Reflections on Hayek's Business Cycle Theory

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Introduction

F. A. Hayek developed his business cycle theory in the 1920s when he visited the United States for the first time. Let me recall that after the so-called first postwar depression of 1920–21, the U.S. economy experienced a vigorous cyclical expansion. There were mild recessions in 1924 and 1927, but unlike in earlier cyclical expansions the price level remained stable. This stability made a great impression and it was widely assumed that the business cycle had at last been tamed, if not abolished. Hayek demurred; he argued that under the deceptively smooth surface of stable prices basic maladjustments were bound to develop that eventually would lead to a severe crisis.

Before examining the nature of these maladjustments—the key concept in his theory—let me briefly sketch the reactions to his theory.[1] After the onset of the Depression Hayek's business cycle theory received the attention it deserved. A milestone was his arrival in London in 1931 to give four famous lectures on the subject at the London School of Economics, which led to his appointment as professor. Fifty years after his theory was first put forward, the Swedish Royal Academy of Science cited it as one of the achievements for which he was awarded the Nobel Memorial Prize in Economics:

> Professor Hayek's contributions in the field of economic theory are both profound and original. . . . He tried to penetrate more deeply into the business-cycle mechanism than was usual at that time. Perhaps partly due to this more profound analysis, he was one of

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[1]Hayek's early essays, written in German, have recently been published in Hayek (1984a). His theory of the business cycle was developed in numerous publications; see especially Hayek ([1931] 1935, 1933, 1939, 1941, [1942] 1948, [1969] 1978).

> the few economists who warned about the possibility of the major economic crisis before the great crash came in the autumn of 1929.

At the London School of Economics, Hayek was the center of a small but influential group of economists who argued that the Depression should be allowed to run its course, that it was the inevitable consequence of the basic "maladjustments in the structure of production" that were the legacy of the boom. Correction of the maladjustments required reallocation of labor and capital, which takes time. They opposed government deficit spending and monetary expansion to deal with the slump. Other prominent members of the group were Lionel Robbins, Theodore Gregory, and Arnold Plant. Perhaps the best exposition of their views is Robbins's (1934) book *The Great Depression*. In today's terminology, Hayek's circle viewed the mass unemployment of the 1930s as classical or structural rather than Keynesian. This was most unfortunate for such a view conflicts not only with Keynes but also with the Chicago monetarist interpretation. Milton Friedman and Friedrich Hayek have much in common; both are staunch supporters of classical liberalism, but as far as money and the business cycle are concerned, they are far apart.

Before discussing Hayek's key concept, the "vertical maladjustments in the structure of production," let me make two further observations. First, Robbins later changed his mind and sided with Keynes and many others insisting that in a deep depression government deficit spending and monetary expansion are in order. In his autobiography Robbins presents a moving account of his struggles with Keynes over deficit spending and free trade, how he gave in on the first but stood his ground on free trade.[2] Robbins (1971, p. 154) notes: "I shall always regard this aspect of my dispute with Keynes [opposing expansionary policies to end the slump] as the greatest mistake of my professional career, and my book, *The Great Depression* . . . as something which I would willingly see be forgotten."

Second, Keynes, Robbins, and many others were correct: if a cyclical decline has been allowed to degenerate into a severe slump with mass unemployment, falling prices, and deflationary expectations, government deficit spending to inject money directly into the income stream is necessary.[3] Moreover, Hayek himself has changed his mind on this point.

[2]During World War II, Robbins collaborated with Keynes on postwar plans, and along with Marcus Fleming, James Meade, and Redvers Opie persuaded Keynes to give up protectionism and to return to his early liberal beliefs.

[3]Saying that Keynes was correct to recommend deficit spending during the Depression does not change the fact that Keynes's followers misapplied the theory during the

Where Keynes went quite wrong in *The General Theory* was to attribute the Great Depression of the 1930s to a basic weakness of modern capitalism, which, he maintained, suffered chronic oversaving and lack of investment opportunities. Later developments emphatically contradicted the secular stagnation theory. There can be no doubt that the exceptional length and severity of the Depression was due to horrendous mistakes of monetary policy that allowed the money supply to shrink by 30 percent. This is the view not only of the monetarists and the great Keynesian and biographer of Keynes, Roy F. Harrod, but also of Joseph A. Schumpeter who said that "avoidable" mistakes of monetary policy "turned retreat into rout."

Maladjustments in the Structure of Production

Other types of maladjustments different from those envisaged by Hayek frequently have been mentioned as causes of the Great Depression—to wit, maladjustments due to World War I and its aftermath, especially in Europe, territorial changes, high inflation, and growing rigidity of wages. Three influential documents took that position. The first was the report of the Gold Delegation of the Financial Committee of the League of Nations (1934), a group of highly respected financial and economic experts who labored from the summer of 1929 until 1932 to study the working of the international monetary system.[4] The second document was a report of the prestigious Royal Institute of International Affairs in London on *The Economic Lessons of the Nineteen-Thirties* (Arndt 1944). And the

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postwar period; they misinterpreted every dip in employment as Keynesian unemployment requiring massive spending. Keynes himself became concerned about inflation as early as 1937 (one year after the appearance of *The General Theory*), when he recommended in three famous articles in *The London Times* that it was time to shift the stance of policy from fighting unemployment to curbing inflation. See Hutchison ([1977] 1981). For a comprehensive discussion of Keynes's views on inflation, see Humphrey (1983, p. 38). In "Personal Recollections of Keynes and the 'Keynesian Revolution'," Hayek (1978, pp. 286–87), who had excellent personal relations with Keynes despite fundamental disagreements, commented on Keynes's later views on inflation:

> I have little doubt that we owe much of the postwar inflation to the great influence of such oversimplified Keynesianism. Not that Keynes himself would have approved of this. Indeed, I am fairly certain that if he had lived he would in that period have been one of the most determined fighters against inflation. About the last time I saw him, a few weeks before his death, he more or less plainly told me so.

[4]The Swedish economist Gustav Cassel was among the minority that issued "A Memorandum of Dissent" to the report. Cassel rejected the maladjustment explanation and pointed to several monetary factors—deflation in the United States, misalignment of exchange rates, reparations, and war debts—as the true causes of the Depression.

third was a large volume by Ingvar Svennilson (1954) entitled *Growth and Stagnation in the European Economy.*

The maladjustment explanations presented in these studies are entirely unconvincing; they cannot be reconciled either with what happened then or, especially, after World War II. Despite enormous war damage and dislocations, there was no depression. Modern capitalism had again shown its mettle. Thus, in the United States despite the large task of demobilization—dismantling the gigantic war machine and finding jobs for some 10 million former servicemen—economic recovery was accomplished rapidly with only a mild recession. Capitalism's strength was further exemplified by the German "economic miracle" which in but a few years lifted the German economy from the ashes of Hitler's Third Reich to a high level of prosperity. This was accomplished by Ludwig Erhard's abrupt abolishment of all wartime controls along with the currency reform of 1948.[5] Similar miracles were performed in Austria, Italy, and France. Members of the Mont Pelerin Society were the architects of these miracles—Erhard in Germany, Luigi Einaudi in Italy, Jacques Rueff in France, and Reinhard Kamitz in Austria.

This unprecedented revival was accomplished by market forces without central economic planning. But it is true that the European recovery could not have proceeded so rapidly and smoothly without U.S. aid under the Marshall Plan, and that the replacement of the gold standard by the Bretton Woods system and the tariff reductions under the GATT were essential for global recovery.

The story after World War I, on the other hand, was a little more complicated. The United States experienced a severe depression in 1920–21, but it was a financial and monetary affair having nothing to do with real maladjustments. The National Bureau of Economic Research registered short recessions from August 1918 to March 1919 and from February 1945 to October 1945. These recessions clearly reflect the transition from a war to a peace economy. But from 1922 or 1923 until 1929 the United States and Europe experienced satisfactory expansion.[6]

I now come to the Hayekian type of maladjustment. According to Hayek each cyclical upswing is marked by more or less intense

[5]Many of Keynes's radical followers, Lord Bologh, John K. Galbraith, and Walter Heller among them, denounced Erhard's dash for economic freedom as a recipe for economic disaster. See Hutchison ([1979] 1981).

[6]Britain was an exception. The ill-advised policy of returning to the gold standard at the prewar parity involved a 20 percent appreciation of sterling vis-à-vis the dollar from the level to which it had declined immediately after the war. Both Hayek and Keynes pointed this out.

inflationary pressures. Inflation depresses the rate of interest below its equilibrium level. This leads to overinvestment in the earlier stages of production or, in the Austrian (Böhm-Bawerkian) terminology, to an excessive lengthening of the "period of production" involving unsustainable "forced saving." The boom can be prolonged by ever-larger inflationary injections, but the longer it lasts, the more severe and painful the unavoidable crisis.

Explaining the Great Depression along these lines *prima facie* encounters a major obstacle: U.S. wholesale and consumer prices were, as we have seen, virtually stable during the crucial period 1921–29. Hayek and Robbins faced this difficulty squarely. Robbins (1934, pp. 48–49) put it this way:

> A stationary price level shows an absence of inflation only when production is stationary. When productivity is increasing, then, in the absence of inflation, we should expect prices to fall. Now the period we are examining was a period of rapidly increasing productivity. The comparative stability of prices, therefore, so far from being a proof of the absence of inflation, is a proof of its presence.

In other words, inflation ought to be defined not in terms of rising prices but in terms of a rising quantity of money. I would not deny that good reasons can be adduced for the proposition that a mild secular decline in the price level, reflecting the growth of productivity (rising output per man-hour), would be desirable on grounds of equity and efficiency.[7] Nevertheless, I find it difficult to believe that in the 1920s under stable prices gigantic maladjustments should have developed involving massive reallocations of labor.

I think that Robbins (1971, p. 154) later put it exactly right. "I do not exclude," he wrote, that "inappropriate investments fostered by wrong expectations" and by the stock exchange boom may have triggered the downturn. But these real maladjustments, whatever their nature, "were completely swamped by vast deflationary forces." These forces are often referred to as "secondary deflation." The center of the storm was deflation in the dominant U.S. economy. Germany became an epicenter of the crisis when Chancellor Heinich Brüning deliberately deflated the economy to get rid of reparations. On the international level, too, devastating policy mistakes intensified deflationary pressures around the globe. There was a protectionist explosion following the imposition of the skyscraper Smoot-Hawley tariff by the United States in 1930. Equally destructive was the piecemeal abandonment of the gold standard—the pound sterling in

[7]See, for example, Friedman (1969). This theme can be found in the monetary literature dating back to the 18th century.

1931, the U.S. dollar in 1933–34, and the gold bloc currencies in 1936.

In later writings Hayek (1974, 1975) has clarified and somewhat modified his views, coming to grips with the problem of secondary deflation. He still rejects what he believes is the basic mistake of Keynesian economics, namely, "that employment is a direct and simple function of what is called aggregate demand, and that by keeping aggregate demand at a sufficiently high level we can lastingly secure full employment" (1975, p. 4). In a later publication he goes so far as to say that "the whole notion that he [Keynes] has made popular, macroeconomics," must be "set aside."[8]

Hayek now says there are two exceptions to the rule that changes in aggregate demand do not affect the level of employment. The first one was "an accidental historic situation." In 1925 Britain made the mistake of returning to the gold standard at the prewar parity, which meant that real wages were too high. "In this situation," he wrote, "the restoration of employment required a reduction of real wages which could be achieved by a general rise of prices" (1974, p. 4).

"The second situation in which it is true that an increase of employment requires an increase in aggregate demand," Hayek (1974, p. 5) now maintains, "is found in the later stages of a depression when, in consequence of the appearance of extensive unemployment, the economy frequently is subjected to a cumulative process of contraction. . . . of secondary deflation, which may go on for a very long time." He concludes:

> I am today the last to deny—that, in these circumstances, monetary counteractions, deliberate attempts to maintain the money stream, are appropriate. . . . I have to admit that I took a different attitude forty years ago, at the beginning of the Great Depression. At that time I believed that a process of deflation of some short duration might break the rigidity of wages which I thought was incompatible with a functioning economy. Perhaps I should even then have understood that this possibility no longer existed. . . . I still believe that we shall not get a functioning economy until wages again become flexible, but I think that we shall have to find different techniques for that purpose. . . . Today I believe that deflation has no recognizable function whatever, and that there is no justification for supporting or permitting a process of deflation [1974, p. 5].

There remains the question of the comparative importance of structural unemployment due to maladjustments and unemployment caused

[8]Hayek (1984b, p. 23). Hayek delivered his lecture "The Flow of Goods and Services" on the occasion of the 50th anniversary of the first lecture he gave at the London School of Economics in 1931. The lecture will be published in English in Hayek's forthcoming book *The Fatal Conceit*.

by the secondary deflations. I believe that as far as the Great Depression is concerned Robbins was undoubtedly correct in maintaining that the former was "completely swamped" by the latter.

Hayek's answer to this question is difficult to follow.[9] He admits that when a cumulative process of secondary deflation has taken hold *in the late stages of a depression, unemployment* "becomes general" and is then curable by strengthening aggregate demand. However, he insists that "the primary cause of the appearance of *extensive* unemployment . . . is a deviation of the *actual structure of prices* and wages from its equilibrium structure, which brings about maladjustments and structural unemployment."[10] He acknowledges that the theory has "the unfortunate property of not being verifiable by statistical methods." In his Alfred Nobel Memorial Lecture, "The Pretense of Knowledge" ([1974] 1975) he argues at length that in economics there are many propositions that in principle—not because of insufficient data—cannot be verified or, we may add, falsified. He inveighs against "the modern fashion [that] demands that a theoretical assertion which cannot be statistically tested must not be taken seriously and has to be discarded."

This is not the place to go into the deep epistemological problems raised by Hayek's Nobel Lecture. The problem at hand is much simpler. It may be true that a sharp statistical separation of the comparative strength of the two factors is impossible, but there is sufficient evidence of a general nature to show that Robbins was right, that by far the largest part of unemployment in the Great Depression was caused by the avoidable secondary deflation. A 30 percent contraction of the U.S. money supply was bound to have catastrophic consequences. Further proof is that in the post–World War II period when there was no real deflation, unemployment never approached the levels of the 1930s.[11] On the basis of Hayek's theory one would have thought that in the postwar period, with inflation aggravating the destruction caused by World War II (which was much greater than in World War I), the maladjustments and price distortions would have been much greater than in the 1920s during the period of stable prices preceding the Great Depression. Yet, this was not the case.

[9]See Hayek (1974, especially pp. 6–7).

[10]Hayek (1974, p. 7), emphasis added. The term "structure of prices" in this sentence must be understood to include interest rates, that is, actual interest rates being pushed by monetary expansion below the equilibrium rate.

[11]The contrast between the 1930s and the postwar period becomes even more striking if one considers that the postwar unemployment in most countries contains a large percentage of "voluntary" unemployment, owing to generous unemployment benefits that did not exist in the 1930s.

Thus, the evidence supports Robbins's view that the structural causes of the Great Depression were completely swamped by deflationary forces.

There was no secondary deflation in the post–World War II period in the sense of falling prices. But spells of rising unemployment in recessions due to policies of disinflation (reducing the rate of inflation) can be regarded as a mild form of secondary deflation. Hayek is right that many Keynesians—not Keynes himself—misinterpreted these episodes as something much more serious, as incipient depressions that required strong expansionary monetary and fiscal measures. This belief did, of course, greatly contribute to the inflationary atmosphere in the postwar period.

The Ricardo Effect

Hayek has further developed his theory in several papers on the Ricardo Effect, which he first discussed in an important paper, "Profits, Interest and Investment."[12] Several years later, Hayek ([1942] 1948; [1969] 1978) elaborated on the theory in two papers reviewing the literature and answering his critics, including such heavyweights as Sir John Hicks and Lord Kaldor. He used as a motto a quote from Ricardo, which presents the Ricardo Effect in a nutshell: "Machinery and labour are in constant competition, and the former can frequently not be employed until labour rises" (Hayek [1942] 1948, p. 220). Hayek ([1969] 1978, p. 165) later wrote that he had chosen the name "Ricardo Effect" because "Schumpeter had referred to a more general and even less original aspect of my theory as the 'Hayek Effect'."[13] Hayek continued: "The theorem called the Ricardo Effect asserts that in conditions of full employment an increase in the demand for consumer goods will produce a decrease in investment and *vice versa*" (pp. 165–66). I suggest that this is not a felicitous formulation. If full employment is defined strictly, it becomes a tautology. But I shall not belabor this point. Instead I now state as clearly as I can what Ricardo had in mind and what Hayek really means.

In modern terminology the Ricardo Effect states that other things being equal—especially interest and profit rates—a rise in the level of real wages will induce a substitution of capital for labor, and that a decline in real wages induces a substitution of labor for capital. In

[12]This is the first paper in Hayek's impressive *Profits, Interest and Investment* (1939). The capital theory underlying Hayek's work has been developed in great detail in Hayek (1941). Also see Haberler (1941, pp. 481–91) for a discussion of the Ricardo Effect.

[13]See Schumpeter (1939, pp. 345, 812, 814).

the Hayekian (Austrian) terminology, the Ricardo Effect means that a rise in real wages will lead to the adoption of "more round about" methods of production, a "lengthening of the period of production." A decline in real wages leads to the adoption of "less round about" methods of protection, or a shortening of the period of production.

Hayek uses the Ricardo Effect to explain the upper turning point of the cycle. He assumes that during business cycle upswings real wages typically decline because prices rise faster than money wages. This was a widely accepted generalization. Keynes, too, thought this was the case. The decline of real wages leads to a shift in the methods of production, which reveals a maladjustment in the structure of production, involves a drop in investment requiring a reallocation of labor, and, thus, brings on the downswing (recession or depression).

The Ricardo Effect undoubtedly is an important and valid theorem, but I have difficulties with its application to the problem of the upper turning point of the business cycle. The main trouble is that the underlying empirical generalization that real wages typically decline during cyclical upswings is far from being firmly established. On the contrary, John Dunlop (1938, p. 241) in a careful and well-known study came to the conclusion that almost exactly the opposite is true: "Increases in wage rates have usually been associated with increased real wage rates, while decreases in wage rates have equally often been associated with a rise or fall in real wage rates."[14]

In view of this weakness of the underlying empirical basis, it is difficult to believe that the mechanism of the Ricardo Effect provides a general explanation of the upper cyclical turning point. This is, of course, especially true of the major turns, such as the one preceding the Great Depression.

I hasten to add that, otherwise, Hayek's Ricardo Effect is still alive and working, although it is rarely mentioned by name. Hayek is surely right that wage rigidity is a major problem in many countries, especially in Europe. In the last few years unemployment in Europe (except Switzerland) has been high, much higher than in the United States. More and more economists have concluded that the basic cause is that wages are too high. Overgenerous unemployment benefits and other welfare measures are the main reason.[15] The theme has been taken up in an expert report to the Commission of the European Communities (1984) in Brussels, which concludes that

[14]The problem has been discussed extensively, both before and after Dunlop's paper. I believe it is fair to say that Dunlop's findings still stand, perhaps with minor qualifications.

[15]Herbert Giersch has developed the theory in several papers. See especially Giersch (1985).

European industries have invested too much in labor-saving machines: "The EC countries spent some 20 percent of their gross domestic product on fixed investment in the past 10 years, compared with 16 percent in the United States. But the EC managed to increase GDP by only 1.7 percent a year compared with 2.3 percent in the United States." The report further concludes "that prosperity might be better served by employing human beings even if there is a machine that can do the same job [more cheaply]. Europe has actually gotten a poor return from heavy capital spending over the past decade." The Ricardo Effect is clearly at work, although it is nowhere mentioned by name.[16]

Hayek's Proposal for "Neutral Money"

In Hayek's theory, inflation is the disequilibrating factor. It depresses the rate of interest below its equilibrium level, which leads to an excessive and unsustainable lengthening of the period of production. In other words, investment exceeds voluntary saving; inflation imposes "forced saving" on the economy, which, according to Hayek, is unsustainable. It will be recalled, however, that in Hayek's theory inflation is not defined in the usual sense of rising prices but as an increase in the quantity of money, M.[17] The implication is that in a progressive economy the price level should be allowed to decline so as to reflect the secular growth of output and employment. If in a growing economy the central bank follows a monetarist policy of increasing the money supply to keep the price level stable, it imposes unsustainable forced saving. We have seen that this, according to Hayek, was supposed to have happened in the 1920s with disastrous consequences.

Constant money, therefore, is the ideal policy, the closest approximation to strictly "neutral money"—neutral to the real economy. Before examining the ideal policy more closely, however, it should

[16]The assertion that in some European countries real wages are too high has received a thorough econometric test in Artus (1984, pp. 249–302). Artus concludes:

> As far as the manufacturing sector is concerned, there are indeed strong reasons to believe that in France, the Federal Republic of Germany, and the United Kingdom the real wage rate is too high, in the sense of being incompatible with high employment. In particular, in these three countries we did not find any evidence that a large part of the actual increase in the share of labor costs in value added is warranted by long-run changes in production techniques, in the price of energy, or in the relative availability of labor and capital.

[17]It is not quite clear whether it is M or MV (nominal GNP) that should remain constant. But I shall not go into that question, nor will I discuss the question how it is to be defined and how changes in velocity are to be treated.

be mentioned that when confronted with the high inflation rates of the 1970s Hayek (1976) put forward another proposal as "a way to stop inflation," namely, "denationalizing money," breaking up the government monopoly of money creation. Many will regard this proposal as utopian and I will not discuss it further, except to say that it is clearly inconsistent with Hayek's earlier proposal for constant money and should be regarded as an interim measure to deal with an acute emergency.

I return to the ideal constant-money policy and compare it with the monetarist policy of aiming at stable prices. Consider an economy that grows at, say, 5 percent per annum. First, assume that the central bank pursues a monetarist policy of keeping prices stable by steadily *increasing* the money supply—in other words, by keeping interest rates lower than they otherwise would be—thus stimulating investment. That situation could be described as forced saving, but I see no reason why a *steady* stream of forced saving, the price level remaining stable, should be unsustainable. Most economists would, of course, agree that if the central bank expanded too fast and brought on price inflation, the process could get out of hand and the expansion become unsustainable.

Next, assume that in our growing economy Hayek's ideal policy of a constant money supply is pursued. In that case the price level would have to decline by, say, t percent a year, which would cause serious complications. To the extent that GNP growth is due to increasing employment rather than to productivity growth, the level of money wages would have to decline to preserve full employment. This would be a major stumbling block, because in the real world wages are and always have been sticky on the downside. This would be a serious matter even if a decline in the wage *level* could be avoided because in a dynamic economy changes in relative wages are necessary. It stands to reason that changes in relative wages are easier to accomplish if the wage level is allowed to rise, which would be the case if the price level remains stable; for in that case the change in relative wages would be accomplished by wages rising in prosperous industries rather than by lowering wages in lagging industries.

A steadily and predictably declining price level involves yet another difficulty. Consider, again, an economy growing at 5 percent per year and the price level declining at the same rate; assume as well that the marginal efficiency of capital (rate of return on real investment) is also 5 percent or more. Then the *real* interest rate must not be higher than 5 percent. But with prices declining by 5 percent, a real

interest rate of 5 percent or more translates into a nominal interest rate of zero or a negative rate.

If the nominal interest rate in this example has to be zero to keep the real rate in line, then the real rate of return on cash balances resulting from the decline in prices equals the rate of return on real assets; if a negative nominal rate is required, it signifies that the real return on cash exceeds that on real assets. That is, of course, a strong inducement, especially in the second case, to switch from real assets into cash; the demand for money increases. Such a development is highly deflationary and would have to be counteracted by monetary expansion. Consquently, Hayek's ideal policy rule would have to be breached to avoid a depression.

The possibility of economically disturbing shifts out of real assets into cash has been discussed in recent monetary theory, although not so far as I know in connection with Hayek's theory. For example, Harry Johnson (1969, p. 169) argued "that under certain conditions real investment might cease, if the rate of price deflation yielded a rate of return on real balances greater than that on real investment." Jerome Stein (1971) and Jurg Niehans (1978) have discussed the related possibility of a Keynesian type "liquidity trap" at zero interest.[18]

These theoretical exercises may give an exaggerated impression of the danger of large shifts out of real assets into money, but there is enough truth in them to warn us that what I called Hayek's ideal policy should not be pressed too far. This is all the more true, because we have seen that the monetarist policy of modest monetary growth to keep the price level stable and the steady stream of forced saving which it involves is quite sustainable.

Conclusion

Despite its difficulties, Hayek's business cycle theory is an impressive structure. It presents an ideal type but it should not be routinely applied to every cycle registered by the National Bureau of Economic Research. Each cycle is, after all, embedded in its historical environment and is thus influenced by all sorts of forces, both random and systematic. Therefore a somewhat eclectic approach to the problem is perhaps in order.

Consider for a moment the business cycle theory of another great Austrian economist, Joseph A. Schumpeter. The driving force in Schumpeter's scheme is, it will be recalled, the innovating entrepreneur. Business cycle upswings are typically characterized by out-

[18]Thomas Humphrey, the renowned historian of monetary theory at the Federal Reserve Bank of Richmond, brought the Stein and Niehans argument to my attention.

bursts of entrepreneurial activity, introducing new products and new methods of productivity. The result is, to use Schumpeter's colorful phrase, "creative destruction"; aided by inflationary bank credit, aggressive newcomers displace traditional producers. In view of the tremendous technological progress since the Industrial Revolution in England—despite occasional interruptions and much talk of "secular stagnation"—it is difficult to doubt that this often may be the correct interpretation of what happened. It should be noted that the Schumpeterian innovations may involve either a "lengthening" or "shortening" of the period of production in Hayekian terminology.[19] Schumpeter was fully aware that the cyclical mechanism, whatever it is, is subject to external disturbances. "[T]he darkest hues of cyclical depressions," wrote Schumpeter (1951), "are due to adventitious circumstances." For example, the exceptional severity and length of the Great Depression was due to avoidable monetary mismanagement which "turned retreat into rout." Hayek and Schumpeter both have unbounded faith in the productive power of capitalism and yet both are very pessimistic about the actual survival of capitalism.

In his *Capitalism, Socialism and Democracy,* Schumpeter (1942) predicted that capitalism was doomed, not because of its failures, but because of its economic successes. He wrote this book in the dark days during the war when faith in free enterprise and free trade was at its lowest in modern times. But he often said that there were "no economic reasons why capitalism should not have another successful run." He did not live long enough to see what he called "the capitalist method"—sound money and free enterprise—produce the West German economic miracle after the currency reform and the simultaneous abrupt abolition of all wartime controls by Ludwig Erhard in 1948.

Hayek's *Road to Serfdom* (1944), also written during the war, was too pessimistic, I believe, about the capability of present-day capitalism in most Western countries to adjust to maladjustments in the structure of production without causing intolerable unemployment. Excessive pessimism also appears in Hayek's later writings. In *Full Employment at Any Price?* (1975), for example, he refers to the inflationary excesses of the 1970s as "the present crisis." I do not wish to minimize the dangers of inflation. However, the experience of the 1980s both in the United States and Europe shows that inflation can be stopped without producing more than relatively mild recessions.

[19]It is a pity that Hayek never commented on Schumpeter's theory, nor Schumpeter on Hayek's. However, Schumpeter (1946) did write a little-known review of Hayek's *Road to Serfdom* (1944) in the *Journal of Political Economy.*

Finally, let us remind ourselves that Hayek's business cycle theory is only a small part of his enormous contribution to economics. His economic writings, in turn, are grounded in, and are part of, a unified *Weltbild* developed in numerous monographs and articles on psychology, political philosophy, philosophy of science, and history of ideas.

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