ON SOME FALLACIES IN HAYEK'S CRITIQUE OF KEYNES.

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The recent revival of interest in the work of Professor F.A.Hayek has led to a not insubstantial amount of disagreement between Hayek, with his supporters (notably Mr. William Rees-Mogg, the editor of The Times), and economists of a Keynesian persuasion. However the fact that exchanges have been conducted almost wholly on the leader and letters pages of the Times has precluded a detailed theoretical appraisal of Hayek's work. Instead his critics have concentrated on trying to show that accelerations in the rate of inflation have had more to do with factors such as the OPEC oil price rise and the threshold clauses of the Heath incomes policy than the rate of growth of the money supply; see Godley, Kahn and Kaldor (1978) for example. By contrast, this paper attempts to see how well Hayek's theoretical foundations stand up to close scrutiny and thus hopes to reveal how sound is the logic behind his case for measures to bring about greater flexibility in wages and prices and the mobility of resources in general and for no attempts at macroeconomic demand management through expansionary fiscal or monetary policies.

The discussion is divided into four main sections. In the first part it is assumed that Keynes rather than Hayek is right about the cause of unemployment and shows that even if one believes what the latter has to say about the lack of money illusion in Trade Unions non-inflationary demand expansion policies are possible. The second section starts with the contention that if Hayek does not believe unemployment is due to a deficiency of aggregate demand then he must believe it is structural in nature. It is argued that while both kinds of unemployment are due to relative price maladjustments Hayek's remedies cannot cure Keynesian unemployment even though they may solve structural unemployment in 'certain circumstances'. Section three examines some of the 'other circumstances' and considers in greater depth the relationship between

structural and Keynesian unemployment. Finally there is a critique of Hayek's attempt to refute Keynes' theory of the determination of asset prices and the rate of interest.

I

Although he is often labelled a monetarist Hayek's theory of inflation differs from the orthodox view typified by Friedman (1975) since it assigns an important role to the activities of trade unions. Trade unions are assumed to bargain for a real wage and suffer zero money illusion in the long run. This means that even if individual unemployed workers are quite prepared to accept a cut in real wages in order to obtain employment (i.e. they are involuntarily unemployed in the sense of Keynes (1936, p.15) definition) any reflationary policy that has to involve a cut in real wages must be doomed to be wrecked in the long run by union attempts to maintain real wages. Both Hayek and Keynes appear to hold the conventional view of microeconomic behaviour and assume that prices adjust to clear product markets and that labour has a diminishing marginal productivity. Because of this a shift to a higher level of employment would necessarily involve a fall in the real wages of employed workers.* The notion of diminishing marginal productivity is difficult to reconcile with the well-known desire of firms with idle capacity to expand output so as to obtain the benefits of economies of scale and spread their overheads more, but one plausible interpretation of the concept is that suggested by Davidson (1978,pp.341-2) that the expansion of output involves the use of less productive workers and older vintages of machines that otherwise have lain idle. This interpretation contrasts with the neoclassical factor substitution approach to the derivation of diminishing marginal productivity but accords well with

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* Shortly after the appearence of the General Theory it was pointed out by Dunlop that the available evidence pointed to the reverse relationship. See Dunlop (1938) and Keynes' reply in the 1939 Economic Journal.

the 'Marshallian short period situation' that Joan Robinson (1969,p.582) says Keynes started from.

If markets clear and firms with surplus capacity choose not to use it then this must be becuase they find it does not add to their profits if they expand output. If, for simplicity, the case of a market for a homogeneous product is considered, then as long as there are at least two producers each company must face a horizontal demand curve where price is equal to marginal cost.** If firms prefer to keep some machines idle it must be becuase the marginal cost of the output produced on them is higher than the prevailing market price. In order to be persuaded to use the older vintage machines and hire some labour to man them the market price must rise relative to costs. An increase in demand engineered by a higher budget deficit or measures to increase the availability of credit would mean that the market not longer cleared at the original price and the consequent rise in price makes it viable to hire workers and bring older vintage machines back into use.

If money wages are unchanged then the real wages of employed workers must have been reduced by the jump in the price level. Industrial profits will have risen and formerly unemployed workers now contribute to output instead of consuming while being unproductive. Clearly a reflation does not have to involve a cut in real wages since it leads to an increase in total product which could be redistributed to ensure that there is no threat to the living standards of trade unionists. In the absence of any redistribution Hayek assumes that sooner or later the trade unions will take action to restore their real wages and if they are successful then unemployment will rise to its former level. Hence he argues that employment can only be increased as long as demand is expanded faster than the rate at which unions try to restore their real wages. This means that instead of there being a once and for all jump in the price level

** Anyone brought up on Joan Robinson's <u>Economics of Imperfect Competition</u> might be surprised that demand curves do not slope downwards in this state where there is a limited number of producers. They are referred to Loasby (1977) for an explanation.

prices have to continue to rise and to the extent that unions anticipate price increases when they bargain for their money wages demand will have to be expanded faster and faster to keep prices ahead of wages. Eventually 'Banana republic' inflation would force the abandonment of the policy or the currency.

If unemployment is due to a deficiency of aggregate demand and reflation leads to a fall in real wages then Keynesian policies must be doomed to failure if unions behave as Hayek argues they do; but a fall in real wages may usually be avoided. Firstly, as has already been argued, the increased real product could be redistributed during the period of money illusion so that real wages remained constant, for example by increased corporate taxes and reduced income taxes. Secondly firms may use normal cost pricing (see Coutts,Godley and Nordhaus (1978) for the most recent and extensive research on this) and set prices according to normal costs at a normal level of capacity utilisation and not alter them when demand changes. Hence apart from any secondary effects on raw material prices or the costs of imported compnents if the exchange rate changes when demand is expanded, an increase in demand produces a quantity response (increased output and employment) and no wage or price response. If the reflating country is short of foreign exchange reserves and does not enjoy simultaneous autonomous export growth or its recovery causes a big increase in raw material prices in the world (most likely if several large countries reflate together) then real wages will be cut by the secondary effects of demand on normal costs and the prices of imports and the Hayekian mechanism apparently comes into operation once again.

Should Hayek be correct about the extent of real wage resistence and Keynes be right about the major cause of unemployment the unless a country has massive foreign exchange reserves and buffer stocks of raw materials it must face the difficult choice between persistent unemployment or hyperinflation unless something is done to reduce real wage resistence. Posner (1978a,p.47) writes of the real wage resistence theory:

> "In its strong form the doctrine asserts that wage fixers on both sides of industry know that real wages must grow by 2.7943 per cent, have a computor to hand and can predict to the last significant figure of the corresponding money wage increase required by any given small change in the exchange rate...Of course, if the economy is a very tautly designed 'critical system', then any shock, however small, can lead to disaster. Well, maybe we have been walking along the Harrod knife-edge for all these post war decades without really knowing it, but I find that hard to believe."

Import controls do not offer a way out of the real wage resistance problem in the short run since if it is decided to prevent any foreign exhange losses by auctioning a limited amount of foreign currency to importers there must be a reduction in imports of consumables if more machines and raw materials are to be imported. Thus even if world prices are not driven up by demand expansion, real wages of already employed workers are likely to be threatened by the higher prices of imported consumables if market clearing prices are charged by the importers. This is where Hayek's argument is at its strongest (if one ignores the imperfect real wage resistance under the 'social contract') but even here real wages need not suffer if the extra real product available to be redistributed is large enough, as is quite conceivable if the unemployed enjoy a high proportion of their regular employment consumption; their subsistence being regarded as overhead payments from the point of view of the economy as a whole. The problem of economic recovery being threatened by rising commodity prices coming up against real wage resistance is a thorny one but apart from increases caused by resource depletion, stability of commodity prices is more likely to occur if producers of raw materials are encouraged regularly to expand their output as in the 1960s by the prospect of continually growing markets. This point is discussed further in Kahn and Posner (1977).

To prevent a shortage of foreign exchange at the existing parity when the economy recovers on can use a somewhat pre-Keynesian policy, which need not involve any deficit financing, namely VAT-financed wage subsidies as suggested by Kaldor (1936). Wage subsidies lower industrial costs so that higher VAT rates do not cause higher prices for domestically produced goods. Exports are VAT exempted whereas

imports are not. Hence a country can engineer export-led growth because its exports can be sold more cheaply overseas while imports become less attractive at home. The latter feature threatens to upset the policy through real wage resistance but since a country does not want to be accused of exporting unemployment (which is what would be implied by a net increase in exports) the wage subsidies should be deficit financed in part so that while the relative prices of import and domestically produced goods sold at home changes the overall price level does not rise and the country enjoys reduced unemployment but no increase in its balance of payments surplus. A final point to be made is that if there is no real wage problem associated with the balance of payments position when recovery takes place then even if industrial costs have to fall relative to the prices received by producers for unemployment to fall, Keynesian policies can always succeed without a cut in real wages if the expansion in the budget deficit incorporates indirect tax cuts for workers or subsidies to firms.

The results of this discussion may now be summarised. Hayeks real wage resistance theory of the 'Keynesian legacy of inflation' stands or falls on a) whether or not there is one hundred per cent real wage resistance by trade unions; b) whether there there is diminishing marginal productivity of labour and market-clearing pricing behaviour; and, most importantly, c) whether, if a) and b) hold, it is possible to devise Keynesian reflationary policies that involve no cuts in the real wages of employed trade union members. If a) and b) hold and c) is not possible then there is no way out of unemployment due to a deficiency of demand via Keynesian policies which will not lead to hyperinflation if the corrective measures are persisted with. Furthermore, Hayek does not appear to see that even an autonomous increase in investment or consumption would fail to increase employment in the long run if a) and b) held - with rigid money wages (which Hayek argues against but Keynes regarded as vital) prices fall in depression providing a ratchet effect on real wages. One can dispute the empirical validity of a) and b)

but the present paper has shown that even if Hayek's implied assumptions are correct descriptions of real world behaviour they do not present an insuperable barrier to reflation provided policies are designed to increase employment without raising the price level.

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The discussion in Section 1 of how Keynesian unemployment could be solved by budget deficit policy measures without generating accelerating inflation would probably seem rather futile to Hayek because he disagrees with Keynes not only on how to cure unemployment but also on its cause. Hayek believes that unemployment is not due to a deficiency of aggregate demand but is structural in nature with the pattern of demand not matching the prevailing configuration of prices and costs. Because of this he he argues that it could be cured if barriers to the free movement of prices and factors in markets, particularly the labour market, were removed. This section examines both approaches to the origins of unemployment and the suitability of the alternative remedies suggested by Hayek and Keynes.

A concise statement of his thesis has been presented by Hayek in a recent pamphlet:

> "The true though untestable explanation of extensive unemployment ascribes it to a discrepancy between the distribution of labour (and other factors of production) between markets(and localities) and the distribution of demand among their products. The discrepancy is caused by a distortion of the system of relative prices and wages. And it can only be corrected by a change in these relations, that is, by the establishment in each sector of the economy of those prices at which supply will equal demand." (Hayek (1975),p.19)

With the free working or markets and a stable money Hayek argues that a full employment configuration of relative prices will be brought about without any need for government action, a view that is the complete opposite of the one argued by Keynes. Leijonhufvud (1968) has convincingly argued that Keynes' theory of unemployment also rests on a maladjustment of relative prices. Usually economists tend to write as though different kinds of relative price maladjustment were being discussed: Hayek's might be termed a horizontal misalignment between industries while the Keynesian difficulty is thought of in vertical terms - real wages

or the interest rate are too high for full employment. Leijonhufvud's work enables us to transpose the Keynesian price relation into Hayekian horizontal, sectoral terms by saying that it is the price of consumption goods in general which is out of line with the supply price of capital goods. In Leijonhufvud's exposition of Keynes the efforts of workers to lower their money wages cannot succeed in changing this relation even if prices are free to move so the authorities need to act on on the long end of the bond market to reduce the long rate of interest and thus raise the demand price of capital by making more investment schemes eligible.

To keep the analysis simple when showing how such different conclusions about the workings of the market mechanism were reached the possibility of a disequilibrium produced by technical progress is ignored and attention is confined to problems caused by an autonomous shift in preferences. Further to focus the discussion on the basic issues it is useful to distinguish two kinds of preference shifts which we shall label Hayekian and Keynesian. A Hayekian preference shift involves no decision to cut total expenditure but merely to buy, say, more furniture and fewer cars. In the General Theory Keynes confined his model to a static system of given preferences, techniques and an existing capital stock and was greatly attacked on this limitation and its implied rejection of more microeconomic causes of unemployment, not least by Hayek. However, the republication of his articles on 'How to avoid a slump' in Hutchison (1977) and the rediscovery of some of his lecture notes for 1932 (see Keynes (1977), pp 52-5) show that Keynes was concerned by structural questions even though they were never properly answered in his own work. In the General Theory itself the only preferences which are allowed to change are those associated with liquidity preference and as an example of a Keynesian preference shift we offer the decision not to buy a car today while leaving one's options open about the actual form of future expenditure to be made with the money not spent today. The case of a decision to postpone

the purchase of a car is deliberately given to offer a chance to make the point that there is a potential instability inherent in the demand for consumer durables - even though demand for the use of a car may be stable, because cars are usually not 'held to maturity' their replacement may be postponed in times of pessimism. For empirical studies of this 'liquidity preference' approach to demand theory see Smith (1975) and Katona (1977).

Hayek's approach implicitly assumes that there is a fairly perfect labour market to be revealed if union distortions and other inflexibilities and immobilities are removed, where there is a high substitutability between labour of various kinds, and where it is easy to redesign jobs to suit workers of various skills and possible for firms to train labour and internalise the benefits. As a surrogate for a perfect labour market the present discussion assumes that labour is homogeneous and earns a uniform wage rate; this does not affect the conclusions but merely simplifies the tale leading to them. While making this assumption one should warn against the approach of the 'New Economics' of the Kennedy Administration which took the view that one could apply blanket Keynesian policies as though no structural unemployment existed even if it really did. Killingsworth (1969) has pointed to the dangers of such policies from a Keynesian position just as Hayek has from the other standpoint and argues that the correct Keynesian stance, and that of Keynes himself, is that the structural component of unemployment must be attended to with microeconomic rather than blanket reflationary measures.

First consider the case of a 'Hayekian' shift in preferences. At the original set of prices and wages some markets would now face excess demands while others would be in excess supply. Non-malleable capital cannot instantly be transferred between sectors so if prices are allowed to change but money wages are fixed unemployment may occur. Price flexibility alone may permit a massive profit opportunity to be evident in the 'furniture' sector while the 'car' sector may have firm

closures and the lay-off of workers because the market-clearing price does not cover variable costs or bankruptcies occur because fixed money debt obligations cannot be met. Demand cannot in the short run lead to an expansion of capacity in the furniture sector and does not hold prices sufficiently high relative to costs to ensure previous levels of capacity utilisation and employment in the car sector. To prevent the emergence of structural unemployment there must be further price changes to divert the pattern of demand along the old lines. To make this possible we need to relax the condition of fixed money wages just as Hayek would wish. Wages will fall until the prices of cars have fallen sufficiently to make consumers want to purchase the original volume of cars which will require the employment of the otherwise structurally unemployed workers. Wages must be low enough so that entrepreneurs in the car industry obtain at least a normal return on additional expenditure (e.g. in wage advances, working capital and the upkeep of machinery) even if, when priducing the original volume of output at the new low price, they earn little or no return on their existing capital valued at replacement costs. If wages and prices reach such a position even bankrupt companies' plant would be worth operating in receivership so former employees of such companies could still get jobs making cars.

With flexibility in wages and prices, prices in the furniture sector will fall somewhat too but they will still be relatively higher than in the original situation. Wages in this sector will also have been driven down by competition in the labour market. Hence furniture producers will enjoy a super-normal profit margin and there will be a strong stimulus for firms to invest in this sector, the result of which is assumed by usual theories to drive the rate of return in a growth sector down to the normal rate. As capacity in the furniture sector expands the price of its output will fall and purchasing power will switch in favour of it away from cars and labour can be transferred from the marginal car plants (which can then be scrapped) to the new furniture producing plants

Were it not for some complications discussed below in section 111 Hayek's remedy for unemployment would on this argument be quite appropriate so long as unemployment was structural in nature and not due, at least in part, to insufficient aggregate demand. Not even a Keynesian would disagree on this issue. Where the Keynesian would disagreee with Hayek is on the possibility that much unemployment could be due to insufficient aggregate demand and the efficacy of Hayek's policy prescription if this was the case, so we now consider what happens when there is a 'Keynesian' shift in preferences.

Again taking prices and wages as fixed in the first instance the big difference between a 'Keynesian' and an 'Hayekian' preference shift is that in the former no excess demands are generated in the markets for producible goods while the decision to save more today clearly leads to excess supply in some goods markets. Since markets for goods to be delivered in future are largely absent and because, in any case, a decision not to have dinner today "does not necessitate a decision to have dinner or to buy a pair of boots a week hence or consume any specified thing at any specified date" (Keynes (1936),p.210) producers receive no signals that they should get ready to produce more of certain kinds of goods in the future. The consumers now demand to hold existing non-reproducible goods (money, land, old masters, etc.) instead of goods which can be newly supplied and require labour in their manufacture. If the consumers who decided not to buy cars now wished to hold their wealth in, say, cigarettes, Keynesian problems would not arise for there would still be a demand for a currently reproducible commodity. While the cigarettes might be held purely as a store of wealth with no intention of consumption rather as in the case of the German hyperinflation, the situation would effectively be just the same as in the example of the Hayekian shift in preferences discussed above. The increased demand for cigarettes might not be satisfied at the existing price configuration but this could be corrected by

sufficient price and wage flexibility.

In the case of a Keynesian shift in preferences the increased demand for non-reproducible goods <u>may</u> drive up their prices relative to their yields thus lowering their effective rates of return and making investment in reproducible goods manufacture more attractive. There is no reason why the lowering of the rate of interest (if it occurs) should be of sufficient magnitude to maintain aggregate demand or why the marginal efficiency of capital should be stable given the obvious fall in current consumption demand.***

If speculation prevents a sufficient fall in the rate of interest and/or the M.E.C. is not conducive to a big enough increase in investment to maintain aggregate demand then the introduction of the price and wage flexibility desired by Hayek does nothing to solve the Keynesian problem. Consider first just price flexibility. In the car markets there will be a definite tendency for prices to fall but there will be no tendency for prices to rise in other markets unless as a result of extra spending through the income effects enjoyed by those who still buy cars. Little reliance can be placed in these Hicksian income effects - cheaper cars enable car buyers to spend more on furniture but the then higher prices mean original furniture buyers have less to spend on other goods so the net result is likely to be that they cancel out. One kind of income effect cannot be ignored though - this is the lost expenditure of the unemployed car workers. Their lack of expenditure means that while car prices are falling there is nothing in the system to <u>pull up</u> the prices of other products and encourage employment in those industries. On the contrary, the second round effect will be to

*** P. Garegnani (1970) argues that the M.E.C. may not even be well-behaved so that while the possible schemes being evaluated by entrepreneurs do not change, revaluations of expected net returns at a lower rate of interest could leave eligible investment schemes which generate <u>less</u> investment than previously. This preverse result in the labour market can occur because of the peculiar behaviour of compund interest calculations which results in 'reswitching' or 'capital reversing' in the capital market.

cause other prices to fall and generate even more unemployment. Eventually the system will converge via the multiplier process to a situation where prices in general are lower and where car prices are possibly relatively lower as well as lower in money terms.

Relaxing the assumption of money wage inflexibility can do nothing to improve matters and may even make them worse. To restore full employment somehow the price of consumption goods must be pulled up relative to money wages (to make additional output profitable) or relative to the supply price of capital goods (to make investment more attractive). If speculation limits the adjustments made by the rate of interest as the transactions demand for money falls the the relative supply prices of capital and consumption goods cannot be altered by changes in the time composition of the costs of their embodied inputs, so no increase in the demand for investment goods can be expected whatever happens to money values unless they eventually help bring about a fall in the rate of interest. The Keynesian view that the interest rate is determined mainly by monetary factors is to be contrasted with Hayek's Austrian approach to capital theory where real factors alone determine relative asset prices and falling wages are thought to lead to the necessary relative price change. If both consumption and capital goods prices are anchored to the same rate of interest falling money wages cannot lead to a neoclassical-type capital/labour substitution. Falling money wages merely lead to the collapse of the price level because money demand (dependent on money income) is falling and cannot support the price level. The only hope of bringing about a change in the real wage lies in the real balance effect, but, as is widely recognised, this only works under certian kinds of price expectation (clearly if you expect prices to fall further it pays to hold back expenditure even if the worth of your cash holdings is rising) and if changes in the distribution of wealth between people lending and borrowing 'inside' money do not lead to discontinuous behaviour patterns, due to say bankruptcies which adversely affect the wealth of both parties to a

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loan. (On this see Hahn in Hahn and Brechling (ed.): (1965)].

The essential differences between the two approaches to the problem should now be clear. Whereas in Hayek's case excess demands do exist to pull up some relative prices when other markets exhibit excess supply and falling prices, in Keynes' case no producible goods markets face excess demand while some face excess supply at the pre-unemployment wages and prices configuration. Introducing price and wage flexibility in Hayek enables prices and wages to change and allow continued employment in threatened industries while capacity is increased in other sectors. In Keynes' case one merely observes a collapse in money wages and prices as all relative prices try unsuccessfully to fall in terms of each other. As the price level collapses firms, even if they are able to maintain their sales in real terms (i.e. not the 'car' industry) will be liable to bankruptcy because of an inability to meet fixed money debt repayment obligations, a point particularly emphasised by Minsky (1975). Finally, even without the behavioural discontinuities introduced by bankruptcies, the flexibility Hayek desires would be associated with instability rather than an atmosphere conducive to reasoned business calculations:

> "...if competition between unemployed workers always led to a very great reduction of the money wage there would be a violent instability in the price level. Moreover there might be no position of stable equilibrium except in conditions consistent with full employment, since the wage unit might have to fall without limit until it reached a point where the effect of the abundance of money in terms of the wage unit on the rate of interest was sufficient to resotre a level of full employment. At no other point could there be a resting place." (Keynes (1936),p.253)

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Having shown that both structural unemployment (Hayek) and demand deficiency unemployment (Keynes) are possible and require different policy measures for their removal, we now turn our attention to a consideration of how the two kinds of unemployment might be related and how this complicates the policy debate. The discussion is divided into six sections, each of which concentrates on points largely neglected by both sides in the debate. The most important point is covered first:

1) If wage flexibility can solve structural unemployment but leads to violent instability if unemployment is due to a lack of aggregate demand one is left wondering how individual workers and trade unions acting in the labour market are supposed to know what is the nature of the unemployment they face. When labour is not homogeneous the presence of excess demand for some kinds of labour at the same time as a (not necessarily equal) excess supply in another segment of the labour market cannot be taken to indicate that all unemployment is structural and removable by measures to abolish wage inflexibilities and immobilities in the market for labour. A misunderstanding of the nature of any unemployment situation could have tragic results: Hayek's remedy applied to Keynesian unemployment could lead to a collapse of the price level. Simpliste Keynesian macroeconomics applied to structural unemployment might partially solve the relative price problem and make declining markets viable once more by driving up prices relative to wages (which, Hayek argues, will eventually be thwarted by union real wage resistance unless the government is prepared to allow accelerating inflation) but might equally well leak out of the system via the balance of payments.

In general, both kinds of unemployment are likely to be encountered at the same time; a point of which Keynes was fully aware:

> "It follows that the later stages of a recovery require a different technique. To remedy the condition of the distressed areas, ad hoc measures are necessary. The Jarrow marchers were, so to speak, theoretically correct." (Keynes: How to Avoid a Slump, The Times 12/1/1937, reprinted in Hutchison (1977).)

The many recent writings on regional policy of Moore and Rhodes could be described as a modern version of what Keynes had in mind. A quick (and necessarily very crude) sketch of their approach will illustrate this - tax financed investment grants with Industrial Development Certificates are used to divert investment away from prosperous areas. These areas then have higher unemployment than they otherwise would have had, so taxes can be reduced to their original levels to increase aggregate demand - the policy is a costless way of reducing the average level of unemployment but without the boost in aggregate demand unemployment would merely

be redistributed.

It is only recently that economists have rediscovered the idea that macro and micro meas res will often have to be combined; supply management or individual market demand management needing to be treated on a par with macro demand management. (See Woodward (1977) and Grant (1977) for possible ways of doing this in a mixed economy.) The so-called failure of Keynesian demand management probably stems from the long neglect of this notion. Demand management has failed not because the underlying theory was incorrect but because supply side inelasticities caused it to founder on a tide of increased imports even with a competitive exchange rate.

2) If one thinks that structural unemployment can only be a serious problem if there are rigidities and immobilities in the labour market it is but a short step to the argument that frictions and market imperfections are in general bad things; if part of the structural problem is due to insufficient capacity in particular industries then barriers to investment there might be removed and reduce the reliance on the labour market as the means of bringing about full employment in the near future. There is, as Richardson (1960) argued, a mistaken belief that economic systems work in spite of imperfections rather than because of them. The problem economists neglect is that the profitability of any one firm's investment scheme depends on the amount of competitive and complementary investment undertaken by other firms. A widespread knowledge of profit opportunities and a similar ability to act upon that knowledge would lay open the prospect of excessive entry into growing markets and gross disappointment of expectations. The parallels with Keynes' views on allowing a flexible labour market to seek an unknown (and probably unattainable) equilibrium wage are only too obvious - in an uncertain world flexibility may not hasten the attainment of equilibrium and may lead instead down a road to nowhere in particular which is strewn with bankruptcies.

3) If firms that face a depressed market look successfully for ways of cutting costs as wages adjust downwards less than instantaneously there may then occur the added complication of 'Marxian' unemployment, i.e. not enough machines for the whole workforce. This cannot be solved by falling wages since once a more efficient way of producing the declining product has been found (e.g. improved scheduling or reduced manning levels) there is effectively a technical shortage of machines on which to employ that sector's original workforce while capacity is being expanded in the growth sectors. This problem, which is excluded by the profit maximisation assumption that firms are always doing the best thing and operate with zero X-inefficiency, appears to imply no equilibrium whatsoever in the labour market unless prices rise so much relative to wage costs in growth sectors that it is worth practicing a higher division of labour than is usual on the existing capacity. The latter kind of policy, used in Russia in the 1930s on its imported tractor plants does not imply over-manning but instead that current relative prices are not the same as those under which the machine is (or was) intended to operate in the long run.

4) So far attention has concentrated on problems of structural change due to 'Hayekian' changes in the preferences of the community but often a more important source of change is the appearance of new final products or methods of production. The inclusion of these sources of change does not affect the arguments already advanced but makes a further point worthy of mention. In the exposition of Hayek's case in Section 11 demand could always be switched back to the threatened sector to maintain employment while capacity was being expanded elsewhere by a sufficient lowering of its price and costs relative to the newly favoured ones. When the latter are wholly new vintages of a commodity it is possible in particular cases that wage flexibility cannot clear the labour market. One special example is where the new vintage is both labour and capital saving and we take an instance of this from Posner (1978b) concerning new vintages of telephone exchange switchgear,

mod fying it to make it slightly more extreme.

In the present U.K. situation there is the added complication that there is excess telphone call switching capacity at home on top of the problem of what to do with the factories producing the outdated 'Strowger' equipment now that the vastly superior 'TXE4' vintage is offered by other factories. Surplus capacity in the TXE4 factories could be used by bringing forward modernisation schemes to replace the Strowger vintage though with given money wages the Post Office would only do a limited amount of this in order to obtain its required rate of return on investment. Flexible wages could lead to enough orders to occupy the TXE4 factories but would then pose the problem of more redundancies among Post Office workers in the future. The is no way out for the Strowger-producing factories no matter what money wages no matter what money wage offers were made by the workers - the shadow wages of employees would have to be set well below zero to make it worthwhile for the Post Office to change its policy. As for exports in competition with TXE4 offered by Swedish producers there would be no effective devaluation or money wage reduction that could persuade third parties to order British telephone exchanges if the labour required by them to operate the British vintage there costs more than the combined cost of labour and capital for a similar switching capacity provided by the Swedish model.

This is a paradoxically Keynesian form of structural unemployment which has resulted in the telephone equipment industry. The G.P.O. has cut investment because it has 20% above normal excess capacity already and even without the excess capacity the price elasticity of demand is so low that now amount of cost reduction would favour expansion of capacity using either vintage. Once there is sufficient TXE4 capacity to cover growth due to income elasticity of demand and depreciation of Strowger exchanges there is no possibility of maintaining employment in the Strowger-producing factories; whatever happens to wages there it would never pay to revamp old Strowger exchanges with new ones of a similar kind. Since TXE4 as well as requiring less operating workers

only has half the labour input during manufacture employment is bound to fall even if the TXE2 factories are fully occupied. Technological progress gives no excuse to maintain investment at the previous level in the telphone industry so unless there is an investment-promoting invention creating excess demand elsewhere aggregate demand must fall, and fall by a multiple amount if ex ante savings intentions are unchanged. To correct this sort of structural problem (and probably the forthcoming one due to microprocessors) there has to be a stimulus to the expansion of capacity in non-telephone sectors provided by reflation. However, any economy reflating its way out of unemployment will, as Hicks (1974) has emphasised, need stocks of foreign exchange and/or raw materials, inventories and particular grades of workers if its recovery is not to be thwarted by a balance of payments crisis before the new capacity necessary to employ the displaced workers comes on stream. The slower the supply side responses to the demand incentives the larger these stocks will have to be. Looking at the approaching 'silicon chip revolution' it would appear that the countries best equipped to weather the storm are those that have been particularly successful in the past, endowed with dynamic entrepreneurs and healthy balance of payments positions. Hopefully, if they try to solve the structural unemployment by reflation it will for a time help the recovery of countries like the U.K. by providing them with a burst of export-led growth.

5) The telephones example hints that unanticipated structural change may be associated with a failure of effective demand. It seems that this association is not confined to the situation where technological improvements lead to a fall in employment that swings in relative prices cannot correct. In a simple case of the redistribution of demand due to a shift in preferences there is a clear investment disincentive in the threatened sectors, which may be finding it hard to meet debts already incurred as well as seeing no prospect for expanding sales. Lost investment demand in these sectors may not be offset by increased investment in the growth sectors for a number of reasons.

firstly there may be physical bottlenecks in the specialised machine tools sector which lead to queuing and less current expenditure.**** If the queue is eliminated by higher prices this does nothing directly to increase the employment of other workers in the capital goods industry who would normally be making machines for the now declining sectors. One way or the other there is a shift towards profits in high demand sectors which may lead to a reduction in the propensity to consume via higher company saving in these sectors or distributed earnings being received by wealthy shareholders. To the extent that the declining sectors' shares do not occupy the same portfolios as those of the growth sectors' the shareholders who suffer losses will be abstaining from consumption to restore their liquidity positions. Wage flexibility does not necessarily solve the problem - while it may permit the survival of factories in threatened industries it appear to lead to a bigger share of profits than otherwise and we cannot say whether the reduction in business failure offsets the scope for a higher propensity to save brought about by the redistribution of income.

Secondly, firms which wish to invest in growth sectors in the future may refrain from doing so at present because of their current liquidity positions, imperfections in the capital market which limit their access to further funds and Penrose (1959) style managerial difficulties. An excellent example of the last problem is I.C.I. in the mid 1960s which had to slow down its investment schemes after

**** In a sense this is exactly the same as Keynesian unemployment caused by too high a rate of return on non-reproducible goods. Unemployment there occurs because the goods desired, whose return when they are held as wealth 'rules the roost', cannot be produced and their high return makes unattractive the production of goods which can be made but offer a lower rate of return. The physical constraint in the present case makes the desired capital goods partially non-reproducible and their high expected yield when they are to become available induces the holding of other non-reproducibles (money) instead of the carring out of investment in less profitable sectors. A similar point is made in the discussion of Turvey's paper on Chapter 17 of the General Theory in Hahn and Brechling (ed.):(1965). The question of what is mean by the 'less profitable sectors' is an interesting one - does everyone aware of the high profits of the growth sector want to enter and cease investment elsewhere, even if 'normal' profit opportunities are available? Orthodox theory is very weak in this area; see Richardson (1956) for a full discussion.

discovering the pitfalls of trying to do too much too quickly. Turner (1969) notes that at the height of its investment spree it was planning to invest £4m. a week while lacking experience of co-ordinating such rapid growth and was simultaneously trying to prove a new technology.

Thirdly, if firms in the sector are limited in the amount of investment they can undertake in any period but outside firms with suitable skills are not, entry by them need not occur on a sufficient scale through ignorance of the profit opportunity. As Ansoff (1965) has argued, tranactions costs prevent firms from looking at all possible investment opportunities so somehow they have to limit their agendas through the use of a search strategy with the emphasis on the scope for synergy. Limiting their search in this way may mean that they miss opportunities in particular market segments because their agendas are either too narrow or involve search for a kind of synergy that leads them to look elsewhere (e.g. a production based synergy instead of a marketing based one). While a company confined to a declining market will be in a weak position with regard to invading new markets a multiproduct organization may fail to do so even if it could afford to enter because its managerial time is occupied trying to save any viable parts of its declining section. Joscow cites some recent unpublished work by R. Radner who views the manager as a 'fire fighter' who "may be relatively impervious to changes in particular economic circumstances if the effects are not large enough to reach the top of the manager's list....larger fires will be fought first". (Joscow (1975),p.276) Such managerial behaviour may well be the cause of the failure previously to spot the collapse of the market - boardroom power struggles may direct attention from the less important 'fire' of a market which is in gradual decline. When the declining market reaches the top of the managers list there is no necessary reason for his search for a solution to lead him to the small 'fire' of a profit opportunity in another sector - a drowning man is rarely calm enough to listen to swimming instructions even when they are shouted to him.

6) As a subsiduary point it is worth noting in this context the distinction between the neoclassical studies of economic growth such as that of Denison (1968), which argue that growth is resource constrained and that factors becoming available will automatically be used, and the Keynesian approach which argues that growth is demand induced and that investment activity by firms <u>generates</u> the necessary capital resources and finance for them. The neoclassical approach requires a mechanism for ensuring that resources are used and growth thus generated. Rowthorn (1975) has argued that technical progress and productivity improvements may lead to increased output via their effect on demand because "a faster than average growth of productivity tends to be associated with falling relative costs and thereby with falling relative price, causing a shift in demand towards the commodity in question". (Rowthorn(1975),p.898) However unless the productivity advance depends on a <u>prior</u> investment to <u>embody</u> it (which will add to aggregate demand) the fall in relative prices of one kind of commodity will lead to reduced demand for other commodities and no net investment incentive to use the endogenously increasing factor supplies. The similarity between this problem and the fallacy exposed by Keynes (that a wage cut while good for one firm could not help the whole economy) should be only to obvious.

The conclusion to be drawn from the arguments of this section is that there is no reason to believe that structural unemployment can always be divorced from unemployment due to a failure of effective demand and hence that Hayek's policy prescription is not only inadequate but possible also dangerous. It is particularly likely that unanticipated structural change will lead to a failure of effective demand through supply side rigidities and distributional effects leading to a net decrease in investment (or in its rate of growth if one is thinking in steady states rather than static terms). If there is a simple shift in preferences and wages and prices adjust only gradually some of the unemploymer that results will certainly be structural and possibly avoidable along the lines of the Hayekian parable on pp.9-10 above

if prices and wages were perfectly flexible so long as there was no effective demand failure due to shifts in investment or savings propensities. However,some of the unemployment will have occurred as a second round feature consequent on the fall in expenditure by the truly structurally employed. That is, structural unemployment causes an effective demand failure and multiple contraction in the special sense proposed by Leijonhufvud (1968,pp.52-60) rather than that analysed by Keynes which involves shifts in savings and investment.***** Even Hayek would be unlikely to believe that perfect wage and price flexibility is possible, but if it is not then the two kinds of unemployment can never be separated, and this means that Hayek's remedy could have disasterous results even if applied to unemployment that was originally purely structural - highly but imperfectly flexible labour markets lay open the possibility of a collapse in the price level once the effective demand failure has started.

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The final area of disagreement between Keynesians and Hayek on the economics of unemployment concerns the theory of the determination of asset prices and the rate of interest. In his Pure Theory of Capital (1941) Hayek tries to use the case of the appearance of a profit opportunity and its effect on asset prices in the context of invention-induced structural change to refute Keynes' arguments. In the process he reveal a gross lack of understanding of Keynes' theory. This section attempts to sort out the confusion with the aid of Townshend's (1937) extension of Keynes' views on the importance of liquidity preference in the determination of bond prices to the theory of value in general.

Hayel argued that Keynes' work implied that scarcity was only important in price determination at the end of a boom and crept in via bottlenecks in particular sectors. Furthermore he claimed:

***** For a detailed discussion of these contrasting approaches to the multiplier and effective demand failures see the present author's forthcoming paper 'Another Multiplier? - A Reappraisal of the Clower-Leijonhufvud interpretation of Keynes.'

"It is even explicitly argued that, apart from the purely monetary factors which are suppose to be the sole determinants of the rate of interest, the prices of the majority of goods would be indeterminate.... In so far as assets in general are concerned the whole argument of the General Theory rest on the assumption that their yield is determined by real factors (i.e. that it is determined by the given prices of their products) and that their price can be determined only by capitalising this yield at a given rate of interest determined solely by monetary factors." (Hayek (1941),p.375)

Were this a correct interpretation of Keynesian value theory then it would indeed lead to the 'contradictory conclusions' suggested by Hayek. Suppose for example that an invention brings about scope for structural change. How does a profit opportunity appear and how are normal profits restored? If the inventor starts production on a modest scale clearly the successful launching of the product should affect the value of his company's assets, but Hayek takes this to the extreme:

"If the prices of factors were directly dependent on the given rate of interest, no increase in profits could appear and no expansion of investment would take place since prices would be automatically market to make the rate of profit equal to the given rate of interest." (Hayek (1941),p.376)

Hayek's absurd result arises because of a failure to distinguish between current and replacement values of assets and an over-simplified use of Keynes' theory of interest rate and asset price determination which is set out in chapter 17 of the General Theory in a way which precludes such a result. Suppose all other prices are given. Then the return to holding an asset has three components: the yield produced through using the asset in production of for the supply of consumption services; the carrying cost of holding or using the asset; and finally what Keynes called it liquidity premium: "The amount (measured in terms of itself) which they are willing to pay for the potential convenience or security given by (the) power of disposal (exclusive of the yield or carring cost attaching to the asset)." (Keynes (1936),p.226)
Taking other prices as given the money value of the yield of an asset may be calculated by adding these components and hence,using the return to holding money (which consists purely of liquidity premium) as the rate of interest which 'rules the roost', a current valuation for the asset is found at which its effective yield equals the return on

money ******, for otherwise there would be an incentive to shift asset holdings until effective rates of return were equal. In Keynes' own exposition he puts things in terms of own rates of interest. This is a conceptually tricky way of doing things when an asset such as a machine produces an output which is a wholly different good and its carrying cost is also not in the same form. Agents may be able to work out the own rate in their minds using the asset as a numeraire but while overcoming the problem of relative values this leaves open the question of the determination of money prices. If agents look at the money prices of other assets when deciding whether to hold any particular asset (decisions which affect its money price and feed back on the other prices) there is a need to explain the price level on which all money prices hang. Unless all money prices are held there by their own bootstraps there must be at least one price which is conventionally fixed in money terms to which other prices are anchored. Townshend (1937) argued that the convention of roughly rigid money wages provides the necessary anchor for the price level and the velocity of circulation, particularly since in capitalist economies workers are not owned as slaves so labour carries no liquidity premium at all and psychological changes in liquidity premiums cannot affect its money value. When there is great uncertainty about the future level of money wage rates reasoned business calculations become impossible and the price level and the scale of activity become open to large fluctuations. Here is a second reason for arguing in favour of a reasonable degree of rigidity of money wages; somehow the price level needs an anchor <u>whether or not</u> there has been a failure of effective demand. (It is interesting to note that Quantity Theorists arguing about the effect of a <u>change</u> in the supply of money on the price level always assume an <u>existing</u> but unexplained price level at the start of their arguments.)

As long as goods are to some degree durable and their supplies

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****** Liquidity premium, the return on money, cannot be observed, of course, so one usually uses the opportunity cost of holding money instead of undated government stock as an approximation. The fact that portfolio composition decisions are all in the mind makes observation of Keynes' theory impossible.

take some time to expand expectations about their future relative price must affect decisions about holding them now. Hence the current prices of all goods not instantly perishable or producible are to a certain extent dependent on expectations. This is what is missing from Hayek's discussion of Keynesian price theory. In the case on the newly launched product the rise in the price of the company's assets is limited by the expectation of some new entry in future - if the cost of new machines to produce the commodity were less that the value of the existing ones calculated according to Hayek (i.e. without reference to the liquidity premium component of their yield which would probably be negative at the margin because of the expectation of new entry as well as the irregular market in secondhand machinery) then people would tend to order these machines and plan to enter the market, affecting also the value of the existing assets of the machine-producing companies. It is precisely the <u>expectation</u> of entry that introduces liquidity premium (probably negative) into the yield of the existing machines and limits their rise in price thus making the <u>apparent</u> difference in yields which attracts entry and reduces the actual yield in future. (Those who pay a high price for the existing machines lose out if they underestimate entry just as do people who buy government stock and wrongly believe the rate of interest is more likely to fall than rise.) At any point all assets must at the margin offer the same yield but only the current money return and carrying costs are observable; the liquidity premium component which is concerned with the future money return and future relative price of the asset is not observable because it exists only in the minds of traders, the balance of whose diverse opinions about its future worth determines its current value.

The conclusion of this section must be that Hayek's critique of Keynes' approach to price determination, which has been republished in a number of anti-Keynesian works (e.g. Hazlitt (1960)), is logically flawed because it fails to take into account the fact the liquidity premiums and expectations affect all prices. The failure of Hayek's

critique probably implies that his Austrian theory of capital is not as sound as he might have hoped, but this issue is best discussed in another paper.

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The aim of this paper has been to expose the major weaknesses in Hayek's critique of Keynes and in Hayek's own policy prescriptions. We have shown that if unemployment is indeed Keynesian in nature then corrective expansionary policies can be designed even if trade unions threaten to thwart conventional policies through real wage resistance. It was shown that Hayek's flexible price and wage policy prescription would only help solve unemployment that was purely structural and even then could not always work, while if applied to unemployment that was in part due to a failure of effective demand could have disasterous results. This was important since structural problems themselves are likely to be a cause of effective demand failure. Finally Hayek's critique of Keynes' theory of asset prices was shown to be defective because it neglected the role of expectations in the determination of all prices.

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