

Labor Market Coordination and Monetary Equilibrium: W. H. Hutt's Place in "Pre-Keynesian" Macro

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I. Introduction

Two major themes pervade the outstanding contributions of W. H. Hutt. The first is his attempt to clarify and advance our understanding of the coordination process of the market, especially the market for labor, and the second is his career-long critique of the Keynesian theoretical framework. It becomes quickly obvious from reading almost any of his books, and many of his articles, that those two themes were very tightly linked in Hutt's mind. It is fair to say that although his critiques of Keynes are both broad and deep, they rest fundamentally on the view of the labor market he first sketched out in *The Theory of Idle Resources* in 1939. Having clarified the nature of idleness, Hutt proceeded to show the problems which would result if inflation, rather than the "natural" price coordination process, was used to reduce the existing level of idleness, particularly in labor. Thus, Hutt's contributions to macroeconomics explore the intersection between monetary phenomena, such as inflation and deflation, and the microeconomic coordination process of the labor market.

In this essay, I place Hutt's work on the macroeconomy in the context of a group of thinkers with whom Hutt frequently identified himself, namely the Austrians, e.g., Mises and Hayek, and the so-called "monetary disequilibrium" theorists, e.g., Yeager, Clower, Leijonhufvud, and others.¹ What both of these groups have in common, and the concepts can be found both explicitly and implicitly in Hutt, are a Wicksellian appreciation for the importance of the relationship between money and interest rates and an understanding of the way in which monetary disequilibria, such as inflation and deflation, work their harm by distorting the *microeconomic* coordination process.² Both of these post-Wicksellian schools of thought have thoroughly explored the pervasive microeconomic discoordination, and concomitant idleness of labor and capital which results, caused by disequilibrium on the *money* side of the market. Hutt's unique contribution to this tradition in macroeconomics is having emphasized the pervasive discoordination created by *real*-side influences, such as the strike-threat, and having argued that attempts to rectify such problems through monetary policy will only exacerbate them. In what follows, I explore the post-Wicksellian monetary-theoretic framework from which Hutt worked and then examine Hutt's own theory of the labor market. The interaction between the two is found in Hutt's

critique of Keynes. I end with some remarks on how Hutt's price-rigidity theory can be seen as a third, nonmonetary, source of microeconomic discoordination revealed as idle capital and labor, complementary to the work of the Austrians and monetary disequilibrium theorists.

II. *Microeconomic Discoordination and Monetary Theory*

Where Hutt, the Austrians, and the monetary disequilibrium theorists agree is in the claim that it is in the microeconomic price coordination process that the effects of "macroeconomic" disturbances are found. If labor and capital are idle or sub-optimally allocated, it is because there is something wrong with the pricing process through which they come to be (optimally) employed. For all three perspectives, explanations of unemployment are not to be found in the relationships among economic aggregates but through the accuracy with which the market enables productive capital and labor to be priced correctly. The divergence between the Austrians and Yeager et al. on one side and Hutt on the other, arises from the *source* of those pervasive pricing errors. For Hutt, as shown in the next section, it is due to real-side factors, such as the strike-threat power of unions, which cause prices to be inappropriate. For the other two groups, it is excesses or deficiencies in the money supply which lead to problems with the microeconomic coordination process.

The understanding of the price-coordination process which underlies Hutt's work as well as that of the other two groups is a solidly Mengerian (as opposed to Walrasian or Marshallian) one. That is, all three clearly understand the competitive market as a process by which individuals come to discover progressively better uses for their resources through price signals. This emphasis on discovery and learning through prices and competition is best articulated in the work of Hayek (1945). Although many have taken Hayek's contribution to mean that *equilibrium* prices provide full and relevant information to market participants, others have argued more persuasively that the more fundamental message from Hayek's work has to do with the informational properties of *disequilibrium* prices (Kirzner, 1992; Thomsen, 1992). The epistemic role of money prices is to guide market actors through a world of error and uncertainty. Prices do so imperfectly, but they provide information that no other social institution can match. To the extent prices are allowed to move freely with changes in preferences, scarcities, and technologies, they will do the best job feasible in guiding the choices made by market actors with imperfect and diverse knowledge.

The importance of a process perspective is twofold. In attempting to explore the ways in which monetary disturbances affect the real economy, our attention will not be focused on the comparative statics of different equilibrium outcomes, but toward the process by which monetary disturbances create disequilibria and the subsequent misallocations which occur. In addition, a process perspective allows us to see the cumulative effects of real-side price rigidities, as Hutt discusses in his work on labor markets and Say's Law. Stipulating what the wage would or should be in equilibrium

is not the problem faced by employers and workers who are unable to make mutually beneficial contracts in the face of wage rigidities, nor is it the problem which occurs when such rigidities are removed and labor market actors must engage in a discovery process of finding mutually acceptable and wealth-enhancing wage rates. All three groups under discussion agree that it is central to understand the processes by which idleness arises and might be removed.

For the Austrians and the monetary disequilibrium theorists, money causes undesirable real effects (via price discoordination) when the banking system fails to maintain monetary equilibrium. Defining monetary equilibrium as the "equality of the supply of money and the demand to hold it at the existing price level," means that in monetary equilibrium it will also be true that the market rate of interest will be equal to the Wicksellian natural rate. From this Wicksell/Mises/Hayek starting point, the Austrians and the monetary disequilibrium theorists tell largely complementary stories about what happens when excesses or deficiencies of money push the monetary system out of equilibrium. To see why monetary disequilibria have real effects, it is necessary to recall that money's status as the generally accepted medium of exchange gives it some unique properties. Foremost among these is that money has no market, and hence no price, of its own.³ Every market is a money market, as virtually all goods and services trade against money.⁴ Sales of goods and services can equally be thought of as purchases of money. In Hutt's terms, all assets provide a yield of some sort, and in the case of money it is the service of "availability" which we invest in when we hold money balances. To sell a non-money asset to acquire money is to shift one's portfolio away from the services provided by the asset and toward more availability services.⁵

Because money has no market of its own and no price of its own, disequilibria in the money market are not isolated to that market. If the price of shoes is too high, implying a quantity supplied greater than the quantity demanded, microeconomic theory argues that the price will fall to clear the market. The correction of the original shoe market disequilibrium is almost completely accomplished through changes in the price of shoes, and the appropriate adjustment has few effects on other markets. With money, however, such disparities between supply and demand cannot be ironed out in one market. Excesses or deficiencies in the money supply have pervasive effects across all money-using markets. Recalling that the demand for money is a demand to hold real money balances, we can trace these pervasive effects. Suppose the supply of money is greater than the demand to hold it at the existing price level. Actors find themselves with more of their wealth in the form of money than they wish. They adjust their portfolios by spending the excess money balances on goods and services, and the result is rising prices. The rise in the price level, along with any wealth effects on the demand for real balances, will eventually establish a new equilibrium as both adjust to the higher nominal money supply. In the long run, the nominal money supply will satisfy the demand for real balances because of the higher price level.

There are two important points about this process. The first is that it is a *process*. Claims about the supposed neutrality of money frequently rely on comparative statics which look only at the starting equilibrium and the new equilibrium at the higher price level. In such a comparison, it is not obvious why the increase in the money supply matters. In the long run, any nominal money supply is compatible with monetary equilibrium, given a flexible price level. However, the issue is not the long run, but the adjustment process between equilibria. The damage of excesses or deficiencies in the money supply is done during the process by which the price level moves upward or downward. Assuming a flexible price level (and flexible individual prices) assumes away all that is of interest.

This brings in the second point — one crucial to seeing how Hutt's work relates to this monetary equilibrium tradition. The problem which occurs during the disequilibrium adjustment process is that changes in the price level must take place through changes in the prices of all of the goods which trade against money. That is, the "price level" is simply a composite of the myriad individual prices of goods and services. For the price level to change, all of those individual prices must change, and there is no reason to believe that each and every price will rise or fall in exact proportion to the excess or deficiency in the money supply. The particular path by which money is added or removed from the market and the unpredictable and differential wealth effects of additional money balances on the spending patterns of individual actors give us no reason to think that prices will all rise equiproportionately. The result is a distortion in the constellation of relative prices, what Mises (1966, p. 413) called a "price revolution." This price revolution implies significant resource misallocation, as prices are less tightly linked with consumer preferences and producers' assessments of costs and scarcities. The undesirable macroeconomic effects associated with both inflation and deflation are largely results of the way in which each one undermines the microeconomic pricing process. Idleness and misallocation of resources occur because market actors are unable, or less able, to rely on the price system to guide them in their attempts to discover what to produce and how best to produce it.

Without attempting an exhaustive description of the problems associated with inflation and deflation, it is worth briefly noting the specific ways in which each undermines the price coordination process.⁶ Inflation-induced movements in relative prices undermine their ability to provide knowledge to producers. Prices serve to signal producers about how best to undertake known processes of production, how well past processes were undertaken, and as prompters for the discovery of previously unknown production possibilities and processes. For all three roles to be effective, prices must be linked with both consumer preferences and producer costs and scarcities. As inflation causes prices to move because of the vagaries of the money supply process instead of the underlying costs and preferences, prices are less reliable in performing these epistemic functions. The result is resource misallocation as the wrong goods get produced by the wrong capital and incorrectly allocated labor. These misallocations of resources cannot be undone when inflation stops because

many of the resources expended in retraining or refitting inputs are irretrievable. Thus, inflation's major effects are in the way it garbles the communication process of the price system. Note also, as Hutt noted, that not all of this misallocation will show up in aggregate figures on employment and output. The problem is frequently not in the *level* of output and employment, but in its *composition*.

The problems associated with deflation are somewhat different. In the face of a deficient money supply, actors will attempt to sell non-money assets, or spend less out of current income, to replenish their deficient real balances. Either option tends to drive prices downward. The problem, however, is that producers may not be willing to cut output prices unless their input prices are falling as well. To the extent that wages are sticky downward, for whatever reason, producers are likely to respond to the slacking off of sales with a reduction in output, rather than a reduction in prices. In addition, even if producers believe that input prices will fall in the near future, no one may have sufficient incentive to be the first to reduce output prices while input prices are still high. The cumulative effect of these problems is, that during periods of an undersupply of money, output falls, unemployment is likely, and wages fall. The key here, again, is the price system. If prices were perfectly and evenly flexible downward, many of these problems could be avoided. However, they are not, and during the process by which the price level is falling to equilibrate money demand and the deficient nominal supply, not all prices will move downward with the same speed. The sluggishness of price movements has output effects and the result is a deflationary recession. Once again, it is noteworthy that the effects of the undersupply of money manifest themselves through the microeconomic pricing process.

The conclusion one can draw from this monetary equilibrium approach is that it is imperative to prevent such disequilibria in the money market. Any monetary regime which can maintain, or effectively penalize deviations from, monetary equilibrium, will avoid these kinds of problems. Hutt fits right into this monetary equilibrium tradition, as seen in his concept of monetary flexibility. For the monetary equilibrium theorists, keeping the supply of money equal to the demand to hold money was equivalent to keeping the market rate of interest equal to the natural rate, which, in Wicksell's terminology as well as Hayek's, meant that money was "neutral." Hutt (1975, p. 22) defines monetary flexibility as a policy where the money supply "can expand or contract sensitively, so as to be neither inflationary nor deflationary; and that means, in practice, when the market rate of interest is maintained at what is judged to be the non-inflationary, non-deflationary level (i.e., at the Wicksellian 'natural level')." In *The Keynesian Episode* (1979), particularly in Chapter 8, Hutt is more clear to link this to the equation of exchange, by arguing that M should move inversely to V (or what Hutt calls M_r , the "aggregate value of money in real terms"). If the monetary authority fails to respond appropriately to changes in V , inflation or deflation will develop, and Hutt (1979, p. 197) blames such outcomes on policy makers.

In arguing that monetary policy should aim at "monetary flexibility" or "monetary equilibrium," and that the ideal policy maintains the equality between the market

rate of interest and the Wicksellian natural rate, Hutt is placing himself within the broad monetary equilibrium tradition of such post-Wicksellian thinkers as most of the Austrians and the monetary disequilibrium theorists.⁷ Where Hutt differs from these two groups is in his explicit discussion of the relationship between monetary equilibrium and real-side price rigidities. As Hutt (1975, p. 73) put it: “Monetary flexibility’ (in contrast to ‘price flexibility’) alone is incapable of correcting the ‘automatic’ process which throws men and assets into idleness.” In other words, while monetary equilibrium may be necessary to avoid widespread idleness, it is not sufficient. Monetary equilibrium theorists would surely not disagree, but Hutt has taken the additional step of explaining how real-side price rigidities can lead to widespread idleness, even in the presence of monetary equilibrium, and how such the idleness resulting from such rigidities will not be reduced, and may well be exacerbated, if monetary equilibrium is not maintained. Hutt’s contribution is a natural extension of the monetary equilibrium approach.

III. *Labor Markets, Say’s Law, and Widespread Idleness*

As is the case with macroeconomics generally, Hutt’s major theoretical goal is to be able to explain the widespread idleness of labor and capital associated with events like the Great Depression. The cornerstone of Hutt’s explanation for idleness is a rejection of the aggregative analysis which characterizes most of macro from Keynes onward. As noted above, the source of idleness is to be found in pricing errors in the micro-economic market process. As he summarized it (1979, p. 44), Hutt’s view was that:

Pre-Keynesian anti-depression teachings are to the effect that unemployment (as a short-term phenomenon) and depression are due to a contraction of the flow of wages and other income through some discoordination of the pricing system. Discoordination is blamed on too many wage rates (and hence final prices) being fixed above market-clearing levels, that is, too high in relation to income or inconsistently with price expectations.

To explain this view, we need to unpack the two theoretical pillars on which it rests. The first is Hutt’s view of the nature of the labor market and the pricing process therein. The second is his understanding of Say’s Law. Together, these two sets of ideas can explain why idleness occurs and why small amounts of idleness can quickly snowball into depression. The relationship between this non-monetary explanation for depression and the monetary theories held by the Austrians and monetary disequilibrium theorists will be taken up in later sections.

Hutt’s theory of the labor market (and asset markets more generally) begins with an elementary insight: All value-producing assets are employable at some price. As for labor, Hutt argues that aside from the very young, the very old, and the infirm or insane, all human factors of production are capable of producing value.⁸ In more contemporary language, Hutt’s point is that, if the value of a worker’s marginal product is greater than zero, that person is worth employing at any wage up to that VMP.

The relevant wage calculation, of course, includes the costs of hiring and training the worker. Once all of those factors are taken into consideration, there is always some wage rate above zero at which it is worthwhile to employ any worker with a VMP above zero. Idleness, therefore, cannot be explained by some fundamental defect of freely operating labor markets.

Hutt makes one important addition to this rather standard factor market analysis. He is careful to clarify that it is always the *prospective* value of the marginal product which matters (1975, p. 93). Entrepreneurs cannot know with certainty what a worker’s marginal product will be, so they must rely on their expectations of that productivity when making wage decisions. It may well be true that over time the worker’s VMP will be discovered to be higher than originally expected, but entrepreneurs are in no position to know the future course of market events and can only set wages based on their expectations of that future in the present. It is also interesting to note that Hutt’s use of “prospective” marginal product and appreciation for the learning or “groping” process by which VMPs are discovered through the market is very Austrian. As Hutt (1975, p. 114, emphasis in original) points out, pre-Keynesians had “a realistic recognition of the dynamic character of the economic process — *clearer in the Austrian tradition than in the Marshallian* — and in particular an awareness of the importance of the continual revision of entrepreneurial expectations in response to continuous changes in the data.” Hutt recognized that his microeconomic explanation for idleness was, independent of his monetary theory, complementary to the Austrian approach.

Although Hutt (1977 [1939]) distinguishes among a number of different forms of idleness, in general they break down into three categories: (1) preferred idleness, (2) pseudo-idleness, and (3) price-driven idleness. The first category is straightforward: Some people simply have a strong preference for leisure and are willing to exercise it. The second category refers to workers or assets which appear to be idle but are actually producing something. One example is an “unemployed” worker who is actively engaged in a job search. Such searches are productive activity, “prospecting” as Hutt calls it, and the worker is therefore not truly idle. Other examples are balances of money or stocks of inventory. Both are “idle” in some physical sense, yet both produce the service of “availability.” That is, both are there waiting to be used when needed. We would not, analogously, wish to call a firetruck waiting in a fire station “idle.” Rather it is doing its job — being available when needed. The third category is the one of great theoretical and policy concern. This category lumps together a number of Hutt’s own categories, but what it generally is referring to is the idleness created when some or all of the factors of production are able to coercively maintain wages or prices above market-clearing levels. By forcing producers to pay all workers hired a wage greater than what would obtain in a competitive market, labor creates idleness both in those workers in the given industry who are not hired at the higher wage and in those workers in other industries who are let go because of the contraction of the wages and income flows which result. It is this last form of idleness which concerns Hutt the most.

To understand why idleness can lead to a cumulative effect on income and employment, it is necessary to understand what Hutt (1975, p. 3) calls "the most fundamental 'economic law' in all economic theory," namely Say's Law of Markets. In its crude and colloquial form, Say's Law is frequently understood as "supply creates its own demand," as if the simple act of supplying some good or service on the market was sufficient to call forth demand for that product. Surely such an understanding of the law is obviously nonsensical as numerous business and product failures attest. In a somewhat more sophisticated understanding, one which Keynes appeared to pin on the "Classical" economists, Say's Law is supposed to be saying that aggregate supply and aggregate demand will always be equal and equal at full employment. In one sense this is trivially true, a tautology. If we compare the actual (*ex post*) quantities of goods bought (demanded) and sold (supplied) they will always be equal. Whatever is sold by one person is bought by another. Presumably, however, Keynes thought the Classical economists meant something else, perhaps more along the lines of "market economies will never create general gluts or shortages because the income generated by sales will always be sufficient to purchase the quantity of goods available to buy." There is a strong sense in which this is true, but by itself it does not assure full employment because obvious examples of significant unemployment and unsold goods can easily be found.

A better understanding of Say's Law is to begin with a simple version of its insight: "Production is the source of demand." This implies that we can only have the power to demand goods from others if we ourselves can produce value with which we will demand. My ability to demand food, clothing, and shelter derives from the productivity of my labor or my non-labor assets. The lower (higher) that productivity, the lower (higher) is my power to demand. Hutt (1975, p. 27) states this as: "All power to demand is derived from production and supply. . . . The process of supplying — i.e., the production and appropriate pricing of services or assets for replacement or growth — keeps the flow of demands flowing steadily or expanding." Later, Hutt was somewhat more precise with his definition: "The demand for any commodity is a function of the supply of noncompeting commodities" (1979, p. 160). The addition of the modifier noncompeting is important. If I sell my services as a computer technician, it is presumed that my resulting demands will be for goods and services other than computer technician or similar services. The goods or services competing with those which I sell can always be obtained by applying my labor directly, so I am unlikely to demand them. The demand for my services as a computer technician is a result of the supplying activities of everyone but computer technicians.

This way of viewing Say's Law gets at the interconnections between the various sectors of the market. In particular, it makes sense of the claim that "the employment of all is the employment of each." As each worker finds employment, he or she is able to turn around and demand goods and services from all other noncompeting suppliers, creating the opportunity for their employment. From this perspective, Say's Law has nothing to do with an equilibrium between aggregate supply and aggregate demand, but rather the process by which supplies in general are turned into demands

in general. It is always the level of production which determines the ability to demand. In Hutt's more idiosyncratic language, the possession of productive assets enables market actors to demand those assets' "money's worth" from other sellers. Because all movements between supplying and demanding have to take place through the medium of money, it is somewhat oversimplified to say that production is the source of demand. Actually demanding products requires the possession of money, which in turn requires a previous act of supply. Hutt is careful to point out that the exchange of money for goods and services isn't the "spending" of money, unless the buyer is permanently reducing her stock of money. Money, for Hutt, is merely one asset in which we store wealth. It is a particularly convenient one because of its high liquidity which enables it to be exchanged for more preferred assets. What enables us to purchase is not the possession of money, *per se*, but the possession of productive assets which can fetch a "money's worth" on the market.

For Hutt, therefore, production takes place not when money is exchanged for an input, but when the input first obtains its productivity. For example, acquiring an education is an act of production which, ideally, can be traded for money when the worker wishes to demand other assets. What is ultimately happening in the market process are exchanges of production for production. The institution of money makes such exchanges easier and, by facilitating the process of price formation, provides a way for us to reckon the possible consequences of future actions and the success of past ones. But in one important sense, money is only a veil; the power to demand comes not from money, argues Hutt, but from the productivity of one's assets which can then be turned into money and then into other assets.

Say's Law helps to explain why a small amount of idleness can quickly multiply into widespread idleness. Suppose one sector of the economy is able to force wage rates above their market-clearing level. Firms will offer fewer jobs at the higher wage and the total wage bill paid out by the firms will fall. The wage flow lost by this withheld productive capacity means, via Say's Law, that the demand for noncompeting commodities will shrink. The reduction in demand in those industries will put downward pressure on wages there. If wage reductions are resisted in those industries, the level of employment and the flow of wages will fall, implying an additional round of reduced demands in industries which do not compete with the ones in question. To the extent that wage rates which are inconsistent with the existing level of income and entrepreneurial expectations are maintained, potentially productive workers will go unhired and those workers will be unable to, in turn, demand goods and services from firms (and their workers) in noncompeting industries. One original round of above-equilibrium wage setting can have multiplied consequences throughout the market. It is Say's Law which explains the multiplicative process.

This issue is discussed in more detail in the next section, but it is important to note at this point that the problem here originates on the supply side and not the demand side. Where Keynesian approaches would see the difficulty as an inability to demand (a lack of "aggregate demand"), Hutt's approach would argue that it is an

unwillingness to supply (at the market-clearing price) which starts the process. If, as Say's Law indicates, the ability to demand can only come from a prior act of supply, blaming insufficient aggregate demand begs the question. The power to demand can only be lacking if for some reason a productive asset has not been supplied. Given Hutt's starting point that all productive assets are hireable at some price, the most likely explanation for labor not being supplied is that something is preventing the market-clearing price from being reached. The depressive process must start with a barrier to price coordination somewhere in an input market. The more widespread such barriers are, the more quickly the depression will ensue when a need for a downward input price adjustment arises. In the next section I discuss the long run adjustments through which employment will recover.

Faced with the widespread idleness associated with a depression, the cure is to undo the sickness. If barriers to price coordination created the problem, then those barriers must be removed. If they are removed, the same Say's Law process which caused the cumulative reduction in output will now lead to an increase in the total flow of wages and a general recovery. When idle workers in one industry accept reduced wages and return to work, the total flow of wages will increase, and the newly employed workers' income becomes the demand for noncompeting commodities as well increasing industry's demand for complementary inputs. As the demand for those commodities rises, wages and the demand for labor will rise there, further increasing the wages flow and leading to further increases in demands in other industries. The more pricing barriers fall early on, the more quickly recovery will occur. In any case, true recovery will occur only when the barriers to labor price coordination fall and wages can be reduced so that they are in line with prospective marginal products. The speed of the wage adjustment varies inversely with the size of the adjustment necessary to restore the wage flow.

In Hutt's view, the widespread idleness that macroeconomics attempts to explain is better understood as a pervasive, and multiplicative, failure of inputs, especially labor, to be priced in a way consistent with their optimal usage. Whether through inertia, strikes, the threat of strikes, minimum wage laws, or other psychological or institutional barriers to more flexible (especially downward) wage rates, unemployment is fundamentally a microeconomic problem. The recent historical study of twentieth century U.S. unemployment by Vedder and Gallaway (1993) provides empirical support for Hutt's position. In summarizing the results of their model, they (pp. 33–34) say:

Higher adjusted real wages last year are associated with more unemployment this year. Rising money wages in the past year are associated with more unemployment, while rising prices and productivity (both lowering the adjusted real wage) are associated with lower unemployment. The model explains an impressive 90 percent of the variation in unemployment over time.

Casual empiricism also confirms this argument in very general terms by comparing the degree of labor market flexibility and unemployment rates found in Western European countries with those of the U.S. The more powerful unions, and more

intrusive labor market regulations, which typically characterize Western Europe, prevent the price flexibility necessary to avoid idleness in the face of shifts in the composition of output demands. The shift from manufactured goods to a service and information economy requires that workers in declining industries be prepared to accept wage cuts as the value of their marginal products decline. If they are able to coercively maintain the existing wage structure, increases in unemployment will surely follow. And, via Say's Law, their unemployment will reduce the demand for noncompeting commodities, and drag down wages (and potentially create unemployment) in those sectors. The cause of widespread unemployment is found in various barriers to wage flexibility.

IV. *Labor Markets and Monetary Disequilibrium: Hutt on Keynes*

The bulk of Hutt's work on "macroeconomics" has come in the form of his criticisms of Keynes, found implicitly in *The Theory of Idle Resources*, but mostly in *Keynesianism* and *The Keynesian Episode*. Because the latter book on Keynes is an updated revision of the former, I refer to it in elucidating Hutt's critique of Keynes. Hutt has numerous detailed criticisms of Keynes and the Keynesians. Rather than document these exhaustively, I focus on the broad contours of Hutt's critique and how they apply to the monetary equilibrium tradition Hutt employed.

According to Hutt, Keynes makes two central assumptions in arguing how deficient aggregate demand can lead to widespread idleness. First Keynes assumes that wages are rigid downward (or perhaps *ought* to be) and, second, that the money supply is effectively fixed, that is, monetary flexibility is absent. Hutt argues that Keynes' theoretical framework is constructed on these two assumptions, without ever asking whether institutional changes which would make those assumptions inappropriate might better address the problems Keynes tries to solve. For example, suppose entrepreneurs turn pessimistic. Because wage rates are based on prospective marginal products, these entrepreneurs will wish to reduce the wages of existing employees. If wages are unable to fall, either for institutional reasons or psychological resistance by workers, idleness will result and will spread through the Say's Law process. Keynesians see this as a problem of deficient aggregate demand triggered by the original pessimism of the entrepreneurs and the resulting fall in the demand for inputs. The implied Keynesian solution is to boost aggregate demand through government spending or inflation. To the extent that such spending is not matched by taxation, and therefore requires debt, Hutt argues that it is equivalent to inflation.

If the entrepreneurial pessimism is justified, then the proper result is a decline in wages. Resisting those wage reductions is ultimately a mistake for workers since idleness will result and the total wages flow will fall, reducing demand and wages and/or employment in noncompeting markets. If the pessimism was mistaken, markets contain a built-in correction mechanism which will kick in if workers accept the wage cuts. As entrepreneurs discover that their pessimism was unwarranted, the larger than expected demand for their product will put upward pressure on prices and

wages, driving wage rates back to the appropriate level. Once again, resisting the original wage cuts, even if entrepreneurs are mistaken, only creates more problems than accepting them. Although entrepreneurs may be in error, there is likely no one else in a better position to form accurate expectations of the future.⁹ The ultimate source of idleness is not deficient aggregate demand, but barriers to coordination through market pricing.

In another Keynesian scenario, it is the desire to hold money balances (liquidity preference) that is the source of deficient aggregate demand. As actors desire increased liquidity, perhaps because of pessimistic expectations, they may hold additional money balances rather than buying goods and services. In Keynes' eyes, this hoarding behavior reduces the flow of income and the withdrawal of spending power would slow production and idle workers. Hutt's response to this scenario is to ask why, *assuming price and monetary flexibility*, a change in the kinds of assets people wish to hold should cause a drop in output and employment. The key to this response is to recall Hutt's theory of the demand for money. Money is just like other assets in that it provides services to its holder. In addition, the proper task of the monetary authority is to provide additional amounts of money when the demand to hold it rises. In this view, it is not clear why the decision to invest one's wealth in money rather than, say, clothing or food, should matter, assuming proper monetary policy.

It is money's pervasiveness as the medium of exchange that appears to create trouble when there are changes in the demand to hold it. As actors hold more of their wealth in the form of money, they do indeed hold less of their wealth as non-money goods and services. However, that reduction in demand for non-money implies a fall in the prices of those non-money goods and services. That fall in final goods prices puts downward pressure on input prices, including wages. If, for whatever reason, wages do not fall in step with the decline in output prices, then the shift to additional money holdings leads to trouble as firms see costs remaining constant while revenues fall. Their likely recourse is to layoff workers, setting into motion the cumulative depressionary process explained by Say's Law. If input prices are free to fall with the falling output prices, then no change in overall wealth has taken place. Nominal wages are lower, but so are output prices, leaving workers' real incomes roughly the same with no increase in unemployment. The Keynesian scenario misses the real problem, which is the downward rigidity of wages, and therefore misses the easiest cure, increased wage flexibility. As Hutt (1979, p. 107, emphasis in original) saw it:

[W]hen the Keynesians . . . blame hoarding (liquidity preference), they are turning attention away from the failure of governments to tackle the problem of *unstable price rigidities*, that is, the unwillingness of governments to take the steps needed to permit prices continuously to reach a level at which further general price changes will be unexpected.

If one assumes irremovable downward price rigidities, then increases in the demand to hold money might well be a depressing influence. Putting that assumption up front, however, should make it theoretically contestable, rather than a given.

One aspect of this argument that Hutt glosses over too lightly is the role that alternative banking institutions might play in aggravating or remedying increases in the demand for money. Hutt rightly notes that a properly working banking system should supply more money when the demand to hold it rises. However, under modern central banking systems, if the demand to hold additional balances is an economy-wide phenomenon, we have to rely on the central bank to supply the desired liquidity. There is no reliable "automatic" process by which increases in the demand to hold money call forth additional supplies.¹⁰ This is because increased money holding can take the form of increased currency holding, which draws reserves out of the banking system, leading to a cumulative decline in the overall supply of money which only the central bank can offset. The institutional structure of central banking makes a policy of monetary flexibility very hard to implement successfully.¹¹

If actors wish to have additional liquidity by holding additional bank liabilities, such as deposits, they provide saving to the banking system which can be channeled into funds for investment. The increase in investment spending would offset the loss in consumption spending deriving from the increased liquidity preference. If savings and liquidity decisions are linked through the banking system, increased liquidity preference will not mean that *all* prices and wages would have to fall, rather only those in the consumer goods industries. The increased investment that results will drive up prices and wages in the producers goods industries. Hutt's fundamental point remains however: Wages, at least in the consumer goods industries, have to be flexible downward to prevent increased liquidity preference from causing unemployment. Even in the monetary regime described above, wages will have to fall somewhere when the demand for money rises, "Wise monetary policy *demands* nonmonetary coordination" (Hutt 1979, p. 126).

Hutt also argued that Keynes' explicit and implicit solution to the idleness created by price rigidities was also problematic. With Keynes unwilling to attack those price rigidities directly, he had to find a way to restore the income flow other than by allowing prices and wages to fall. That "other way" was to use inflation, either explicitly, or implicitly through debt-financed government spending. The withheld capacity created by nominal wages being held above their market-clearing values could be brought back into activity by increasing the money supply. The keys to the inflation-driven recovery process were the imperfect flexibility of prices going upward and the very same Say's Law considerations which explained the cumulative depression.

Hutt assumed that the additional supply of money would make itself felt first in the demand for and, therefore, the prices of outputs. Workers would not see the rising output prices, or would be unable to react to them immediately, leaving nominal wages to lag behind output prices. The difference between those two sets of prices effectively reduced the real wage from its above-equilibrium position, enabling firms to offer increased employment opportunities to workers who were shut out when prices fell and wages did not. As these workers are induced out of idleness, by their lack of recognition of the effect of the inflation on their real wages, their increased incomes

become the source of demand for noncompeting commodities, driving up prices and leading to more employment there. The Say's Law process continues until the price level rises sufficiently to bring most or all of the formerly idle labor back into activity. In Hutt's (1979, p. 154) words:¹²

Keynesian policy seeks to restore coordination by making it possible for people to afford to buy, not by enabling them directly to increase their contribution to real income, but by increasing the money valuation of their income in the expectation that this will cause an increase in the contribution of others to real income. . . . The increase in money income they recommend merely *circumvents* the disordinating rigidities by inflating income to meet inflated prices.

Hutt's explanation for the recovery process is a version of the Phillips curve story. Of course, it is important to note that the increase in employment and output depends on the pre-existence of idle resources created by price coordination barriers.¹³ At "full" employment with price and wage flexibility, inflation cannot create additional output and employment.

Why, then, does Hutt think the Keynesian inflationary solution is inferior to his own call for increased price flexibility? There are a variety of reasons for that conclusion, all of them relating to what Hutt sees as the inefficiency and injustice of inflation. Some of the inefficiencies associated with inflation were noted in the brief discussion earlier, and more can be found in the references cited there. In addition, workers will soon begin to adapt their expectations to the continuing inflation, frustrating the attempt to push output prices up ahead of wages. More generally, inflation is "a remedy which leaves the genesis of the disease [i.e., price rigidity] undisturbed" (Hutt, 1979, p. 157). The injustices associated with unanticipated inflation include the transfer of wealth from lenders to borrowers, the more general scrambling of market signals and the resulting inflation-induced windfall profits and losses accruing to entrepreneurs, and the tendency toward increased government control of the market which frequently accompanies it.

Hutt (1979, p. 158) also refers to the coordination generated by inflation as "crude coordination":

Such policies not only coordinate, they remove other pressures to coordination, and they create inducements to discoordinate. For instance, if organized labor knows that full employment of labor is guaranteed, demands for wage-rate increases will be relatively uninhibited. And if "employers" know that inflation will follow in order to enable them to pay the higher rates, they will tend to lose sight of their social duty to resist the fixing of wage rates by the threat of private force. Indeed, for such reasons, when inflation is generally anticipated, its coordinative effects are completely destroyed.

Again, inflation attacks the symptoms but not the disease. Hutt goes on to explain a deeper sense of "crude coordination" caused by inflation. If the original depression is set into motion by selected wage rates being held above equilibrium, with others, as a result, being held below, what assurance is there that the pattern of spending resulting from the increase in the money supply will restore all of the *individual wages* in

question back to their appropriate market-clearing levels? Suppose the wages in the shoe industry are coercively maintained above market-clearing levels. Hutt's solution is to remove the coercive barrier and let shoe wages drop to the appropriate level, with other input prices adjusting in turn.

Now suppose instead we resort to inflation to drive down real wages. At best, the fall in real wages can only be understood in some aggregative sense. The excess supplies of money which find their way into consumers' hands will be spent according to their preferences, which cannot be assumed to be identical to the preferences of the workers who would have had income to spend had prices been more flexible. Inflation may bring idle workers back into activity, but it does so driven by a pattern of consumption utterly different from that which would have occurred with price flexibility. There is no reason to expect that the market-clearing distribution of wage rates in the shoe industry after inflation will be identical to the one which would have been reached in the absence of pricing barriers.

The coordination created by inflation is in that way "crude." Hutt (1979, p. 111) rightly pointed out that one major problem with Keynes' theoretical apparatus, and most of the theory since then, was his over-reliance on aggregates, especially "the" price of labor:

When Keynes did think of this "price" having a crucial task, he seemed to assume that the adjustment required to induce full employment is an equal percentage reduction in all wage rates and secondly to assume that rises or falls in the general level of wage rates correspond to rises or falls in the general flow of wage receipts. Neither assumption is acceptable.

The kind of coordination that inflation can induce is only of this aggregate sort. It can drive up the price level so that the average level of wages is back to its pre-depression level. However, that average will mask a whole "wage revolution" which has created an economy very different from the one which existed previously. That wage revolution and the price revolution which goes with it entail significant irretrievable costs of transition, as labor is retrained and capital is refitted to meet the new, and false, structure of relative prices.

Although Hutt never really drives home the relationship, this argument illustrates beautifully the need for microfoundations and also shows, by its emphasis on the epistemic role of relative prices, Hutt's similarities to the Austrians (Horwitz, 1988). What inflation does is to set the market off into a discovery process different from — and less desirable — the one which would be set in motion by the removal of pricing rigidities. Although both processes might wind up in full employment, the composition of that employment, and its relationship to underlying costs and preferences, will differ radically. There is a parallel to Israel Kirzner's (1985) critique of regulation, which argues that much of the damage it does is by diverting the discovery process of the market onto a sub-optimal discovery path by throwing up barriers along some paths on which it would like to go. Both price rigidities and inflation do the same. However, inflation does not remove the barriers created by price rigidities, it

only adds more on top of them. This is one way to see the benefits of Hutt's solution: It directly attacks the problem by removing the barriers and allowing the market to head down the desired discovery paths.

The crudeness of inflationary coordination is linked to Hutt's term "sub-optimal full employment," which he claims is similar to Joan Robinson's term "disguised unemployment." What both are getting at is that, even if all resources are being utilized, they may not be utilized optimally. Hutt (1975, pp. 55–56) relates this notion to the ways in which idleness is subsidized:

If it were not for various ways in which idleness is subsidized, unemployment could not long persist. "Waste" would continue, and it could well be chronic waste, but productive resources would find other, less productive and less remunerative employment. The composition of the stock of assets would adapt itself, while displaced workers, and juveniles reaching working-age, would enter new or different occupations. When all resources . . . were employed in that manner, there would be "full employment" — although "sub-optimal employment."

The adaptations Hutt described are not costless, thus lowering overall wealth in comparison to an inflation-free economy with price flexibility. Inflation may bring idle inputs into activity, but the costs of using it to remove idleness are greater than those associated with price flexibility, even though, in the aggregate, both produce "full" employment.¹⁴ Once again, Hutt's focus on price coordination forces us to look beyond aggregates such as total employment, to see the composition of those aggregates and their relationship to total wealth and consumer preferences.¹⁵

V. Real and Monetary Sources of Idleness

In the end, how does Hutt's story of real-side discoordination fit in with the monetary explanations of idleness offered by the Austrians and the monetary disequilibrium theorists? The answer, I would contend, is that neither monetary equilibrium nor price flexibility *alone* is sufficient to prevent pervasive idleness and that both are necessary for truly full employment. The relevance of Hutt is that he persuasively argued that *even if monetary equilibrium is maintained*, pervasive idleness can still occur if price and wages are inflexible, particularly downward. To use our earlier example, even if a rise in the demand for money is accompanied by an increase in the supply, targeted to producers who borrow, prices in consumer goods industries will have to fall, and wages there along with them.¹⁶ If prices are inflexible or wages are maintained above market-clearing levels, monetary equilibrium cannot prevent widespread idleness.

Conversely, as Hutt seems to recognize, the degree of price flexibility that would be necessary to avoid idleness in the face of monetary disequilibria is probably beyond our ability to achieve. He (1979, p. 147) distinguishes between "perfect" price flexibility and "effective" price flexibility: "It is important to accept as a realistic assumption the existence of unstable price rigidities . . . [this is] the sort of flexibility which is empirically observable under appropriate conditions; that is, under

suitable economic policies." Even if the monetary system is as flexible as possible, which also will be less than perfect, and even if coercive barriers to price flexibility are removed, there will still be some irremovable amount of price rigidity left in the system. This may be nothing more than psychological resistance to price cuts, or a version of the prisoner's dilemma problem.

Suppose we have "effective" price flexibility and the demand for money rises without a corresponding increase in the supply. This deficient supply of money will put downward pressure on prices across the economy as actors restrain their purchases in order to increase their money holdings. If sellers (of final goods or labor services) resist, for psychological reasons, dropping their prices, they will have to cut back on production and layoff workers. Or, each seller may be hesitant to be the first to lower prices, even though if everyone else follows suit, no one seller will be worse off. However, the fear that others will balk, leads each individual seller to hesitate in lowering her selling price. Robert Greenfield (1994, pp. 3–7) refers to this as the "who goes first?" problem, and it can be seen as an example of a prisoner's dilemma game.

Moreover, even if prices are effectively flexible in both directions, excesses or deficiencies in the money supply do not affect all markets equally. The relative price effects of inflation that Austrians have long been concerned with have their counterpart in the ragged pattern by which spending is slowed during deflation. In both cases, even if prices are perfectly flexible, the constellation of relative prices which emerges after a monetary disequilibrium will not be the same as what would have taken place under monetary equilibrium. The process by which prices undergo this revolution is costly, involving waste, and the resulting set of relative prices and the allocation of resources that goes with it will reflect, in Hutt's terms, "sub-optimal full employment." Although not strictly idleness, this situation does involve waste in the same way that more obvious idleness does. Even if the real side is as flexible as possible, excesses or deficiencies in the supply of money can still precipitate idleness and waste.

It is around these issues that Hutt and Leland Yeager appear to be talking past each other. In his fine essay, "The Keynesian Diversion," Yeager (1973) argues that Hutt's contributions are quite similar to his own, except that Hutt downplays the possibility of monetary disequilibria being able to start the cumulative rot. Yeager emphasizes that an "adequate supply of money" can go a long way in preventing the scenario that Hutt lays out. Hutt's (1975, p. 64) response misunderstands Yeager's point by believing he is talking about using unanticipated inflation to restore the level of economic activity after a price-rigidity induced recession has begun. Instead, Yeager was making the argument that even if prices are reasonably flexible, an insufficient supply of money can set the same recessionary process into motion. The explanation is that anything less than perfectly flexible prices allows for the possibility that some prices will not fall appropriately during the transition from a monetary equilibrium with one nominal money supply to a second monetary equilibrium with a lower nominal money supply. Hutt (1975, p. 62) admits that deflation can "aggra-

vate" the cumulative withholding process, but appears unwilling to admit that it can initiate it. The argument of Yeager (1986), and other monetary disequilibrium theorists, is that deficient supplies of money can both aggravate and initiate the process, as long as prices are less than perfectly flexible. The Yeagerian explanation for the process itself, given that prices cannot fall to values consistent with the new, lower nominal money supply, is precisely the same as Hutt's. Bringing the two together, along with Austrian work on inflation, creates a reasonably consistent perspective on the possible causes and cures for the widespread idleness associated with recession and depression.

VI. Conclusion

As the search for microfoundations of macroeconomics has intensified over the last 25 years or so, macroeconomists have paid increasing attention to the economics of the labor market. Hutt's work on the labor market could provide the microfoundations of a macroeconomics which emphasizes a process perspective and the importance of psychological, institutional, and political rigidities in how that process plays out. The work of the Austrians and the monetary disequilibrium theorists has articulated a consistent vision of how disequilibria in the money market spill over into nonmoney markets and cause real disturbances therein. Along with Hayek's more general work on the informational properties of prices, Hutt's work on the price coordination process in labor markets, can provide a more complete theory of the pricing process which implicitly and explicitly underlies the macroeconomics of those two schools of thought. Aside from his contributions to labor economics per se, Hutt's work has implications for many fundamental questions in macroeconomics, as his life-long critique of Keynes illustrates. As modern macroeconomics continues its frustrating slide into complex, yet unrealistic, technique, perhaps Hutt's work will finally begin to get its due when more macroeconomists begin to look for a more institutionally rich and realistic theory of the labor market to serve as their microfoundations.

NOTES

¹On the Austrian theory of the business cycle, see Hayek (1966; 1967) and Mises (1966). On Austrian "macroeconomics" more broadly, see Garrison (1985; 1989). The monetary disequilibrium theorists' perspective can be found in Leijonhufvud (1981, Chs. 6 and 7), Yeager (1986), and Greenfield (1994). Assessments of Hutt's work from an Austrian perspective can be found in Horwitz (1988), Salerno (1991), and Egger (1994). Yeager (1973) includes a discussion of the relationship between his work and Hutt's.

²I have explored the relationship between these two groups in Horwitz (1996). The argument of that paper and this one are developed in more detail in my book manuscript, *Microfoundations and Macroeconomics: An Austrian Perspective*.

³To head off the most obvious objection: The interest rate is not the price of money, but the price of time in this Wicksellian perspective. In an important sense, money is simply the form in which we buy and sell time. Hutt (1975, p. 21) refers to using the phrase "the price of money" as "a slovenly use of language," and "to refer to the interest rate as 'the price of money' is worse than slovenly. The metaphor indicates a serious confusion of thought."

⁴This aspect of money is best articulated in Yeager (1968). Clower's (1970) famous "constraint" that money buys goods and goods buy money but goods do not buy goods in an organized market is another version of the same insight.

⁵For more on Hutt's view on money held, see Hutt (1956; 1979, Ch. 8) and Selgin (1987). Also, see Horwitz (1990) for an attempt to link Hutt's perspective to a broader Austrian conception of the market process.

⁶For a more complete treatment of these issues, see Wagner (1977; 1980), Leijonhufvud (1981, Ch. 9), Horwitz (1991), and Dowd (1996, Ch. 15) on inflation, and Yeager (1986), Greenfield (1994), and the brief discussion in Horwitz (1996) on deflation.

⁷One point of contention among monetary equilibrium theorists is whether a neutral money is one which should stabilize the price level or allow for the price level to move inversely to changes in productivity. Hutt falls on the price level stabilization side, as shown by his claim that monetary flexibility means that "an appropriate price index will oscillate within a narrow amplitude about a constant trend of zero" (1975, p. 22). Hutt also argues that the quantity MV should be adjusted to changes in T or Q term of the quantity equation. Productivity norm theorists argue that the changes in the price level caused by changes in Q are not problematic, where those price level changes which come from changes in aggregate demand are to be avoided. Dowd (1995) and Selgin (1995) address the major issues in this debate.

⁸It is worth noting that with advances in medical technology and the shift toward an information-based economy, the number of even very young, very old, or disabled persons who would be utterly unproductive is rapidly shrinking. Physical limitations which in previous times would have prevented one from being a productive worker may well be meaningless in an economy driven by brain power rather than muscle power, and even the very young and very old can operate computers.

⁹Of course Keynes did not accept this last claim: "I expect to see the State, which is in a position to calculate the marginal efficiency of capital on long views and on the basis of the general social advantage, taking an ever greater responsibility for directly organizing investment" (1936, p. 164). Keynes, however, overlooked the problems governments face in acquiring the relevant knowledge. Some of that knowledge may be very costly and some may be in a form that is not even obtainable. In addition, public choice considerations suggest that even well-meaning and well-informed political actors may face institutional incentives which favor their own interests over any long-run public interest.

¹⁰In fact, since the monetary authorities normally rely on macroeconomic data, such as employment and the price level, to tell them *ex post* how they have affected the macroeconomy, by the time they realize the need for such adjustments it is probably too late.

¹¹In a banking system where currency was also a bank liability rather than a reserve medium, increased liquidity preference in the form of holding more currency would not require a change in the overall level

