
Arthur F. Burns

The Anguish of Central Banking

Arthur F. Burns, who died on June 26, 1987, was Chairman of the Board of Governors of the Federal Reserve System from 1970 to 1978. The following article is a reprint of the address Dr.

Burns gave as the sixteenth Per Jacobsson Lecture, at Belgrade, Yugoslavia, on September 30, 1979. The Federal Reserve reprints the lecture as a memorial to Dr. Burns.

The international monetary system, which has been in almost constant turmoil during this decade, has benefited recently from several developments. Under the amended Articles of Agreement, the International Monetary Fund can exercise firm surveillance over the exchange rate policies of its members and is therefore now in a position to move the nations of the world toward a rule of law in international monetary affairs. Another promising development is the establishment of the European Monetary System, with the aim of maintaining relatively stable exchange rates within the Common Market.

A third positive development is recognition by the United States that the persisting deficits in its international current account must be eliminated, and that in the meantime decisive intervention to protect the external value of the dollar may well be needed. The conventional theory that a depreciating currency is beneficial to a nation's foreign trade and to its overall economic activity has lost its appeal within the American government. The officials concerned with economic policy have learned that whatever merit may in some circumstances attach to this theory, it is a dangerous guide for a country whose currency is still the centerpiece of the international monetary system. "Benign neglect" of the external value of the dollar came to an end dramatically, and I would hope irrevocably, in November 1978.

This and other constructive developments suggested earlier in 1979 that a closer approach to international equilibrium was under way, and calm returned for a while to foreign exchange

markets. But uneasiness about the monetary system, particularly about the future of the dollar, has continued and in fact intensified this summer. There have been ample reasons for concern—among them, the political convulsions in Iran, the enormous new increases in oil prices by OPEC, the narrowing at times of interest rate differentials between New York and foreign money market centers, and the limited progress in developing an effective energy policy in the United States. While all these factors contributed to nervousness, what has been most disturbing to foreign exchange markets in recent months is the reacceleration of inflation in the United States and in much of the rest of the world. Even Germany and Switzerland no longer qualify as islands of stability.

This unhappy development is one more indication, if any were needed, that the current instability in international finance is largely a consequence of the chronic inflation of our times and that stability will not return to the international monetary system until reasonably good control over inflationary forces has been achieved in the major industrial nations—and especially in the United States. This critical consideration at once raises serious questions: Why is the worldwide disease of inflation proving so stubborn? Why is it not yielding to the various efforts of the affected nations, including some determined efforts, to bring it to an end? Why, in particular, have central bankers, whose main business one might suppose is to fight inflation, been so ineffective in dealing with this worldwide problem?

To me, as a former central banker, the last of these questions is especially intriguing. One of the time-honored functions of a central bank is to protect the integrity of its nation's currency, both domestically and internationally. In mone-

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tary policy central bankers have a potent means for fostering stability of the general price level. By training, if not also by temperament, they are inclined to lay great stress on price stability, and their abhorrence of inflation is continually reinforced by contacts with one another and with like-minded members of the private financial community. And yet, despite their antipathy to inflation and the powerful weapons they could wield against it, central bankers have failed so utterly in this mission in recent years. In this paradox lies the anguish of central banking.

My aim today is to consider the causes of this paradox and its implications for the future. Much of what I say will inevitably reflect lessons that I learned during my service as Chairman of the Federal Reserve Board over an eight-year period that ended about eighteen months ago. This may be a good time to reflect on that experience; a year ago I was probably too close to it to have the necessary perspective, and a year from now the sharpness of my impressions may have begun to fade.

I shall focus mainly, although not exclusively, on the United States. That is the area that I know best, and I also believe the American experience—despite some unique aspects—is fairly representative of that of other industrial countries. The developing nations have their own characteristic sources and patterns of inflation. Nevertheless, in our interdependent world, economic conditions in the United States and other industrial countries are bound to have a significant bearing on the fortunes of developing countries.

By way of introduction, I might note that during much of the period since the end of World War II, overall economic developments were, in the main, satisfactory. By prewar standards, recessions were brief and mild through the mid-1960s, both in the United States and in other industrial countries; world trade expanded rapidly under a beneficent regime of stable exchange rates; and living standards rose impressively throughout the developed world. In most industrial countries inflationary pressures were troublesome from time to time—as in the immediate postwar years, during the Korean hostilities, and for a couple of

years after the mid-1950s. These pressures were more substantial in some countries than in the United States, but in none did inflation appear to be out of control.

From 1958 through 1964, the United States enjoyed a remarkable degree of price stability. During that stretch of six years, the wholesale price index remained virtually unchanged and the consumer price index rose at an annual rate of only a little more than 1 percent. And then the inflation that has ever since been plaguing the American economy got under way. Average wholesale prices rose at an annual rate of 2 percent from 1964 to 1968, 4 percent from 1968 to 1972, and 10 percent from 1972 to 1978. This pattern of accelerating price increases is found in other countries also, although rates of increase have varied widely, and in most industrial nations the acceleration began later—typically in 1969 or 1970.

Analyses of the inflation that the United States has experienced over the past fifteen years frequently proceed in three stages. First are considered the factors that launched inflation in the mid-1960s, particularly the governmental fine tuning inspired by the New Economics and the loose financing of the war in Vietnam. Next are considered the factors that led to subsequent strengthening of inflationary forces, including further policy errors, the devaluations of the dollar in 1971 and 1973, the worldwide economic boom of 1972–73, the crop failures and resulting surge in world food prices in 1973–74, the extraordinary increases in oil prices that became effective in 1974, and the sharp deceleration of productivity growth from the late 1960s onward. Finally, attention is turned to the process whereby protracted experience with inflation has led to widespread expectations that it will continue in the future, so that inflation has acquired a momentum of its own.

I have no quarrel with analyses of this type. They are distinctly helpful in explaining the American inflation and, with changes here and there, that in other nations also. At the same time, I believe that such analyses overlook a more fundamental factor: the persistent inflationary bias that has emerged from the philosophic and political currents that have been transforming economic life in the United States and else-

where since the 1930s. The essence of the unique inflation of our times and the reason central bankers have been ineffective in dealing with it can be understood only in terms of those currents of thought and the political environment they have created.

Historically, Americans have had deep faith in the concept of progress—in the idea that it was realistic to expect to better one's own lot and that of one's family in the course of a lifetime. During the greater part of America's history, government intervention in economic life was only peripheral. Personal progress was generally viewed as a reward for personal effort—assisted, perhaps, by good fortune. Provision for bad times or other contingencies of life was deemed prudent, but that was a private responsibility. The American's way through life lay along the road of self-reliance; only in extremity did he look to government or his neighbors for economic assistance.

This tradition of individualism was shattered by the cataclysmic events of the 1930s and 1940s. The breakdown of economic order during the Great Depression was unprecedented in its scale and scope, and it strained the precept of self-reliance beyond the breaking point. With one-quarter of the labor force unemployed, personal courage and moral stamina could guarantee neither a job nor a livelihood. Succor finally came through a political idea that was novel to a majority of the American people but compelling nonetheless—namely, that the federal government had a far larger responsibility in the economic sphere than it had hitherto assumed.

Under the New Deal the federal government undertook extensive projects of public construction and offered work relief as well. It gave direct relief to the needy—a function previously performed only by local authorities or private charity. It established unemployment insurance and old-age pensions. It took steps to raise wages and prices with a view to fostering economic recovery. And beyond these innovative actions, the federal government greatly extended the range of its regulatory activities. It intervened massively in the securities market, in banking, in the public utilities industry, in the housing market, and in the farm sector; and it gave labor unions broad new rights and powers. Together, these and

other New Deal measures laid the foundations of an activist government—a government responsible not only for relieving suffering and insuring against economic adversity, but also for limiting “harmful” competition, subsidizing “worthwhile” activities, and redressing unequal balances of market power. In less than a decade the government became a leading actor on the economic stage.

Just as Americans were persuaded during the depression that the federal government should help the unemployed, so they were taught by the experience of World War II to look to government to prevent unemployment in the first place. Under the compulsions of war, the government had demonstrated that it could assure gainful employment for every willing hand. It therefore seemed reasonable—and not only to the followers of Keynes—to expect government to do the same in a time of peace. In 1944, when President Roosevelt set forth the basis of his postwar domestic program in an “Economic Bill of Rights,” he put “the right to a useful and remunerative job” at the head of the list. With the war ended, the Employment Act of 1946 explicitly proclaimed the federal government's responsibility to promote “maximum employment,” and this came to mean “full employment” as a matter of law as well as popular usage.

Armed with the Employment Act of 1946, the government sought to demonstrate that it could combat unemployment with preventive as well as curative measures. In fact, the period from World War II to the mid-1960s was marked not only by a dampening of the business cycle but also by persistent increases in the prosperity of American families. On the one side, rising incomes, reflecting substantial gains in labor productivity, made possible rising consumption, greater leisure, and better provision for retirement. On the other side, a steady stream of new and often improved consumer goods tended to sustain the growth of aggregate demand. The extensive development of consumer credit institutions made it easier for people to acquire automobiles, household appliances, and other goods and services, the desire for which was continually being whetted by alluring advertisements and the illustrations of potential life styles broadcast by television and the movies. The

seemingly inexorable rise in living standards for the bulk of the population was reflected in upward trends in the proportion of families that owned their own home, that owned a summer home, that possessed one, two, and even three automobiles, that had telephones, that owned television sets, clothes washers, and food freezers; also in the proportion of the population that had graduated from high school and from college, that traveled abroad, that owned corporate stock, that carried life insurance, and so on.

This experience of economic progress strengthened the public's expectations of progress. What had once been a quiet personal feeling that the long future would be better than the past, particularly for one's children, was transformed during the postwar years into an articulate and widespread expectation of steady improvement in living standards—indeed, into a feeling of entitlement to annual increases in real income.

But the rapid rise in national affluence did not create a mood of contentment. On the contrary, the 1960s were years of social turmoil in the United States, as they were in other industrial democracies. In part, the unrest reflected discontent by blacks and other minorities with prevailing conditions of social discrimination and economic deprivation—a discontent that erupted during the “hot summers” of the middle 1960s in burning and looting. In part, the social unrest reflected growing feelings of injustice by or on behalf of other groups—the poor, the aged, the physically handicapped, ethnics, farmers, blue-collar workers, women, and so forth. In part, the unrest reflected a growing rejection by middle-class youth of prevailing institutions and cultural values. In part, it reflected the more or less sudden recognition by broad segments of the population that the economic reforms of the New Deal and the more recent rise in national affluence had left untouched problems in various areas of American life—social, political, economic, and environmental. And interacting with all these sources of social disturbance were the heightening tensions associated with the Vietnam War.

In the innocence of the day, many Americans came to believe that all of the new or newly discovered ills of society should be addressed promptly by the federal government. And in the

innocence of the day, the administration in office attempted to respond to the growing demands for social and economic reform while waging war in Vietnam on a rising scale. Under the rubric of the New Economics, a more activist policy was adopted for the purpose of increasing the rate of economic growth and reducing the level of unemployment. Under the rubrics of the New Frontier and the Great Society, broad-scale efforts were made to stitch up open seams in the fabric of affluence—inadequate or unequal education, housing, medical care, nutrition. Under the rubrics of civil rights and citizen participation, minorities and other disadvantaged groups were given political weapons to maintain, consolidate, and extend their gains.

The interplay of governmental action and private demands had an internal dynamic that led to their concurrent escalation. When the government undertook in the mid-1960s to address such “unfinished tasks” as reducing frictional unemployment, eliminating poverty, widening the benefits of prosperity, and improving the quality of life, it awakened new ranges of expectation and demand. Once it was established that the key function of government was to solve problems and relieve hardships—not only for society at large but also for troubled industries, regions, occupations, or social groups—a great and growing body of problems and hardships became candidates for governmental solution. New techniques for bringing pressure on the Congress—and also on the state legislatures and other elected officials—were developed, refined, and exploited. The Congress responded by pouring out a broad stream of measures that involved government spending, special tax relief, or regulations mandating private spending. Every demonstration of a successful tactic in securing rights, establishing entitlements, or extracting other benefits from government led to new applications of that tactic. Various groups found a powerful ally in the federal courts, which repeatedly struck down legislative or administrative limitations on access to government benefits. Even government employees, particularly at the state and municipal levels, discovered the pecuniary rewards of shedding genteel notions of public service and pressing economic demands with a strident militancy.

Many results of this interaction of government

and citizen activism proved wholesome. Their cumulative effect, however, was to impart a strong inflationary bias to the American economy. The proliferation of government programs led to progressively higher tax burdens on both individuals and corporations. Even so, the willingness of government to levy taxes fell distinctly short of its propensity to spend. Since 1950, the federal budget has been in balance in only five years. Since 1970, a deficit has occurred in every year. Not only that, but the deficits have been mounting in size. Budget deficits have thus become a chronic condition of federal finance; they have been incurred when business conditions were poor and also when business was booming. But when the government runs a budget deficit, it pumps more money into the pocketbooks of people than it withdraws from their pocketbooks; the demand for goods and services therefore tends to increase all around. That is the way the inflation that has been raging since the mid-1960s first got started and later kept being nourished.

The pursuit of costly social reforms often went hand in hand with the pursuit of full employment. In fact, much of the expanding range of government spending was prompted by the commitment to full employment. Inflation came to be widely viewed as a temporary phenomenon—or, provided it remained mild, as an acceptable condition. “Maximum” or “full” employment, after all, had become the nation’s major economic goal—not stability of the price level. That inflation ultimately brings on recession and otherwise nullifies many of the benefits sought through social legislation was largely ignored. Even conservative politicians and businessmen began echoing Keynesian teachings. It therefore seemed only natural to federal officials charged with economic responsibilities to respond quickly to any slackening of economic activity—at times, in fact, as in the early days of 1977, to sheer illusions of such slackening—but to proceed very slowly and cautiously in responding to evidence of increasing pressure on the nation’s resources of labor and capital. Fear of immediate unemployment—rather than fear of current or eventual inflation—thus came to dominate economic policymaking.

This weighting of the scales of government policy inevitably gave an inflationary twist to the

economy, and so too did the expanding role of government regulation. Traditional ways of protecting particular groups against competition—such as raising farm price supports, increasing minimum wages, and imposing import quotas—did not lose their appeal as inflation kept soaring. On the contrary, all these devices of raising costs and prices were liberally employed even in the face of accelerating inflation during 1977 and 1978. Also troublesome were the newer social regulations—those concerned with health, safety, and the environment—that kept multiplying during the 1970s. However laudable in purpose, much of this regulatory apparatus was conceived in haste and with little regard to the costs being imposed on producers. Substantial amounts of capital that might have gone into productivity-enhancing investments by private industry were thus diverted into uses mandated by the regulators. Improvements in productivity were also slowed by the discouragement of business investment that resulted from the increasing burden of income and capital gains taxes. Progress in equipping the work force with new plant and equipment proceeded much less rapidly during the 1970s than during the 1950s or 1960s, and this shortfall contributed to the productivity slump and thus to the escalation of costs and prices.

Additional forces on the side of supply contributed to the inflationary bias. As the income-maintenance programs established by government were liberalized, incentives to work tended to diminish. Some individuals, both young and old, found it agreeable to live much of the time off unemployment insurance, food stamps, and welfare checks—perhaps supplemented by intermittent jobs in an expanding underground economy. Even enterprising and ambitious individuals who sought permanent jobs could be more leisurely or more discriminating in their search when the government, besides pursuing a full-employment policy, provided a protective income umbrella during jobless periods. In such an environment, employed workers could demand and often achieve longer vacations with pay and more frequent holidays and sick leave, besides enjoying coffee breaks and other social rites on the job. In such an environment, they could afford to reject a pay cut or a small wage increase when their employer pleaded serious financial difficulties. Thus the number of individuals

counted as unemployed could rise even at times when job vacancies, wages, and the consumer price level were rising.

The philosophic and political currents that transformed economic life and brought on secular inflation in the United States have run strong also in other industrial countries. Rising economic expectations of people, wider citizen participation in the political arena, governmental commitments to full employment, liberal income-maintenance programs, expanding governmental regulations, and increasingly pressing demands on government for the solution of economic and social problems—all these became common features of the industrial democracies. And just as the rapid expansion of government activities in the United States was accompanied by persistent budget deficits and inflation, that too happened in other industrial countries. Indeed, other countries have often practiced loose governmental finance and inflation on a more intensive scale than has the United States.

And so I finally come to the role of central bankers in the inflationary process. The worldwide philosophic and political trends on which I have been dwelling inevitably affected their attitudes and actions. In most countries, the central bank is an instrumentality of the executive branch of government—carrying out monetary policy according to the wishes of the head of government or the ministry of finance. Some industrial democracies, to be sure, have substantially independent central banks, and that is certainly the case in the United States. Viewed in the abstract, the Federal Reserve System had the power to abort the inflation at its incipient stage fifteen years ago or at any later point, and it has the power to end it today. At any time within that period, it could have restricted the money supply and created sufficient strains in financial and industrial markets to terminate inflation with little delay. It did not do so because the Federal Reserve was itself caught up in the philosophic and political currents that were transforming American life and culture.

The Employment Act of 1946 prescribes that “it is the continuing policy and responsibility of the Federal Government to . . . utilize all its plans, functions, and resources . . . to promote maximum employment.” The Federal Reserve is

subject to this provision of law, and that has limited its practical scope for restrictive actions—quite apart from the fact that some members of the Federal Reserve family had themselves been touched by the allurements of the New Economics. Every time the government moved to enlarge the flow of benefits to the population at large, or to this or that group, the assumption was implicit that monetary policy would somehow accommodate the action. A similar tacit assumption was embodied in every pricing decision or wage bargain arranged by private parties or the government. The fact that such actions could in combination be wholly incompatible with moderate rates of monetary expansion was seldom considered by those who initiated them, despite the frequent warnings by the Federal Reserve that new fires of inflation were being ignited. If the Federal Reserve then sought to create a monetary environment that fell seriously short of accommodating the upward pressures on prices that were being released or reinforced by governmental action, severe difficulties could be quickly produced in the economy. Not only that, the Federal Reserve would be frustrating the will of the Congress, to which it was responsible—a Congress that was intent on providing additional services to the electorate and on assuring that jobs and incomes were maintained, particularly in the short run.

Facing these political realities, the Federal Reserve was still willing to step hard on the monetary brake at times—as in 1966, 1969, and 1974—but its restrictive stance was not maintained long enough to end inflation. By and large, monetary policy came to be governed by the principle of undernourishing the inflationary process while still accommodating a good part of the pressures in the marketplace. The central banks of other industrial countries, functioning as they did in a basically similar political environment, appear to have behaved in much the same fashion.

In describing as I just have the anguish of central banking in a modern democracy, I do not mean to suggest that central bankers are free from responsibility for the inflation that is our common inheritance. After all, every central bank has some room for discretion, and the range is considerable in the more independent central banks. As the Federal Reserve, for example,

kept testing and probing the limits of its freedom to undernourish the inflation, it repeatedly evoked violent criticism from both the Executive Branch and the Congress and therefore had to devote much of its energy to warding off legislation that could destroy any hope of ending inflation. This testing process necessarily involved political judgments, and the Federal Reserve may at times have overestimated the risks attaching to additional monetary restraint.

Any such errors of political judgment are extremely hard to identify; but I believe, in any event, that errors of economic or financial judgment have in practice been far more significant. In a rapidly changing world the opportunities for making mistakes are legion. Even facts about current conditions are often subject to misinterpretation. Statistics on unemployment in the United States provide a good example. Even before World War II ended, some economists were trying to determine how much frictional and structural unemployment would exist when the demand for labor and the supply of labor were in balance; in other words, the rate of unemployment that would reflect a state of full employment. Before long, a broad consensus developed that an unemployment rate of about 4 percent corresponded to a practical condition of full employment, and that figure became enshrined in economic writing and policymaking. Conditions in labor markets, however, did not stand still. A huge influx of women and young people into the labor force, the liberalization of unemployment insurance, the spread of welfare programs, the progressive lifting of statutory minimum wages, the increasing proportion of families having more than one worker, and the increase of national affluence itself—all these changes in the economic and social environment served to render the conventional 4 percent figure obsolete. The unemployment rate corresponding to full employment is now widely believed to be about 5½ or 6 percent, and the 1979 report of the Council of Economic Advisers appears to concur in that judgment. But governmental policymakers, while generally aware of what was happening in the labor market, were slow to recognize the changing meaning of unemployment statistics, whether viewed as a measure of economic performance or as a measure of hardship. The Federal Reserve did not escape

this lag of recognition, and, once again, I believe that other central banks at times have made similar mistakes.

While misinterpretations of unemployment statistics or other current information have consequences for all public policymaking, there are other problems of interpretation to which the central banker's calling is peculiarly subject. Monetary theory is a controversial area. It does not provide central bankers with decision rules that are at once firm and dependable. To be sure, every central banker has learned from the world's experience that an expanding economy requires expanding supplies of money and credit, that excessive creation of money will over the longer run cause or validate inflation, and that declining interest rates will tend to stimulate economic expansion while rising interest rates will tend to restrict it; but this knowledge stops short of mathematical precision.

Partly as a result of the chronic inflation of our times, central bankers have been giving closer attention to the money supply than did their predecessors; but they continue to be seriously concerned with the behavior of interest rates. They face difficult questions about the relative weight to be given to measures of money and interest rates in the short run and long run; about the concept or concepts of money that are most significant for policy purposes; about the interpretation of such developments as the growth of Eurocurrency deposits and credits; about the length and regularity of the lags with which changes in monetary growth rates influence business activity and prices; about the likely changes in monetary velocity as a consequence of institutional innovations and business cycle developments; and so on and on—as any student of central banking and monetary theory well knows. And there are more fundamental problems about potential conflicts between domestic and international objectives, about the appropriate response to exceptional events not encompassed by theory, and about the precise relevance of any theory based on past experience to a world where behavioral patterns are continually evolving.

It is clear, therefore, that central bankers can make errors—or encounter surprises—at practically every stage of the process of making mone-

tary policy. In some respects, their capacity to err has become larger in our age of inflation. They are accustomed, as are students of finance generally, to think of high and rising market interest rates as a restraining force on economic expansion. That rule of experience, however, tends to break down once expectations of inflation become widespread in a country. At such a time, lenders expect to be paid back in cheaper currency, and they are therefore apt to demand higher interest rates. Since borrowers have similar expectations, they are willing to comply. An "inflation premium" thus gets built into nominal interest rates. In principle, no matter how high the nominal interest rate may be, as long as it stays below or only slightly above the inflation rate, it very likely will have perverse effects on the economy; that is, it will run up costs of doing business but do little or nothing to restrain overall spending. In practice, since inflationary expectations, and therefore the real interest rates implied by any given nominal rate, vary among individuals, central bankers cannot be sure of the magnitude of the inflation premium that is built into nominal rates. In many countries, however, these rates have at times in recent years been so clearly below the ongoing inflation rate that one can hardly escape the impression that, however high or outrageous the nominal rates may appear to observers accustomed to judging them by a historical yardstick, they have utterly failed to accomplish the restraint that central bankers sought to achieve. In other words, inflation has often taken the sting out of interest rates—especially, as in the United States, where interest payments can be deducted for income tax purposes.

In addition to these direct effects of inflation, there are other effects that raise doubts about the meaning of particular growth rates of the monetary aggregates. I have in mind changes in financial practices that evolved in the United States during the 1960s—particularly during the bouts with tight money in 1966 and 1969—and that culminated in an explosion of financial innovations in the 1970s.

Many of these changes were facilitated by regulatory actions or the development of new computer technology. But the driving force behind them was the incentive that sharply rising

market interest rates gave to financial institutions and their customers to change their ways of doing business. Commercial banks responded to rising rates by economizing on non-interest-bearing reserves, and their customers responded by economizing on non-interest-bearing demand deposits. Both banks and large corporations developed new sources of funds in the Eurodollar market and the domestic commercial paper market. Banks developed new techniques of liability management by exploiting these sources as well as the vast potential of the federal funds market and the market for negotiable certificates of deposit. Other financial institutions—including savings banks, savings and loan associations, credit unions, and money market mutual funds—developed new transactions services in connection with customer accounts on which they paid interest. Banks fought this competition for transactions balances by offering large depositors special services that reduced the average level of balances they had to carry and by employing various ingenious means to pay interest on balances that were held in large part for transactions purposes.

Developments of these kinds have had profound consequences for the environment in which American monetary policy operates. Not long ago, the thrust of monetary restraint was conveyed more by reductions in the availability of credit—particularly residential mortgage credit—than by rising interest rates; at present, rising interest rates are the primary channel of restraint. This means that a higher level of interest rates is required to achieve any given degree of restraint—quite apart from the effects of inflation premiums that I discussed earlier. But how much higher is not clear; only time will tell. Not long ago, changes in M1, the familiar monetary aggregate confined to currency and demand deposits, reflected reasonably well changes in the aggregate volume of transactions balances; at present, with new alternatives to bank demand deposits emerging all the time, a lower rate of growth in M1 is required to achieve any given degree of restraint. But how much lower is not clear; only time will tell. Nor is it clear what other monetary aggregate, if any would be more serviceable than the traditional M1 as a monetary indicator. As a result of these effects of inflation, central bank-

ing has lost its moorings not only in interest rates: that has happened to a large extent also in the case of the monetary aggregates—certainly in the United States and perhaps in other countries as well.

There is no need to expand further on the opportunities for misjudgment that in recent years have surrounded policymaking at central banks. Some uncertainty, of course, has always characterized monetary policy, just as it has characterized policy decisions generally, whether in public or private life. It should be noted, however, that lags in recognizing some of the developments I have been discussing—with respect to unemployment rates, interest rates, and growth rates of the monetary aggregates—would tend to bias policy toward monetary ease. Moreover, the emergence of an inflationary psychology in industrial countries has imparted an asymmetry to the consequences of monetary errors, even if the errors themselves occurred as often in one direction as the other.

There is a profound difference between the effects of mistaken judgments by a central bank in our age of inflation and the effects of such judgments a generation or two ago. In earlier times, when a central bank permitted excessive creation of money and credit in times of prosperity, the price level would indeed tend to rise. But the resulting inflation was confined to the expansion phase of the business cycle; it did not persist or gather force beyond that phase. Therefore, people generally took it for granted that the advance of prices would be followed by a decline once a business recession got under way. That is no longer the case.

Nowadays, businessmen, farmers, bankers, trade union leaders, factory workers, and housewives generally proceed on the expectation that inflation will continue in the future, whether economic activity is booming or receding. Once such a psychology has become dominant in a country, the influence of a central bank error that intensified inflation may stretch out over years, even after a business recession has set in. For in our modern environment, any rise in the general price level tends to develop a momentum of its own. It stimulates higher wage demands, which are accommodated by employers who feel they can recover the additional costs through higher

prices; it results in labor agreements in key industries that call for substantial wage increases in later years without regard to the state of business then; and through the use of indexing formulas, it leads to automatic increases in other wages as well as in social security payments, various other pensions, and welfare benefits, in rents on many properties, and in the prices of many commodities acquired under long-term contracts. On the other hand, unintended central bank effects of a restrictive type do not ramify in similar fashion. To develop any significant momentum in unwinding inflation, they would need to be both large and repetitive—a combination that can hardly occur under prevailing conditions in the industrial democracies.

If my analysis of central banking in the modern environment is anywhere near the mark, two conclusions immediately follow. First, central banks have indeed been participants in the inflationary process in which the industrial countries have been enmeshed, but their role has been subsidiary. Second, while the making of monetary policy requires continuing scrutiny and can stand considerable improvement, we would look in vain to technical reforms as a way of eliminating the inflationary bias of industrial countries. What is unique about our inflation is its stubborn persistence, not the behavior of central bankers. This persistence reflects the fundamental forces on which I dwelt earlier in this address—namely, the philosophic and political currents of thought that have impinged on economic life since the Great Depression and particularly since the mid-1960s.

My conclusion that it is illusory to expect central banks to put an end to the inflation that now afflicts the industrial democracies does not mean that central banks are incapable of stabilizing actions; it simply means that their practical capacity for curbing an inflation that is continually driven by political forces is very limited. Historically, central banks have helped to slow down the pace of economic activity at certain times and to stimulate economic activity at other times. They have also contributed to economic stability by serving as lenders of last resort or even going beyond that traditional function. During this decade alone, the Federal Reserve moved on at least two occasions to prevent

financial crises that otherwise could easily have occurred. I have in mind particularly the failure of the Penn Central Transportation Company in June 1970 and the failure of the Franklin National Bank in October 1974. In the former case, the inability of Penn Central to refinance its outstanding commercial paper caused consternation among holders of commercial paper generally. To prevent a financial panic the Federal Reserve put aside its monetary targets for a while, opened the discount window wide, and changed its regulations so that commercial banks could raise funds in the open market to finance firms unable to renew their maturing commercial paper. In the Franklin National case, the Federal Reserve loaned to that troubled international bank almost \$2 billion; and while these advances were outstanding it was possible to arrange a takeover by another bank that protected the interests of Franklin's depositors and customers. These actions were influenced by a feeling of responsibility for the financial system as a whole—international as well as domestic. The central banks of some other countries, notably the Bank of England, have likewise discharged constructively the function of serving as lenders of last resort, and the entire concept of central bank responsibility has been both widened and clarified through discussions in recent years at the Bank for International Settlements.

All this and much more deserves to be noted about central banks—especially their tireless efforts to awaken the citizens of their respective countries to the economic and social dangers posed by inflation. But whatever the virtues or shortcomings of central banks may be, the fact remains that alone they will be able to cope only marginally with the inflation of our times. The persistent inflation that plagues the industrial democracies will not be vanquished—or even substantially curbed—until new currents of thought create a political environment in which the difficult adjustments required to end inflation can be undertaken.

There are some signs, as yet tenuous and inconclusive, that such a change in the intellectual and political climate of the democracies is getting under way. One of the characteristic features of a democracy is that it encourages learning from

experience. Recent disturbing trends in economic and social life, particularly the persistence and acceleration of inflation, have led to much soul-searching by leaders of thought and opinion. Among economists, the Keynesian school has lost much of its erstwhile vigor, self-confidence, and influence. Economists are no longer focusing so exclusively on unemployment and governmental management of aggregate demand. They are paying more attention to the management of aggregate supply—to the need to strengthen incentives to work and innovate, to ways of stimulating saving and investment, to the importance of eliminating barriers to competition, to ways of reducing the regulatory burdens imposed on industry, and to other means of bolstering business confidence. Many economists now recognize that much of reported unemployment is voluntary, that curbing inflation and reducing involuntary unemployment are complementary rather than competitive goals, that persistent governmental deficits and excessive creation of money tend to feed the fires of inflation, that the high savings rate that usually prevails in the early stages of inflation is eventually succeeded by minimal savings, and that when this stage is reached it becomes very much harder to bring inflation under control.

The intellectual ferment in the world's democracies is having its influence not only on businessmen and investors, but also on politicians, trade union leaders, and even housewives; for all of them have been learning from experience and from one another. In the United States, for example, people have come to feel in increasing numbers that much of the government spending sanctioned by their compassion and altruism was falling short of its objectives: that urban blight was continuing, that the quality of public schools was deteriorating, that crime and violence were increasing, that welfare cheating was still widespread, that collecting unemployment insurance was becoming a way of life for far too many—in short, that the relentless increases of government spending were not producing the social benefits expected from them and yet were adding to the taxes of hard-working people and to the already high prices they had to pay at the grocery store and everywhere else. In my judgment, such feelings of resentment and frustration are largely responsible for the conservative political trend

that has developed of late in the United States. And I gather from the results of recent elections elsewhere that concern about inflation and disenchantment with socialist solutions are increasing also in other industrial countries. Fighting inflation is therefore being accorded a higher priority by policymakers in Europe and in much of the rest of the world.

In the United States a great majority of the public now regard inflation as the Number One problem facing the country, and this judgment is accepted by both the Congress and the Executive Branch. Some steps have therefore been taken within the past year to check the rapid rise of federal spending, to lower certain taxes in the interest of encouraging business investment, and yet to bring down the still large budget deficit. Pressures to augment the privileges of trade unions have been resisted by the Congress. Some government regulations—as in the case of airlines and crude oil—have been eased. And even restrictive moves by the Federal Reserve, which not long ago would have stirred anger and anxiety in government circles, have been accepted with equanimity. Symbolic of the changed political atmosphere was the announcement of an increase in the Federal Reserve discount rate on the very day this July when a sizable decline of the nation's overall production was being reported for the spring quarter.

The present widespread concern about inflation in the United States is an encouraging development, but no one can yet be sure how far it will go or how lasting it will prove. The changes that have thus far occurred in fiscal, monetary, and structural policies have been marginal adjustments. American policymakers tend to see merit in a gradualist approach because it promises a return to general price stability—perhaps with a delay of five or more years but without requiring significant sacrifices on the part of workers or their employers. But the very caution that leads politically to a policy of gradualism may well lead also to its premature suspension or abandonment in actual practice. Economic life is subject to all sorts of surprises and disturbances: business recessions, labor unrest, foreign troubles, monopolistic shocks, elections, and governmental upsets. One or another such development, especially a business recession, could readily overwhelm and topple a gradualist timetable for curb-

ing inflation. That has happened in the past, and it may happen again.

If the United States and other industrial countries are to make real headway in the fight against inflation it will first be necessary to rout inflationary psychology—that is, to make people feel that inflation can be, and probably will be, brought under control. Such a change in national psychology is not likely to be accomplished by marginal adjustments of public policy. In view of the strong and widespread expectations of inflation that prevail at present, I have therefore reluctantly come to believe that fairly drastic therapy will be needed to turn inflationary psychology around.

The precise therapy that can serve a nation best is not easy to identify, and what will work well in one country may work poorly in another. In the case of the American inflation, which has become a major threat to the well-being of much of the world as well as of the American people, it would seem wise to me at this juncture of history for the government to adopt a basic program consisting of four parts. The first of these would be a legislative revision of the federal budgetary process that would make it more difficult to run budget deficits and that would serve as the initial step toward a constitutional amendment directed to the same end. The second part would be a commitment to a comprehensive plan for dismantling regulations that have been impeding the competitive process and for modifying others that have been running up costs and prices unnecessarily. The third part would be a binding endorsement of restrictive monetary policies until the rate of inflation has become substantially lower. And the fourth part would consist of legislation scheduling reductions of business taxes in each of the next five years—the reduction to be quite small in the first two years but to become substantial in later years. This sort of tax legislation would release powerful forces to improve the nation's productivity and thereby exert downward pressure on prices; and it would also help in the more immediate future to ease the difficult adjustments forced on many businesses and their employees by the adoption of the first three parts of the suggested program.

I wish I could close this long address by expressing confidence that a program along the lines I have just sketched, or any other construc-

tive and forceful program for dealing with inflation, will be undertaken in the near future in the United States or elsewhere. That I cannot do today. I am not even sure that many of the central bankers of the world, having by now become accustomed to gradualism, would be willing to risk the painful economic adjustments that I fear are ultimately unavoidable. I would therefore not be surprised if the return to reasonable price stability in the industrial democracies and thereby to an orderly international monetary

system is postponed by more false starts. But if political patience in individual countries is severely tested as that happens, the learning process will also be speeded. The conservative trend that now appears to be under way in many of the industrial democracies will then gather strength; and unless political leadership falls into irresponsible hands, the inflationary bias that has been sapping the economic and moral vitality of the democracies can finally be routed. □