. Likewise Mr Alchian, in his useful contribution to this debate (*American Economic Review*, March 1953, pp. 27 ff.), commits himself to the view that 'the utility discussed in this paper has literally nothing to do with *individual*, social or group welfare, whatever the latter may be supposed to mean' (loc. cit., p. 50, my italics). Mr Baumol's similar disclaimer (*ibid.*, May 1953, pp. 415-16) is at least followed up by a welcome concession that 'old-fashioned cardinal utility is neither meaningless nor pointless if not taken too literally'. Mr D. Ellsberg's objection (*Economic Journal*, September 1954, p. 549) to admitting the relevance of the N and M analysis to the evaluation of welfare seems to depend rather on an epistemological argument about the relation between 'concepts' and 'operations' which I am probably not competent to appraise but by which on first reading I feel far from convinced.

individual utility and social welfare. I will try to focus my remarks round two questions only. (a) Is it sensible to try to distinguish between real income and economic welfare (conceived, of course, like real income, as a flow per unit of time)? (b) Is it sensible to try to distinguish between economic welfare and welfare in general?

(a) According to Boulding,¹ 'the attempts which have been made to define a concept of "real income" which should be in some sense independent of its distribution have been generally abandoned'. I think he had better wait till he sees Hicks's new book before he makes too sure. I do not wish to make light of the index-number difficulties which arise when we attempt to correct movements of aggregate money incomes for changes in prices; but it seems to me that these difficulties are frequently marginal, and that there is hardly any branch of economic analysis which cannot be reduced to chaos if we insist on taking them too tragically. Over a very large range of cases it seems to me that statements such as 'the real national income has increased, but its distribution has changed for the worse' are likely (whatever the grounds on which we suppose ourselves to be basing the second half of the judgment) to make quite good sense.

It is, I think, Little's refusal to distinguish between objective real income and the flow of welfare² that has laid him open to the formidable attack by Mr Kennedy³ of which I must now try to give you a simplified account. You will remember Little's criterion for judging whether one economic situation *B* is better than another economic situation *A*. *B* is better than *A*, he says, if there is a situation *A'*, reachable from *A* merely by redistributing money income, and such that (i) distribution is roughly the same as at *B* and is judged to be at least no worse than at *A*, and (ii) everybody is better off at *B* than at *A'*. Now this,

¹ *Second Survey of Contemporary Economics*, p. 13.

² *A Critique of Welfare Economics*, pp. 11-12, 273.

³ 'The Economic Welfare Function and Dr Little's Criterion', in *Review of Economic Studies*, No. 52, pp. 137-42.

says Kennedy, will not do. The logical sequence involved – B is better than A' , A' is at least no worse than A , therefore B is better than A – implies that A' is judged to be no worse than A because distribution is judged to be no worse at A' than at A . This means that the plain man, or Mr Malenkov, or the Archangel Gabriel, or whoever is supposed to be in charge of the proceedings, is, in comparing A' with A , either ignoring everything except distributional considerations – ignoring total utility considerations, let us express it – or is capable of weighing up total utility considerations against distributional ones and striking a balance. In either case, says Kennedy, there seems no reason why he should not be able to do directly, as between B and A , what he is implicitly assumed to be doing as between A' and A ; the circuitous route through A' turns out to be completely otiose and unhelpful.

In correspondence with Kennedy I tried to put up a case in Little's defence; but I was bowled out. For Little is difficult to help. It would seem that, if he is going to treat A and A' as equivalent except for the scheme of distribution in force, he must be assuming that *something* more fundamental than the total of money income has remained unchanged between A and A' when the distribution of that flow is changed; but it is by no means clear what that unchanged something is. From the fact that what he says *is* changed is 'the distribution of welfare' one is tempted to infer that what he thinks is unchanged is the total of welfare; but that will not do, for, in the case where distribution is judged to be actually better at A' than at A , it seems clear that he would have to say that the total of welfare has increased. Nor will he permit us to say, as I think Hicks would, that what is unchanged is real income, conceived of as something different from welfare.

On his own principles I can see no escape for him; the graven image which he has set up in place of all those he has cast down seems to fall with a loud crash to the ground.

But the whole trouble vanishes if only we allow ourselves to think of economic welfare and real income as different things, the magnitude of the former depending not only on the magnitude of the latter but on its distribution. That, however, of course implies the making of interpersonal comparisons of utility, and that in turn – though Little, as I noted in my previous essay, does not seem to realize it¹ – implies, so I still believe, taking a cardinal view of the nature of utility.

(b) I come to my last question – may I, or may I not, be allowed to keep that distinction between economic welfare and other kinds or forms of welfare which I have ventured to underline by coining for the former the fancy word *ecfare*? Professor Robbins, in his review of my paper, says that I must not; and he has no difficulty in illustrating, what has always been admitted, the difficulty of drawing a clear line. But let me explain again briefly why I should like to keep the distinction if I can. It is because I think the economist, on the basis of judgments which are judgments of fact and not of value, can hope to make useful statements about some, though not all, of the consequences for human happiness of economic changes, *including changes which entail or consist in a change in the distribution of income*. Now Robbins makes it quite clear that he does not believe this. He thinks that about this latter type of change *no* statement can be made which does not involve an appeal to extra-economic considerations such as justice or political workability.² I am bound to say that this still seems to me a defeatist view, and one which belittles unduly the *specific* contribution which the economist can hope to make as an (official or unofficial) counsellor. The extreme positions to which it can give rise if

¹ Cf. Arrow in his review of Little, *American Economic Review*, December 1951, p. 928: 'Presumably the equivalence of two income distributions means that in some sense the *relative* utilities of different individuals are the same in the two situations. This implies, as far as I can see, the existence of some measure of utility which possesses an interpersonally comparable cardinal significance.'

² Loc. cit., p. 109.

pressed to its logical conclusion are well illustrated by the pessimistic contribution of Professor Reder to the new American Survey.¹ 'Welfare economics,' he says, 'is in a very unhappy state'; and, a little later, 'considerations of the welfare implications of envy make it impossible even to say that welfare will be increased by everyone having more of every commodity'. How much better, surely, to assert as a plain matter of fact that *economic* welfare undoubtedly *will* be increased in this event; and *then* to call in the Archbishop of Canterbury to smack people over the head if they are stupid enough to allow the increased happiness which might be derived from this plain fact to be eroded by the gnawings of the green-eyed monster! And I cannot at present persuade myself that such a common-sense distinction between the economic and the not is fatally undermined by the fact that the Archbishop draws a salary and that his gaiters embody scarce resources which might have been devoted to an alternative use.

¹ Op. cit., pp. 34-6.

III

MORE NOTES ON THE RATE OF INTEREST¹

I. THE PATINKIN PUZZLE

I. In the more highbrow journals there has been in recent years a good deal of discussion, enshrined in some formidable mathematics, about an alleged inconsistency in the treatment of the determination of prices by certain classical and neo-classical writers. Did they, or did they not, get into a muddle in attempting to combine a theory of *relative* prices, determined entirely by *real* factors, with a theory of *absolute* prices, that is of the price level, determined partly by *monetary* factors?

On the main issue, which concerns the prices of commodities, I will say only these two things. First, Becker and Baumol, in a notable piece of excavation,² seem to me to have shown good reason for dismissing most of the accused, *imprimis* Mill and Walras, without a stain on their characters; I was already of the same opinion about Marshall and Wicksell, in whose writings I am less ill-read. Secondly, whatever these eminent gentlemen actually said, there is, fortunately, agreement between the counsel for the prosecution, Patinkin³, and the counsel for the defence, Becker and Baumol, on what they ought to have said. That is to say, it seems to be possible to state simply, exactly and plausibly the assumptions on which, as between two positions of equilibrium, a change in the monetary factors will be found to have changed the general level of prices, while leaving the structure of relative prices unchanged.

But I am here interested in a particular price, the price of bonds, alias the rate of interest. And there the position, which is dealt with at great length by Patinkin, but only

¹ A talk given to Seminars at the Universities of Princeton and Harvard in April 1953, and printed in the *Review of Economic Studies*, No. 55 (1953-4).

² *Economica*, November 1952, p. 355 ff.

³ *Review of Economic Studies*, No. 45, p. 42 ff., and earlier articles there cited.

very briefly by Becker and Baumol, seems to be less clear. Let us put the problem in this way. Let us take the Cambridge monetary equation, $M = KRP$, where M stands for the quantity of money; P for the commodity price level; R , for the moment, for the community's stock of real resources, i.e. we start by considering (if we know how – I am not a good enough Walrasian to find it at all easy) a pure exchange economy, where there is no production. K then stands for the proportion of these resources over which it is desired to keep command in the form of money. There are then two questions, or rather groups of questions, needing separate consideration. (1) Can we specify the exact assumptions on which, as between two equilibrium positions, a change in M , K remaining unchanged, will, while changing the prices of all commodities in proportion, leave the rate of interest unchanged, thus leaving the latter free to be determined entirely by 'real' forces? If so, are these assumptions at all plausible? (2) What are the answers to the same questions for a change in K , M remaining unchanged?

2. To the first group of questions Patinkin started by giving, for the 'exchange economy' with no production, a confident answer. On assumptions not very complicated, and not making greater demands on our credulity than those commonly associated with 'classical' or long-run economics, it could, he thought, be shown that *pari passu* with an increase in the stock of money, the number of bonds carrying a claim to a given number of dollars of annual interest would increase, thus preventing the price of such bonds from rising, i.e. keeping the rate of interest unchanged. Becker and Baumol,¹ on the other hand, appear to reject this result for an exchange economy, and Hahn² seems to have produced enough objections to it to cause Patinkin³ to agree that the validating assumptions are somewhat more complicated than he had supposed.

¹ Op. cit., p. 362.

² *Review of Economic Studies*, No. 50, p. 179 ff.

³ *Ibid.*, p. 186 ff.

I believe that the view in question, namely that the rate of interest can sensibly be regarded as in the long run invariant to changes in the supply of money, is that which was held by Marshall, and probably most other classical or neo-classical writers.¹ But my hunch is that it will prove difficult to establish persuasive foundations for it, except in terms of a production economy, which is, after all, the kind of economy in which we live and the only kind which it is at all easy to visualize. This seems to be Baumol's view, and I expect he would agree that it is easier to make the case plausible for a *progressive* economy than for the *stationary* production economy for which he has attempted (loc. cit.) to provide an illustration of how the equilibrating process may be expected to work. It is through entrepreneurial borrowing for the extension of production, involving in our simplified language the creation of additional bonds, that Marshall represents the rate of interest being dragged up again from the point to which it has been lowered by the original injection of money. After all, as Hahn² suggests, it is somewhat unnecessarily ambitious of Patinkin to seek to provide foundations for the classical theory of interest by means of a model -- the pure exchange economy -- from which the typical classical forces of productivity and thrift are excluded.

3. When we turn to the second group of questions, that connected with the effect of changes in K , the propensity to hold command over resources in monetary form, the matter becomes considerably more obscure. I have been inclined to suppose, and have committed myself to this view in print,³ that the Marshallian doctrine, and a reasonable doctrine, is that for purposes of comparative statics the rate of interest can fairly be regarded as invariant to

¹ Cassel seems to have been an exception, holding (*Theory of Social Economy*, first English translation, p. 479), as against Wicksell, that, in the event of inflation, the 'market for real capital' would eventually 'react' so as to bring the real rate to equality with the lowered money rate. Keynes in his *Treatise* days (Vol. I, p. 198) rather unexpectedly sided on this issue with Wicksell (who, as Patinkin has reminded me, afterwards somewhat modified his position).

² Op. cit., p. 184.

³ *Essays in Monetary Theory*, p. 28.

this kind of change as well. But for this to be true, Patinkin, for his exchange economy, asserts the need of at least one further assumption – namely that the intrinsic attraction of bonds as purveyors of the sources of satisfaction summed up in the word ‘liquidity’ has changed in the same proportion as K has changed. If this assumption is not fulfilled, a fall in K , which is associated with an equivalent rise in commodity prices, will be associated also, in Patinkin’s world, with a fall in the rate of interest.

I think it would be difficult to show that Marshall, or any writer antecedent to or contemporary with him, ever explicitly made this assumption. They lived in a world less dominated than ours by huge national debts and therefore probably less conscious of the near-money-ness of certain types of non-money. The question remains whether it would be a reasonable assumption for a modern writer, anxious to investigate long-run tendencies, to make. I incline to think that it would. But once more I suspect that Patinkin, in trying to simplify his task by confining it to an exchange economy, has really made it more difficult. For once we allow for production, and *a fortiori* for progress, the way is open for an increase in the quantity of bonds, stimulated by the rise in commodity prices, to bring their price down again towards an equilibrium or real-force-determined level. That is the solution which I put to Patinkin in a letter written after reading his first article, and for which I like to think I find support in Baumol’s treatment, though the latter does not, in fact, deal with this case of a change in K as contrasted with a change in M .

4. In his later article Patinkin, under the harrow of Hahn and that other noted inquisitor, Johnson, has had qualms about two of the other assumptions of his ‘improved classical’ model. First, ought he, he asks himself, to have taken more heed of the possibility that the reduction in K is specifically associated with an increase in the intrinsic attractiveness of bonds? My answer would be

No – it is a merit, not a defect, of his treatment that for purposes of long-run or equilibrium theory it releases us from that extreme concentration on the single money-or-bonds alternative which Keynes's treatment encouraged. Secondly, ought he not to have considered that an increase in K which is due to an enhanced desire to stow money away for 'precautionary' purposes, and which is duly set off by an equivalent fall in commodity prices, will increase the real value of the active stock of money held for the conduct of current business, rendering some of that stock redundant and creating a disequilibrium which it will need a fall in the equilibrium rate of interest to resolve? Again my answer would be No. It seems to me that Mr Tormentor Johnson has been putting the cart before the horse; it is only through the draining of money from the active stock to the precautionary stock that the equilibrating fall in commodity prices has been brought about, and at no point has the active stock been redundant.

5. In conclusion, there remains one special point of *dogmengeschichte* on which I have not been able to see eye to eye with Patinkin. What was Keynes's view on all this? We are agreed, I think, that in respect of the second problem, the effect of a change in K , it amounted to a rejection of the classical or Marshallian attitude or of any close approximation thereto. But in respect of the first problem, the effect of a change in M , Patinkin inclines to the view that Keynes was a classic at heart, and was concerned only to emphasize and broaden the doctrine which Marshall and Wicksell had already expounded – the *short-run* or transitional effects of an injection of money on the rate of interest. In coming to this opinion, Patinkin, while admitting that other passages of the *General Theory* tell in the reverse direction, has relied heavily on a passage on page 191, where Keynes for the moment endorses the view that, on the assumption of flexibility of money wages (and presumably other prices), 'it would make no permanent alteration to the rate of interest whether the quan-

tity of money was fixed by the monetary authority at ten millions or at a hundred millions'. This, taken by itself, seems clear enough; but after some highly obscure sentences Keynes sums the matter up again with the words, 'Assuming flexible money wages, the quantity of money as such is, indeed, nugatory in the long period; but the terms on which the monetary authority will change the quantity of money enters as a real determinant into the economic scheme.' What he seems to be saying here is that it makes no difference to the long-run rate of interest whether the authority fixes the quantity of money at x or at y : but that it *does* make a difference to the long-run rate of interest whether the authority is ready to create money in return for a short-run rate of interest p or for a short-run rate of interest q . But since in his theory there is a one-one relationship, determined by the preferences of the public, between x and p and between y and q , the two halves of this statement seem to me irreconcilable. The whole passage occurs in an Appendix, incidentally to a criticism of Ricardo, and I find it hard to give it much weight as compared with the extended expositions elsewhere, especially pages 181-5, which tell in the opposite direction.

II. THE ROOSA PARADOX

During the last few years a number of countries – Britain and the United States both lumbering along well in the rear – have been experimenting in disinflationary action by bringing back into use the long-rusted tool of discount rate policy. There seems to me no doubt that those experiments have had a considerable measure of success. Those who dislike and distrust them can say that some of the disinflation which has been ascribed to them has really come about through the operation of spontaneous forces; and that in so far as it has been brought about by deliberate policy, much of it *has* been, and more of it *could* have been,

brought about by the direct controls and the sermonizings by which, in this country at least, the use of bank rate has still been accompanied. Some hold that the use of the weapon has been partially frustrated by failure to apply it effectively in what is nowadays called the 'public sector' of the economy; others that the public sector ought to have been even more carefully shielded from its impact by the erection of skilfully designed fences between various sections of the capital market. By and large, however, the thing seems to have worked. But there is still a good deal of mystery about the precise manner of its operation; and it is unlikely that a general solution can be given which would be fully applicable to markets so different in their institutional set-up as those of the United States, England, France, Germany, India, Australia.

It is not my purpose to go deeply into these matters, but rather to confine attention to an argument for the effectiveness of discount rate policy which has been developed by somebody who should know, and undoubtedly *does* know, what he is talking about. In his contribution to the collection of essays called 'Money, Trade and Economic Growth', Dr R. V. Roosa, of the Federal Reserve Bank of New York, expounds the thesis that, under modern conditions in the United States, even small changes in official money rates can exert a surprisingly strong influence on business conditions, because of their effect not so much upon either the borrowers or the savers of money – though neither of these classes is neglected in his analysis – but upon the *lenders* of money which has been already saved in the past. It will be understood that I am not presuming to dispute the conclusions of such an obviously first-hand authority; but I do think they contain an element of paradox which needs dragging out into the light. Let me try to justify that assertion.

We must start, I think, by drawing a clear distinction between banks and other lenders. As regards banks, there are two stages in the story. First, it is well understood

that both discount-rate policy and open-market policy are weapons in the hands of the Central Bank for operating on the reserves of the commercial banks, though there is room for much subtle discussion as to how far they are rival or alternative weapons and how far they are complementary. Secondly, it is well understood that both a movement in loan rates and an increased or diminished compliance in lending are weapons in the hands of the commercial banker for operating on the volume of his earning assets, though here again there is room for a great deal of discussion about the exact relation between the two weapons. In England, for instance, it has usually been held that the second is the more important, and that the banker who decides, under pressure from the Central Bank, to draw in his horns does not usually trust to the quotation of higher rates to produce the required degree of drying up in the demands for accommodation, but indulges also in a certain measure of selection and credit-rating. This indeed is one of the complaints of the planner who objects to the use of monetary policy – that it does not in fact entail, as is sometimes claimed for it, the use of an impersonal and automatic instrument, but rather the substitution of the judgment of bankers for that of the inhabitants of government offices, which he is pleased to regard as likely to be superior. But whatever the intricate truth about these matters, the point which I wish to make is that there is nothing paradoxical about asserting that a rise in interest rates is normally associated with a diminution in the supply of loanable funds emanating from the banks. The paradox only arises when we go outside the banks, and make, as Dr Roosa does, the same assertion about non-bank lenders.

Why do I venture to call it a paradox? For this reason. Dr Roosa opens the discussion in a way which leads one to suppose that he is endorsing the change in emphasis, associated largely with the name of Keynes, from the *flow of new savings* to the *pool of previously saved money* as the

main source, in the very short period, of the supply of funds to the capital markets. But there is nothing in this change of emphasis, taken by itself, to lead us to suppose that the supply curve of such funds is of an abnormal or 'backward-rising' character. On the contrary, Keynes's celebrated L_2 curve, connecting up the rate of interest with the desire to hold money idle, is definitely downward-sloping, indicating that the lower the rate of interest the more inclined people are to hold their money idle, and the higher the rate of interest the more inclined they are to offer it in the capital market. One would suppose, for instance, that the natural effect of the stiffening of interest rates which comes about in the course of a trade expansion would be to tempt some of these idle funds out of their lairs, thus feeding the fires of the trade expansion and moderating the rise in the rate of interest as effectively as would, in the classical analysis, an increased flow of genuine new savings.¹

That this is what we might be disposed to expect is, I think, confirmed by a passage² in an address delivered to the American Economic Association in December, 1946, by Dr Roosa's distinguished colleague on the administration of the New York Federal Reserve Bank, Professor J. H. Williams. It is a passage to which Dr Roosa specifically refers³ as a pioneer exposition of his own doctrine of the effect on the actions of non-bank lenders of variations in the rate of interest. But when we look it up, what do we find? Professor Williams recalls how in the great depression of the 'thirties there was an unprecedented accumulation of idle funds in the hands of potential lenders. One cause of this, he concedes, may well have been the general lack of business confidence during the period of New Deal experimentation. 'But,' he concludes, 'it may well have been due also to the fact that the interest

¹ Cf. my *Essays in Monetary Theory*, p. 35, lines 9 to 4 from end.

² Reprinted in *Post-War Monetary Plans and Other Essays*, third edition, pp. 98-103.

³ *Money, Trade and Economic Growth*, p. 275, bottom.

return from investment was not high enough to overcome "liquidity preference".¹ On this interpretation it was cheap money, not dear money, that was causing non-bank lenders to be reluctant to lend. Professor Williams, disguised at any rate for the moment as a good Keynesian, seems to have said just the opposite to what we expected to find that he had said!

Nor do we get much further if we look at another passage, this time by Professor F. A. Lutz,¹ to which Dr Roosa refers as a pioneer study of the effect of interest-rate changes on the behaviour of non-bank lenders. For Professor Lutz's treatment is confined to the behaviour of investment houses, who, he says, if the rate of interest goes up, may well decline to sponsor a new issue for a borrower of whose capacity to service the new issue in the future at the enhanced level of rates they have become more sceptical than has the borrower himself. This is no doubt true; but the investment house is here being regarded not so much as a lender of money, but rather as an agent of the borrower of money; and the account given of its behaviour seems to be not so much an exposition of the new doctrine that a rise in the rate of interest will check the *supply* of loanable funds as a refinement, appropriate to a highly organized capital market, of the old doctrine that it will check the *demand* for them.

We are thrown back, therefore, on Dr Roosa's own exposition, the heart of which is to be found on pages 286-91 of the article cited. And I must concede that when we study this, the paradox in large measure disappears. For Dr Roosa turns out not to be concerned, as Professor Williams was in the passage referred to, with the holders of idle money, but rather with the institutional holders of government securities. These, he says, are nowadays so numerous and so sensitive that if the Central Bank can produce even a small change upwards or downwards in the price of such securities, they will in the first case sell

¹ *American Economic Review*, December 1945, p. 829.

when they would otherwise have held, in the second case hold when they would otherwise have sold; in the one case offering the proceeds of sale in the private capital markets, in the other withholding from these markets offers of funds which they would otherwise have made. Thus, so the argument runs, a change in official rates is more easily and smoothly transmitted than used to be the case from the short market to the long, and from the market for governments to the markets for private bonds, mortgages and equities. This all seems highly persuasive, provided we can dismiss as a bogey the Keynesian alternative of money leaking away to, or welling up from, the earth on such a scale as to break the chain of causation, and thwart the purposes of the Monetary Authority. And personally I do not see why, in most normal circumstances, we should not do so – I do not think Dr Roosa is claiming the ability to control earthquakes.

There still remain, however, to my mind, certain difficulties in the argument. At several points in its course it is hinted that the efficiency of the whole process depends on the formation by lenders of an expectation that a small change in rates will be followed by further changes in the same direction – Mr A, who was thinking of lending in the private markets, will hold off those markets if he thinks he will be able to get a better return on his money a little later on. Here I have two difficulties. First, I can see the force of this argument if Mr A is a holder of idle money; but if, as Dr Roosa is assuming, he is a holder of government securities, does not the argument cut both ways? For if Mr A is expecting a further rise in private loan rates, he will also be expecting a further fall in the price of his government securities, and might as well perform his *ex hypothesi* projected switch straightaway. Secondly, it is usual to assume that a rise in rates operates on *borrowers* partly by generating the *opposite* expectation, namely that rates will be lower again in the future than they are now; and Dr Roosa in his text does not seem to

dissent.¹ Yet it seems somewhat paradoxical to suppose that lenders and borrowers should consistently draw opposite inferences from the fact of an accomplished rise in rate. In a private letter which he has been kind enough to write me, Dr Roosa seems rather to take the view that borrowers will share the 'elastic' expectations of lenders, but will not, in the most important cases, be in a position to act upon them by rushing in to borrow now; i.e. borrowers will be more affected by the *actual* rise in the rate of interest, and lenders by its expected further rise. If this can be accepted, what I will still venture to call the Roosa paradox, namely that a small rise in rates will both diminish the stream of loanable funds demanded and the stream of loanable funds offered, can remain intact. At the back of my mind, however, I still cannot help wondering whether budgetary considerations are not still leading the monetary authorities in both Britain and the United States to take a more optimistic view of the restrictive effects of *small* changes in official rates than in the long run will be found to be justified.

¹ 'The market pricing of new securities issued is also immediately affected, and new issues may *for a time* be held back, leading *in some cases* to indefinite postponement.' *Op. cit.*, p. 288; my italics.

IV

THOUGHTS ON MEETING SOME IMPORTANT PERSONS¹

One of the signs of senility, especially among academic persons, is a tendency, if they are introduced to somebody who has attained distinction in the world, to look him up and down, cudgel their memories, and finally to frame a greeting in some such words as these: 'Ah, so it's *you*, my boy. Why, I knew you when you were quite a little feller. Well done, my lad – I'm glad you've had such good luck, and become such an important person.' When this tendency reaches pathological strength, it develops an element of hallucination, and leads the sufferer to treat the distinguished stranger as his own son.

It is some little experiences of this kind which I am going to ask you to allow me to relate to you. You must put yourself therefore into a mood of indulgence towards egoism and even delusion. But let me hasten to reassure you on one point. It is parentage after the spirit, not after the flesh, that I have in mind. The three persons whom I propose to greet in this embarrassing manner in your presence are not real persons. They are Concepts who have come to play a prominent part in the recent developments of dynamic economics. Their names are Autonomous Investment, the Domar Equation and the Kalecki Effect.

I. AUTONOMOUS INVESTMENT

It is not for me to say when Autonomous Investment was born, but I know when he first took shape in my own head. In reviewing Harrod's book, *The Trade Cycle*, in 1937 I found myself able to agree in principle with the importance which he attached to the long familiar 'principle of acceleration', but at the same time constrained to

¹ A talk given informally at seminars at the Universities of Princeton and Harvard, April 1953, and printed in the *Quarterly Journal of Economics*, May 1954.

argue that it need not operate on the upswing with the fatalistic precision which he ascribed to it. This is what I wrote:¹ 'The next most important thing to be said is perhaps that some of the principal forms of investment in the modern world – the instruments of power-production, of transport, of office-activity – are, after all, very loosely geared to the visible demand for particular types of consumption goods and depend rather on fairly vague estimates of the future progress of whole areas and populations.' Such activities, I argued, being free from the relentless compulsion of the acceleration principle, might be more amenable than Harrod supposed to the pressures of monetary policy.

I *think* this is the first appearance of Autonomous Investment in print, though that may be a delusion; certainly I do not delude myself into supposing that my review had anything to do with his appearance, under the name 'long-range capital outlay', in Harrod's revised exposition of his theory in the *Economic Journal* for March 1939. Meanwhile, in a series of lectures not published till 1940, I had had occasion to use him again in a different context – this time as a damper on the allegedly devastating deflationary effect of an increase in the propensity to save. For the kinds of capital outlay in question, I argued, while not very sensitive to fluctuations in the demand for final consumption goods, *are* likely to be specially sensitive to movements in the rate of interest.²

After the war, our friend cropped up again, as was natural, in Harrod's third version of his theory,³ in which, however, he plays a relatively unobtrusive role. It was reserved for Hicks, in his brilliant study *The Trade Cycle*,⁴ to give him his polysyllabic name and assign him a commanding role in the mechanism of the cycle. For it is he who, in Hicks's treatment, pulsing away with a steady rhythm of advance, at the critical moment lifts the econo-

¹ *Essays in Monetary Theory*, p. 179.

² *Towards a Dynamic Economics*, p. 79.

³ *Ibid.*, p. 37.

⁴ See especially pp. 59 ff., 105.

mic system from the floor to which it has been beaten; it is he who, not at this critical moment only but throughout the story, is the Super-Tail which wags the Dog of income which wags the secondary tail of induced or bread and butter investment.

Now when I met my old friend – there! I almost said my son – thus aggrandized, I felt proud and impressed, yet not altogether at ease. For one thing, he had become a more virtuous character than I had expected. It is true that, as I have just explained, I had brought him in as a possible steadying influence on the violence of fluctuation; but I had coupled that with a warning that his very looseness of texture might make him the begetter – let me quote again – of ‘even worse situations of temporary saturation’ than Harrod had disclosed. I do not feel complete confidence in the picture of him as an engine whose steady pounding away in the background can be relied upon to lift us off the floor.

Moreover, in Hicks’s treatment he has become endowed with a peculiar feature which I admit that, until it had been pointed out independently by Kaldor,¹ by Duesenberry² and by Tsiang,³ I had not fully realized. He has become sterile – a generator of demand but not of supply. I had thought of him as an animal with rather a long period of gestation – an elephant rather than a fruit-fly – but by no means an infinite one. But there seems no doubt that in Hicks’s system, if he is to do his job, he must be barren. For in Hicks’s treatment the acceleration principle, linking needed capital equipment to desired output, from which he is *ex definitione* exempt, is simply the productivity principle, linking realized output to available capital equipment, looked at from a particular angle; and in shutting him out from the one Hicks has shut him out from the other.

¹ *Economic Journal*, December 1951, p. 845.

² *Quarterly Journal of Economics*, August 1950, p. 467.

³ *Ibid.*, August 1951, p. 337

Once I did realize this, it renewed the malaise with which I had, when I first read Hicks's draft, regarded his whole handling of the acceleration principle. I feel free to allude to this, because on page 40 of his book he has courteously recorded my malaise and attempted, I am afraid without complete success, to remove it. It seemed to me that, in a laudable attempt to keep money out of the picture in this part of his book, he had somehow got demand and supply tangled up together; and that when he came to introduce a simplified lag into the relationship between changes in output and amounts of capital outlay he had introduced it the wrong way round. For what, ever since I met it in the pages of Aftalion forty years ago, I had taken the acceleration principle to mean was that a given increase in the *demand* for final output would lead to a greater proportionate increase in the *demand* for capital equipment, the increased *supply* of capital equipment following after a lag, and the increased *supply* of final output – or most of it – coming along last of all. What Aftalion never succeeded in explaining was why this torrent of useful goods should be regarded as, in his own metaphor, a swarm of malignant microbes. But on the mechanism and order of events, he seems to me more instructive than Hicks, in whose treatment, as Tsiang points out, the obvious sense in which a machine generates output by turning it out is subordinated to the esoteric sense in which its construction generates output by putting some money into somebody's pocket with which to demand output.

But to return to Autonomous Investment. I'm not sorry to see him a bit deflated from his Hicksian stature. But I don't want to lose him altogether. And I still regard him as both a potential friend and a potential enemy of steady progress. I think his ticking away *can* help to tide us over minor setbacks, and that his relative amenability in both directions to the interest rate and to financial policy is a high merit. But when he *does* turn round, after a Hudson

railway débacle or a Baring crisis, his behaviour can be very disturbing. Like the little girl in the rhyme, when he is good he is very very good, but when he is bad he is horrid.

II. THE DOMAR EQUATION

I turn to another important person whom I am constantly meeting nowadays, and who indeed has been hovering in the background of the preceding discussion – the Domar Equation. The Domar Equation can be put various ways round, and with various degrees of embellishment in the way of leads and lags; I am going to present him in the simplest possible form, and put the way round which suits me. Let there be a society in which output is increasing by a fraction r of itself in every year, and in which the proportion of capital equipment to the annual stream of output which it helps to produce is fixed inexorably at q . Then if this state of affairs is being smoothly maintained, without the generation of inflationary or deflationary pressures, we can be sure that the proportion of their real income which the members of the society desire to save is equal to rq . For if, and only if, this is so, the sums saved in each year will just suffice to buy the new batch of capital equipment created in that year, and the additional sum spent on consumption in each year will just suffice to buy the additional batch of consumption goods for which that new batch of capital equipment is responsible.

Heaven forbid that I should claim, in my most deluded moments, to have invented the Domar Equation. Mrs Robinson, for all I know, may well be right¹ that it had lain for years wrapped up in the tangled phrascology of Marx before being brought to light by Domar and Harrod. And yet – and yet – the more I look at it, the more familiar some of its features seem to be, and I must beg once more to be allowed to be a little autobiographical. In the 1920s I found myself, in what would be thought now

¹ *The Rate of Interest*, p. 91, n. 1.

the unduly narrow context of the practices and policies of banking, intrigued by this very problem of the conditions for a steady rate of growth. And I invented a little equation which is to be found at the end of the appendix to Chapter V of the second (1932) edition (and also of the 1948 reprint) of my *Banking Policy and the Price Level* in the form $K = nD(1 + e)$. I had obviously better have avoided the arbitrary symbol e , for fear of confusion with the real unique $e (= 2.718 \dots)$; so I shall speak of my equation as $K = nD(1 + r)$. Since nobody nowadays can be expected to have read that book, I should like you to allow me to explain what seems to me to be the relation of that little formula to the Domar Equation.

I was then worried (as indeed I am still) by the obstacles which might be put in the way of steady growth by certain institutional features of modern societies – namely, the fact that people like to entrust the proceeds of part of their thrift to things called banks, which in turn tend to have a strong preference for particular sorts of assets, in particular for loans made to assist in the building up of working or circulating capital. To isolate this source of trouble, I made some heroically simplifying assumptions, namely: (1) that all money takes the form of bank deposits; (2) that all bank assets consist of loans for working capital purposes; (3) that all working capital is built up with the aid of the banks; (4) that all thrift whose proceeds have *not* been entrusted to the banks finds its way successfully, by direct investment or through a smoothly functioning capital market, into embodiment in fixed capital. I started by enquiring into the conditions for *stationary* equilibrium to be maintained on these assumptions.

Write R for total annual output, K for the proportion of this over which people wish to keep command in the form of money; nD for the ratio of working capital to annual output, where n , in the simple case where expenditure is incurred on goods at an even rate during the whole period of process D , is $\frac{1}{2}$, while in the Wicksellian case of

wine it approximates to 1. With this notation I found the condition for stability of a stationary economy, in the sense of absence of inflationary or deflationary pressure, to be $K = nD$. The two sides of the equation can be thought of, as in the Domar Equation, as fractions. Or they can be thought of as periods, K being the period of circulation of money against output, nD being the *average* period of process of output. These periods being determined by entirely different sets of forces, I came to the conclusion that the preservation of even a stationary equilibrium would be something of a miracle.

Then I turned my attention to various types of change, and among others to something which looks pretty much like Harrod's natural rate of growth – a situation in which population is increasing by a proportion of itself r in each period of process. And I found reason to amend my formula to look after this situation – in Harrodese to enable the warranted rate of growth to be maintained and to correspond with the natural rate – to the expression which I have already disclosed, $K = nD(1 + r)$.

Obviously this formula exhibits certain marked differences from the Domar formula. First, and most important, it is concerned only with certain types of thrift and certain types of real capital; to that I shall return. Second, it expresses the condition of equilibrium in terms of the behaviour of a *stock*, the outstanding stock of thrift congealed in monetary form, instead of in terms of a *flow* of new thrift. This second difference turns out, I think, to be only a formal one. Let us suppose for the moment that I *had* been considering a world in which *all* savings were made in the form of bank money and *all* real capital built up by means of bank loans. Then my condition would have become $K = q(1 + r)$, where q is Domar's ratio of total capital to output. This is entirely compatible with Domar's $s = qr$. Both express the condition for steady growth on the assumption that the creation of capital equipment C in period t entails the payment of money income C and the

saving of money income sC in period t , but does not generate output $\frac{C}{q}$ till period $(t+1)$.¹

That formal difference being out of the way, what about the *real* difference between my formula and Domar's – that mine is concerned only with working capital and his with total capital? Let us begin with mine. As a guide to the practicability of preserving equilibrium it is obviously in some respects too pessimistic, assuming a rigidity in banking practice which does not prevail in real life, and which I proceeded later to qualify.² But in another respect it was, so many modern writers would hold, too optimistic, taking too much for granted the smooth functioning of the capital market as an agent for converting into fixed capital the thrift *not* channelled through the banks. The more comprehensive Domar Equation clearly opens up a wider field for things to go wrong in. And most of those who have used it as a standard of reference take the view that things are in fact certain to go very wrong indeed, though they may 'totally disagree' with each other's reasons for believing this, as Mrs Robinson³ says she does with Harrod's. It is cheering to find Mr Goodwin⁴ gently charging them with having provided no 'adequate demon-

¹ An arithmetic example may be helpful.

	(1)	(2)	(3)	(4)	(5)
Period	Capital stock at beginning of period	Income (output)	Consumption	Saving	Money stock at end of period
1	40,000	10,000	8,000	2,000	42,000
2	42,000	10,500	8,400	2,100	44,100
3	44,100	11,025	8,820	2,205	46,305
4	46,305	11,576 etc.	9,261 etc.	2,315	48,620

$$r = \frac{1}{20}, q = 4$$

$$\text{Domar equation: } s = \frac{\text{Col. (4)}}{\text{Col. (2)}} = rq = \frac{1}{5}$$

$$\text{Robertson equation adapted: } K = \frac{\text{Col. (5)}}{\text{Col. (2)}} = q + rq = \frac{21}{5}$$

² See the section on 'the four crucial fractions' in the 1929 (and 1948) editions of my '*Money*', pp. 105-7.

³ *The Rate of Interest*, p. 159.

⁴ *Economic Journal*, December 1952, p. 933.

stration' of this; and even without his aid it had seemed evident to some of us that the simplification of a constant q (ratio of capital equipment to output), while well enough as a formal starting-point, is one which should be rapidly abandoned in an approach towards real life. I think I can fairly plead that my assumption of a constant D (period of process) was somewhat more instructive; for while D *does* suffer change, both (as I went on to argue) cyclically and also secularly, there is a closer organic connexion between what are in effect the same goods at various stages of their progress from the soil to the consumer than there is between buildings or machines and the goods which they house or on which they ply their teeth and claws. To start by assuming constancy of D was, I think, a useful way to call attention to something which, in times of settled peace at least, was often forgotten – the great quantitative importance of the mass of goods which at any moment is in some part or other of the pipe-line. But to assume for more than a brief introductory moment the constancy of q is to risk shutting one's eyes to the main route – in Hawtrey's convenient phrase 'the deepening of capital' – through which the forces of thrift have been utilized for the lightening of man's labour and the enlargement of his enjoyment.

I end up therefore by feeling a certain tenderness towards my own skinny child as compared with the handsome cousin who has supplanted him. With all his faults he *did* point out a definite difficulty to meet which certain definite institutional steps can perhaps be taken – indeed, I think one can say, remembering the 'term loan' in the United States and the Industrial and Commercial Finance Corporation in the United Kingdom, *have* been taken since 1926 (please do not think for a moment that I am suggesting *post hoc ergo propter hoc*!). But his cousin the Domar Equation wears such a discouraging air of comprehensive menace as to drive most of the people who take up with him into what seems to me an unbalanced and

excessive pessimism. Which is not to say that I think that the trade cycle has ceased to exist, or that we have learnt any infallible dodges for dealing with it!

III. THE KALECKI EFFECT

No doubt there are many Kalecki Effects walking about the world, some of them dressed up in such grand mathematical clothes that they are not likely to come my way. But I want to tell you about my meeting, a year or two ago, with one of them who seemed a fairly plain-spoken and approachable person.

Once more, however, let me go back a little in history.

When the Kahn-Keynes multiplier $\frac{1}{1-q}$ first burst upon the world, some of us, I am afraid, found a number of reasons for not being – shall I say? – very welcoming or trustful in our attitude towards it. I do not propose to catalogue all our reasons for mistrust – I think a good many of them have been vindicated by events and by subsequent theorizings, and I should like to pay my tribute to the candour and zeal with which in recent times the experts have been adding parameters to the ‘consumption function’ at the rate of about one a month in the attempt to make it a more serviceable and trustworthy instrument. I will confine myself to one point. You remember how, in the multiplier story when it is laid out properly in time, an outlay on, let us say, public works of N per period will generate in successive periods increasing flakes of saving $N(1-q)$, $N(1-q^2)$, etc., which become available for financing increasing fractions of the recurrent capital outlay N per period. As I pointed out in my original review of the *General Theory*¹, ‘the instructiveness of the story depends very largely on the strength of our reasons for supposing that, in the absence of continued activity by

¹ *Quarterly Journal of Economics*, November 1936, p. 174. The passage is reprinted in my *Essays in Monetary Theory*, p. 20.

the [Government] Authority, all the induced savings of the public would have become abortive instead of finding a vent in real investment either directly or through the machinery of a normally functioning stock exchange'. And in lectures over several years I have felt bound to call the attention of my hearers to the possibility that under certain conditions these flakes of additional saving might walk off, so to speak, on their own, and *not* become available for financing the public works outlay.

Now, as I have often pointed out to my students, some of whom have been brought up in sporting circles, high-brow opinion is like a hunted hare; if you stand in the same place, or nearly the same place, it can be relied upon to come round to you in a circle. What then was my joy to find, a couple of years ago, that Mr Kalecki, than whose no brow is higher, had been struck by this same thought that the induced saving might walk away and generate investment on its own. In an article in the *Review of Economic Studies* (1949-50), with the high-sounding title of 'A New Approach to the Problem of Business Cycles', he reveals his dissatisfaction with the explanations currently given of the behaviour of capital outlay in the trade cycle in terms of the principle of acceleration and so forth. As a substitute he offers the following suggestion. 'A reasonable interpretation of the inter-relation between the level of income and investment decisions should be based, I think, on the fact that with a high level of income there is correlated a high level of savings, and that the stream of new savings stimulates investment because it makes it possible to increase investment without increasing indebtedness.' The wheel has come full circle. I now tell my students that if they want to be really up to date they can say that it is not so much investment which governs savings as savings which govern investment. But I add that they had better be careful to give Mr Kalecki as their authority; otherwise they may be in danger of being accused of falling into elementary schoolboy error.

PART TWO

V

THE TRADE CYCLE
IN THE POST-WAR WORLD¹

I suppose the question for our first meeting, the question on which the eight 'Country Papers' which have been circulated are intended to throw light, can be put in some such way as this. For the last seven years the economic life of the countries of the western world has been dominated by two powerful sets of influences. First, there has been recovery from total war, relapse into partial war, preparation for possible resumption of total war. Secondly, there has been a persistent problem of imbalance between various sections of the western world. I must not at the moment attempt to probe into the nature of this latter problem, or the extent to which it has been aggravated or mitigated – perhaps both – by the first set of influences – that connected with past, present and possible war. My point is simply that between them these two sets of influences – those connected with war and with international imbalance – have moulded the actual course of events to a degree which makes it idle to suppose that the economic record of the past seven years can be written in any direct and simple way in terms of a theory of normal cyclical movement.

Nevertheless it has seemed not too much to hope that a careful study of the course of events in the several countries since 1945, abnormal as in every case that course has inevitably been, might reveal the operation of bits of mechanism which could be transplanted, so to speak, in thought into a more normal environment, and so serve, if used with due caution, to throw light both on what has happened in the more remote past and on what may be expected to happen in the future, in that more settled but

¹ Introductory address at a conference on this theme held by the International Economic Association at Oxford in September 1952; printed in the proceedings of the conference, published in 1955 (Macmillan & Co.).

nevertheless imperfect world to whose emergence those of us who are neither pessimists nor perfectionists still look forward. One reason, of course, for indulging in this hope is that the events of 1945-52, however abnormal, are not only fresh in the memory of those who have participated in them, but have been reduced, with an elaboration to which there is no parallel in earlier times, to statistical form. Anyway, it is *in* this hope that these 'Country Papers' have been commissioned and prepared.

It would be a mistake for me to attempt to summarize those papers, which are themselves summaries of long and complicated trains of events. All I can do is to try to pick out one or two traditional problems of the business cycle, and to ask what light if any these papers throw upon them.

Now the first thing of course that hits the eye is that from the point of view of the business cycle student the period under review exhibits one grave defect - it contains no slump worthy of the name. These seven years may have been lean and difficult years for some, but judged by the ordinary business cycle tests they bear rather the aspect of those seven kine, well-favoured and fat-fleshed, of which Pharaoh dreamt, and which were destined, you will remember, to be eaten up in due course by their seven ill-favoured and lean-fleshed brethren. It is little use, therefore, to look in these papers for convincing positive evidence about the nature either of those forces which can precipitate an economic system into deep depression or of those which so often, to misquote an Elizabethan poet,

Now at the last, when all have given him over,
From death to life have made him yet recover.

We have therefore as students to be thankful, so to speak, for small mercies, and to see what we can learn from our chroniclers about the undoubted flexion in the world's

career of so-called prosperity which took place between the autumn of 1948 and the winter of 1949.

It is true that the impact of this recession, to give it its official style, seems to have been felt with very different force in different countries. In Italy we might be inclined to suspect its influence in the check to industrial production in early 1949 had not Dr Saraceno warned us to the contrary, referring this check to a seasonal scarcity of electrical power. After the Einaudi clean-up in the autumn of 1947, the progress of the Italian economy, beset though it is with grave and intractable structural problems, seems to have been fairly continuous and sustained. In Germany and Japan, such recession as occurred in 1948-9 can perhaps be mainly accounted for in terms of the deliberately deflationary activities respectively of the Bank deutscher Länder and the all-powerful Mr Joseph Dodge. But in France, where the creation of money proceeded apace, and likewise in Denmark, our chroniclers assure us that there were definite signs of a spontaneous flagging of demand from about the middle of 1948. It should be noted, especially by those who hold as an article of faith that all recessions start in the New World, that these phenomena seem to have preceded by some months the down-turn in the United States, which Fellner places in the last quarter of 1948. Nevertheless so far as the United Kingdom, the Sterling Area and apparently Sweden are concerned, it was primarily the blow-back from the American recession which was the immediate occasion of the difficulties of 1949, driving Britain into devaluation, as Professor Robinson reminds us, at the very moment when she had triumphantly balanced her overall position on current account.

What then has Professor Fellner to tell us about this little fit of American hiccoughs, disconcerting in its inception, perhaps salutary on balance both in its domestic and in its international effects, anyway reassuring in its early termination? One's natural instinct is to label it as a typical

American inventory cycle, due to a temporary overdoing, especially by retailers, of the process of stock-building. Fellner, however, is not quite happy with this explanation. He suggests that the trouble went a little deeper – was a trouble of production not merely of distribution, but on the other hand a partial trouble rather than a general one, centred in a *relative* weakness of particular branches of activity – agriculture he mentions, and textiles and chemicals. In somewhat similar vein M. Piatier, when he takes us back with him to midsummer 1948, bids us concentrate our gaze on the potato and the pig. Such suggestions are in line with a tendency which has been evident in a good many quarters in quite recent years, and of which I dare say we shall hear more in the course of the week – a tendency to admit a certain disillusionment with analysis in terms of great global aggregates and to revert to the use of the microscope. I am old enough to have experienced a somewhat similar reaction just about forty years ago, when discontent with the prevailing *simpliste* explanations of the business cycle in terms of what is now called effective demand led me to promise, somewhat rashly, to show reason for believing that ‘no less may be learned of the causes of fluctuation from the divergence than from the similarity between different trades, countries and periods’. No doubt this recurrent oscillation of scholarly interest between the general and the particular is healthy and leads to the progress and enrichment of thought.

A similar emphasis on the behaviour of *relative* prices, this time in its international applications, is to be detected in Professor Robinson’s paper. The fact that a turn in the terms of trade against one country implies a turn in favour of some other country or countries does not, he seems to be arguing, rob it of its power to act as a source of oeconomic disturbance. In a somewhat similar vein Professor Lundberg calls attention to the very different fortunes, in Sweden in 1950–2, of the trades depending on export and those using imported materials, and suggests that the

inflationary process was tending to 'kill itself' through its uneven effect in the distribution of profits between industries.

But to return for a moment to Fellner and the dip of 1949. Whether he is right or wrong about its causation, there is one thing of which he reminds us and which is already apt to be forgotten, and that is that it was all over six months before Korea. If the Korean War, with its vicissitudes and its consequences, has dominated the rhythm of economic life since June 1950, let us not pay it the undeserved compliment of alleging that it snatched back the United States and the world from the brink of a major depression. That does not prove, of course, that there is not a day of reckoning still to come. Fellner reminds us of reasons, notably the low ratio of capital stock to annual output subsisting in 1945, why the post-war restocking boom should have displayed exceptional vitality; he reminds us of the well-established fifteen- to twenty-year building cycle in the United States, confusingly displaced in phasing by the war, but possibly still operative. When we add the ultimate tapering-off of rearmament, there are reasons enough for vigilance, if none for catastrophe-mongering.

Now let us again invoke Fellner's aid in focusing for a few minutes on another time-honoured dichotomy – not that between macronics and micronics but that between consumption and investment. It used, I think, long ago to be quite a respectable view that fluctuation originated in the consumption trades, and was transmitted with intensified force, through a mechanism which had not yet got itself baptized by the name Accelerator, to the construction trades. If I may again be a little reminiscent, I think that in 1914, blissfully ignorant of a great mass of continental literature, I felt quite brave in awarding the prize apple for trouble-making to the goddesses of Investment, Invention and Innovation, or at any rate splitting it between them and the god of the weather. Twenty-five

years later the immense researches of Schumpeter and the intuition of Keynes had conspired to set Investment firmly on the throne; the tail was triumphantly established as the waggoner, the dog, bound in the bonds of a simple and immutable consumption function, as the waggoner.

More recently, Investment has come to need a little padding out with the blessed word Autonomous to increase his self-confidence and buttress his hegemony. For undoubtedly one of the most interesting features of the post-war period has been the tendency of the consumer to escape from his bonds and skip about all over the place, causing our friends the econometrists to skip too, and to set about adding parameters to the consumption function at the rate of about one a week in a frantic attempt to keep pace with the consumer's behaviour. Evidently the most striking manifestations of this 'instability of consumer spending', to borrow the title of Professor Burns's most interesting report on the subject to the National Bureau of Economic Research, have been closely bound up with the abnormality of the times – with resettlement after total war, apprehension of total war, relief at the non-recurrence of total war; and it is extremely difficult to assess their importance for normal business cycle theory. But I have a feeling that the consumer may take a good deal of whistling back into the neat little theoretical cage – just a bit too neat, as it seemed to some of us at the time – which was designed for him by loving hands in Cambridge twenty years ago.

Now one of the new parameters with which the consumer has been somewhat tardily endowed is of course his 'liquidity position'; and Fellner is moved, fruitfully, I think, to discuss his behaviour in the setting of an older and simpler concept than that of the consumption function – the Marshallian K or the ratio of the public's money stock to its money income. If this ratio has been wrenched violently away from its normal value, as it had been in most countries by the end of the war, somebody or other,

it would seem, consumer or investor or both – and the conventional line between them, running as it does between the humblest house and the most majestic motor car, is perhaps wearing a bit thin – somebody or other can be relied on to set to work to reduce the ratio towards its normal value, spinning out of the air, if he is not already equipped with them, such ‘propensities’ to consume or invest as may be required for the purpose. It is surprising for how many countries, as a table in the latest B.I.S. Report (p. 181) suggests, the tale of the post-war expansion can be told in terms of a prolonged and ultimately fairly successful struggle on the part of *K* to return to something like a pre-war level; though of course we must look out for exceptional cases such as Italy, where war-time and immediately post-war inflation had been naked and unashamed, and where, therefore, as Dr Saraceno’s figures show, *K* has actually *increased* since 1947 by about one-third, a doubling of the money supply, once confidence was restored, proving compatible with something not far from stability in the level of prices.

In any case, whether as principals or accessories, Excess Liquidity and his stable-companion Elasticity of Bank Credit have clearly in most countries played a prominent part in fashioning the course of the post-war expansion, and also in endowing it to an exceptional extent with many of those unattractive features which we had learned in the pre-1914 era – and perhaps *unlearned* in the inter-war period – to associate with the progress of a normal commercial upswing. I say ‘many’ rather than ‘all’, for it is no longer easy to argue, as it was before 1914, that the representative fully employed workman normally suffers disadvantage in a period of rising prices; and to some minds, which I am sure will have their spokesmen at this conference, the broad redistribution of income in favour of the manual working class which has been effected in most countries in post-war years is a sufficient justification of the processes by which it has been secured. But many even

of these will, I think, be prepared to admit that those processes have their ugly and dangerous side, tending to lead to a state of affairs in which, in Lundberg's pregnant phrase, the economy becomes 'so well organized that only a small proportion of the population is left out and can be cheated'. What happens then remains to be seen; and in some countries less fortunately placed than Sweden, countries of which Britain is the leading example, the operation of inflationary pressures, interwoven with that factor of structural imbalance of which I spoke at the outset of these remarks, has repeatedly brought the economy to the verge of disaster; so that the natural way to write Britain's post-war history is, as Robinson's study brings out, not in terms of any recognizable cyclical pattern, but in terms of a biennially recurrent oscillation between exchange panic and fools' paradise.

The presumed object of this morning's exercise is, as I have said, to detect in the confused welter of post-war history the operation of bits of mechanism which may be at work also in periods of more normal cyclical movement. It seems worth while, therefore, to follow Robinson in turning the spotlight for a moment on to one particular consequence of the strongly inflationary conditions which have prevailed in Britain and most other countries in most of the years since 1945. After calling attention to the virtual demise in Britain of the individual saver, and to the absorption of much so-called company saving in supplementing inadequate depreciation allowances and financing inventory appreciation, he concludes with this significant warning. 'At the time of writing it would appear that difficulties of short-term liquidity due to rising requirements of inventory finance are having powerful repercussions on plans for long-term investment, and may in the end conceivably precipitate so great a reduction of the latter as to cause an industrial depression of the traditional form.' Are we not back here at something very like the old Cassel-Spiethof theory of the origin of the 'crisis' or

turning-point not in over-saving but in a 'shortage of saving' – investment collapsing not through any lack of 'investment opportunities' but – if I may revive for a moment a long-forgotten language – through lack of lacking to carry it through to completion? Whatever the smoothly working econometric models may say, it would seem that, if one is a boom, there are, and always have been, more ways than one in which one may come to a sticky end.

What of that other, more obvious, facet of the prolonged post-war inflation to which several of these papers naturally give much attention – the tendency of wage rates to climb steadily upwards, even, as Professor Pedersen points out, in face of temporary flickerings of demand? Is this also a potential cause of 'an industrial depression of the traditional form'? Or is it rather, as both Fellner and Pedersen suggest, a potential cause of something quite different – a complete breakdown of monetary stability, leading to a naked choice between totalitarianism and chaos? Has this result been hitherto prevented, as again both these authors suggest, by the occurrence of the mild price and employment recessions of 1949 and 1951? And if so, can we rely on an indefinite succession of these beneficent slumplets, not severe enough to generate widespread distress but sufficient to prevent the reputation of money as a store of value from being irretrievably undermined? Or does anybody know of a 'wages policy' which will purge a 'full employment' régime, not of its manifold inefficiencies and injustices – that is too much to hope – but of its propensity to ultimate suicide?

Here I stop; for I must not invade the territory reserved for tomorrow by passing over from matters of diagnosis to matters of policy. But several of these papers, especially those from countries which have pursued ambitious programmes of planning, are naturally largely concerned with the history of policy, and I find it difficult to comment on them without calling attention briefly to a certain note of disillusionment which runs through them. Professor

Pedersen will correct me if I am in error in gaining from his paper the impression that he thinks that the Danish Government has done almost everything wrong, but that the things which it might have done and hasn't would have been even more disastrous than the things which it has done. Professor Lundberg paints a picture of the *naïveté* of Swedish policy in the immediate post-war period, and also as I venture to think at the present day, which is positively frightening. Professor Robinson is critical, I think, not so much of the aims of the British planners as of the extreme inaccuracy of their forecasts, which would have had even more unfortunate consequences if the errors had not on several occasions providentially cancelled one another out. It is noteworthy, and I think to the planners' credit, that the errors have been by no means always in the direction of over-optimism; both Robinson and Lundberg note a marked tendency on their part, at all events in the earlier years, to *underestimate* the growth in the national product. But, in whichever direction, the errors have without doubt been pretty considerable. No worse, some will reply, than was to be expected of an art which is still admittedly in its infancy; the only remedy is to try to do better in future. Others, while welcoming any improvement in the collection and interpretation of statistics that can reasonably be made, will sympathize rather with Lundberg's pithily phrased conclusion that 'economists should not aim at precision where that does not make sense', and that what the whole story really points to is the need in many countries for a 'less pretentious' economic policy than we have had since the war.

VI

THE STERLING PROBLEM

(i) CONVERTIBILITY¹

You have done me the great honour to invite me to inaugurate this series of discussions with some remarks on a very important subject, the restoration of convertibility to the currencies of Europe. I do not know whether you have done this in spite of, or because of, the fact that, some sixteen months ago, at the Vienna Conference of the International Chamber of Commerce, I felt impelled to read a paper which threw some drops of cold water on what I felt to be the rather hot-headed and precipitate attitude on this subject which was then being adopted by the central organ of that body and its expert advisers. In any case, I think that since that date the conditions for a steady advance towards convertibility have on balance become somewhat more favourable, while the difficulties in the way have become much more generally understood and realistically studied. I hope therefore not to find myself quite such a 'pelican in the wilderness' at Granada as I did at Vienna; time will show whether I am right!

I

In speaking to an expert audience such as this, it is not necessary, as it is in putting these matters before the general public, to emphasize the extreme ambiguity of the word convertibility, which carries wrapped up in itself a whole rainbow of possible meanings. But you will not feel insulted if I remind you, as I reminded my audience in Vienna, that anybody making noises about convertibility exposes himself to being asked the following disconcerting question:

¹ Opening address at the Seventh International Summer School of Banking, held at Granada, Spain, in September 1954; printed in Spanish in *Moneda y Credito*, September 1954, and in English in the *South African Bankers' Journal*, January 1955.

What persons, who at present are not allowed to do so, are you proposing to allow to turn what into what, by what method, on what terms, and for what purposes?

Instead of analyzing in general terms the distinctions latent in that complicated question, I propose to assume straight away that the concrete proposition in which we here are most interested is that certain persons should be accorded very markedly greater facilities than they possess at present for turning pounds sterling into United States and Canadian dollars; and that the persons concerned are the inhabitants of countries which lie neither within the Sterling Area nor within the region comprising North, Central and the northern bit of South America which with equal convenience, though less official sanction, can be described as the Dollar Area.

For convenience I shall allude to these non-sterling, non-dollar countries as the Third Area; and I shall allude to convertibility into dollars of sterling held by inhabitants of those countries as Third Area Convertibility.

I hope I shall not be thought to be indulging in nationalistic prejudice in thus turning the spotlight on sterling. But the plain fact seems to me to be that, in spite of menacing noises which have been heard from time to time proceeding from the centre of Europe, there is now no serious chance of any other country taking the kind of steps which we are about to discuss except in concert with Britain. This is not necessarily because they love or revere Britain – though, of course, I hope they do – but because of the predominant importance of sterling as a currency for the conduct of international trade. Whether Britain has been altogether wise to devote so much expertise and care to the preservation of this predominance is another matter – it has been disputed lately by an able young English scholar, Mr A. C. L. Day: but there is no doubt about the fact. I notice that even my much esteemed friend, Professor Haberler, who in a recent pamphlet has

thought it necessary to criticize the British Government, as I think most unjustly, for dragging its feet in this matter of convertibility, and by way of contrast to lavish praise on the 'enthusiasm and daring' displayed by the Germans, the Belgians and the Dutch, does not in fact suggest that they are in a position to take any decisive action without Britain. For praise or blame, then, let the spotlight rest upon sterling!

Nor need I apologize for having, in defining the question for our discussion today, turned the spotlight on those holders of sterling who belong to what I have called the Third Area. There is no need to turn it on those who belong to the Dollar Area, for they already possess very extensive rights of convertibility indeed; roughly speaking any Dollarian who has sold goods or earned profits in Britain or the rest of the Sterling Area, or placed funds there on short term for safe keeping, can take his money away whenever he pleases. Very different is the position of the British or other 'Sterlingarian' holders of sterling; and it will be part of my thesis that their position needs most careful consideration by those who are responsible for deciding what can and what cannot be done in the way of extending the conversion facilities of members of the Third Area. But the fact remains that it is this last type of decision that has become the centre of world interest, and which we had better make, therefore, the focal point of our discussion.

That being settled, I must now draw attention to the rather flabby form in which I have felt bound to pose the question selected for debate. I have not asked whether the pound should be 'made convertible' into dollars for Third Area members, but whether they should be accorded very markedly greater facilities than they possess at present for effecting this conversion. I have phrased the question in this way because some such facilities undoubtedly already exist; moreover, this is one of the respects in which the situation has altered most noticeably in recent months. For

a long time, by various illegal or semi-legal methods which I am sure are much better understood by you practical bankers than they are by an innocent academic like myself, it has not been too difficult for some Third Area holders of sterling balances to dispose of them for dollars in some of the more disreputable cities of the world such as Macao and New York. But till lately it has been rather expensive; whereas now if such deals are done at all they can be done at a price very near the official parity. Moreover, it is now perfectly legal for Third Area holders of sterling to buy on the recently reopened London markets, for re-export, a number of metals and other staple commodities, even though they have been imported from dollar sources. These are big changes; and they make it possible for my more Haberlerian friends to argue that Third Area Convertibility has in fact already arrived, and that the British authorities would incur no significant further risks by acknowledging the *fait accompli* and openly proclaiming the dollar convertibility of all currently earned Third Area sterling.

I do not find it possible to accept this argument. As regards the 'commodity approach' to convertibility, I think it is much to be welcomed, but precisely because it can be followed piecemeal (while sugar has lately been added to the list of dollar commodities which can be bought with Third Area sterling, that is not yet true of the crucial commodities wheat and cotton), and because in case of need it would be without much difficulty reversible, which is very far from being true of a more comprehensive act of liberation. Nor do I find it easy to believe that the operations of the black and grey markets have revealed the maximum strain which might be engendered if the conversion of sterling were suddenly made a completely permissible procedure which could be indulged in by the most respectable Third Area institutions, including the central banks themselves, without concealment or compunction.

Let me now try to state briefly where I think we have got to – or at all events where I think I have got to! I accept with approval the British Government's repeated declarations that some species of dollar convertibility for Third Area sterling is the goal; I accept with pleasure the evidence that greater progress has been made towards that goal than I would have thought very likely sixteen months ago; but I reject the notion that this progress has been so great that all that is needed now is some striking and spectacular act of consummation. The way therefore is now open for me to discuss – or rather, for my time is short, to tabulate for your discussion – two groups of questions. First, exactly what species of dollar convertibility for Third Area sterling are we to presume to be the goal? Secondly, what are the leading considerations which should be in the minds of the British authorities in determining the pace of the advance?

II

Under the first heading it seems to me that, as foreshadowed in that 'portmanteau' question which I formulated at the beginning of this talk, at least four problems arise – I dare say some of you will be able to think of several more. To none of them am I prepared to give a confident answer.

(1) Are rights of conversion to be confined to 'currently earned' sterling, defined as sterling accruing to the holders after some crucial date which it is becoming fashionable, I believe, to denote as C-Day, or are they to extend also to some part of the balances existing at that date?

Let me remind you that if C-Day were to be tomorrow (which, as I have indicated, I do not anticipate), the amount of existing balances to be brought under review would be of the order of £700 million – an amount equal to about two-thirds of Britain's present gold and dollar reserve. Some of these are already subject to restrictions on their use for any purpose, and I imagine might well

have to remain so; and I suppose there might turn out to be others about which special arrangements would have to be made.

(2) If an attempt were made thus to distinguish between what is capital and what is current in respect of the *origin* of the balances, would or should a similar attempt be made in respect of the *purpose* for which their conversion may be sought? My feeling is that in the case of foreigners such a distinction would be held to be too difficult to police, and that it is more likely that C-Day will be deferred until it is thought safe to allow it to dawn without reliance being placed on any such distinction. In this connexion it is probably significant that no such distinction was sought to be maintained when in March last the facilities for transfer of sterling between one Third Area country and another were greatly extended. But, for reasons which will appear later, I reach this provisional conclusion with a good deal of regret.

(3) Is the goal to be dollar convertibility for the balances of all individuals and firms in Third Area countries or only for those of approved financial institutions or, more narrowly still, only for those of central banks? Here, too, what was done in March as between the Third Area countries themselves may perhaps be taken to indicate which way the wind is blowing. Contrary to what might have seemed likely a few years ago, it would seem that the present current of thought and practice is set so strongly in the direction of *decentralization* that the first and broadest interpretation of what is intended is now the most plausible.

(4) I come now to a very fundamental point, by which I confess myself to be a good deal troubled – the point raised in my ‘portmanteau’ question by the words ‘on what terms?’ Does the convertibility which is our proclaimed goal mean the right to turn pounds into dollars at a rate varying by no more than a small proportion, say 1 per cent, from a fixed parity? That is what it meant before

1931, and what it means again, for those who already enjoy it, today, though the mechanism for ensuring this result is different from what it used to be. Or does it mean only the right to buy dollars for pounds at the price of the day as arrived at in a large free market, it being left entirely to the discretion of the monetary authorities who handle our gold and dollar reserves to decide when and to what extent and with what objectives they will intervene in that market either as buyers or sellers? This is what convertibility meant between 1931 and 1939, and what it seems to mean again in the mouths of many City folk and journalists who have been talking and writing about the 'restoration of convertibility' and the 'freeing' of sterling without explanation as though these were obviously synonymous terms. And among liberal-minded economists to whom, some years ago, stability of exchange rates was the very ark of the covenant, there is now a surprising volume of support for the view that what is called a floating rate would be a small price to pay for the restoration of free dealings in the exchange market.

The attractions of this generous interpretation of the concept of convertibility are obvious enough. Any exceptional pressure on sterling could be met partly by a yielding of the rate instead of wholly by a loss of reserves; and the knowledge that a sunken rate might well be caused to rise again might on occasions deter speculators who, had the rate been held fixed, would have been ready to gamble on its eventual collapse. Nevertheless, it is not clear to me that on balance a fluctuating rate discourages harmful speculation, while it is certainly, to say the least of it, an inconvenience to trade. And beyond that there is the ever-present danger that it will be used as a cover for pursuing lax domestic policies, and that in the hands of governments harassed by pressure from trade unions and hampered by actual or virtual cost-of-living sliding scales it will prove a primrose path to inflation. I do not want to be puritanical or dogmatic; in the gradual march towards

sterling's, or any other currency's, convertibility there may be a case for an experimental phase before the dollar parity to be defended is finally determined, and a case even in the end for a somewhat wider margin of tolerance around that parity than the 2 per cent laid down at Bretton Woods. But I am disturbed by the current fashion of opinion in favour of freely fluctuating exchanges, and can only repeat what I wrote a few months ago – I wonder whether we should not, after a few years' experience of this particular brand of freedom, all start groping our way back, as we did in the later 1930s, towards fixed parities of exchange.

III

The way is now clear at last for me to tackle my last and most important task, which is to set out in order the considerations by which the British authorities should, and we must hope will, be guided in determining the pace of their advance along the road marked 'Third Area Convertibility'. But first let me link up with what has just been said by emphasizing that the stringency of the conditions governing the pace of advance depends, of course, partly on the exact definition of the goal; in particular a crucial choice may at some point have to be made between an earlier C-Day with a more flexible rate of exchange and a later C-Day with a more nearly fixed one.

(1) The first consideration is that advance on the currency front should not be at the expense of retreat on what is fundamentally much more important, namely the trade front. It is easy to see in general terms how such an unfortunate result might well happen. If, in the absence of other change, country A's currency becomes suddenly convertible into something which is greatly desired, namely United States dollars, there is an obvious temptation to other countries B, C and D to make special efforts to acquire plenty of it; and this they can do by intensifying their restrictions on imports from A, thereby increasing

the excess of their receipts of A's currency over their expenditures in it. A in turn will be impelled to protect its store of dollars or potential dollars (gold) by intensifying its restrictions on imports from B, C and D, thus diminishing the supply of its coveted convertible money; and the result will be a shrinkage of mutual trade between all the non-dollar countries. Further, while the facilities which B, C and D now enjoy for buying goods of dollar origin with A's currency may enable them to reduce their restrictions on the import of such goods, A will be under a strong inducement to protect its reserves by intensifying its restrictions on the import of these goods as well. Even therefore from the point of view of the producers in dollar countries the apparent step towards multilateralism may well have turned out badly, entailing a calamitous sacrifice of the substance of the bone of freedom to the shadow.

When, a couple of years ago, cries for a 'dash to convertibility' began to be heard in England and applauded from abroad, these considerations appeared to be not at all widely understood. At home the cry was raised most volubly by those whose material interests or emotional loyalties were centred in finance rather than in trade; abroad there was often failure to appreciate the vast difference between the position of Britain, her currency in widespread use as a medium of international trade and therefore especially vulnerable to the squeezing process I have just described, and that of all other countries. It is a matter for great satisfaction and relief that in all its more recent pronouncements the British Government has stressed the need to make sure that the pursuit of currency convertibility does not conflict with progress in the liberation of trade, and that strong emphasis is laid on the same point in the admirable chapter on Convertibility in the Report presented last January by the Randall Commission to the President of the United States.

One particular context in which the relation between sterling convertibility and trade liberalization has to be

worked out is, of course, Britain's membership of the Organization for European Economic Co-operation and its ancillary organ, the European Payments Union. It is evident that Britain cannot afford to get into a position in which all her claims on, let us say, Belgium were settled in the relatively flabby currency of E.P.U. units, while all Belgium's claims on her were presented for settlement in dollars. If not even the strongest of continental currencies could make much of a showing of convertibility except in concert with sterling, it has become equally clear that sterling cannot safely move very far along the convertibility road except in convoy with at any rate a handful of the strongest of the continental currencies. As a result of the realization of these truths, the still breathing body of the Payments Union is being groomed and decked for decent burial at some fairly early date. But there is a general desire that the good which it has done should not be interred with its bones; and it appears that on British initiative plans are in process of being hammered out to ensure that its decease should not interrupt the progress of the removal of trade restrictions between its members, nor destroy for the weaker countries, unable to join for the moment in the convertibility convoy, all prospects of obtaining neighbourly assistance. It is too early to say how these plans will work out; but let us hope it will be in such a way as to induce Professor Haberler to modify somewhat in retrospect his strictures on British leadership, and to enable transatlantic observers to say of the unborn successor of E.P.U. what the experts attached to the Randall Commission have found it possible to say of E.P.U. itself:

Regional trade and payments agreements have sometimes been criticized on the ground that they threaten to create economic groupings which become more and more isolated and insulated from the rest of the world, particularly the dollar area, with dire economic and political results. This danger has not materialized in the case of E.P.U.

(2) The second factor which in my view should govern the pace of the British advance to Third Area Convertibility overlaps to a large extent with that which I have just discussed, but entails looking at the same facts from a somewhat different point of view. I accept, as not all my countrymen yet accept, the achievement of Third Area Convertibility as a reasonable and indeed inescapable objective of British policy. There may be – I think there is – a tendency in the City of London to overestimate the advantages which Britain derives from the wide use of sterling as an international currency; but they are real, and if we mean to continue to enjoy them we must lay our long-term plans accordingly. But there is a limit, in my view, to the zeal with which this objective can sensibly be pursued, either as a long-term national interest or as an international duty, if the burdens of pursuing it press with great severity on the present generation of inhabitants of the United Kingdom and the rest of the Sterling Area. Under the institutional arrangements in force in these countries, it is technically true that for many purposes any sterling which their inhabitants earn or own is already convertible into dollars; for once such a person has obtained permission from the trade authorities to import goods from dollar sources no obstacle will be offered by the monetary authorities to his obtaining the requisite currency. But on the issue of such permits to import there are still, in the case of many manufactured goods such as motor cars, machinery, chemicals and a host of others, severe restrictions amounting in some cases to virtual prohibition. Moreover, for capital investment purposes, and even for some important current purposes such as travel, home-owned sterling is not even technically convertible into dollars, except under special conditions and in strictly limited quantities.

It seems to me that not merely should a given advance towards Third Area Convertibility not be pressed if it threatens to bring a deterioration in the position of the

ordinary Sterling Area citizen in respect of his access to dollars, but that it should not be pressed unless it can be accompanied by some relaxation of his present lot. From this point of view, the programme of 'commodity convertibility' to which I have alluded earlier has had great merits; for it has involved merely the passing on to foreigners of some, though not all, of the additional facilities being simultaneously extended to Englishmen. If that device has reached its limits, other embodiments of the same principle should be sought. With all respect to the company assembled here, there seems to be no good reason why a United Kingdom government should incur the political odium of being concerned to solve everybody else's dollar problem except its own, and of preferring the ease and comfort of Germans and Spaniards to those of Englishmen, Australians and West Africans. For some time, I suspect, the tricks of language concealed from many Sterling Area inhabitants how little there was for *them* in the project of Third Area Convertibility taken by itself; but they are awake now and they will have to be listened to. I have been glad to read, since this lecture was drafted, of some notable relaxations of the rules governing the removal of funds by emigrants from the United Kingdom to countries outside the Sterling Area.

I do not think, however, that in this matter, any more than in any other, it is any use aiming at complete distributive justice. That Sterling Area residents should be accorded complete liberty to obtain dollars for purposes of capital investment seems to me to be, as we say, 'off the map'. (I notice with interest that Dr Holtrop, the experienced Chairman of the Netherlands Bank, takes up a similar position as regards Holland in his Annual Report; though some other countries, I believe, are more ambitious, planning to emulate Switzerland in the complete freedom which she accords to her nationals to make investments abroad, even in dollar countries.) As I have said, therefore, I shall be somewhat regretful if it proves

impracticable, when convertibility of currently acquired Third Area Sterling for current purposes becomes complete, to retain some control over the use of such sterling for capital purposes; I like the idea of discriminating against one's own citizens even less than that of discriminating in their favour. But I do not believe any fundamental natural right is here involved; and if strict equity must be sacrificed to overwhelming administrative convenience, it will not be for the first time.

(3) The third factor governing the practicable rate of advance is a very complex one indeed, namely the whole state of the actual and prospective balance of payments of the United Kingdom, of the rest of the Sterling Area, of Western Europe, indeed of the whole non-dollar world, with the Dollar Area. Evidently this is a subject which it would take many hours to explore at all adequately, and I must be content with some very scrappy remarks. When I said in my opening sentences that the prospect for convertibility seemed to me to have become somewhat more favourable than when I was speaking in Vienna sixteen months ago, I had two things primarily in mind. First, the American recession which was then hanging like a thunder cloud in the offing has come to pass, and has run its course for more than a year without generating in the rest of the world anything like those damaging effects on reserve positions and on economic activity which on the basis of past experience had been predicted. There are a number of reasons for this; but there seems no reason to doubt that prominent among them is a greatly and lastingly improved capacity of the complex entity which I will call Euro-Sterlingaria to minister to its own needs. I have not time for many figures, but here is one which strikes me as specially significant. Of the fall in commercial exports from the United States which contributed so largely to the improvement in 1953 by two billion dollars of the merchandize balance of the rest of the world with that country, 80 per cent was accounted for by wheat, cotton, coal and

steel – basic commodities for which the previous dependence of the rest of the world on the United States can now be confidently judged to have been abnormal. That seems to be a fact of good augury not only for the moment but for the future. Secondly, the Federal Reserve Authorities, after pursuing for some months a rather strict monetary policy, have switched over to one of extreme ease. This fact, taken together with the explanations which have accompanied it, also seems to be of more than momentary significance. I have no time to enter into the rather intricate problem of the effect on the rest of the world of the higher rate of increase, in the United States than elsewhere, of industrial productivity; but on one point there seems to be agreement, namely that the effect is less likely to be embarrassing if the fruits of increased productivity are taken out in that country mainly in the form of rising money incomes rather than of falling prices. I think the indications are that American monetary policy is likely to be conducted on lines calculated to secure this result. If I were an American, I am not at all sure I should not be disturbed by that conclusion; as a European I am relieved by it.

Now after that little spasm of optimism let me relapse again into caution. First, it is not at all clear that the American recession is over, still less that it will be followed by a phase of buoyant and continuous advance; there is a state of saturation in the automobile market, and perhaps a weakening in the demand for plant and equipment, which may well not have exerted yet their full effect on production, employment and imports, though the latest news about these matters seems to be on the whole encouraging. Secondly, the relatively good showing of the payments position of the rest of the world with the United States depends still on American defence and quasi-defence aid expenditure overseas, including those so oddly named 'offshore purchases', to the extent of an annual rate of some four billion dollars. It may be that we shall still be

saying the same thing in ten years' time; but that is obviously, from some points of view, itself a rather gloomy hypothesis. Thirdly, the problem of the resuscitation of American private investment abroad still awaits solution. And I think it will be owing to lack of time rather than of matter if I close my list of reasons for caution at this point.

No! I must not close it yet. There is one more crucial question which I must ask myself in your hearing. Does my progress in optimism depend at all on the fact that there has been presented to General Eisenhower, and endorsed by him in general terms, a Report of which a group of American economists, politically somewhat allergic to the Administration, finds it possible to say, after submitting it to a good deal of damaging criticism, that if all its recommendations on trade policy were enacted by Congress in the next one or two years, the result would constitute the biggest step towards a more liberal commercial policy since the Trade Agreements Act was passed in 1934? What *are* the present prospects of that drastic change in American commercial policy and practice which is required in order to enable Euro-Sterlingaria to go ahead with confidence along the twin paths leading to non-discrimination in trade and convertibility of currencies?

Well, the Randall Report was better than one feared it might be. It was disappointing that the eminent Senator to please whom its terms had evidently been so carefully tailored should have slipped at the last moment out of the net. It was disappointing that the President, after giving it his blessing, should have felt compelled to postpone for a year any action other than the minimum required to preserve the *status quo*. Still, much allowance must be made for political difficulties, and it is still possible to hope that this was a case of *reculer pour mieux sauter*. But in the last few months some very sorry things have happened. In June another swinging blow with the Buy American Axe landed on the head of the British electrical industry. In July the President, apparently not without misgiving, de-

cided a case whose issue many people outside Switzerland had been anxiously watching, by sanctioning an increase, amounting in some cases to as much as 50 per cent of existing levels, in the import duties on Swiss watches. Time will show whether these precious little creatures will really prove to be an exceptional case, protected from imitation by the *deus ex machina* of Defence Need; one cannot forget how that prosaic fellow Cheese succeeded in squeezing himself in under the same deity's hospitable wings. Meanwhile, the President's ruling can hardly fail to strengthen the European exporter's fears that nothing fails in the American market like success. It is not surprising that on the morrow of the announcement Mr Heathcoat Amory, then Minister of State at the Board of Trade, took occasion at a gathering of American business men in London to use, as reported by the *Manchester Guardian*, the following words:

'The view is too prevalent in America that United States policies in tariffs and trade are not really important, and that the United Kingdom and other countries exporting to the United States need only to be concerned with the level of demand in that market.'

If my own puny voice could carry to the White House, I would not cease to warn the President and his advisers that grave perils will continue to beset the convertibility movement on this side of the Atlantic until such a thing can no longer plausibly be said by a responsible and enlightened European Minister. But in fairness I must add this – the Minister's remarks would have come with a better grace if British policy towards Japanese trade had been more clearly inspired by the maxim 'Do as you would be done by.'

(4) I have left myself only a few minutes for the fourth factor to which the British Government must give heed. This factor is the prospect of re-enforcing its monetary reserves by methods less snail-like than the slow accumu-

lation of favourable balances on current account, and less precarious than the attraction, by relatively high interest rates or even by proved good behaviour, of the spare balances of private individuals and firms. Shall I fill those minutes with a flow of figures? I think not; but here are just a few – and rough ones at that. The United Kingdom's reserves of gold and dollars are worth three billion dollars, or about a third of the annual value of its imports from all sources: about a third of the annual value of the imports of goods and services by the whole Sterling Area excluding South Africa from sources outside itself: about a half of the gross annual sterling earnings, proposed to be made convertible, of Third Area countries: and a little less than the annual gross dollar earnings of the whole Sterling Area, so that a fall in the latter by 20 per cent, everything else remaining unchanged, would clean them out completely in less than five years. On the basis of such, and other such, figures one can argue endlessly about how much too small these reserves are to face a fully convertible and non-discriminatory world with; for, as everybody knows, the concept of an 'adequate reserve' is an extremely elusive one. But that they need substantial buttressing before the sun can be allowed to rise on C-Day seems clear enough; and one of the more welcome passages in the Randall Report was that in which encouraging noises were made about two potential buttresses, the International Monetary Fund and the Federal Reserve System.

Once more, however, I am afraid I must end on a cautionary note. Reserves are tricky things, and borrowed reserves are even trickier than other kinds. It is not very far from the truth to say that owned reserves are no use unless you use them and borrowed reserves are no use if you *do* have to use them. Tempting propositions about reserves should neither be offered as a substitute for reasonable trade policies, nor accepted save by those whose feet are so firmly set on the path of firm monetary policies

as not to be deflected therefrom by electoral clamour or perfectionist interpretations of the concept of full employment.

(ii) THE FUTURE OF STERLING¹

In the course of this thoughtful and extremely readable little book, Mr Day examines anew a number of well-worn and important themes: the nature and significance of the 'dollar problem'; the advantages reaped and the dangers incurred by the practice of discrimination in foreign trade; the genesis, structure and internal strains of the Sterling Area; the respective merits and drawbacks of fixed and mobile exchange rates. The analysis throughout is acute, the attitude fair-minded, the language temperate. On the main issue, whether the world can expect a complete and permanent solution of the 'dollar problem', the author professes himself unable to reach a firm conclusion.

Nevertheless, this is very definitely a book with a thesis, and a challenging and provocative one; it is (p. 6) that the 'generally accepted British policy of maintaining and reinforcing London as the chief pivot of the world payments system is ill-advised'. The wide use of sterling as an international currency, so runs the argument, is an illogical survival of the days when Britain was the predominant economic power; it has been fortuitously prolonged by the very acuteness of the post-war dollar problem, enabling the pound to strut and posture as *primus inter secundos*. If a unified and liberal Western system of trade and payments *can* be re-established the pound's pretensions will stand unmasked; if it *cannot*, the attempt to glorify the pound will continue to expose the British economy to strains and costs out of all proportion to the admitted advantages.

This thesis is worked out with reference first to Britain's

¹ A review, printed in *Economic Journal*, September 1954, of the book with this title by Mr A. C. L. Day.

position *vis-à-vis* her Sterling Area partners and then to her position *vis-à-vis* the non-sterling non-dollar world, that is to say, predominantly, Western Europe. Britain, Mr Day thinks, has enjoyed the lion's share of whatever net benefit accrues to the Sterling Area from the policy of joint discrimination against dollar goods; but the Outer Area has had the lion's share of whatever advantages the Sterling System confers in the way of convenience and stability, as well as the use of British savings to build the milk-bars and luxury flats proscribed within Britain's own borders. As progress is made therefore towards unification of the trading world, Britain's net benefit from the Sterling System declines both absolutely and relatively to that of her partners. As regards Europe, Mr Day fears lest the accord of dollar-convertibility to foreign holders of sterling, coupled with the maintenance of restrictions on dollar purchases at home, should lead to a situation in which Britain (p. 151) 'has removed the dollar problem of practically all other nations but still has one of her own', so that 'after paying most of the costs of removing world discrimination she will be blamed for being the only illiberal country left'.

Mr Day is not content to rest on these negative conclusions, but outlines an ingenious alternative system of world payments, based on an extension of the functions of the European Payments Union. Briefly, the idea is that the net payments (if any) due from each non-dollar country to the dollar countries should be made through the Union. Payments by the Union to the dollar countries would be made only in gold.

'When payments of the Union as a whole with the dollar bloc are in balance, individual members could settle their balances arising from American trade in just the same way as they settle their balances arising from European trade; that is, partly in gold and partly in credit, the proportions depending on the cumulative

position of their accounts with E.P.U. In those circumstances individual members would have no incentive to discriminate against payments to America. When, however, payments of Union members as a whole to America show deficit, then members would clear the American part of their accounts wholly or more predominantly in gold, and so would have an incentive to discriminate against America' (pp. 10-11).

America's co-operation would be required to the extent of declining to receive gold from any source except the Union itself, and, if she felt so moved, of giving the system a good start by means of a stabilization loan to the Union. But she would not be called upon to depart from her settled resolve not to treat anything as international money except gold and dollars; while at the same time the plan would meet the need of the reserve-hungry non-dollar world for its central monetary organ to be a true bank – a potential *creator* as well as a mere transmitter of international money.

I do not myself think it likely that things will happen in Mr Day's way. Other alternatives, since his book was written, have begun to lift their heads above the horizon. And, while I share some of his fears, I think the prospects for Britain and her currency are quite a bit brighter than Mr Day will allow. In the long spectrum extending between those who dismiss the 'dollar problem' as nonsense and those who hug it to their breasts, I find myself nearer than him to the Erhardian, farther from the Baloghian, extremity. If I miss anything in his book, it is the tough insistence on the importance of internal monetary discipline which pervades an almost contemporary study of the weaknesses of the Sterling Area – Sir Sydney Caine's trenchant essay in the April 1954 *Lloyds Bank Review*. Almost the only place where I feel inclined to cry out upon Mr Day's smooth tolerance is that in which (p. 105), after conceding that 'criticisms of the Dalton episode are

largely to the point', he defends the 'euthanasia of the rentier' as a reasonable objective, and claims that 'the cheap money policy was by no means the unmitigated evil it is often painted to be, and there is no reason to suppose it may not become respectable again, *even in prosperous times*' (my italics)!

So the kicks which this reviewer has himself received for his lack of faith and courage from those to the rum-bustious right of him in the convertibility spectrum he respectfully transmits to Mr Day's posterior, with his warm congratulations on writing a book which, for its matter and its style, deserves to be read and pondered by all those concerned to form or to influence British policy – even if some of them rise from its perusal with a determination not so much to follow Mr Day's advice as to make sure that he is proved wrong.

VII

CREEPING INFLATION¹

At the outbreak of the Korean War the Board of Trade's old index of general wholesale prices stood at two and a half times its 1938 level; in the following twelve months it spurted upwards by a quarter; since then it has risen by a mere fiftieth. The retail price index has followed a rather markedly different course – a rise by five-sixths between 1938 and mid-1950, by a tenth in the following year, by as much as a sixth since mid-1951. What story do these two series of figures tell, what augury for the future do they hold?

First, they hammer in that war is the biggest, though by no means the sole, cause of inflation. Secondly, they bear witness to the broad truth that any violent upsurge of monetary demand breaks first against the most sensitive outposts of the price system, and is followed by a long process in which, through various routes of demand and supply, with varying speed and degree of completeness, other prices strive to readjust themselves to those which have felt the first impact. But without further analysis the figures do not go far towards telling us what we want to know. Is the process of adjustment both to the major Hitlerian and to the minor Korean tempest complete, or is there more to come? And can the fairly nimble upcreep of the retail price level in the last three and a half years be regarded as a *mere* readjustment to past events, or does it contain also elements of spontaneous vitality which should lead us to expect it to continue into the future?

It is not difficult to specify *some* price-happenings during this recent period which can make a particularly strong *prima facie* claim to be of a catching-up or once-for-all character. The lion's share of that 17 per cent rise

¹ From the *Bulletin of the London and Cambridge Economic Service* (printed in *The Times Review of Industry*), March 1955. I am indebted to my colleagues on the editorial committee for some improvements, extending at places to the addition of whole sentences.

in retail prices since mid-1951 is accounted for by a 30 per cent rise in the retail price of food, a large part of which can be set down to the credit or discredit of deliberate and definitive policies of de-control, de-rationing, and de-subsidization. The rise of one-third in ordinary share prices can with some reason be regarded as a reflection of a specially long retarded urge of capital assets to get themselves revalued in something like due relation to the antecedent rise in the price of current output. In similar light may be regarded such modest rises in house rents as have been set in motion by recent legislation tempering the wind to the shorn landlord. Here the process has probably still much further to go: but one can think of various other groups – taxi-drivers, perhaps, and the governors of fee-charging schools – who, in spite of the rise in food prices, are probably nearer to feeling (if not admitting) that they have found their right niche on the band-wagon than they were on VJ-Day or in the high tides of 1950-1.

Now, having given a hearing to those prices which regard themselves as having had a special excuse for rising since mid-1951, let us salute briefly but gratefully those which, through the removal of special shortages or through technical progress, have managed to achieve a fall. These include many imported raw materials, as well as tramp shipping freights (despite their recent rise), second-hand houses and motor cars, synthetic detergents and television receivers.

Nevertheless, when all this is said, there is a general feeling about that the position is unstable, and that most indices of prices are more likely to go on rising than to remain stationary or to fall. Some sizable tweaks to the upward spiral may well have been administered even before this article reaches print. Large bodies of wage-earners are known not yet to be satisfied with their place on the band-wagon; the revised scheme of charges now being hatched by the Transport Commission will undoubtedly

contain some nasty shocks; some prices, notably coal, are still being held below their economic level for policy reasons which may in the end give way; large schemes of public expenditure on railway electrification and dieselization, road widening and construction, smoke-abatement are on paper or in the air – schemes whose object is the ultimate reduction of cost, but whose implementation would add to the pressure of demand.

Rather than attempt to predict particular happenings, let us run over the reasons for which to many observers a continuous, even if moderate, rise in prices has come to seem an inescapable feature of the modern world, even on the assumption of relatively peaceful coexistence between that world's antagonistic parts. Primacy of place must be given to the tremendous emphasis everywhere placed by public opinion, and hence reflected in Government policy, on the objective of 'full employment'. Analytically, it seems possible to distinguish three routes through which this influence works to exercise an upward, or thwart a downward, pressure on the price level. In the first place, apart from any reaction from the side of wage rates, it encourages the maintenance of a swollen stream of monetary demand. Ideally, perhaps, one can conceive of the stream being so managed that its volume was no more than sufficient to absorb, at current prices, the goods and services which would be forthcoming at a 'reasonably full' level of employment. But arithmetical calculations in terms of undifferentiated 'resources' tend to conceal the extreme difficulty of even giving an exact meaning to this result, let alone achieving it, in an economy in which the labour market is inevitably split up, both geographically and industrially. And the strength of the sentiment in favour of avoiding unemployment at all hazards is likely to bring it about that most deviations or mistakes will be on the side of making the stream of monetary demand excessive. It matters little whether we like to think of the consequent upward pressure on prices as directly due to the impact

of 'too much money chasing too few goods', the fewness of the goods being only partially mitigated by an expansion of production, or whether we like to think of it as proximately due to rising costs of production as more product is wrung from sources of supply which are only slowly expansible: sometimes one account may fit the facts better, sometimes the other – the result is the same.

Secondly, this buoyancy of demand in fact operates to diminish resistance to pressure from the side of work-people for higher wage rates. Such pressure is to some extent an endemic feature of any capitalist system; and it would no doubt in any case have been intensified in recent years by the growing success of trade unions in monopolizing the supplies of labour and in conducting the operations of collective bargaining on a nation-wide scale. But the exploitative powers even of monopolists are conditioned by the opportunities for the sale of their product: and there seems little doubt that the primary place assigned among the objectives of public policy to 'full employment' has been responsible to a considerable extent for the present state of affairs in which a regular annual or even more frequent revision of the wage bargain has come to seem part of the order of nature. Thirdly, the fear of creating pockets of unemployment tends to cut across and to stultify other government policies directed towards the breaking down of monopolistic practices or barriers to international trade, and so hinder the reduction of costs.

But the public demand for 'full employment' policies might have had to remain relatively ineffective had not the means for implementing them suffered a simultaneous improvement. The flaccidity of monetary systems, already inherent in the whole system of paper money and of fractional reserve banking, has been permanently increased by the autarcic currency experiments of the 1930s and the expedients of wartime. In some countries the habits born of wartime necessity, in others the example of totalitarian systems and the urge to compress into decades or

half-decades processes of development which elsewhere have been spread over centuries, have converted the government-directed programme of capital outlay from an emergency expedient into a normal feature of the landscape. For these phenomena are world-wide in their range; and whatever the vicissitudes of the terms of trade between them, countries in the future may be expected on balance to import inflation from one another just as for a brief period in the 1930s they imported unemployment. Witness the manner in which, mild recession in the United States having been conducted amid general applause without any weakening of the price level, even modest recovery now carries a threat to other industrial countries of rising costs of raw materials. Witness, too, the manner in which the recent rocketing in the price of tea has given the British artisan a splendid opportunity of making the contribution which his leaders have so long been anxious he should make to the raising of living standards in under-developed India and Ceylon.

The picture, then, of the future which has formed itself in many thoughtful minds is that of a price level of final output which, in spite of a steady annual increase of some 2 or 3 per cent in productivity per head, moves upwards on the average in at least a similar proportion. And of these observers some have not hesitated to conclude that this is not only what *will* happen but what under the circumstances it is best *should* happen. 'My view,' writes Professor S. H. Slichter of Harvard, 'is that it is better to accept a slow rise in the price level in order to get the maximum employment and output than to maintain stable prices by measures that produce preventable unemployment and cause the standard of living of the community to be less than it might be.' In Britain, official and other warnings that the rise must not be allowed to outstrip that in other countries in such wise as to endanger the balance of payments are not uncommon, but the advocacy of any more austere policy is rare. 'Stability' almost seems to have

been *re-defined* in terms of a 2 or 3 per cent annual rise.

Incidental advantages are sometimes claimed for this policy of slow upcreep on other grounds than those directly concerned with 'full employment'. Of these the most obvious is the gradual lightening, in terms of things and still more markedly in terms of effort, of the burden of the national debt. To this some might add a similar if less definitive lightening of a burden of retirement pensions which has been inflated by the community in a fit of enthusiasm beyond its real intentions, which cannot be overtly scaled down, but which can be subjected to surreptitious doctoring for at any rate the first few years after each successive general election. A little less shamefacedly the same advocates might point to the gain accruing to the State from the surreptitious lowering in real terms of exemption limit and other stop-points in the scale of income tax. All these clandestine transfers to the State's coffers would, it is argued, enable it to carry on with beneficial acts of expenditure or investment which might otherwise have either to be curtailed or to be financed by means of open deficits.

What, then, if any, are the valid objections to acquiescence in this programme of slow price upcreep? An attempt must be made to distinguish between objections which apply even on the assumption that the slow pace of the upcreep will be successfully maintained, and those based on apprehensions that in practice it will be found impossible that it should be.

It does not seem very likely that a price-rise of the order of 3 per cent a year, even if it continued for many years, would impair the efficiency of the economy by discouraging the use of money for ordinary purposes: experience seems to show that the inconveniences of barter or quasi-barter arrangements are so great that people will adhere to the use of money even when it is losing value at a considerably more rapid rate than this. Nor does it seem necessary to attach much weight to the objection that the

efficiency of the economy will be adversely affected in a more special way, namely by the temptation offered to the controllers of businesses to keep a rather larger proportion of their resources in the form of inventories than is technically necessary or desirable.

Nevertheless, even a slow rise of prices works out inequitably as between those who can and those who cannot easily procure a revision of contracts made in money. And in the case of really long-term contracts, such as those for life insurance or for long-term loans of all kinds, the resulting inequities may well be so glaring that the habit of entering into such contracts might in the end, to the general disadvantage, be gravely impaired. Here again it may be possible to point to some groups of savers, especially those of small means, who live anyhow in such a haze of imprecision about what the future holds in store for them that their habits of apprehensive prudence might stand up against a slow eating away of their real capital of about the same order as their nominal receipts of interest. But it would be rash indeed to expect such imperviousness from the more sophisticated and substantial owners and administrators of investable funds.

Indeed both the admitted inequities and the long-term economic and social dangers generated by even a slow inflationary process are so apparent that some of those who accept it as inevitable, and even on balance desirable, have felt moved to make suggestions for modifying the incidence of its impact. It is not difficult to suggest that the device of the sliding-scale, tying money payments to some index of the cost of living, should not only be extended from the fraction of the wage-earning field which it at present covers to the whole, but should be allowed also to invade the domain of salaries on the one side and social security payments on the other. It needs a little more ingenuity to devise, as in outline did a writer in the *Economist*¹ some years ago, paper schemes for bringing

¹ August 18th, August 25th, September 1st, 1951.

various groups of creditors safely on to the moving staircase. Insurance contracts with both premiums and benefits payable in sums to be written up in accordance with the levels of a price index ruling at the several appropriate dates, government bonds promising interest and repayment on the same principle (a principle thought by the author to be so attractive at least to the small saver that it would not be necessary to offer him any *interest* at all) – these formed the backbone of his plan.

It was a plan which might appear at first sight to have a very respectable ancestry. For did not Alfred Marshall¹ in 1887 suggest that the time had come to divorce the currency from the standard of value, and to give all prospective debtors and creditors ample legal facilities (he would not have made their use compulsory) to make their contracts in terms of units of constant purchasing power over the constituents of a carefully constructed 'tabular standard' – the Government itself offering to pay the interest on Consols in the same units, and 'gradually feeling its way towards' using it for assessing all its incomings and outgoings? Unfortunately, a little reflection shows that Marshall's problem was quite different from that to which the writer in the *Economist* addressed his mind. To Marshall the dominant influence on the long-run movements of prices was the behaviour of the precious metals, which he saw no sufficient means to control or counteract: his plan was one to enable individuals and governments to stand aside from the operation of blind natural forces. The modern suggestion seems to be rather one for instructing or encouraging the Right Hand of Authority to pursue a particular course, and then for strengthening its Left Hand to tweak away, one by one, the instruments at the disposal of the Right Hand for achieving the indicated objective. For if the victims of the inflationary process are thus to be rescued one by one until there is nobody left to cheat, then surely the alleged advantages of the infla-

¹ Memorials of Alfred Marshall, pp. 197–9.

tionary process in stimulating business enterprise will also be whittled away.

It is at this point that doubts about the *merits* of the programme of slow upcreep coalesce with doubts about its *practicability*. For if its inequities can only be softened, and the threat which it presents to the whole system of long-term contracts can only be averted, by the excogitation of a whole battery of contracting-out devices, it is surely to be expected that those sections of the population who are at present the leaders in, and the beneficiaries of, the present comparatively dignified inflationary procession will all the time be endeavouring to preserve and restore their threatened leads. Thus in practice the rescue operations so carefully planned would probably be far from completely effective. The rush for the band-wagon would set the wagon itself smartly rolling forward, and there would always be somebody left lagging behind. But what that means is that the planned orderly fall in the value of money would be in danger of turning into a landslide, generating not a comfortable condition of 'full employment' but a hectic and disorderly muddle, which could only be checked, at the cost of much disemployment and distress, by the re-establishment of drastic monetary discipline.¹

It seems all too likely then that the result of a thorough-going attempt to destroy the inequities and dangers of a gradual inflation would be to destroy the gradualness of the inflation and leave its inequities and dangers alive. Is it really too late to embark resolutely on the other course and attempt to re-establish in the public consciousness the belief that stability of the price level *means* stability of the price level and not stability in its rate of upcreep? There

¹ In Sweden already, according to Professor Lundberg, the trade union movement attempts to forecast the effect of its wage claims on prices and to write up the claim in accordance with a multiplier formula which takes account also of the marginal rate of taxation being higher than the average. Such a multiplier is probably convergent, but may nevertheless be large. And not all such 'expectational' processes can be relied on to converge.

are surely some bricks with which to build. Not altogether dead in the public mind, especially perhaps in the female half of it, is an opposite and better-founded belief – the old belief that the ‘natural’ result of technical progress is a progressive cheapening of the cost of living. At present this sentiment chiefly comes to the surface in bursts of indignation against real or fancied cases of monopolistic conspiracy to raise or maintain prices. The more effective public policy in the control of monopoly can be made, the less excuse will remain for witch-hunting, and the plainer it should become that any residual upward thrust of the price level is due not to the nefarious schemes of monopolists but to monetary and wage policies inconsistent with the natural diffusion of the fruits of progress.

Greater activity therefore on the part of the Monopolies Commission might contribute greatly to the re-establishment of cheapness as a respectable idea. But another thing which seems to be required is much greater care on the part of politicians and other public persons in framing their well-intentioned sentiments on the relation between wages and productivity. Too often, and with some excuse, such pronouncements as that ‘advances in wages must not outstrip the growth of productivity’ are held to imply that any increase in output per head in any industry, for whatever reason occurring, *does* justify a corresponding proportional increase in wages per head in the industry in which it occurs. This would be a questionable doctrine if such increases could be relied upon to be uniform throughout industry. But, of course, they cannot, even if the word ‘industry’ is narrowly interpreted, and still less if it is extended to include all gainful occupations. The doctrine in question therefore tends to produce a disproportionate rise in the money income of particular groups which, both through the route of demand and through emulative action aimed at preserving the existing relativities in the reward for effort, sets the wage spiral to work in occupations whose productivity (perhaps through

no fault of their members) has increased less or not at all. In this connexion, too, then, the old idea that cheapness is the natural sequel to abundance and improved techniques needs re-fostering.

A similar requirement is that the insidious philosophy of the automatic sliding-scale, so far from being extended, should be most critically re-examined. This does not mean that consideration of such price movements as may still occur should be altogether excluded from wage and salary negotiations – that is neither possible nor desirable. But it does mean that the notion that particular bodies of workers have a prescriptive right to contract altogether out of the consequence of natural calamities, or of adverse changes in the terms of trade, or of increases in the wages of *other* groups of workers, does need to be progressively undermined even if it cannot be precipitately eradicated. As things are, a bristling hedge of actual or virtual sliding-scales stands as a continual menace not merely to the doubtful policy of a continuously flexible exchange rate, but to any international financial arrangements which, like those agreed at Bretton Woods, find a place for the treatment of ‘fundamental disequilibrium’ by an agreed adjustment of rates of exchange. On this front has come a lead from a country which has not otherwise been conspicuously in the van of the fight against inflation. In 1953 the Commonwealth Court of Conciliation and Arbitration in Australia suspended indefinitely the practice whereby the basic wage was doctored automatically every quarter in accordance with an index of the cost of living.

Such minor modifications in policy or propaganda would still however leave us face to face with the two major mutually reinforcing obstacles to genuine long-term stability of prices – the monopolistic powers of trade unions and what may be called for brevity the ‘full employment pledge’. As regards the former, I do not wish to be too pessimistic about the hopes widely entertained that experience of the mutual damage that can be inflicted

upon one another by bodies of workpeople attempting to force up their own wages will eventually impose a greater moderation in the use of monopoly power. But I think there has been excessive *naïveté* over this matter in the past: and I would myself rather stress the importance of ensuring that the preachers and propagandists of moderation – to whose lungs be all power – are given a favourable climate in which to operate. And that to my mind means reconstructing, so far as is possible, the framework of monetary discipline within which in the old days the fashioners of trade union policies were well, if only sub-consciously, aware that they were obliged to act.

The task is not easy. We cannot disinvent the machine of credit creation any more than we can disinvent the aeroplane or atomic pile; we cannot wholly re-create a situation in which unreasonable wage advances will not be demanded because everybody knows that there is not enough gold and silver with which to pay them. And from the public relations point of view, it is perhaps a misfortune – however explicable in terms of a long and honourable history – that in this country monetary policies have to be operated through an apparatus whose technique is understood by few and whose functioning is apt to present to the uninitiated an appearance of unbearable artificiality. But there, rescued in 1951 from the scrap-heap, the tools are; and if we really want to cope effectively with the menace not merely of spectacular but of creeping inflation, I think we must pay heed to certain recent expert questionings¹ whether they must not be used with less tenderness to the market, less consideration for the Exchequer's interest-bill, than has hitherto – at all events till very recently – been shown. Perhaps the stiffening of rates in the last few months can be taken as an indication that in high quarters this is now more fully accepted.

But in the last resort, over however many dead bodies, the public can doubtless get the monetary policy it desires.

¹ See a series of articles in *The Banker*, September, October, November, 1954.

It may be that it does *not* desire one which is compatible with genuine long-term stability of the price level. But if it does, from what has been said already it seems to follow that it must be prepared not only to adopt a reasonable interpretation of the concept of 'full employment', but to recognize that it may not be wise to regard the attainment even of an employment objective in itself reasonably conceived as in all circumstances the absolutely overriding aim of policy. Experience shows that this is a subject on which it is almost impossible to speak plainly without incurring misunderstanding and obloquy. And that is perhaps truer than ever at a time when in many countries a combination of good luck and good policy has reduced unemployment figures to a level lower than many of us would have believed possible, at a moment moreover when the rise of prices has for the time at least slowed down, even if it has not stopped: for men hate above all to be told they may lose what they have once had. Let me take refuge in metaphor and say that I am far from desiring that this most sacred of all the cows should be led out relentlessly to sacrifice,

 lowing at the skies,
And all her silken flanks with garlands drest.

But that, I still fear, is what in the end may happen, unless she learns not to try to jump over the moon.

VIII

WAGES¹

I thank you for the honour you have done me in inviting me to deliver the Stamp Memorial Lecture. If you feel moved to buy the printed version, you will find at the end a little nosegay of figures, culled in the garden of the Central Statistical Office but arranged, with some defiance of the warnings of the gardeners, by my own fumbling fingers. You will also find a humble and non-quantitative example of the kind of criss-cross contraption without which no self-respecting paper on economics is now complete, and which is known, I believe, as a matrix. I shall allude to these things later, but the things themselves are fit only for the eye, not for the ear. They are all the tribute I have it in my power to pay to a great architect and fountain-head of statistical studies, who nevertheless, as I have good reason to remember, always displayed a generous tolerance towards those of us who, lacking his expertise, could do no more than brood, often with little enough result, over the meaning of the facts and figures organized for their benefit by more powerful intellects.

Figures, too, there are in plenty in the documents whose perusal prompted me, in spite of having been anticipated five years ago by my master and predecessor Professor Pigou, to choose the subject of Wages for this address. I allude to the Reports² of the Court of Inquiry which was appointed in February last to throw light on the wage dispute then current in the engineering and shipbuilding industries. But it is not those figures or the particular issue

¹ The Stamp Memorial Lecture, delivered before the University of London on November 9th, 1954, and printed by the Athlone Press. The fingers mentioned in the second sentence proved to be even fumblinger than I feared! The nosegay had to be skilfully refashioned by Mr A. Adams and Mr P. R. Fisk of Cambridge, with generous assistance from the compassionate gardeners (who very reasonably pointed out that they are not yet in a position to grow roses without thorns), and a few amendments made in the text.

² Cmd. 9084 and Cmd. 9085.

submitted to the Court which will be the subject of my address, but rather the kite flown at the end of each of its twin Reports. It might, the members of the Court thought, be a good plan if an 'authoritative and impartial body' were to be appointed to consider the wider implications of the questions which had been raised before them, together with the 'complex and sometimes conflicting economic arguments which surround them', and to 'give advice and guidance as to broad policy and possible action'. The kite fluttered feebly in the air for a while, and as far as I know has now fallen harmlessly to the ground. But during the period of its fluttering it was the cause of my suffering a nightmare. I dreamt that, in virtue of my office and in spite of my disclaimers, I found myself present as a full member of the preliminary meeting of this august panel. And after we had made mutual acquaintance over luncheon and suffered the torments of a flashlight photograph, the Chairman, who appeared to be a breezy retired Admiral, spoke these terrifying words. 'We have no case yet before us, but it won't look well if we go home at once. Let us get this professor fellow, who is used to shooting off his mouth, to tell us in a few simple words his ideas about the principles on which we ought to act when a case *does* come before us; and then we can go home and pretend to chew it over.' For the rest of this hour I shall be repeating, though no doubt in a somewhat tidied-up form, what I think that in my dream I blunderingly tried to say.

* * *

Ladies and gentlemen, next time we are called together, it will probably be in order to consider the case for raising the wage-rate in a particular trade – let us call it, for the sake of argument only, hosiery. It seems to me that in addressing our minds to that application, we shall have to try to arrive at a conclusion on three separate questions. First, is the general wage-level in the country as a whole about right? Secondly, are hosiery wages in about the

right relation to general wages? Thirdly, if the answers to these questions point towards different lines of action, to which of them ought we to attach the greater weight?

(1) We shall not find any of these three questions easy to answer; but the first is by far the most difficult and fundamental, and you need not be afraid that I shall take up as much of your time with the others as I propose to do with this. I warn you that I am going to approach the subject in the most academic and aggravating possible way – that is what I am here for. First, then, please imagine for the time being that our country has no foreign trade or other dealings with foreigners. I can see the look of horror, Admiral, on your face, and my late friend and colleague Hubert Henderson would have agreed with you – he never would let one make the assumption of a ‘closed system’ even for a moment, lest one should forget to remove it later; but I think he was wrong. Next, let us suppose for the present we can take it for granted that the Monetary Authorities, those mysterious powers who live somewhere between Great George Street and Threadneedle Street – some say it is in an underground laundry near Ludgate Circus, where the dirty linen which in America would be dragged out before a Congressional Committee is quietly washed – are managing to achieve stability – not stationariness, mark you, but stability – in the country’s total flow of money income. I won’t pause at the moment to discuss exactly what that means, or how the thing is being done, but ask you to let me proceed with my question. In such a country would it be possible for the general wage-rate, and hence the total wage-bill as a proportion of the country’s total income, ever to be too high?

From conversations which I have had during luncheon, I conclude that even those of our body whom you, Admiral, (though you will be too good a chairman to say so) regard as holding rather extreme views, will agree that it could. They would perhaps say that in a well-ordered and intelligent democracy, however much money is dished

out to wage-earners in the first instance, the State could always by taxation recover enough of it not only to defray the costs of defence, social services and the other activities of government, but to look after the necessary maintenance and growth of the country's capital equipment. But even these people, having studied conscientiously their Table 2 in the National Income Blue-book, seem ready to agree that there are citizens outside the statistical category of wage-earners who contribute to the national economic effort, so that an increase of the wage-bill, at present some 40 per cent of the gross national product, to a full 100 per cent, would be likely to have a very damaging effect.

Once, however, we get beyond this rather elementary point, I am afraid we shall find opinion, both inside and outside our body, very diverse and confused, but tending nevertheless to gravitate towards one or other of two opposite poles. At one extreme, we shall find those who regard the existing distribution of income as the result of a mere dog-fight, governed by no principle, since there exists no principle by which it *can* be governed. 'When a farmer and his labourers sow and reap a field,' wrote Bernard Shaw in the course of propounding this view,¹ 'nobody on earth can say how much of the wheat each of them has grown.' At the other extreme stand those who take it for granted that there exists at any time, if only we can discover it, even in such a self-contained country as we are now considering, what Professor Pigou, in a contribution to *The Times* newspaper² not many months ago, described as a 'proper' wage. This 'proper' wage is conceived of as standing very considerably below the figure arrived at by dividing the country's total income by the number of wage-earners, and as being such that any divergence from it of the actual wage will set in motion forces tending to corrective action – forces which it is presum-

¹ *The Intelligent Woman's Guide to Socialism*, p. 21.

² February 1st, 1954.

ably within the power of our panel, ladies and gentlemen, according as we advise unwisely or wisely, to thwart or to assist.

There has been a good deal of back-chat in recent years between the champions and the critics of this concept of a proper wage.¹ Perhaps I can give you a rough idea of the issues – it won't be more – by staging a little debate between them. When I am about to become a champion I shall raise my right arm, and when a critic my left arm; so I'm afraid, Admiral, that in spite of that lunch you must keep your eyes open as well as your ears, or you won't know what is happening.

Champion. My proposition is that that farmer of Mr Shaw's, whom I take to be an average good farmer, *can* form a pretty shrewd idea of what he would lose in the way of annual sale proceeds by working his farm with, say, ten men instead of his present eleven, and that that sum represents the proper annual wage for farm labour. The same holds good for every employer in the country, large or small; and since we are assuming for the present that all the industries of the country are in proper balance, that gives you a figure, or rather, if you like, a cluster of figures bound together by reasonable differentials for differences of skill and so forth, for the proper wage level for the country as a whole. If the level established by collective bargaining exceeds this level, a number of people will, under the conditions of general monetary stability which we have agreed for the present to assume, lose their jobs.

Critic. You're going rather fast – let's get back to the farmer. If he pays all his men on your principle, won't the wage-bill swallow up his whole proceeds?

Champion. Oh dear no! You see, if he carried his sums further, and tried to see what he would lose by working his farm with only nine men instead of ten, only eight

¹ See especially the debate between Professor R. A. Lester and Professor F. Machlup in *American Economic Review*, March 1946, September 1946, March, 1947.

instead of nine, and so on, he would find those amounts become bigger and bigger. So if he pays each of his men the addition made to the selling value of his product by the eleventh man, there will be enough left over for his other expenses and for his own profit.

Critic. Perhaps more than enough! but I'll return to that. For the moment I'll agree that what you say might make some sense as applied to a farm, at any rate a rather old-fashioned one. But what about a complicated modern manufacturing process, or a thing like a power station? Surely there it doesn't make sense to imagine the labour force being reduced or added to bit by bit in that way. You have a compact group of interlocking labour essential to the working of the affair; if you tried to withdraw one man the whole process would come to a stop, while if you were offered an additional man to employ you wouldn't know what to do with him.

Champion. Ah! you're taking rather a short-sighted view. In that sort of case you've got to allow *time* for my principle to work itself out. The techniques of production are not immutable; and if labour is dear you will see them altering in such a way as to employ less of it, while if it is cheap you will see them altering so as to employ more of it. Moreover in the former case you will see those industries which employ much labour declining, in the latter case you will see them growing, relatively to those which employ little labour. I must ask you to distinguish between the immediately or ostensibly proper wage, and that which is truly proper in the long run. It is the latter which the wage fixed by collective bargaining will tend to come up to but must not exceed.

Critic. Humph! This is all getting a bit misty, isn't it? But I think I see what you mean. You are saying, aren't you, that, given time, the *form* of the capital equipment with which labour co-operates can and will be changed so as to allow this step-by-step principle of yours to operate. But are you saying something else as well? Are you saying

that if labour is too greedy the *quantity* of capital equipment will be increased in such a way as to throw some labour out of work – that over a certain range capital will be *substituted* for labour?

Champion. Yes, I am prepared to say that as well.

Critic. I thought so; but you ought to know that that old argument has been proved wrong. Remember we are talking about the *general* wage level. If there is a really *general* rise in wages, the cost of making, and hence of buying or hiring, machines will go up in almost exactly the same proportion as the cost of doing things by hand, and there will therefore be no advantage in substituting machinery for hand labour.

Champion. I know some people have argued in that way, but I think it is fallacious. I still think Ricardo was right – that if general wages go up, the rate of profit on invested capital which is to be earned by making things by direct labour will be more severely reduced than the rate which is to be earned by making things by machine methods; and that it is these relative rates of profit which are significant as a guide to action, so that if general wages go up there *will* be a tendency to the displacement of labour.

Critic. Well, we had better have that out another time. But now let me take you up on another point. You said that if that farmer pays wages on the principles you explained, he will have enough over for his own profits and his other expenses, including, I suppose, interest on any money he may have borrowed. But what do you mean by enough? Don't you mean simply what these people have been in the habit of getting?

Champion. No, I think I mean something more than that. I mean, to put it broadly, that in a country where economic freedom prevails, the forces of competition and industrial change are always applying impersonally to the profit-making classes the same sort of sifting and scrutinizing process as the employer is consciously applying

in his dealings with labour, and are thus producing a broad correspondence between what those classes get and what they are economically worth.

Critic. You say 'the forces of competition', but you know well enough that they often nowadays, to say the least of it, are very sluggish indeed.

Champion. Yes, I agree that monopoly of various kinds and degrees is a great problem, and that in a country where it is very prevalent, while some groups of workers may share in its gains, what I have called the 'proper' level of general wages will be lower than if it were absent – will be, if you like, 'improperly' low. But I don't believe that in an advanced industrial country at all events you can do much about that by operating directly on the wage level. It is a matter for the Monopolies Commission, not for the Admiral and his friends here.

Critic. But even forgetting monopoly, what makes you think that the level of profits turned out by your principle is in any real sense the right one?

Champion. Well, I would say that there were strong forces at work tending to make it correspond not only with the *value* of the services rendered, but with their *cost*. In other words, that if you encroach on it beyond a point you will find that there is a drying up of the willingness to save, to display enterprise, to take the risks of tapping new markets, introducing new processes, devising new products, on which the ability to pay wages ultimately depends.

Critic. All that takes a long time to work out, and is very difficult to assess and measure, isn't it? We're rather a long way, aren't we, from the clear-cut 'proper wage' which the casual reader of that article of Professor Pigou's in *The Times* might suppose was staring us in the face?

Champion. Yes, I agree that we are. But I'm talking sense all the same.

There I had rather close down the debate. But of course,

as well as listening to disputations of this kind, it will be our duty to see what light, if any, figures can throw on the validity of this concept of a proper wage level. Here are some tentative ones. Between 1938 and 1953 the ratio of the national wage-bill to the net national income at factor cost increased by 8 per cent; its ratio to the total of private incomes by 7 per cent; and its ratio to the total of *personal* incomes, that is, incomes excluding undistributed company profits, by 15 per cent. Since the proportion of the population consisting of employed wage-earners probably increased between those years, these figures somewhat overstate the rise in the ratio of wages per employed wage-earner to national income (however defined) per head. Is such an increase as this, it may be asked, compatible with the theory of the proper wage, or does it show it to have been a bogey, needing only the upset of a great war to prove its hollowness?

I think, Admiral, we must be on our guard. This increase in the wages ratio has *not* been achieved under the conditions of general monetary stability which the theory assumes, and which I imagine we must hope will be successfully maintained in this country in the future. It has been attained, therefore, not so much at the expense of the ratio of *total* profits to national income, which, even when plausibly deflated for fictitious elements, has been running at nearly the same level as before the war, as at the expense of the position of the average recipient of rent, interest, salary and – in the case of my third figure – profits distributed as dividends. All these classes have made a certain come-back in the last few years of the period, and I do not think we can conclude that the forces impelling, and from an economic point of view justifying, this come-back, have spent their force, though some part of the change may well prove irreversible.

As regards the prospect of irreversible change in the ratio of wage-bill to total profits, we shall have to listen to an expert who I hope will often be before us, and in

whose favour indeed I am secretly planning to resign from this body at a very early date, Professor Phelps Brown of London University. He presents us with *prima facie* evidence of such a change, as a result of the combined effects of wartime inflation and post-war deflation, between 1913 and 1924. The 14 per cent jump between these years in the ratio of wages to total home-earned income *was*, he says, largely at the expense of profits, and had only been very partially reversed by 1929, when the great slump and subsequent recovery brought fresh influences into play. But he is duly cautious in the inferences which he draws from his figures; the malleability which he detects in profit margins 'does not imply that changes in the return to risk-capital and enterprise set up no reactions on the side of supply. Such reactions must take time to work themselves out', so that his study, he feels, gives no reason either 'to affirm or doubt their importance to the course of distribution and economic progress'.¹

Anyway you must let me assume, if the Admiral is to get home to his tea, that we shall do our best to form an opinion as to whether the general wage level of the country is proper, or improperly low, or improperly high. Does it follow that if we think it improperly low we shall always be very anxious to see it raised, and in the opposite event to see it lowered? Before drawing this seemingly obvious inference, please remember one of the assumptions which I have hitherto asked you to make, namely, that certain Authorities over whose actions we have no direct influence are successfully preserving a condition of general monetary stability. But suppose they are not – suppose we are in the middle of what is sometimes called an inflationary or deflationary spiral. It can be argued that in the former case, even if we think that from a long-run point of view the money wage level is too low, we should not wish to see it rise, for fear that such a rise should simply add fuel

¹ E. H. Phelps Brown and P. E. Hart, 'The Share of Wages in National Income' *Economic Journal*, June 1952, pp. 272-3.

to the inflationary flames without causing any appreciable rise in *real* wage rates; while in the opposite case, even if we think that from a long-run point of view the money wage rate is too high, we should not wish to see it fall, for fear of reinforcing the downward drift of monetary demand, and intensifying trade depression without producing any appreciable fall in *real* wage rates. As against this, however, it can be argued that in such conditions it is just the kind of change which falls within our purview, namely, a bit of a shock delivered from the side of wages, which is needed, in the case of an inflationary boom, to damp down the excessive optimism of business men, or, in the case of a slump, to restore their confidence and credit status; and thus, in either case, to assist the monetary authorities to regain that control of the situation which *ex hypothesi* they have temporarily lost.

We shall have to do a good deal of scratching of heads in weighing up these opposing arguments. And there will not, I am afraid, be wanting witnesses who will endeavour to add to our confusion by arguing that there is not really symmetry between the two situations, and that in a boom we ought always to be pleased to see a too low wage go up, while in a slump we ought never to be pleased to see a too high wage go down.

I have now started taking out simplifying pegs, so here goes another – the one, Admiral, that made you jump a little time ago. Of course we shall not be operating in a closed country, but in one which is much more dependent than most upon earning by foreign trade its food and the raw materials of its industry. I think almost everyone would agree that in such a country it is less difficult than it would be in a closed one to attach a fairly clear meaning to the concept of a proper wage, and more dangerous to be landed with an improperly high one. But we have got to be a little careful here. Even for such a country we must not suppose that the forces of foreign demand and foreign competition supersede all others as determinants of the

proper wage level. Circumstances *may* occur in which a national wage level is being found uncomfortably high by those in charge of the export industries, but in which the right response is not so much a lowering of the national wage level as a reduction of the proportion of the country's resources devoted to foreign trade. I have argued myself, rightly or wrongly, that such conditions arose in this country as a result of the tremendous cheapening of the cost of our imports which occurred after the first world war.¹ But having in mind our present obligations to rebuild our monetary reserves, to co-operate in the removal of trade and currency restrictions and to develop our Colonial estates, I don't think they are very likely to occur during at any rate the first few years of our assignment. For the time being I don't think we shall go far wrong in keeping a very sharp look-out on the effect of wage claims on the level of our exports.

(2) Now I come to my second question. Let us suppose that we are fairly happy about the general level of wages, but that hosiery wages lie below the general level, and the question is whether they shall be put up to the general level. Here, I suggest, our problem will be found to fall into two parts – a first part which *must* arise and a second part which may or may not arise, according to the answer which we give to the first part. Our first duty will be to attempt to distinguish between a wage-gap which perfect knowledge and mobility on the part of the workpeople concerned would tend to perpetuate and one which the attainment of these ideal conditions would tend to remove. Why are wages lower in the hosiery trade than elsewhere? Is it because the work in that trade demands less strength, skill, experience than most kinds of work? Or again, while demanding just as high qualities as work elsewhere, is work in the hosiery trade safer, more agreeable, less liable to be broken by spells of involuntary idleness – these

¹ See my *Essays in Monetary Theory*, pp. 196–7.

advantages having hitherto apparently compensated, in the private judgment of those who work therein, for the lower level of wages? If we can satisfy ourselves that either of these conditions prevails (and of course in neither category is my list of possible differences meant to be exhaustive), we shall not have much of a problem. We shall be disposed towards preserving at any rate the greater part of any existing gap, and towards frowning on any attempt to obliterate it as being dictated by a bogus and damaging pseudo-egalitarianism.

But what if the gap seems to us to be due to the fact that the demand for hosiery products has fallen away, or failed signally to keep pace with the growth of demand in general? What if it is due to some special difficulty to which the workpeople concerned are subject in the way of hearing of more lucrative avenues of employment, or of acting on such knowledge thereof as reaches their ears? In that case the second half of our problem arises, and I am afraid we may not find it at all easy to solve. On the one hand we shall recognize that the wage-gap is serving a purpose in stimulating exodus from this *ex hypothesi* declining or overcrowded trade, and, what is perhaps more important, in discouraging recruitment into it. On the other hand we may come to the conclusion that the stimulus is working so feebly that it will be better to try more drastic treatment, and by putting up wages in the hosiery trade to add so much to the difficulties of the firms engaged therein as to restrict appreciably the opportunities for finding employment in it. We may, that is to say, invoke the push of unemployment to achieve the improvement in the distribution of the labour force which the pull of higher wages has failed to achieve. If this seems a somewhat cold-blooded policy, we may care to recall that it has received the public blessing of one of the most uncompromising apostles of 'full employment', Professor R. F. Kahn.¹ But so strong nowadays is the sentiment against

¹ *Economic Journal*, March 1949, p. 9.

countenancing anything which can be represented as personal injustice between man and man that I feel sure that strong pressure will often be exercised upon us in favour of the policy of wage-equalization by people who do not understand, or have managed to forget, its implications for employment. And I expect, my colleagues, that more often than not you will find me arguing on the side of giving a wage-gap a fair chance to perform its economic function instead of ironing it out prematurely in the name of distributive justice.

I doubt whether we shall ever be invited to consider this wage-gap problem in the context not of a difference between one whole industry and the general industry of the country, but of a regional difference between establishments, or groups of establishments, in the same industry. For good or evil, the bulldozer of collective bargaining has probably operated too efficiently to permit such cases to reach the level of our august noses. But if I am wrong – if we *are* sometimes asked to express an opinion on such a question as whether a remote and all but exhausted mine *must* screw up its wage-level to that of its most fertile and conveniently situated competitor – then we shall be faced with the same dilemma, and shall have to decide as best we can between the rival policies of turning the heat on a noxious parasite and tempering the wind to a lame duck. And once more you are likely to hear me pleading that there is more to be said for the latter policy than is nowadays generally conceded.

(3) I now come, my patient colleagues, to the third question which I distinguished in my opening remarks. Suppose we come to the conclusion that hosiery wages are 'too low' relatively to general wages, either because the existing gap over-values any superior amenities that the hosiery trade has to offer and is making it difficult to recruit sufficient labour to that trade, or for the opposite reason that an over-supply of labour in that trade calls in

our judgment for shock tactics to expel it. Then if, as I have recently been assuming, we are satisfied about the general level of wages, we shall advise putting hosiery wages up. But what if we think the general level of wages is itself dangerously high, and hosiery wages, while relatively wrong, absolutely about right? Ought we to advocate making them absolutely wrong, just in order to get them relatively right?

I will say no more now than that I think we ought to reflect very seriously before doing so, lest *by* doing so we find, oh my lady colleagues, that we have removed one more restraining peg from a piece of washing which in our judgment the wind is already threatening to carry away over the roof-tops. But before we meet next time I shall venture to circulate to you a little table – I will not frighten you by mentioning its ugly technical name – showing the nine possible combinations of right, too high and too low general wages with relatively right, relatively too high and relatively too low hosiery wages, and suggesting the policy which each of those combinations demands. You will see that there are three other cases, besides the one I have just mentioned, where we shall be faced with a dilemma. Let me draw your particular attention to one of them. Let us suppose we think there is a case for a general rise in wages, but that only from the hosiery trade, which so far as we can see has no special claim to favour, is an application before us. Ought we to be deterred from backing it by the reflection that to grant it will put its relative position wrong? I do not think so. I think we can be sure that in the present temper of the world this *ex hypothesi* unjustifiable gap will not long remain unclosed. But I must not conceal from you that my table will disclose also less agreeable possibilities, namely a number of cases in which we ought, either certainly or possibly, to reply to an application for an increase in hosiery wages by recommending a *decrease*.

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At the mention of this monstrous possibility there arose from my hitherto long-suffering colleagues a hubbub of dismay. The voices of the women in particular, all members of an organization which had never questioned the equivalence of the concepts Equal Pay and More Pay, rose to an angry shriek. Finally the whole company soared into the air and bore down on me like the pack of cards in a more famous dream. So I awoke – but to a reality scarcely less distressing than my nightmare. For I remembered that I was under contract to deliver, on November 9th, the Stamp Memorial Lecture.

APPENDIX I

(1) *Distribution of private income before tax*
(£ million)

	1938	%	1953	%
1. Wages	1,964	37.1	6,016	39.6
2. Salaries, Forces' pay and professional earnings	1,146	21.7	3,703	24.4
3. Rent, profits and interest received by persons	1,657	31.3	2,730	18.0
<i>Personal income from work and property</i>	4,767	90.1	12,449	81.9
4. Social security, etc., transfers	275	5.2	1,001	6.6
<i>Total personal income</i>	5,042	95.3	13,450	88.5
5. Undistributed company profits	250	4.7	1,750	11.5
<i>Total private income</i>	5,292	100.0	15,200	100.0

(2) *Wages as a percentage of*

	1938	1953	1953 % increase over 1938
1. Personal income from work and property (net)	41.2	48.3	17
2. All personal income (net)	39.0	44.7	15
3. All private income (net)	37.1	39.6	7
4. Gross national product at factor cost	38.3	40.7	6
5. Net national income at factor cost	40.3	43.6	8
6. Home-produced net national income at factor cost	41.9	44.2	5

Notes

1. All figures exclude stock appreciation (negative in both years); and exclude depreciation, estimated at replacement cost, on industrial and commercial plant and buildings.
2. Wages and salaries include employers' contributions to national insurance and to pension funds.
3. Undistributed company profits include additions to dividend reserves.

APPENDIX II

G = general wages.

H = hosiery wages relatively to general wages.

Recommended action on hosiery wages: + = put up.

o = leave unchanged.

- = put down.

In doubtful cases the action on the whole recommended is put first.

H too high			H right		H too low	
G too high	(1)	-	(4)	- or o	(7)	o or +
G right	(2)	-	(5)	o	(8)	+
G too low	(3)	o or -	(6)	+ or o	(9)	+

In cases 1, 5 and 9 there is no conflict; nor is there in cases 2 and 8.

In cases 3 and 7 we advise *keeping* the relativity wrong in order to *keep* the absolute level more or less right.

In cases 4 and 6 we advise *making* the relativity wrong in order to *make* the absolute level more or less right.

IX

WHAT DOES THE ECONOMIST ECONOMIZE?¹

In inviting me, a stranger from overseas, to give this address, you have done me a great honour and laid on me a great responsibility. I greatly fear lest in attempting to discharge it I shall be found guilty of the crime, recorded in President Myles Cooper's² famous black book, of 'making an unseasonable noise at an unreasonable hour'. And though I have among my baggage the modern equivalent of a night-shirt, I have omitted to provide myself with the complementary good of a British warship riding at anchor; so unlike President Cooper I shall be at your mercy.

We are met together in search of a national policy for economic welfare at home and abroad. Perhaps it is a wild-goose chase. 'Welfare economics,' one of our colleagues has recently declared,³ 'is in a very unhappy state; . . . considerations of the welfare implications of ENVY make it impossible even to say that welfare will be increased by everyone having more of every commodity.' A gloomy conclusion indeed! Our conveners have displayed some courage and, if I may say so, great common sense, first in permitting us to assume, at least for three days, that there is a department or form of welfare that can be called specifically economic, and secondly in summoning to discuss it a conference, not of clergymen or even of psycho-analysts, but of economists. Let us hope to prove ourselves worthy of the confidence thus shown in our subject and in our profession.

¹ The 'Keynote Address' to the Conference on National Policy for Economic Welfare at Home and Abroad which formed part of the Bicentennial celebrations of Columbia University, May 1954; published by the Trustees of the University in the Proceedings of the Conference, 1955 (Doubleday and Co., New York).

² [The first President of King's College, New York, afterwards Columbia University. During the revolutionary troubles he escaped from the college in his night-shirt and took refuge in a British warship.]

³ M. W. Reder, *Survey of Contemporary Economics*, Vol. II, p. 35. My capitals.

We have been provided with a noble preliminary meal – I am alluding at the moment not to the excellent dinner which we have just eaten, but to the five massive papers, covering between them an enormous range of difficult and interesting topics, which have been prepared by our distinguished section-leaders.¹ It would be no easy task to summarize them in twenty minutes; besides, a recapitulation is not a keynote. I think you will rather be looking to me to suggest, if I am able, some single line of thought, even if it be rather a tenuous and imprecise one, which we might do well to keep at the back of our minds during the next few days, while we are trying to distil, out of the mass of information and analysis which is going to be set before us, some suggestions for public policy.

In searching for such a thought, my mind recurred, as it often does, to a sentence of Alfred Marshall's which I am afraid I have quoted once before on a public occasion: 'progress chiefly depends on the extent to which the *strongest* and not merely the *highest* forces of human nature can be utilized for the increase of social good'. That little sentence seems to me to contain in a nutshell both a charter for the economist – a licence to think his own thoughts in accordance with his own calculus – and a reminder, in case he needs it, that the licence is to be used in furtherance of a wider purpose. And the moral which I want to draw from it for the guidance of our discussions of policy is something after this fashion. There exists in every human breast an inevitable state of tension between the aggressive and acquisitive instincts and the instincts of benevolence and self-sacrifice. It is for the preacher, lay or clerical, to inculcate the ultimate duty of subordinating the former to the latter. It is the humbler, and often the invidious, role of the economist to help, so far as he can, in reducing the preacher's task to manageable dimensions. It is his function to emit a warning bark if he sees courses

¹ [Simon Kuznets, Joseph S. Davis, Jacob Viner, Gunnar Myrdal, John Maurice Clark.]

of action being advocated or pursued which will increase unnecessarily the inevitable tension between self-interest and public duty; and to wag his tail in approval of courses of action which will tend to keep the tension low and tolerable.

Let me try to illustrate what I mean from some of the problems which, in my country at least, have been recently in the public eye. There is none which has caused more concern, and that by no means only in capitalist or right-wing circles, than the problem of wage-restraint. Why is it that so many people, of diverse political parties, have begun to lose faith in those old processes of sectional collective bargaining, with a minimum of interference by the State, of which we used to be so proud – those tough orgies of negotiation in which each side was frankly doing the best it could for its own clients, but as a rule no public interest was greatly endangered, whatever the result? Whence the need for so many sermons on the virtues of moderation, not only from bank chairmen and the like, but from labour sympathizers and labour leaders themselves? There may be other reasons; but is not the main reason that those battles used to take place within the enclosed waters of a reasonably well-ordered monetary system, while too often in recent years they have taken place on an ocean of flabby money? All power to the preachers who are trying to make their voice heard, and all honour to such trade union officials as, battling with the strain of divided loyalties, may be found to attend to them. *Less* honour to those economists who failed to warn the governments of this obvious consequence of the policies on which they were embarking, and who must bear their share of responsibility therefore for creating formidable and perhaps unresolvable tensions in shrewd but simple human breasts.

Capitalists too may be shrewd but simple-minded. Here is a man who thinks that a certain company could be run more efficiently so as to make a bigger profit. Or perhaps

he only thinks that it is hoarding an unnecessarily large part of the profits that it *does* make, so that its shares are undervalued in the market. He buys it up; perhaps he operates it himself, perhaps he passes it on, at a profit, to somebody else whom his action has led to form a similar judgment. Is this a useful piece of enterprise, or is it, as a leading British banker has recently described it, 'the apotheosis of the spiv and the damnation of honest business men'? You will notice that I have rolled together four cases – two alternative reasons why Mr X may have bought the company and two alternative accounts of what he does when he has bought it. It would take us much too long to look properly into all these four cases tonight; all I want to point out is that this kind of moral dilemma is much less likely to arise if the economic background is sound – if profits have not been on the one hand swollen by inflation, on the other hand depleted by a tax system which counts as profits what are really replacement costs, and if dividend policy has been governed by the true needs of the business for expansion and not deflected by the hope, vain as it may prove to be, of discouraging wage inflation. Poor Mr X! He too, like the trade union leader, is a human being. Should not society, guided by its economists, have provided an environment in which his acquisitive instincts can function more unmistakably for the common good?

Now, lest you should set me down as a hard-faced deflationist, let me hasten to point out that these moral tensions are aggravated at least as seriously in depression as in boom. All good luck to the newspaper editor who, in a time of heavy unemployment, tells the man who has got a job that he must not obstruct the reduction of costs by playing it out. All good luck to the broadcaster who tells the steady-going professional family that at such a time they must cast their cherished virtue of thrift to the winds and spend freely in the public interest. But I am afraid these devoted preachers will have a hard and thank-

less task. It is the business of the economist to do what he can to save them from being set it.

There is another department of domestic policy in which, so one of our paper-writers suggests, sound economic theory can inspire decisions which may relax strains and release constructive effort. I allude to monopoly policy, a matter in which your country has experimented much, while mine has only just begun. Is it perhaps true, and truer in your country than in mine, that economic theorists have been led on from analysing 'unworkably' pure models of competition to prescribing them, and have thus presented the business man with unnecessary tensions between what his good sense impels him to do and what the law allows? But is it not also true, and truer perhaps in my country than in yours, that in this field it is the business man's social instincts, his impulse to live and let live, that are at least as frequent a source of public damage as his more purely aggressive ones? The subject, as Professor Clark says, is almost inconceivably complicated and difficult; it lies outside my special field of study, and I have no contribution to make to it. But here too it would seem that the objective must be the construction of a general framework of theory, law and policy which may need to be pretty tough, but the existence of which, once it is established and understood, may reduce, if it cannot abolish, the occasions of conflict between what is seen to be profitable and what is felt to be right.

Has my poor little thought died of suffocation under the weight which I have tried to put upon him, or can I keep him alive for ten minutes longer to help us in preparing our minds for those discussions of international affairs which rightly figure so prominently on our programme? I hope so, for I believe we shall need him.

After all, as Dr Myrdal points out, we western democracies, or most of us, have reached internally a fair degree of what he calls social integration. The political parties snarl at one another; the poor clamour to get rich quicker,

the rich grumble at growing poorer so fast; but on the whole, not only in war but between wars, there is, or has been so far, sufficient sense of being in the same boat to prevent the boat from being dashed on the rocks. But, as Myrdal also emphasizes, the fumbling attempts to extend this sense of solidarity beyond national boundaries have not yet come to much; the concept of the nation-state, which it has taken so many centuries to distil in the cauldron of history, seems to have set and crystallized uncommon hard. Perhaps we British, though not more generous or imaginative, are a little more elastically-minded, or if you like woolly-minded, in this respect than some other peoples; for, as I pointed out when I lectured in this country last year, we never quite know what our country or nation is or where it stops; and among all the people whom the Bank of England describes colourlessly as non-residents we feel some to be nearer to us in race, some in language, some in political allegiance and some in age-old cultural inheritance. But neither we nor anybody else seems to be at all ready to practise on an international scale such a degree of emotional solidarity as prevails, in spite of differences of interest, between, say, London and Yorkshire or between the Atlantic Coast and the Middle West.

This being so, it is of high importance that the economic arrangements of nations and between nations should be so designed as to minimize the making of chronic and possibly unmeetable calls on the limited stocks of conscious international altruism. That of course is the idea behind the slogan 'trade not aid' in which the demands now being made upon the United States by the other western nations have been epitomized. Those of us who have endorsed those demands must be candid about what we are asking. What we ask, if fully accorded, would result in shifts of activity which, we believe, would be to the advantage of the United States as a whole, but which would undoubtedly impair the earning-power and dislocate the lives of an

appreciable number of blameless American citizens. Are your institutions already sufficiently adapted to take care of that situation, or is there a case for special action along the lines suggested in the deeply interesting and impressive memorandum submitted to the Randall Commission by Mr David Macdonald? That is a matter on which it would be scarcely becoming for a foreigner to advise. My point is that in any case in carrying out these readjustments you would be in a position to draw upon that sense of social unity which is so richly developed as between fellow-citizens, but upon the limited flow of which available for international use it is so important not to make excessive demands. And the obverse of the coin is of course our own obligation to make the readjustments needed to take advantage of the opportunities which we claim. It is an obligation which in England, even since November 1951, has not in my judgment been perfectly fulfilled.

Finally, we shall be discussing not only the relations between the United States and the other western democracies, but also those between all the richer countries of the West and the poorer countries of the East and South; and here too I hope my little thought may be of service. I think it needs saying that some of the claims for unlimited largesse made by the so-called under-developed countries, or by their self-appointed spokesmen in other lands, go far beyond what human nature can be expected to respond to, and can only end in disillusion. I belong to a country some of whose finest sons over many generations have grown grey in the service of backward peoples, and which has readjusted not without dignity to the new situation in which her political tutelage is progressively rejected but her technical expertise and her now shrunken savings are still in demand. They will still be forthcoming, in a certain measure and with goodwill, if the terms are fair. But the more clearly these countries can make up their minds that the bulk of the job of development must be done by

themselves, that it must be planned on lines and within limits dictated by climatic conditions and natural aptitudes, and that foreign funds and skills invited to co-operate must normally be hired and not demanded as of right, fairly treated and not bullied, the better are the prospects for a real, if slow and unspectacular, improvement in their living standards. And the greater the chance that unexhausted reserves of generosity and willingness to share will be available in Britain as an iron ration in times of emergency or unforeseen setback. I cannot help thinking that that goes too far for countries more richly equipped to help than, any longer, is my own, especially the country whose guest I am today. And while I have no doubt that the International Bank for Reconstruction and Development, and perhaps other such agencies, will continue to play a prominent part in the whole process, I am far from subscribing to the doctrine that no transfers of capital are henceforth to be counted respectable unless channelled through a complicated international machine.

I have kept you long enough. Having already made one quotation from Alfred Marshall, let me draw on another of my favourite sources of wisdom to summarize what I have been trying to say, and to suggest an answer to the question posed in my title – What does the economist economize? ‘ ’Tis love, ’tis love,’ said the Duchess, ‘that makes the world go round.’ ‘Somebody said,’ whispered Alice, ‘that it’s done by everybody minding their own business.’ ‘Ah well,’ replied the Duchess, ‘it means much the same thing.’ Not perhaps quite *so* nearly the same thing as Alice’s contemporaries thought. But if we economists mind our own business, and do that business well, we can, I believe, contribute mightily to the economizing, that is to the full but thrifty utilization, of that scarce resource Love – which *we* know, just as well as anybody else, to be the most precious thing in the world.

X

THE ROLE OF PERSUASION IN ECONOMIC AFFAIRS¹

I want to speak, as I think you will expect me to, about some problems of the British economy; but instead of throwing at you a mass of facts and figures, which are hard to take in by ear, I propose to let what I have to say grow out of the theme which I have taken as my title – the Role of Persuasion in Economic Affairs. Let me put it in this way. There is a saying in England, and I dare say here, that there are two ways of getting a donkey to progress along a road – by holding a carrot in front of his nose and by applying a stick to his behind. But experts say there is also a third way, of which we normally hear less, namely, by stroking his ears – in other words by establishing a code by means of which the animal becomes aware of what is expected of him and behaves accordingly. For the first six years after the war we in England lived under a régime of which the *leit-motiv* was planning, regulation, prohibition; for the last three years we have lived under one of which the *leit-motiv* has been the restoration of incentive and the regeneration of enterprise. But in point of fact under both régimes immense reliance has also been quietly placed on the efficacy of this third force of a code of communication of looked-for behaviour.

It will be my theme that what I call Ear-stroking is a noble art, which has been developed in England to a pitch which may well be, and indeed is, the envy of some other countries. But also that it is an art which we must be careful not to overdo, lest it should prove incapable of respond-

¹ An address delivered before the Nationaløkonomisk Forening of Denmark on September 15th, 1955, and printed in the *Nationaløkonomisk Tidsskrift*, 1955, No 5-6, 1956. The substance of the address had already been delivered as the Earl Grey Memorial Lecture at King's College, in the University of Durham, on May 27th, 1955, and printed by the University.

ing to the excessive calls made upon it; so that there need be no cause for shame if we discover that in this connexion or that it would be wiser to revert a little towards the cruder methods of the carrot, or even – with due repetition of the formula that it hurts us more than it hurts him – of the stick.

We have in England two specially notable ear-strokers, the Bank of England and the Board of Trade. Indeed the Bank of England has good claims to be regarded as the champion ear-stroker of all time. Historians have told the story of the way in which, not without reluctance and backslidings, it came in the latter part of the nineteenth century to assume the ultimate responsibility for what happened in the markets for money and foreign exchange; and it is within the memory of the older among us how those somewhat indigestible morsels, the great joint-stock banking amalgamations, were brought fully within the orbit of its leadership. Long before 1939, working partly through the public semaphore of Bank Return and Bank Rate, but largely also through more private and intimate contacts, it had established a system of monetary control which worked at least as effectively as, and a good deal more flexibly than, others which were hedged about with legal regulations and powers. As you know, one of the central features of the whole system, the convention by which the joint-stock banks now keep continually in the form of cash or balance at the Bank of England an amount equal to 8 per cent of their deposit liabilities, *is* still a convention and not a legal rule.

There followed a period of war and crisis, of legal changes, of altered objectives, some would say of virtual abdication of monetary control, over which I must skip to resume the story at the rebirth of monetary policy in November 1951. And from this point, in order to avoid prying into ineffable mysteries of the relationship between the Treasury and the Bank of England, I had better speak vaguely of 'The Monetary Authorities'.

The story falls into four phases: a period of experimentation from November 1951 to the following March; a long phase of two and a half years of apparent stability and calm; a period of more intense activity beginning perhaps in the closing months of 1954 and reaching its climax with the rise in Bank Rate to $4\frac{1}{2}$ per cent in February last; and finally, in response to a new threat this summer to Britain's balance of payments, an intensified 'credit-squeeze' which is not yet two months old. It is not my intention to recount the story in all its technical detail but only to call attention to certain features of it which are of interest from the standpoint of my special theme.

The first phase was ushered in by a piece of ear-stroking which was admitted even by champions of that technique to be somewhat extreme. It was whispered into the ears of the astonished donkeys – in this case the joint-stock banks – that it was their manifest duty to contribute to the required tightening of monetary conditions by turning some £500 millions of their very short-term assets into securities of slightly higher yield indeed but of longer maturity. This action was required in order to enable the Authorities to make use of a convention which for some time had ceased to be relevant – a convention, namely, that the banks should always keep a sum equal to not less than roughly 30 per cent of their deposit liabilities in the form of very short-term assets (including that 8 per cent of cash). For it is only if this convention is working effectively that the Authorities can be sure that, if they try to check the growth of bank deposits by keeping the banks short of cash reserves, the banks will not strike back by turning some of these short-term assets into cash instead of dutifully restricting their long-term investments or their advances. Thus the exceptional action of the Authorities in putting pressure on the banks to lop off at one fell swoop their overgrown surplus of short-term assets could be defended on the ground that it was obviously of a cleaning-up or once-for-all character.

It is of interest from our point of view that while some observers felt that this action of the Authorities went a bit far and needed special justification, others thought that the principle might well have been pushed further. Why not, asked one of them, my clever young Cambridge colleague, Mr Johnson, save the Government some money by simply letting it be understood that 40 per cent instead of 30 per cent in cash and other short-term assets was now the done thing? The only answer I can suggest is one to which I shall several times have to recur, namely that if the standard of the done thing is set too far apart from what the enlightened self-interest of the persons concerned dictates, the done thing will not in the end be done.

During the long quiet phase of the New Monetary Policy between the spring of 1952 and the winter of 1954 sundry technical improvements were made in its working; but the situation remained dominated by an apparent determination to keep the rate at which the Government could float its Treasury Bills far below the resuscitated bank rate. The negative carrot of higher borrowing rates, that is to say, was applied in a certain measure to the general public, but not to the Government itself; nor to the bill-brokers who, under the English system, borrow from the banks and others in order to supply the Government with funds, though now and again one of them was given a tweak by the ear *pour encourager les autres* – a not very happy new application of the technique of Informal Communication of Wishes. It is not surprising that to some observers the whole of the New Monetary Policy began to look rather unserious. It almost seemed as if the Old Lady of Threadneedle Street, like the Delphic priestess of old, was herself not too clear about the meaning of the signals she was emitting. Did she remember that in the old days bank rate was one of a pair of instruments worked in intricate conjunction, the other member of the pair being direct operation on the cash reserves of

the banks, this in turn, to be fully effective, requiring that the negative carrot of high interest rates should on occasion be applied in full vigour to the dealers in bills?

It was not till the semi-crisis of sterling in February last that all these things came to pass; and when they *did* come to pass the results seemed for a time rather disappointing, as we shall see in a moment. Meanwhile it is of interest from our special point of view to note that they were accompanied by a measure of a wholly different character. This was the restoration of direct controls, both administrative and financial, on a particular class of credit transactions, namely those connected with the acquisition of goods by hire-purchase. This reversion to the use of the stick greatly shocked some of the enthusiasts for the restoration of the carrot, among whom in general I count myself. I am not altogether able to agree; there does not seem to me the same objection against singling out a whole class of transactions of this kind for special disciplinary treatment as there is against attempting to discriminate between individual industries or individual firms. In any case I think this is not a field in which the third method, the Informal Communication of Wishes, is likely to be very effective; to use a slang expression, there is not likely to be much change to be got out of the ears of the hire-purchase companies, great or small.

I said just now that the restoration of monetary policy in full vigour, with a $4\frac{1}{2}$ per cent bank rate and Treasury Bill and other short rates to match, proved somewhat disappointing as a check to inflation; and we now have to consider why. One reason may prove, I fear, to be rather a deep-seated one, even if policies are directed aright. As a result mainly of the distortion produced in their balance sheets by war finance, the banks' advances, which are of course the most lucrative of their assets, are even now only 30 to 35 per cent of their deposit liabilities, as against 55 per cent in the good old days of 1929; and it is natural

enough that when the banks are put under pressure they should seek rather to reduce their government securities, constituting say 35 per cent of their deposits as against 15 per cent in 1929. This of course has tended in the right direction, producing a rise in longer term interest rates which, after some wobbling, the Treasury has not tried to resist: but the disinflationary effect is less direct than that of a contraction of advances. But secondly, the 'credit-squeeze' has been operated against a background of huge existing government programmes of, in particular, house-building and electricity supply; large further projects of capital expenditure on transport, coal and atomic energy as well as educational, medical and other social purposes; enthusiastic adjurations to the business community to 'invest in prosperity'; and last but not least an actual remission of taxation in the April Budget. The result has been to create a high wind of monetary demand, making everything look profitable and nothing look risky, so that, as one critic¹ has put it, the candidates for a curtailment of bank loans have failed to select themselves automatically in the way in which they used to do in periods of credit restriction.

And, from my special point of view in this lecture, a further result, within the last two months, has been a recrudescence of ear-stroking on a spectacular scale. First it was the banks themselves, stroking the ears of their customers in a letter to *The Times* newspaper, and almost imploring them not to be unkind and come bothering for loans. Then it was the Chancellor, stroking – one might almost say cuffing – the ears of the banks and telling them it was their duty to effect a 'positive and significant' reduction in their advances over the next few months. In response to this peremptory request, the banks, it is believed, have got together and agreed on the principles of a reduction of about 10 per cent by the end of the year. As the same critic whom I quoted just now has put it, they

¹ *The Banker*, September 1955, p. 154.

have had to consent to act as planners for a Government which regards planning as impossible.

Well, for all I know, things may have come to a pass when direct action of this kind was inevitable. But the lesson to be learnt, I think, is not that the revival of bank-rate policy has been a mistake, nor that it has been pressed too far, but first that its full application was developed too slowly, and secondly that it has had to be used in an environment which other branches of government policy have rendered resistant to its effective operation.

I must now say something about another very experienced ear-stroker, the Board of Trade, which has practised this art in numerous connexions. One of these, the geographical distribution of industry, might be thought at first sight peculiarly suitable for its application. For it is often said that there are a number of industries which are 'foot-loose' in the sense that there is no strong economic reason for their being conducted in one locality rather than another, the decision often being a matter of chance or fashion or – a slightly more economic factor – the preference of the entrepreneur's wife for metropolitan society. And if that be true, then here is a case where, if the Government has a policy to put across, the arts of explication and persuasion should be employed to the full to avoid unnecessary wastage of carrots or bruising with sticks. And employed these arts undoubtedly have been, in the interests of guiding industrial enterprise to certain selected parts of the country, known as Development Areas, in which unemployment had been specially heavy before the war – the north-east coast of England, South Wales, the Glasgow region and so forth. Yet it seems doubtful if the policy would have made much headway if it had not been buttressed, under the Distribution of Industry Act of 1945, with pretty liberal helpings of statutory carrot. For a time, too, the Board of Trade found ready to its hand a heaven-sent statutory stick, with which the Act of 1945 had omitted to provide it; this was the

general power of withholding building licences wielded by its friend the Ministry of Works. It is outside my purpose to debate at length the merits of this policy of attempting to steer the location of industry; my point is simply that it is a matter in which Persuasion unaided is not likely to be enough, because it seems that in most cases a definite increase in direct production costs is involved, which Society, if it thinks the objective worth while, must be prepared to meet.

Another prominent use by the Board of Trade of the art under study has been in the stimulation and direction of exports – the jollyng-along of industrialists, by what I once ventured to describe as ‘encouragements which are not quite promises, frowns which are not quite prohibitions, understandings which are not quite agreements’ to sell their wares abroad rather than at home, and in this region of Abroad rather than that. I am not for a moment saying that in the difficult exchange situation which confronted us after the war this could have been dispensed with. I certainly would not maintain that sermonizing has played no part in assisting some British industries – motor cars and bicycles spring to the mind – to realize that there is only limited truth in the old belief that the cushion of a large home market is necessary in order to develop a profitable export trade. But I think there was a period when some breath and temper expended in these proceedings could have been saved if the nettle of currency alignment and firm domestic control had been earlier grasped; and that even now the objective should be to work back towards a situation in which the distribution of productive effort between making for home and making for foreign markets can safely be left to be determined by the relative size of carrot-bundles obtainable.

As regards the selection of export markets, again, I am not among those who have denied the existence, for Britain and other countries, of a specific ‘dollar problem’, and we have had some nasty reminders in the last few

weeks from the American Administration of the obstacles in the way of its solution. But how difficult in detail is the administration of a selective export policy! Is not an export activity which brings a big reduction of sterling balances in London better than one which brings only a small addition to dollar reserves, and if so what does 'big' mean and what 'small'? Is not the export to Australia of something which the Australians would otherwise indubitably buy in the United States just as good as an export to the United States? How blessed when the time comes – I am not pretending it has come yet – when such conundrums need not be asked, and the selection of markets can be left to ordeal by carrot!

In quite recent years the most spectacular instances of reliance by the Board of Trade on the method of Communication of Wishes are perhaps those which have occurred in connexion with the Monopolies and Restrictive Practices Acts of 1948 and 1953. Under these Acts, if the Monopolies Commission, an independent body, reports that certain practices followed by an industry are contrary to the public interest, the appropriate Minister may make an Order declaring these practices to be unlawful and requiring agreements which embody them to be brought to an end. Yet only in one case, and that the earliest in time, out of the nine which have so far arisen has such an Order been made. In all the other cases the Board – or where appropriate some other department – has relied on the technique of discussing the matters at issue with the leaders of the industry concerned, and obtaining from them assurances that the desired change will be brought about.

There is evidently something very attractive about this idea of voluntary amendment of ways in accordance with the will of the people as expressed by an impartial and respected body, and there is no reason to suppose that these assurances of good behaviour have not been given in good faith. Yet I do not think it is unduly cynical to

doubt whether to rely permanently on the operation of an 'honour system' over such a large, complicated and controversial field is not to put more on human nature than it is fitted to bear. 'My attention,' said the President of the Board, when these matters were debated some six months ago, 'has not been called to widespread breaches of undertakings which have been given.' One need not, I think, be a very truculent person to feel that that is not quite good enough. And now, following a general report by the Monopolies Commission on the practices described as 'exclusive dealing' and 'collective boycott', the Government has announced its intention to legislate on the following lines. Not only these but a number of other questionable practices are to be in turn called up for registration, and, subject to appeals by the trade associations which practice them – appeals which will no doubt be numerous and closely argued – are to be definitely banned. The whole subject is exceedingly difficult and complicated and it is too early to predict how the programme will work out. Enough to note that in this field there is projected, I think legitimately and wisely, a definite extension of the territory of the Stick at the expense of that of the Stroked Ear, though the stick apparently is to be of the merciful variety which is cut out of the hedge of the civil and not the criminal law.

None of these matters which I have so rapidly passed in review – the machinery of monetary control, the local distribution of industry, the destination of its products, the pricing activities of trade associations – is unimportant. But transcending all of them in general interest is the broad problem of the distribution of the national product between the several parties who co-operate to produce it, and more particularly the problem of the due magnitude of those two constituents of the national income on which emotional interest is chiefly concentrated – the wage-bill and the flow of distributed dividends. Can our society be content to leave these things to the play of market forces,

operating, in appropriate cases, for bargaining purposes through collective organizations? Or should it take a leaf out of the book of its earlier history, and assign a far more important role in these matters than it does at present to written law? Or, if that seems a retrograde step, is there anything to be looked for from a more intensive use than would have seemed possible fifty or a hundred years ago of what I have called the Third Force – the force of persuasion and convention directed to averting provocative action and damping down inordinate claims?

Of these two selected streams, wages and dividends, let us look first at the smaller. No one doubts that the powers of persons organized into joint stock companies to carry on business and earn profits must be exercised within an elaborate framework of written company law; the question is whether their rights to distribute these profits among themselves should be limited either by legal action or by moral pressure. Since in most cases these persons have bound themselves by their articles of association not to declare higher rates of dividend than those recommended by their elected directors, the question resolves itself in practice into whether these directors shall be subjected either to legal or to moral pressure in this matter of the disposal of company profits. If the pressure is to be moral, its exercise can hardly, in a matter of such importance involving so many individuals, be entrusted to any subordinate organ of state; it must be exercised publicly by the Government of the day, as it was in England for some years after February 1948, during which period directors were under 'request' from the Chancellor of the Exchequer not in any year, unless in the most exceptional circumstances, to declare dividends higher than in the previous year.

The arguments against adopting such a course as a normal procedure seem to be enormously strong. There seems little reason to think that normally the company director needs outside assistance in keeping the rapacity

of his shareholders sufficiently in check to enable him to make due provision on their behalf for the expansion of their company. There is even reason in some cases to suspect the opposite – namely that *vis inertiae* and considerations of ambition or prestige will lead to sums of money being ‘ploughed back into the business’ which would have been better paid out in the expectation that, though some of them may be spent in riotous living, most of them will find their way into financing new and promising developments. If to the ear-stroking normally practised by directors on their shareholders there is to be added a further and not over-gentle official stroking of the ears of the directors themselves, there seems a real risk that one of the results will be a progressive ossification of the market for investable funds and a progressive distortion of the structure of the country’s equipment of material capital. I am inclined to think that if this is what a democratic electorate wants, it had better have the courage to get it by legislation than abuse the method of moral suasion for the purpose; but I do not despair of its being brought to realize that it really wants no such thing.

It is true that in quite recent years there has been a special influence which might well have tempted directors to over-distribution. This is the inadequacy of statutory depreciation allowances, in a period of rapidly rising prices, to cover anything like the true cost of replacement of fixed capital assets, and the consequent emergence as nominal ‘profits’, subject to heavy taxation as such, of sums which are really in the nature of current costs. In general, directors have manfully stood up to this situation by allocating large slices of these paper ‘profits’ to reserve; but in trades, notably the shipping trade, in which the situation is particularly acute, they have not always felt able to stand up to it completely. Thus the Chairman of the Cunard Company, in his spirited reply to the pressure for increased dividends exercised by a vociferous (and apparently peculiarly inaccurate) shareholder, has recently

claimed or confessed – whichever way you like to put it – that, while the cost of shipbuilding is four times what it was before the war, he is only making provision for the replacement of his fleet on the basis of a doubled cost, that being ‘the utmost the trade of these days will permit’.

In such circumstances it is perhaps arguable that the Cunard shareholders should receive no dividends at all, since there are no true profits out of which a dividend can be paid; but a society which is permitting its government to take away half these imaginary profits in taxation is scarcely in a strong position for arguing on these lines. Furthermore it can perhaps be argued that if, in such circumstances, the shareholders are not economically or morally entitled to a dividend, they *would be* economically and morally entitled to demand the closure of what is *prima facie* an unprofitable enterprise, and the return of what can be salvaged of their money capital for reinvestment in some more profitable, and therefore more economically justifiable, direction. The whole situation, that is to say, in these trades, while if there is no further inflation it may right itself in time, is for the present rather deeply diseased and awry. It is hard to believe that the right solution is for all the liner companies in the world (and a good many other businesses as well) to go into liquidation. But if we resist this conclusion, I think we should also be slow to admit that this abnormal situation furnishes a sufficient reason for abandoning the normal rule that dividend policy is a matter best left by society to directors, acting within the framework of a strict company law under the eyes of bodies of shareholders who may fairly be exhorted in general terms to be neither sluggish nor predatory but should not be subjected to more specific acts of official chivvying or cajolery.

I have left to the last the most important question of all. What place is there for my Third Force in controlling the size of the biggest element of the money national income

— that national wage-bill¹ which in the United Kingdom by 1954 had risen by nine-tenths since 1946 and more than trebled since 1938, the money figures representing increases in real terms of one-quarter and nearly two-fifths respectively? This is a vast subject, and if I am to say anything sensible about it in ten minutes I must be allowed to take certain things for granted. One is that over a certain range of industries a floor will continue to be put under wages with the aid of the sanctions of the criminal law. Another is that no attempt will in fact be made in peacetime to compel the submission of wage disputes to arbitration, or to enforce by law the awards of arbitration tribunals to which recourse has been voluntarily had. A third is that, in the event of disputes occurring, the skilled ear-stroking ministrations of the indefatigable officials and outside parties who plod cheerfully along the corridors between closed roomfuls of obstinate disputants will continue to be readily available, and will often be successful, so far at any rate as a face-saving agreement which appears to give something to everybody is a criterion of success.

Assuming the maintenance of the present framework in these respects, it is nevertheless arguable that something more should be attempted. It has for instance been argued in an interesting pamphlet published by the Fabian Society² that the Government of the day should formulate far more explicitly than it has ever hitherto done the wages policy which it believes that negotiating bodies should pursue, and even that, not content with issuing pronouncements of this kind, it should set up some kind of National Wages Board empowered to 'supervise' all collective agreements arrived at, with a view to seeing that they conform to the policy thus expounded, and authorized also itself to 'initiate enquiries with a view to proposing neces-

¹ As measured by the item 'Wages' in the official Blue Book, Table 2. The corresponding increases in real terms of the total of interest and dividends distributed by companies and public corporations were one-tenth since 1946 and *minus* more than a quarter since 1938.

² *A Policy for Wages*, by Allan Flanders (July 1950).

sary reforms of existing wage structures'. The General Council of the Trades Union Congress, so this writer argues, cannot be expected to evolve into a truly federal organ, itself initiating and conducting a unified wage policy; but it *could* be expected to participate in the formulation of such a policy by the Government, and to acquiesce in the application of the policy by the proposed National Wages Board. And, says the author, 'the course of industrial relations in this country does suggest that [the Board's] moral authority might well be adequate to fulfil its purposes'.

Such a result, if it could be achieved, would indeed be a proud feather in the cap of the Third Force in Economic Affairs. But to most people, I think, it seems unlikely that it *will* be achieved, or that either Government or General Council will move far in this direction beyond those general exhortations towards moderation in wage demands which have been sprinkled fairly liberally over the last few years. We must not, indeed, unduly belittle the part played by these exhortations. There does seem reason to think that the White Paper on Personal Incomes, Costs and Prices, issued in February 1948, and the very vigorous manifesto issued by the General Council after the devaluation of sterling in 1949, did something to check for a time the pace of the wage advance. On the other hand, the advance was no more than delayed, and by the end of 1950 was again in full swing; and according to one expert¹ at no time did the awards of the National Arbitration Tribunal exhibit any direct effect of the prescriptions of the White Paper.

I think therefore there is some wishful thinking among those who pin their faith to what has been called Organized Voluntarism² for the solution of the problem of the wage level in a full employment society. But so there is

¹ Professor E. H. Phelps Brown, *Lloyds Bank Review*, February 1952, p. 25.

² 'It sounds', said a highly placed Board of Trade official, 'like an occupational disease of church organists.'

also, in my opinion, among those who reject it in high confidence that that problem is well on its way to solution without its aid. Among these, apparently, is the expert whom I have just quoted, Professor Phelps Brown. 'There is no presumption from our general knowledge of collective bargaining,' he wrote in 1952,¹ 'that low unemployment of itself gives the unions superior bargaining power. . . . The idea of full employment must not be identified with the inflationary conditions of recent years.' I wonder; I cannot help thinking that another expert, my Cambridge colleague Mr Stanley Dennison, writing in the same journal two years earlier,² had struck a more realistic note. 'The need for a "wages policy" arises because of the determination to keep unemployment down to a minimum which is lower than ever before experienced for any length of time except during war. If this is put as the first objective of policy, to which all other aims must in some measure be subordinated, then it would seem impossible to formulate a satisfactory policy for wages which will at one and the same time maintain stability and also allow that flexibility which is the mechanism of economic change.' 'It may be,' he concludes, 'that we shall be driven . . . to make the choice between maximum employment with precarious stability and a good deal of rigidity on the one hand, and a less ambitious objective of employment with more assured stability and some flexibility on the other.'

Since these words were written, the unemployment percentage in Great Britain, after rising from one and a half to just over two, has fallen to below one. The number of unfilled vacancies registered at the employment exchanges has risen to be well over twice the number of registered unemployed. The pressure for wage advances has gathered momentum, and though at the Trade Union Congress lately some extremist motions were satisfactorily defeated, some very large claims were still outstanding and there is

¹ Loc. cit., p. 22.

² *Lloyds Bank Review*, April 1950, pp. 35-7.

no present sign of their being withdrawn or modified. My own belief is that some revision of policy objectives on the lines suggested by Mr Dennison is overdue. It is not pleasant to recommend courses of action which will result in anybody's livelihood being rendered even a little less secure; but I do not think economists ought to be deterred from doing so by consciousness of the relative security of their own positions, still less by wholly unmerited taunts that what they want to restore is the distress and disorganization of the 1930s.

The British community has every reason to be grateful to those trade union leaders who, like the late Arthur Deakin, have exposed themselves to obloquy and risked their position and their old friendships by vigorous stroking of the ears of their fellow-members of the manual working class. It has less reason to be grateful to those intellectuals who, by belittling the role of monetary discipline and disparaging the old mechanism of the positive and negative carrot, have helped to create the conditions in which the preachers of moderation have such a hard row to hoe.

It seems to me that what society has the right to expect from the top leaders of trade unionism is a redoubling of those efforts in which some of them have evidently not been backward in the last few months to create more orderly conditions than at present everywhere prevail in the machinery for forging wage agreements, and to hammer in the importance of agreements once arrived at being loyally observed. It has not the right to place upon them the major responsibility for the content of those agreements. For, to quote Mr Dennison once more, 'the prevention of inflation is not the duty of trade unions but of government. If government wishes to retain free collective bargaining, together with other free institutions, then it must create the conditions in which that system can fulfil its proper functions without a continuous threat to stability and social order.'

Now let me try to sum up what I have been trying to say in this talk. Persuasiveness and persuadability are valuable things; but, like most valuable things, limited in supply. It is the duty of society to create a framework of monetary law and administration, and to operate a régime of incentives and disincentives, which will prevent these precious qualities of persuasiveness and persuadability from being wastefully squandered through being set tasks which it is outside their compass to perform.

ECONOMIC VERSE

(1) *The Marshall Plan*¹

We hereby pledge each European nation
By Re-deployment and by Integration,
By Customs Unions (innocent of Preference,
And so consistent with our terms of reference)
To swell each asset, prune each liability,
And thus attain to Global Viability.

Summoned from every country (except Spain),
Briton and Benelucifer and Dane,
Affluent Switzer and penurious Greek,
We swear with hand on heart (and tongue in cheek)
By 1950 shall the thing be done
—Or if not '50, well then '51.

So look benignly on your zealous scholars,
Dear Mr Marshall, and release the dollars.

¹ Suggested report for the Committee of European Experts which met in Paris to consider Mr Marshall's offer, 1947.

