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# KEYNES, THE NEW KEYNESIANS, THE POST KEYNESIANS AND INVOLUNTARY UNEMPLOYMENT

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## INTRODUCTION

It is something of an irony that there is such disagreement over macroeconomic theory at present, given that economics sees itself as the most formal and rigorous of the social sciences and economists may be termed the "social science imperialists", to use Geoff Harcourt's (1982) apt description. Solow (1983) once remarked that members of other faculties view economics with some amazement. While there are disagreements in other disciplines, these are generally at the frontiers of research. In macroeconomics, there are presently disputes from the ground up. This was not always true. There was a consensus in the 1950s and the 1960s, when the neoclassical synthesis held sway, that while the *General Theory* was of great importance from a policy point of view, it added nothing of major theoretical significance in the understanding of unemployment. It was, *pace* Keynes, merely a special case of the Classical system (Leijonhufvud, 1968).[1] (This is not to gainsay that it provided a substantial stimulus to the development of national income accounting and aggregate analysis. Moreover, there were theoretical innovations in the shape of the consumption function, liquidity preference, etc.)

Yet by the early 1980s, macroeconomics was in a state of disarray or macroconfusion as Nordhaus put it. First came the challenge from the Monetarists and then from the New Classical

[1] Keynes used the term Classical for what is now generally termed neoclassical.

Economics. Keynesianism - where an "academic scribbler a few years back" seemed to have revolutionised economics - was dead. Lucas will not even recommend his students to bother to read the *General Theory.* As Alan Blinder (1988) noted: "By about 1980, it was hard to find an American academic macroeconomist under the age of 40 who professed to be a Keynesian, nearly all were committed new classical economists." There were, it is true a few who remained Post Keynesians, mainly in the UK and Continental Europe, but these were not mainstream, and not to be taken too seriously. Yet the last few years have seen a revival in Keynesian economics, primarily through the emergence of the New Keynesian Economics.

But there is a further irony. The neoclassical synthesis of the 1960s, which was due primarily to the work of Paul Samuelson (the so-called Aggregate Demand/Aggregate Supply ŠAD/ASĆ model) attributed "Keynesian unemployment" to money-wage rigidity, often criticised as being nothing more than an *ad hoc* assumption. The *General Theory,* far from being general, was simply a special case of the Classical theory. Yet, as many Post Keynesians repeatedly pointed out, Keynes did not assume the fixity of money wages as even a cursory glance at Chapter 19 of the *General Theory* would confirm. But their complaint was generally ignored.

The quantity-constrained models that arose out of the work of Clower (1965) and Leijonhufvud (1968) seemed, for a time, to be a rehabilitation of Keynes since the problem of the lack of effective demand returned to the centre of the stage. But again, it was argued that these models require price stickiness. The rationale of the subsequent New Keynesian Economics is to provide a satisfactory explanation of this stickiness in terms of optimising agents and, hence, to remove the charge of *ad hocery.* This is made explicit in two recent surveys of the New Keynesian Economics. Mankiw (1990) argues that Keynesian Economics is essentially a theory of market imperfections. "The market imperfection that recurs most frequently in Keynesian theories is the failure of wages and prices to adjust instantly to equilibrate supply and demand" (Mankiw, 1990, p.1654). Gordon (1990, p.1115) likewise defines the approach as "research within the Keynesian tradition that attempts to build the microeconomic foundations of wage and price stickiness."

Once more, the Post Keynesians claim that this is not Keynes. The argument that Keynes did not regard involuntary unemployment

as resulting from imperfections in the market mechanism has been carefully discussed, *inter alios*, by Milgate and Eatwell (1983). They term those who see the price mechanism in the long run leading to the establishment of full employment as the "market mechanism group". Those who accept the underlying model of the importance of the forces of supply and demand but rely on some form of market imperfections (such as sticky wages, prices or interest rates) to produce unemployment, Milgate and Eatwell call the "imperfectionists". They argue that the latter group hold an untenable position because the distinction between the two groups is only one of degree. The solution to the involuntary unemployment problem for the imperfectionists is simply to remove these imperfections: there is no need for general reflationary policies. However, a closer reading of Keynes suggests that there are underlying forces that lead to adjustment of the economy but do not lead automatically to equilibrium at full employment, even in the absence of market imperfections. The classic example of this is the adjustment process by which savings and investment are brought into equilibrium, but not necessarily at full employment. Milgate and Eatwell (1983, p.265) comment that "for here, although the theory of effective demand indicates that this self-adjusting process (i.e. the operation of the market mechanism as it effects employment) does not tend to produce those desirable outcomes that it was asserted to produce according to the orthodox demand-and supply characterisation of the market mechanism, it is not to frictions and rigidities (or 'obstacles' to the normal operation of the market mechanism) that Keynes appeals for his results." There are automatic forces leading to a determinate outcome, but the failure of this to be necessarily at full employment is not due to the market imperfections. This is, of course, what the New Keynesian Economics implicitly disputes.

The elegant critique by Paul Davidson (1992) argues, *inter alia*, that by concentrating on supply side failures, the New Keynesian Economics completely ignores two important Keynesian aspects. First, there is no independent role for the lack of effective demand in explaining unemployment; and, secondly Keynes himself explicitly ruled out money wage and price inflexibility as the *cause* of involuntary unemployment.

Mankiw (1994) gives the game away when he suggests that the "new Keynesian macroeconomics could just as easily be labelled the

new monetary economics" and "the new Keynesian economics is much more in line with the neoclassical synthesis than with Post-Keynesian analysis" (Snowdon *et al*., 1994, p.337.)

This paper first considers in greater depth the contention that the New Keynesian Economics is nothing more than the "presumption of some *ad hoc* constraint to the classical supply conditions to temporarily fix nominal magnitudes so that the classical neutrality of money axiom is, in the short run, inoperative" (Davidson, 1992, p.451). This is contrasted with the position taken by Keynes in the *General Theory*. Keynes's treatment of involuntary unemployment and its relationship to money wage flexibility will then be considered. It will be shown that the greatest problem with the *General Theory* is that there was never a second edition. If there had been, Keynes (1939) argued that Chapter 2, "The Postulates of the Classical Economists", would have required radical rewriting. It will be further shown that the fact that this never occurred meant that the shortcomings of this chapter paved the way for the standard interpretation of the *General Theory* in the form of the Keynesian supply curve in the traditional AD-AS model that is not Keynes. And this has contributed to the misnomer of the New Keynesian Economics as Keynesian.

## INVOLUNTARY UNEMPLOYMENT AND STICKY WAGES AND PRICES

If it were necessary to summarise the differing views of the conflicting schools of macroeconomic thought, it would be in the form of the question "does the working of the market economy always ensure that the economy will move back to full employment if an exogenous shock has taken it away from this position?" A corollary is the question whether or not there is such a thing as involuntary unemployment, even though it may be difficult to operationalise this concept.

If the answer given to the first question is no and to the second is yes, then one may be described as a "Keynesian". However, if the qualification "in the absence of market imperfections" is added

to the first question and the answer is still in the affirmative, then one is a Post Keynesian. Would Keynes have been a Post Keynesian? To answer this question, it is necessary first to consider Keynes's concept of involuntary unemployment.

Keynes himself defined involuntary unemployment in what at first seems a rather convoluted way.

*Men are involuntarily unemployed if, in the event of a small rise in the price of wage-goods relatively to the money wage, both the aggregate supply of labour willing to work for the current money wage and the aggregate demand for it at that wage would be greater than the existing volume of employment.*[2] (*GT*, p.15, emphasis in the original)

Nevertheless, the interpretation of this definition is straightforward. If we consider the demand for and supply of labour curves measured in nominal terms, then if the money wage rate is above the market clearing rate, the demand for labour by firms will be less than the equilibrium level (defined as the intersection of the two curves). This, in turn, will be less than the amount of labour on offer, so that at that given money wage the supply curve of labour is effectively perfectly elastic. Hence, if there is a small rise in the price level (a fall in the real wage), the maximum volume of labour offered at the initial real wage will decline, but it will still exceed the amount previously employed. (The maximum volume of labour offered at the prevailing wage rate is determined by the point where the wage rate cuts the aggregate supply curve of labour. Its role is limited to determining the amount of involuntarily unemployed labour.) The demand for labour, however, will increase as a result in the fall in the real wage and so will be greater than the previous level. Hence, "both the aggregate supply of labour willing to work and the aggregate demand for it would be greater than the existing volume of employment".

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2 Keynes also gave a definition of full employment, "namely, a situation in which aggregate supply is inelastic in response to an increase in the effective demand for its output" (*GT*, p.26).

Why did Keynes define involuntary unemployment in terms of *changes* in the real wage, rather than in the context of the *level* of the real wage (which comes to the same thing as the level of the money wage with a given price level)? Or, why did he not define it in terms of a fall in the money wage, when the price level is held constant, which would likewise be a definition in terms of the reduction of the real wage? The answer is that Keynes probably wished his definition to be related to what he saw as the cause of involuntary unemployment. As Hawtrey (in Keynes, 1973, p.31) noted in a letter to Keynes in 1936, his (Keynes's) definition "implies that if employment can be increased by some other means and not by this Šthe rise in the price levelĆ then employment is not involuntary". Hawtrey continued: "if that were so, the 'small rise in the price of wage goods relatively to the money wage' would have to be read in the narrow sense to exclude the case where the relative rise is due to a fall in the money wage. But you nowhere say this expressly".

Involuntary unemployment is seen by Keynes as that which is due to lack of effective demand and can only be cured by an increase in the latter, as a consequence of which there will be a rise in the price level. Thus, a definition of involuntary unemployment solely in terms of the level of the money wage being too high relative to the price level is ruled out as unsatisfactory, because this could be due, for example, to the trade unions demanding a real wage that is above the market clearing level (which Keynes wished to define as voluntary unemployment).[3] Moreover, a fall in money wages, *ceteris paribus*, is likewise excluded for the same reasons, since it is compatible with Classical unemployment. "A classical economist may sympathise with labour in refusing to accept a cut in its money-wage, and he will admit that it may not be wise to make it to meet the conditions which are temporary; but scientific integrity forces him

[3] In the galley proofs, Keynes's definition was in terms of the *level* the real wage: "*men are involuntary unemployed if the supply of labour willing to work for a money wage worth in terms of wage-goods the same or less than the existing money wage, is greater than the existing volume of employment*" (Keynes, 1973b, p.366, emphasis in the original). This difference in the definitions is significant and it is clear that the definition of involuntary unemployment in the *General Theory* was the result of careful thought.

to declare that this refusal is, nevertheless, at the bottom of the trouble" (*GT*, p.16).

Furthermore, in places in the *General Theory*, Keynes denied the possibility that labour could actually bargain for the real wage by accepting a cut in money wages (e.g. *GT*, p.14). The practical importance of the concept of involuntary employment is that it is not the fault of the individual worker. There is nothing he can do to improve his lot. Rather his unemployment is the consequence of the failure of the market, sometimes on a grand scale, and the onus is on the State to implement corrective action.

However, as we shall see, Keynes's insistence on using the Classical model of the labour market together with his definition of involuntary unemployment was one of the reasons for the derivation of the Neoclassical synthesis and hence the neo-Walrasian revival (as the New Keynesian Economics is sometimes called).

Lucas and the New Classical economists dismiss Keynes's concept of involuntary unemployment as, at the best, meaningless and, at the very worse, misleading. The importance of this view is that if the concept of involuntary unemployment is meaningless, then markets must by definition clear.[4] Consequently, it is worth quoting Lucas (1978) at length.

The worker who loses a good job in prosperous times does not *volunteer* to be in this situation: he has suffered a capital loss. Similarly, the firm which loses an experienced worker in depressed times suffers from an undesired capital loss. Nevertheless the

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[4] See Coddington (1983, pp.26-38) for a discussion of how difficult it is to determine empirically whether a worker without a job is voluntarily or involuntarily unemployed. Questionnaires are likely to be misleading because few drawing benefits are likely to admit to being voluntarily unemployed. The possibility of involuntary unemployment is best viewed as a paradigmatic assumption (Kuhn, 1962) or part of the Lakatosian (1968) hard core of the Keynesian approach. In this sense, it is either not tested or not testable. Conversely, the impossibility of involuntary unemployment should be viewed as, by assumption, an irrefutable central tenet (or part of the hard core) of the New Classical Economics. This leads to the explanation of employment fluctuations in terms of inter-temporal utility maximisation and hence optimal.

unemployed worker can always find *some* job at once, and a firm can always fill a vacancy instantaneously. That neither typically does so by choice is not difficult to understand given the quality of the jobs and the employees which are easiest to find.

Keynes, in chapter 2, deals with the situation facing an *individual* unemployed worker by evasion and wordplay only. Sentences like "more labor would, as a rule, be forthcoming at the existing money wage if it were demanded" are used again and again as though, from the point of view of a jobless worker, it is unambiguous what is meant by "*the* existing money wage." Unless we define an individual's wage rate as the price someone else is willing to pay him for his labor (in which case Keynes' assertion is likely to be false) what *is* it? The wage at which he would *like* to work more hours? Then it is true by definition and equally empty.

This argument is not convincing. In Keynes's discussion of unemployment, the wage facing the unemployed worker is the wage currently paid to those in employment. The involuntarily unemployed worker would be willing to work for this wage (and possibly less), but there are no vacancies.[5] This is not an empty definition, since, as we have noted above, it implies that this situation is outside the control of the individual worker. Implicit in Lucas's critique is that unemployment must be voluntary because an unemployed worker can always take a lower paid job or offer his services at below the going wage rate.

Clearly, if we generalise the argument to allow for different skills, occupations, and wages, then it is perfectly possible for a worker to look for, and accept, a job for which the wage is equal to his actual marginal productivity *for that occupation*, but which is nevertheless below his maximum potential productivity (e.g. street sweepers who have PhDs, a situation that is not uncommon in some less developed countries). If this occurs, it is, of course, nothing more than disguised unemployment, or, in what amounts to the same thing,

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[5] Notice Lucas's rhetorical device in the use of the words "*like* to work more hours" (conveying a choice at the margin for the worker) rather than would "*like* a job".

involuntary underemployment. Moreover, this may well simply result in excluding other less skilled workers from employment. Even if the latter does not occur, there is still involuntary unemployment of labour in terms of efficiency units (or underutilisation of human capital) even though the market clears in the sense of all workers having some sort of a job. Also, it may well be that the number of vacancies is less than the number of those willing to work at the prevailing wages.

As far as the second possibility is concerned, i.e. workers are willing to reduce their reservation wage far enough they can always find a job, Keynes argued that those employed will be unwilling to see a cut in money wages and there would be resistance to attempts by employers to impose this. (Implicit in this is the plausible assumption that all workers with equal skills are paid the same; the marginal worker's offer to work for below the going rate will not be accepted unless all wages fall to that level.) There was much discussion commencing with Leontief (1937) as to whether or not this implied that workers were irrational and whether or not involuntary unemployment was based on money illusion. (It would, of course, be very damaging to the theoretical importance of the *General Theory* if involuntary unemployment was simply based on workers' irrational decisions.) This was especially pertinent as Keynes argued that workers would be more willing to accept a cut in real wages due to a rise in the price level than through a reduction in money wages with prices held constant (*GT*, p.264). The early consensus in the 1940s and 1950s was that this was irrational and some commentators saw this as *the* essential difference between Keynes and the Classics. All that Keynes had done was merely to impose the *ad hoc* assumption of money wage rigidity onto the classical system. The consensus of opinion was summarised by Samuelson (1963) when he wrote that "had Keynes begun his first few chapters with the simple statement that he found it realistic to assume that modern capitalistic societies had money wage rates that were sticky downward and resistant to downward movements, most of his insights would have remained just as valid". If this were the case, then the answer to Leijonhufvud's question: "Keynes: A Theoretical Charlatan?" would have to be in the affirmative. (See Addison and Burton, 1982, for a discussion of the way the early critics viewed this putative assumption.)

Trevithick (1976), however, shows that the reluctance of workers to accept a fall in the real wage through a price rise (but not via a money wage cut) is perfectly rational in a choice theoretic framework, where relative wages enter into a worker's utility function. An attempt to cut money wages is likely to be selective in its effect on industries and hence, if successful, to disrupt wage relativities. (There is much empirical evidence in support of this contention - see Trevithick, 1976, footnote 1). Thus, a rise in the general price level, by affecting all workers equally is more likely to be accepted by the workers.[6] Moreover, there is no doubt that Keynes was not only sceptical of the possibility of persuading labour to take money wage cuts, but also concerned that, even if successful, as it was in the Great Depression, it would be inequitable (see Kahn's (1984, pp. 126-133) discussion). and was likely to further depress aggregate demand.[7]

In an inflationary context, the comparable position is that an increase in the rate of inflation faster than the growth of money wages will stimulate employment when the real wage is above the

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[6] This argument has suddenly come into fashion once again. Akerlof (reported in *The Observer*, 30 September 1996) has used it to suggest that a zero inflation rate may not be desirable. This is because to reduce the real wage would entail a cut in the *money* wage which would be strongly resisted by labour, leading to conflict in the work-place. On the other hand, labour would be more willing to accept a freeze in money wages or a rate of increase that is below the rate of inflation. (This, of course, presupposes that a cut in the real wages is desirable in the first place.) Thus, the optimal rate of inflation is not zero, as the Monetarists argue, but should be of the order of 3% per annum.

[7] Brenner (1979) argues that Keynes's contention that labour is unwilling to accept a cut in money wages, but will not withdraw its labour if there is a rise in the price level, is based on a notion of justice rather than optimising behaviour. "Therefore, when somebody is offered a wage lower than the actual wage and does not accept it, he is considered in Keynes's model to be involuntarily unemployed" (Brenner, 1979, p.841.) However, the notion of fairness is not necessarily distinct from the utility maximising approach; it is reflected by the inclusion of relative wages in the utility function. Secondly, it seems unsatisfactory to interpret Keynesian involuntary unemployment as the case when there are firms offering jobs but at level below the going rate.

market clearing level. On the other hand, the rate of change of money wages will be downwardly inflexible.

Addison and Burton (1982) have pointed out a shortcoming with this analysis. The utility of a worker depends upon the real wage, the probability of employment and the relative wage. If we assume that a decrease in the real wage increases employment (a controversial assumption as we shall see) and hence the probability of any worker either remaining in employment or gaining a job, then there is a trade off. In other words, when there is involuntary unemployment, a greater degree of job security and employment can be had at the expense of a lower real wage and the resulting disutility from the potential worsening of relativities.[8] Which is likely to be more important in the face of a fall in money wages, *ceteris paribus,* cannot be answered on *a priori* grounds. Therefore, it is not clear that the relativities argument is sufficient to ensure that market forces will not lead to a fall in the money wage rate in the face of unemployment. Moreover, this analysis has led to the argument that involuntary unemployment is a co-ordination problem. If workers could agree to a uniform wage cut, then the problem of involuntary unemployment would be solved. In an inflationary system, this has provided a rationale for the use of an appropriately designed incomes policy to hold the growth of money wages below the rate of inflation.

The insider-outsider models of the labour market remedy this deficiency in Trevithick's argument by the simple expedient of relaxing the assumption of a perfectly competitive labour market (Lindbeck and Snower, 1988). It is assumed that trade unions exert monopoly power, because of firm specific skills, in the setting of wages and they only take account of the welfare of existing employed workers. Hence, there is no trade-off between the real wage and an increase in employment beyond the level that currently exists. (This implies that should there be a fall in demand and previous insiders become unemployed, they move into the outsiders category and their welfare no longer is a matter of concern for the trade union.) Keynes, however, explicitly terms such unemployment "due to an open or tacit

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[8] Of course, *ex post,* changes in relativities resulting from a fall in the money wage will by definition improve the relative wage of some workers while worsening that of others. Presumably, there is an asymmetry here. Workers lose more utility from a decline in their relative wage than they gain from an improvement.

agreement amongst workers not to work for less" as *voluntary* unemployment.

Although Keynes, it is true, did make some passing remarks on the relativities argument, it was only that - a passing argument. It is in no way central to the causes of involuntary unemployment. The reason is that Keynes did not see unemployment as being caused by the rigidity of money wages or to a demand by workers for an excessive real wage. He was quiet explicit about this: "It is not very plausible to assert that unemployment in the United States in 1932 was due either to labour obstinately refusing to accept a reduction in money-wages or to its obstinately demanding a real wage beyond what the productivity of the economic machine was capable of furnishing" (*GT*, p.9). Given that he explicitly deals with the effect of a fall in money wages in Chapter 19 of the *General Theory*, it is difficult to see how the misleading impression could ever have risen that the essence of the *General Theory* was the *ad hoc* assumption of rigid money wages.[9] (It is a pity that the content of Chapter 19 did not appear earlier in the *General Theory*!)

As Keynes pointed out, labour could not bargain for the real wage, which was determined by "certain other forces" (*GT*, p.13), notably the level of effective demand. One interpretation of why this occurs is that a cut in the money wage will result in an equiproportionate cut in prices (because price is equal to marginal prime cost which is determined by the money wage).[10] Thus the real wage would remain unaltered. However, it is possible that a fall in prices will increase investment, and hence demand, through the "Keynes effect". This is where a fall in the interest rate, resulting from a fall in prices, stimulates investment through the marginal efficiency of capital schedule. This will lead to an increase in prices that will partly offset the initial fall and will result in a fall in the real wage. The textbook explanation normally invokes the liquidity trap to explain why Keynes thought this unlikely to occur. This

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9 Lucas (1977), for example, considers that "Keynes saw that ... with the unexplained postulate of rigid nominal prices, an otherwise classical model could be transformed into a model which did a fair job of accounting for observed time series".

10 This is the interpretation of Keynes by Trevithick (1992, p.96).

overlooks the fact that Keynes explicitly repudiates the liquidity trap as an important factor. "But whilst this limiting case Šof the liquidity trapĆ might become practically important in future, I know of no example of it hitherto. Indeed, owing to the unwillingness of most monetary authorities to deal boldly in debts of long term, there has not been much opportunity for a test" (*GT*, p.207). For Keynes, the more likely sequence is that the initial fall in demand consequent upon the decline in the real wage is likely to affect adversely the state of entrepreneurs' expectations and cause a shift to the left of the marginal efficiency of capital schedule. This shift is likely to more than offset any movement down the schedule due to the fall in the interest rate.

A second possible route of an increase in demand is through the Pigou or real balance effect whereby the fall in prices increases the real value of outside money. But the beneficial effect of this on demand would be more than offset by the increased real debts owed by firms and the almost inevitable banking crisis. Writing in 1931, when the price level actually was falling, Keynes proffered the view that "there is a degree of deflation which no bank can survive... . Modern capitalism is faced, in my belief, with the choice of finding some way to increase money values towards their former figure, or seeing widespread insolvencies and defaults and the collapse of a large part of the financial structure" (Keynes, Vol IX, p.151, cited by Kahn, 1984, p.133.)

However, in Chapter 19, Keynes contradicts himself to the extent that he now seems to accept that a fall in money wages will reduce the real wage. In discussing the classical argument, he agrees that "prices certainly do not change in exact proportion to changes in money wages" (*GT,* p.259) and "a reduction in money wages will somewhat reduce prices". (This point was also stressed by Lerner.) However, whether this would stimulate employment, Keynes considered, depended on a number of factors, including the effect of a possible redistribution of income on the propensity to consume; the effect of lower money wages relative to those abroad; the effect of a collapse in investment as the debt burden of firms increases; the effect of a lower interest rate on investment; and the expectations of the subsequent direction of changes of money wages. The overall conclusion Keynes came to was that the net effect on demand from an exogenous cut in the money wage was likely to be adverse and

hence he argued that rigid money wages should actually be a policy objective. It was not a behaviourial assumption of Keynes. Consequently, even though the real wage may fall in the short run, there is no guarantee that employment will increase.[11]

How is it then that the orthodox textbook interpretation of Keynes still often asserts that his explanation depends upon downward money wage rigidity?[12] Before answering this question, it is useful to summarise Keynes's own arguments about money wages.

First, money wages are unlikely to fall in the face of an excess supply of labour because of workers' resistance to money wage cuts resulting from the possible adverse repercussions of changes in relative wages.

Secondly, if money wages fall, prices should fall, *pari passu*, leaving the real wage unaltered. Through the short-run production function, a necessary, *but not sufficient*, condition for employment to increase is for the real wage to fall. But the fall in prices will lead to the Pigou effect by which a fall in prices will eventually increase demand, although as we have noted above, Keynes thought that the banking system would have collapsed long before this had any real effect. Nevertheless, the theoretical possibility of the Pigou effect occurring was enough to lead to the generally accepted conclusion that Keynes needed the assumption of rigid money wages and prices.

But, finally, even if we do not accept the Pigou effect, there is the argument that, as a matter of logic, a fall in money wages is likely to lead to a fall in real wages which would, *per se*, through the short-run production function lead to an increase in employment. The *General Theory* was not general at all, but merely a special case of the Classical system. This interpretation stems in large part from

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[11] It has been argued that, for an individual country, a fall in real wages would increase overseas demand for its exports and hence lead to an increase in employment. However, there is much evidence that, in international trade, price competitiveness is relatively unimportant - it is non-price competitiveness that matters (McCombie and Thirlwall, 1994).

[12] Especially in view of the fact that the Great Depression saw a significant fall in *both* money wages and prices in both the UK and the US.

Chapter 2 of the *General Theory* - the least satisfactory of all the chapters - to which I now turn.

## CHAPTER 2 OF THE *GENERAL THEORY*

The great problem with the *General Theory* is, as I have noted, that there was no second edition. Given the pathbreaking nature of the work, both in terms of the method and the use of new concepts (e.g. the consumption function and the multiplier), and its implications, it is not surprising that there may well be some inconsistencies in Keynes's argument. There are ambiguities in the text that have given rise to a number of different interpretations of Keynes. The ever-present danger is that the odd sentence and the odd throw-away line in the *General Theory* are given an importance far beyond that which Keynes ever intended. It must also be remembered that the *General Theory* was deliberately polemical, a fact that Keynes was later to regret.

In Chapter 2, Keynes attempted to show the deficiencies of the classical system in terms of its analysis of the labour market. Nevertheless, he later conceded (Keynes 1939) that there were deficiencies in Chapter 2, at least to the extent that "it is the portion of my book which most needs to be revised".

Keynes considered the standard aggregate analysis of the labour market based on the demand for and supply of labour. He argued that the fact that all markets were assumed to clear was based on what he termed the two classical postulates. He showed, to his own satisfaction at least, why the acceptance of both these postulates ruled out involuntary unemployment. He then rapidly proceeded to his own explanation as to why involuntary unemployment could occur. He never successfully integrated the analysis of the labour market into his explanation. This opened the door for the neoclassical synthesis which, as has been noted, effectively reduced the *General Theory* to a special case of the Classical Theory. I have a certain sympathy with Lucas's view that Keynes rushed through the analysis of Chapter 2 (which occupies only 18 pages out of the 400 page book), keen to get on and present his

own views of the determination of the level of employment in terms of demand factors.

The difficulty with Keynes's own argument stems precisely from his taking the two 33classical postulates as his starting point, primarily at the insistence of Harrod (Keynes, 1973a, pp.533-4). Harrod argued, in effect, that it would be poor rhetoric, in McCloskey's (1985) sense of the term, to abandon the assumption that two independent demand and supply functions jointly determine equilibrium prices and quantities.

The first Classical postulate is the traditional neoclassical marginal product theory of factor pricing condition that "*I. The wage is equal to the marginal product of labour*". Keynes kept the first postulate while arguing that the second postulate, " *II. The utility of the wage when a given volume of labour is equal to the marginal disutility of that amount of employment")* was inapplicable. To assert that the latter postulate held necessarily implied that the economy was fully employed. Consequently, when there was unemployment, the short side of the market (namely, the demand for labour from the first postulate) determined the actual the level of employment.

According to Keynes, the first postulate is the result of profit maximisation and the existence of diminishing returns. It implies that

> with a given organisation, equipment and technique, real wages and the volume of output (and hence of employment) are uniquely correlated so that, in general, an increase in employment can only occur to the accompaniment of a decline in the rate of real wages. Thus, I am not disputing this vital fact which the classical economists have (rightly) asserted as indefeasible. In a given state of organisation, equipment and technique, the real wage earned by a unit of labour has a unique (inverse) correlation with the volume of employment. Thus, *if* employment increases, then, in the short period, the reward per unit of wage-goods must in general decline and profits increase. (*GT*, p.17, emphasis in the original)

In a footnote, Keynes attributes this inverse relationship to diminishing returns which occur as more labour is added to a fixed

factor, drawing on agricultural production as an example. He later introduces the assumption that as employment is increased less efficient labour and equipment is used, hence causing a fall in the marginal product of labour with increasing employment.[13]

But while a fall in the real wages is a necessary condition for an increase in employment, Keynes considered that it is not sufficient. The choice of the word "correlation" by Keynes was deliberate since it does not imply causation. It is effective demand that determines the level of employment, which in turn determines the marginal product of labour and hence the wage. Keynes is quite explicit about this: "the propensity to consume and the rate of new investment determine between them the volume of employment which is uniquely related to a given level of real wages - not the other way around". Moreover, in Chapter 19, Keynes explicitly rejects the assumptions underlying the short-run neoclassical aggregate production function.

> For the demand schedules for particular industries can only be constructed on some fixed assumption as to the nature of the demand and supply schedules of other industries and as to the amount of the aggregative effective demand. It is invalid, therefore, to transfer the argument to industry as a whole unless we also transfer our assumption that the aggregate effective demand is fixed. Yet this assumption reduces the argument to an *ignoratio elenchi.* (*GT*, p.259).

Thus, according to Keynes, a fall in the money-wage will only increase employment if it is "*accompanied by the same effective demand as before*" (*GT*, p.259, emphasis in the original), but there is

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[13] There is some confusion in the *General Theory* as to the exact cause of diminishing returns. In his long discussion on the non-homogeneity of labour in Chapter 4, Keynes suggests that this "is *merely one factor among others* leading to diminishing return from the capital equipment in terms of labour as more labour is employed on it " (*GT*, p.42, emphasis added). But later he asserts that if all factors are assumed to be "homogeneous and interchangeable in their efficiency ... we have constant returns". Kahn thought that here Keynes had simply confused the long run, when all factors are variable, with the short run when there is a fixity of capital.

no guarantee that this will be the case (Davidson and Smolensky, 1964). However, this important qualification was completely overlooked in the neoclassical synthesis, possibly because it did not come in Chapter 2 but much later in the *General Theory*.[14] Nevertheless, its existence has been repeatedly pointed out by the Post Keynesians (Thirlwall, 1983).

Consequently, the unique direction of causation from the level of employment to the real wage was also lost in the neoclassical synthesis, which adopted the traditional neoclassical one-sector short-run production function with capital-labour substitution. In other words, as more labour is employed, capital is spread more thinly over those employed. A unidirection of causation in these circumstances becomes untenable and could be dismissed on the grounds that Keynes had simply not appreciated the simultaneity in his implicit model.

For sake of argument, suppose that the real wage is above its market clearing level and unemployment exists. If there is an *exogenous* fall in the real wage, then, given that firms are profit maximisers, the level of output must automatically increase, *pari passu*, as the economy moves down the marginal productivity curve. The volume of output (the area under the marginal productivity curve) must also increase and in effect Say's law holds: the increase in supply necessarily creates its own demand. For expositional ease, let us assume a classical savings function so that workers consume all they spend and all profits are invested. As the real wage falls and employment increases, investment will automatically increase. The neoclassical interpretation of Keynes's demand and supply side model is, in a sense, over-determined since changes in the level of investment are also determined by fluctuations in "animal spirits", which determine shifts in the MEC schedule, and changes in the rate of interest, which cause movements along the MEC schedule. But there is no mechanism in the model by which a fall in the real wage will necessarily cause "animal spirits" and the rate of interest to change in such a way as to induce exactly the required increase in investment. With the use of the short-run production function and a

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[14] However, there are difficulties in reconciling this with the assumption of perfect competition where all firms, including those in the capital goods industries, face a perfectly elastic demand for their products.

fall in the real wage rate, these considerations are effectively ignored. The whole demand side - the centre piece of the *General Theory* - has become irrelevant, since the fall in the real wage, by itself will generate the requisite demand to purchase the increased supply.

The only way for a fall in the real wage not to led to an increase output is for the first postulate to be violated or amended and this will be discussed below. But if we accept the conventional production function, the whole of the *General Theory* depends on mechanism that prevents real wages from adjusting - i.e. a market imperfection of some sort.

This is carried over to the textbook discussion of the Keynesian model in terms of the AD/AS model. A typical story goes as follows. Consider the economy initially in equilibrium. There is a deflationary shock and prices fall as the AD curve shifts down to the left. Money wages are assumed to be rigid (because of, say, the wage relativities argument) and hence real wages rise. Through the short-run production function, employment falls with a fall in the price level and so we have a positively sloped "Keynesian" AS curve (as opposed to the vertical classical AS curve) in price-output space. Thus, in most macroeconomic textbooks, the cause of "Keynesian" unemployment is the *assumption* of rigid money wages. To bring the economy back to full employment requires the real wage to be lowered. Consequently, increasing demand shifts the AD curve back to the right and drives up the price level, reducing the real wage. Reference is made in support of this analysis to Keynes's contention noted above that labour will resist cuts in money wages but will accept a reduction in the real wage through a general rise in the price level. (Support could also be found in Keynes definition of involuntary unemployment, discussed above.) Thus, Keynesian involuntary unemployment is caused by rigid money wages which in the absence of government intervention to, for example, increase expenditure prevents the real wage from falling in the presence of excess labour supply and from clearing the labour market. No wonder the consensus was (is) that Keynes was merely a special case of the Classical system with an *ad hoc* restriction imposed upon it.

There is only one problem with this analysis - it is not what Keynes had in mind. He made this quite explicit in the course of his article "The Relative Movements of Real Wages and Output" published in 1939. Since the "Keynesian" supply curve has become

such an established textbook explanation of Keynesian unemployment, it is worth quoting Keynes's implicit rejection of this.

> I was already arguing at that time [c. 1929] that the good effect of an expansionist investment policy on employment, the fact of which no one denied, was due to the stimulant which it gave to effective demand. Prof. Pigou, on the other hand, and many other economists explained the observed result by the reduction in real wages covertly effected by the rise in prices which ensued on the increase in effective demand. It was held that public investment policies (and also the improvement in the trade balance through tariffs) produced their effect by deceiving, so to speak, the working classes into accepting a lower real wage, effecting by this means the same favourable influence on employment which, according to these economists, would have resulted from a more direct attack on real wages (*e.g.* by reducing money wages whilst enforcing a credit policy calculated to leave prices unchanged).

Thus, the irony is that Keynes ascribes to the Classical economists the exact chain of events sketched out above with respect to the putative Keynesian AD/AS model.

## REAL WAGES OVER THE TRADE CYCLE

Shortly after the publication of the *General Theory*, two articles published in the *Economic Journal* by Dunlop (1938) and Tarshis (1939) suggested that, far from real wages moving contracyclically over the trade cycle, they in fact moved procyclically. This was at variance with both Keynes's assumption and the relationship predicted by the short-run production function. Recent research suggests that either real wages are slightly procyclical or are

roughly constant over the trade cycle.[15] In either case, this is enough to contradict the neoclassical foundations of the AS curve. Keynes was reluctant immediately to abandon the conventional wisdom and accept a procyclical real wage.[16] Nevertheless, if real wages are not contracyclical, then a fall in the real wage neither is associated with nor causes an increase in employment. Hence as Keynes (1939, p.40, omitting a footnote) noted if "it proves right to adopt the contrary generalisation, it would be possible to simplify considerably the more complicated version of my fundamental explanation which I have expounded in my 'General Theory'." As Largentaye (1979) has noted: " in point of fact ... the inclusion of the classical view of diminishing marginal productivity in the *General Theory* made it possible to invoke the authority of the latter in favor of opinions directly contrary to its essential teachings." To this one might add, if Keynes had adopted the contrary generalisation, it would have prevented the emasculation of Keynes's theory by the neoclassical synthesis.

McCombie (1985-86) demonstrated that one way of reconciling the procyclical movement (or constancy) of the real wage over the trade cycle was to allow for the occurrence of excess capacity, in the sense of idle machinery, as the economy moves into recession.

The conventional short-run production function approach normally assumes that capital is always fully utilised; it is only employment that is laid off. Since most of the capital stock is already purchased (although some may be rented), there is no saving to be had from leaving it idle and given the possibility of capital-labour substitution, a profit maximising firm will economise on labour (where it saves the cost of the wage) and fully use its capital. Weeks, although presenting a critique of neoclassical macroeconomics, accepts that "neoclassical theory reaches profound truth when it ignores the possibility of unemployed capital" (Weeks, 1989, p.127).[17] But, labour

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15 However, see Bils (1985) who argues, that for the postwar period, US real wages are strongly procyclical.

16 Keynes (1939, pp.42-43) conceded though that if "we are to make any single statistical generalisation. ... we shall not often go far wrong if we treat real wages as substantially constant in the short period".

17 However he continues "for the wrong reason". He argues that "no exchange is needed to occur for capital to be employed, while labour requires a successful sale and purchase".

is a "quasi-fixed factor of production" (Oi, 1962). There is a fundamental asymmetry between capital and labour. Labour, once made redundant, may be lost to the firm when it needs to expand its labour force during a subsequent upswing. This loss of firm-specific skills means that there are retraining costs as well as hiring costs. The firm does not have to bear such costs when bringing equipment and machinery back into production. Consequently, it may be optimal for a profit-maximising firm to lay off both capital and labour (i.e. the flow of capital and labour services both fall) as the economy moves into recession. The possibility of less-than-full utilisation of capacity substantially alters the analysis. Take, for example, the case where the real wage is above the market clearing level. Let us assume that it falls exogenously. To begin with, let us further assume that firms adopt a cautionary attitude and retain the existing level of employment and output, while waiting for demand to change. If investment also remains constant, the fall in consumption, consequent upon the decline in the real wage, will lead to an accumulation of unwanted inventories. Production will be cut back, with both labour and capital being laid off. The marginal product of labour which is a function of the level of the utilised capital stock (strictly the flow of capital services) will shift to the left, so that employment may actually decrease as the real wage falls towards the market clearing level. (It is nevertheless possible for employment to increase as capital becomes progressively more underutilised; see McCombie, 1985-86). However, it should be noted that the first classical postulate is still fulfilled.

An alternative way that excess capacity and unemployment may coexist is if there are fixed coefficients in production (Garrison, 1991). There is some textual evidence in the *General Theory* that Keynes appreciated the existence of less-than-full capacity utilisation. For example, on p.42, footnote 2, he writes of "a surplus of equipment identical in type with the equipment in use". Moreover, the fact that Keynes writes of constant returns as employment increases is compatible with the existence of spare capacity. This would be the case if the increase in employment brought forth an equiproportionate increase in formerly unused capital services. However, the exegetical evidence is scant and it is clear that the role of the underutilisation of capital was not at the forefront of Keynes's mind when he wrote the *General Theory*. But what this discussion has shown is that even retaining the first Classical postulate, it is not necessary to assume real wage rigidity to generate involuntary unemployment.

The importance of this approach is that a fall in the real wage is no longer *even* a necessary let alone a *sufficient* condition for an increase in employment; it all depends upon what is happening to the level of aggregate demand.

## THE NEW KEYNESIAN MODELS

The roots of the New Keynesian Economics can be dated to the pioneering work of Clower (1965) and Leijonhufvud (1968) which were an attempt to explain involuntary unemployment within a Walrasian mechanism. As is well known, the introduction of false trading (trading at non-equilibrium prices) meant that quantity constraints could become binding. This is elegantly demonstrated by Clower's dual decision hypothesis. Expenditure decisions are based on actual income, not on income that would have been received if the consumer (worker) could work as much as he wished. Thus, if initially the economy is at less than full employment, effective demand will be less than notional demand (the demand that would occur if the market cleared). Thus, there is essentially an information failure. Firms would be willing to sell more goods if the demand were there and workers would be willing to supply more labour, even at the going wage, if there were a demand for their input. But there is no way in which the price mechanism can indicate to firms the *potential* or *notional* demand for their products.

The heart of the problem can be summarised in Clower's dictum that "goods buy money and money buys goods but goods do not buy goods". In other words, if there were a barter economy then there could be no effective demand failure because each offer to supply extra labour would be simultaneously an offer to buy the equivalent amount of extra goods.[18] This would at first blush seem

[18] There is one difficulty with this as a complete explanation of involuntary unemployment. Even if workers could communicate their notional demands, these would be for consumer goods. This would not be a necessary and sufficient condition for full employment because there would have to be an appropriate increase in investment. There is nothing in the Clower-Leijonhufvud model that ensures that this will

to capture the distinction that Keynes was trying to make in the preliminary draft of the *General Theory* when he drew the distinction between an entrepreneur and a co-operative economy. However, while Leijonhufvud was at pains to point out that all that was needed was a non-instantaneous market clearing price vector, the subsequent development of these quantity-constrained models by Barro and Grossman (1971) and Malinvaud (1977) became essentially fixed-price or temporary equilibrium models. This approach also used the one-sector aggregate production function, but the first classical postulate was abandoned; the real wage could now be below the marginal productivity of labour, but because of the quantity constraint there would be no incentive for individual firms to expand production. It is now theoretically possible for employment to increase as effective demand increases with a rise in the real wage. Malinvaud terms the initial unemployment from which this occurs as Keynesian unemployment.

However, this approach required one major change in the underlying assumptions: there now had to be some form of imperfect competition with firms acting as price makers.[19]

But behind this explanation lurks the Pigou effect. Even if real wages are below the equilibrium level so that a rise is required for full employment, if the excess supply of labour is accompanied by a fall in money wages and hence prices, then the real balance effect will lead to an increase in demand. The quantity-constrained models still need money wages to be rigid to induce the necessary price stickiness. The New Keynesian Economics has attempted to provide a rationale for this by using models where individual agents optimise. In a sense, we have come full circle since it was precisely the phenomenon of money wage rigidity that it was claimed Keynes's original explanation relied upon. The problem within an optimising framework was to explain why the opportunity from mutually

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occur. Furthermore, the model is silent on why unemployment occurs in the first place.

[19] If there were perfect competition individual firms, by definition, would face an infinitely elastic demand curve and could not be quantity-constrained. Consequently, they would expand employment up to the point where the real wage equalled the marginal productivity of labour (i.e. to the point where unemployment became classical).

profitable trade did not occur. If all opportunities for profitable trade were taken, then any existing employment would be voluntary. It was dissatisfaction with the explanation of why wages and prices could be sticky that led Barro, one of the pioneers in developing the disequilibrium model ultimately to reject it as a satisfactory explanation. (The "nontheory of price rigidities", as he called it (Barro, 1979).) The rise of the New Keynesian theory in the late 1980s was precisely to rectify this deficiency, i.e. to provide a theoretical justification for wage and price stickiness within an optimising or neo-Walrasian framework and also to place Keynesian economics on firm micro-foundations. It was necessary to go beyond the assumption that all agents are price takers. As Mankiw (1990) puts it: "once one starts to think about an economy with price setters, it appears unlikely that it will behave like an economy in which prices are set by a Walrasian auctioneer who, for some unspecified reason, fails to choose equilibrium prices". The initial justification for sticky prices was contract theory. Implicit contract theory provided a rationale for nominal wage stickiness. For Barro, the difficulty was that if all parties correctly perceived that the marginal value product of labour exceeded the wage, then there would be scope for a mutual renegotiation. "Rather than rationalizing the non-market approach as a useful 'as if' approach, contracting analysis suggests that - despite the possible existence of 'sticky' wages - the continuous market-clearing model may provide a satisfactory framework for the analysis of employment and output" (Barro, 1979, p.54).

However, other explanations for price stickiness were soon forthcoming including the efficiency wage argument, the insider-outsider argument and menu costs.[20] Yet the question naturally arises, can these market rigidities really explain the dramatic fall in output in the Great Depression where there was certainly no evidence of downward money or price rigidity? The New Keynesian Economics has, like the neoclassical synthesis, obscured the central message of the *General Theory*, the importance of effective demand and the invalidity of the classical dichotomy. (It is noticeable that monetary factors no longer play any role in the New Keynesian Economics.)

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[20] There is not space to deal with the short-comings of these various theories. A good survey is to be found in Sawyer (1996).

## CONCLUDING COMMENTS

In his influential book on scientific methodology, *The Structure of Scientific Revolutions*, Kuhn (1962) stressed the crucial role that textbooks play in the shaping of the development of a subject. The textbook, which is inevitably a simplification and interpretation of what may have been a long and convoluted debate, sets the agenda for the determination of the Kuhnian puzzles. The *General Theory* is not an easy book to follow and is almost certainly not totally consistent. Consequently, the Keynesian revolution came to be viewed almost solely in the light of its various interpretations, which subsequently formed the basis for the textbook analysis. The first and most influential was Hick's IS/LM model. While this at first received the approval of Keynes himself, it is doubtful if it captured the main thrust of the *General Theory*, as most notably Hicks (1980-1) later argued. (See also Leijonhufvud, 1987, for a discussion of some further limitations of the IS-LM analysis.) It is difficult to see much of Keynes's emphasis on the role of uncertainty and "animal spirits" in Keynes's (1937) "The General Theory of Employment" in the comparative static nature of the IS/LM model.

The neoclassical synthesis introduced an explicit consideration of the supply side, and by including the short-run neoclassical production function effectively emasculated the role of demand. The Keynesian argument that it was the volume of employment (determined by demand)

that determined the real wage could be dismissed as a failure to understand the simultaneity of the system. As Keynes admitted, unemployment had to be characterised by a real wage above the equilibrium rate, and a fall in the real wage *must* by the logic of the model lead to an decrease in unemployment. Conversely, for Keynesian unemployment to occur there must be some mechanism by which the real wage is made to rise - namely, rigid money wages in the face of a decline in the price level. The cure for unemployment was to drive up the price level and this was the role to which effective demand was relegated. To be fair, there is some exegetical support for this view in the *General Theory*, viz. Keynes's acceptance of the first postulate and his definition of involuntary unemployment. But I have argued that it is clear from his 1939 paper that,

notwithstanding this evidence, this was not what Keynes had in mind. The quantity-constrained models provide a more satisfactory interpretation by abandoning the first postulate and introducing imperfect competition. But these models are unsatisfactory to the extent that they assume the full utilisation of capital.

They also need an explanation as to why firms do not simply set the real wage at the point where the aggregate labour supply curve cuts the vertical demand for labour curve. (This is the real wage where firms can hire the desired volume of labour at the least cost.) Moreover, these models still give an undue importance to the Pigou effect. An alternative model was discussed which still retained the first postulate but allowed for variations in the utilisation of the capacity utilisation rate.

It is now becoming increasingly accepted that demand does matter. But does that mean that we can now simply spend our way out of a recession? The problem is that there is a hysteresis effect or asymmetry. A prolonged or deep recession leads not only to the underutilisation of capital but also to its scrapping and destruction. Unemployment leads to the loss of human capital or, in the case of long-term youth unemployment, to its failure to be acquired. Any return to full employment is likely to be a slow affair even with the reintroduction of Keynesian policies.

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