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he Great Inflation of the late 1960s and 1970s was surely one of the defining moments of postwar economic history. After more than a decade of stable prices and relatively steady real growth, the United States, and indeed the world economy, embarked on a path of steadily rising inflation. By the end of the 1970s, inflation had reached levels unheard of in peacetime. Understanding the origins of the Great Inflation is a crucial task for modern economists and policymakers. Only by understanding how we went so far astray in the 1960s and 1970s can we be confident of avoiding the same fate in the future.

In his paper, Allan Meltzer provides his usual mix of probing insight and detailed narrative history. Meltzer makes several arguments about the factors giving rise to the Great Inflation. Some of them I agree with; some of them I do not. But, as is always true of his work, I learned a great deal.

Meltzer's key theme is that politics were crucial. The Great Inflation began and continued largely because monetary policymakers felt constrained to accommodate expansionary fiscal actions. More generally, monetary policymakers felt they needed to support the administration's and Congress's desire for low unemployment above all else. Added to this main idea, Meltzer stresses the impact of operating procedures. The need to maintain an "even-keel" during debt issues and an excessively short-run focus in monetary policymaking made concerted antiinflation policy difficult.

There is surely truth in Meltzer's politics hypothesis, especially for the late 1960s. But overall, I feel that Meltzer's analysis is too narrow. I believe that his painstaking analysis of the dayto-day details of policymaking has caused him to fail to stress the more fundamental determinants of policy mistakes in this era. In the 1960s and 1970s, it was not that the Federal Reserve was narrowly constrained by fiscal policy. Rather, both monetary and fiscal policymakers were constrained or driven by the misguided economic framework of the time.

IN DEFENSE OF THE IDEAS HYPOTHESIS

The view that economic ideas were the key source of the Great Inflation, and indeed most of the policy failures and successes of the postwar era, is one that my coauthor, David Romer, and I documented in a series of papers (see Romer and Romer, 2002a, 2002b, 2004). It is, as Meltzer notes, a view with many proponents, especially for the Great Inflation. Taylor (1997, 1999), Sargent (1999), De Long (1997), Mayer (1998), Orphanides (2003), Nelson (2004a,b), and Nelson and Nikolov (2004) have all provided evidence on the central role of economic beliefs. Since Meltzer argues that beliefs were only a small part of the story, I thought it would be useful to discuss the evidence for this alternative briefly and to answer some of Meltzer's challenges. I will then go on to discuss what parts of Meltzer's politics hypothesis I think are persuasive and what parts I feel are not.

In our papers, David Romer and I use much the same sources and techniques as Meltzer. We show the crucial role of ideas by reading the narrative record. We find that monetary and fiscal policymakers' economic views evolved drastically over time and that these views played a crucial role in the actions they took. In our analysis, the

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Table 1

Characteristics of Policymakers' Economic Framework in Different Eras

1950s	Inflation (π) caused by output above capacity. Normal unemployment (u) moderate. No permanent π - u trade-off.
1960s	Normal <i>u</i> low. Permanent π - <i>u</i> trade-off.
Early 1970s	Natural rate framework with low natural rate of unemployment (\overline{u}). π insensitive to slack.
Mid-1970s	Natural rate framework with moderate \overline{u} . π responds somewhat to slack.
Late 1970s	Natural rate framework with low \overline{u} . π insensitive to slack.

Great Inflation resulted from the replacement of the remarkably sensible economic framework of the 1950s with the fundamentally misguided framework of the 1960s. The inflation persisted throughout the 1970s because policymakers replaced one bad model of the economy with another.

Let me give a brief sense of the evolution of economic beliefs. (Table 1 summarizes this evolution.) In contrast to Meltzer, who views 1950s policymakers as largely rudderless, we find that policymakers in this decade had a basically sound, if relatively unsophisticated, view of how the economy functioned. They believed that inflation resulted when output went above a quite reasonable view of capacity or full employment. They also believed that, while expansionary policy could reduce unemployment below normal in the short run, the resulting inflation would certainly not lower unemployment permanently and might possibly raise it. For example, Federal Reserve Chairman William McChesney Martin said in 1958: "If inflation should begin to develop again, it might be that the number of unemployed would be temporarily reduced...but there would be a larger amount of unemployment for a long time to come" (Federal Open Market Committee [FOMC], Minutes, August 19, 1958, p. 57).

Because of these views, both monetary and fiscal policy were carefully tempered in the 1950s. On a number of occasions the Federal Reserve responded to rising inflation by orchestrating serious contraction.

In the 1960s, policymakers clearly adopted a different model. Estimates of a "reasonable and prudent" goal for normal unemployment were substantially reduced by the Kennedy and Johnson administrations and by the Federal Reserve (Council of Economic Advisers, 1962, p. 46). And, as has been stressed by a number of scholars, a belief in a permanent trade-off between inflation and unemployment briefly held sway. These views led to highly expansionary monetary and fiscal policies, and inflation and booming real growth resulted.

Around 1970, policymakers adopted a natural rate framework, but with an overly optimistic estimate of the natural rate. This view led to a half-hearted attempt at disinflation in 1969 and 1970. The result was that inflation was temporarily slowed, but not squelched.

Early in his tenure as Federal Reserve Chairman, Arthur Burns added the idea that inflation was relatively insensitive to slack. He concluded that "monetary policy could do very little to arrest an inflation that rested so heavily on wage-cost pressures. In his judgment a much higher rate of unemployment produced by monetary policy would not moderate such pressures appreciably" (FOMC, Minutes, June 8, 1971, p. 51). If tight monetary policy and the resulting unemployment were ineffective against inflation, there was no reason to pursue it. Because of this view, the Federal Reserve and the Nixon administration ran expansionary macroeconomic policy and advocated dealing with inflation through wage and price controls.

Economic views became substantially more sensible in the mid-1970s and, again, disinflation was attempted. Inflation fell substantially after the 1973-75 recession. However, with the election of Jimmy Carter and the appointment of G. William Miller as Federal Reserve Chairman, estimates of the natural rate were lowered and Burns's view that inflation was insensitive to slack returned with a vengeance. The first Carter *Economic Report of the President* stated: "Recent experience has demonstrated that the inflation we have inherited from the past cannot be cured by policies that slow growth and keep unemployment high" (Council of Economic Advisers, 1978, p. 17). The result was fiscal expansion and monetary policy inaction in the face of high and rising inflation.

This brief description of the "ideas view" of the Great Inflation points out a number of important elements. One is the notion of change. A crucial part of any explanation of the Great Inflation must be to show what changed in the 1960s that led the price stability of the 1950s to be replaced by persistent inflation. Our research, along with that of a number of other scholars, clearly shows that the economic framework took a radical turn.

This same notion of change explains why the policy mistakes were so persistent. Meltzer gives as one reason that he rejects the central role of ideas that it is implausible that bad ideas would have lasted 15 years in the face of the obvious continued rise in inflation. But, as we show, policymakers did learn. The Samuelson-Solow permanent trade-off view was rejected at the start of the Nixon administration. However, it was replaced by another flawed model: first by a natural rate framework with a very low natural rate, then by a natural rate framework with an extreme insensitivity of inflation to slack. It was this succession of misguided models that gave rise to repeated policy mistakes and persistent inflation in this period.

Here I should mention the very nice recent paper by Georgio Primiceri. Primiceri (2004) develops and estimates a model of learning for the 1960s on. He finds that this evolution of ideas that we think was crucial could have resulted from policymakers updating their framework along plausible dimensions in response to the macroeconomic developments in this period. For example, Primiceri finds that Burns's conclusion that inflation was insensitive to slack was a plausible way to revise the natural rate model given policymakers' priors and the inflation news of the time.

A second important element is the key role of ideas for both monetary and fiscal policy. The economic beliefs of policymakers in different parts of the government show close correlation over the entire postwar era. That both monetary and fiscal policy were expansionary in the late 1960s and 1970s does not mean that the Federal Reserve felt forced to accommodate fiscal policy. Rather, the two types of policymakers shared similar views about the sustainable level of unemployment and the ability of aggregate demand restriction to cure inflation.

The description also suggests how some other recent research fits into the ideas story. Athanasios Orphanides (2003) emphasizes errors in the measurement of the output gap as a source of policy mistakes in the 1960s and 1970s. But, misestimates of the output gap are not random or due to technical difficulties. They are fundamentally due to a flawed model of the economy. The belief in a permanent trade-off, along with data from the lowinflation environment of earlier decades, led policymakers in the 1960s to choose 4 percent as their goal for unemployment. A belief that inflation had become insensitive to slack allowed them to maintain this flawed view in the early and late 1970s despite rapidly rising inflation.

Edward Nelson (2004a,b, and Nelson and Nikolov, 2004) emphasizes what he calls the monetary neglect hypothesis as the source of the Great Inflation. This hypothesis holds that policymakers attributed inflation to supply-side factors and did not believe that monetary restraint could cure the resulting inflation. In our view, the emphasis on special factors was a symptom of policymakers' other misguided beliefs, such as an overly optimistic estimate of the natural rate: They had to invoke other factors because they did not believe demand was excessive. Moreover, the belief that monetary contraction was useless was the fundamental part of the neglect hypothesis. Even if the inflation had been caused by special factors, without the pessimism about the usefulness of slack, the obvious response would have been monetary contraction. We agree strongly with Nelson that this pessimism was the crucial source of policy inaction at key points in the 1970s.

STRENGTHS AND WEAKNESSES OF THE POLITICS HYPOTHESIS

Now that I have shamefully digressed and given my own view of where the Great Inflation

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came from, let me return to Meltzer's alternative view that politics were crucial. It is a view that I believe has some strengths, but also some important weaknesses.

Perhaps its most fundamental weakness is that it is too narrowly focused on the Federal Reserve. Suppose that Meltzer is completely right that the Federal Reserve felt constrained to support various administrations' expansionary fiscal policies. This story only pushes the mystery of the Great Inflation back a step. One is left to ask, Where did the drive for expansionary fiscal policy come from? Here, I believe, even Meltzer would assign a large role to ideas. Herbert Stein's classic book The Fiscal Revolution in America (1969) details the crucial role of economic beliefs in breaking down the traditional support for a balanced budget. And, as I have described, the changing beliefs among policymakers about the sustainable level of unemployment and the efficacy of recession for controlling inflation can explain why policymakers genuinely concerned about inflation could nevertheless have advocated fiscal expansion.

In terms of his description of Federal Reserve behavior, I feel Meltzer has provided crucial information about the late 1960s. As I have described, Chairman Martin had fundamentally sensible views about where inflation came from and the sustainable level of unemployment. And he did not change those views during his tenure. Nevertheless, he failed to act to stem the rising inflation of the second half of the 1960s. Meltzer has provided compelling evidence of Martin's quite limited support for true Federal Reserve independence and his deference to the White House.

However, my reading of the narrative record puts less emphasis on the narrow issue of the Federal Reserve supporting the various administrations' fiscal policies and more on supporting the administrations' economic frameworks and macroeconomic goals. In the 1950s, the economic framework of the Eisenhower administration largely matched that of Martin and the majority of the FOMC. In this environment, Martin had no difficulty standing up to Congress. He said in 1958: "If the System should lose its independence in the process of fighting for sound money, that would indeed be a great feather in its cap and ultimately its success would be great" (FOMC, Minutes, September 9, 1958, p. 53). But the Kennedy and Johnson administrations had thoroughly accepted the New Economics, as had a number of members of the FOMC and the Board staff. Martin, I believe, felt it was not appropriate to push his own views when so many around him believed otherwise. It is interesting that the minutes of the FOMC for the 1960s contain numerous discussions of the Council of Economic Advisers' beliefs and forecasts (see, for example, February 13, 1962, p. 5, and March 1, 1966, p. 44).

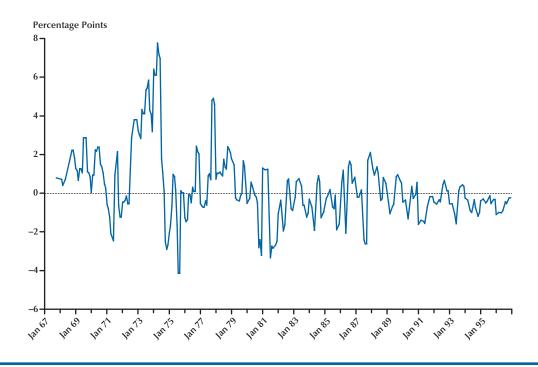
I would also put much less weight than Meltzer does on operating procedures as a source of Martin's policy mistakes in the late 1960s. Short-term emphasis in policymaking, lack of focus on monetary aggregates, and a commitment to maintaining interest rates during a Treasury debt issue were all factors that had been present in the 1950s. Yet, as Meltzer notes, the Federal Reserve had no trouble undertaking aggressive and successful disinflations after the Korean War and in 1958-59. Furthermore, Meltzer's argument that larger budget deficits in the 1960s made "even-keel" constraints more important seems to me implausible. The deficit-to-GDP ratio in 1959 was as large or larger than in most years of the late 1960s and early 1970s. The important change between the 1950s and the 1960s was the change in economic beliefs among fiscal and some monetary policymakers, which, for the reasons Meltzer discusses, Martin chose not to challenge.

While a slightly revised version of Meltzer's politics story can explain why Martin did not act to restrain the rising inflation of the late 1960s, this, of course, only brings us to 1970. That the moderate inflation of the late 1960s continued and accelerated for ten more years is in many ways the more important feature of the Great Inflation. I do not believe that the politics hypothesis is correct for most of this decade. I certainly do not feel that it is correct for Arthur Burns in the early 1970s. Meltzer quotes Burns's 1979 Per Jacobson lecture as evidence that Burns knew that monetary policy could have stopped the inflation of the 1970s, but felt unable to do so because of political constraints. I can't help but believe that there is

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Figure 1

Greenbook Forecast Errors for Inflation



a substantial amount of wishful revisionism in Burns's ex post account. The minutes of the FOMC for the early 1970s show no sign of a struggle between Burns's desires and the policies he advocated. Burns argued forcefully for expansionary policy, citing his belief that monetary contraction was useless. This was, importantly, an idea he had expressed many times before becoming Federal Reserve Chairman.

It is possible that political concerns were more important late in Burns's tenure. By the mid-1970s, Burns's economic framework seemed much more standard, and he testified that "we will need to rely principally on sound management of aggregate demand through general monetary and fiscal policies" to bring about a gradual return to price stability (Board of Governors, February 1974, p. 105). Nevertheless, after tightening during the 1974 recession and returning the inflation rate to an almost acceptable level, Burns led a rapid monetary expansion in 1977. The minutes give remarkably little justification for this action. I hope that Meltzer will turn his prodigious talents to explaining Burns's puzzling last hurrah.

In the case of G. William Miller, whom Meltzer does not discuss, I think there can be little doubt that he was acting as he saw fit. Miller genuinely believed that it was possible to "pursue a monetary policy that aims at a reduction of inflationary pressures while encouraging continued economic growth and high levels of employment" (Board of Governors, December 1978, p. 943). Miller, like Burns, acted in a way that supported the administration in office because he shared the same economic framework as the administration.

One way to try to get some empirical evidence on the issues that Meltzer raises is to look at the Federal Reserve's internal forecasts. Meltzer's political story implies that the Federal Reserve knew better—they understood that their actions in the late 1960s and early 1970s were inflationary (or at least not contractionary enough to curb inflation), but took them for political reasons. If this were true, one would expect their internal

Table 2

Natural Rate of Unemployment Implicit in Greenbook Forecasts

Era	Mean
Martin (1967:10-1970:01)	2.5%
Burns (1970:02–1975:06) (1975:07–1978:02)	3.1% 8.2%
Miller (1978:03–1979:07)	4.6%
Volcker (1979:08–1987:07)	8.0%
Greenspan (1987:08–1996:12)	6.7%

forecast errors for inflation to be reasonably small and unbiased. This is most definitely not the case.

Figure 1 shows the forecast errors for the Greenbook forecast of inflation two quarters ahead. (I am using the Greenbook forecast for the GNP/ GDP deflator and therefore use as the comparison series a real-time measure of the deflator. See Romer and Romer, 2002b, for more details on the comparison series and procedures.) The forecast errors during the Great Inflation were very large and nearly all positive. Federal Reserve forecasts, on average, underpredicted inflation just two quarters ahead by 1.2 percentage points. And, during the early Burns era, forecast errors of 4 percentage points or larger were common. Such large errors are more consistent with the notion that the Federal Reserve failed to curb inflation because its model of the economy was severely flawed, than that the Federal Reserve was constrained by fiscal policy or other political concerns. It is interesting to note that, even during the late Martin era, the inflation forecasts are severely overly optimistic, which is perhaps indicative of the idea that, while Martin may have had reasonable beliefs, many at the Federal Reserve (including the staff) had adopted the New Economics. This may help to explain why Martin found it hard to follow his personal compass.

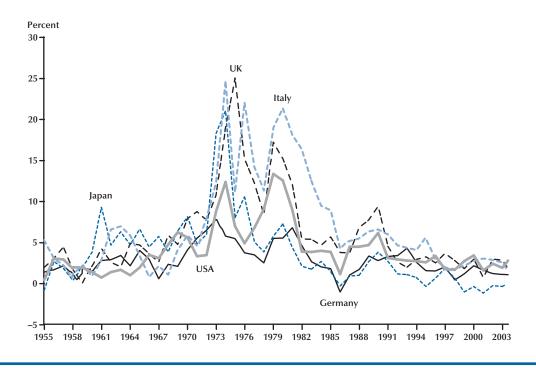
Another exercise one can do with the Greenbook forecasts is to infer the implicit estimate of the natural rate of unemployment. To do this, one has to make the somewhat heroic assumption that all forecasted movements in inflation result from forecasted deviations of unemployment from the natural rate. Thus, the estimates will inevitably be somewhat noisy and rough. (Again, see Romer and Romer, 2002b, for more details on this exercise.) The results, however, are striking and are given in Table 2. The implicit estimate of the natural rate averaged around 3 percent during the late Martin and early Burns periods. It rose substantially in the last three years of Burns's tenure, a time when his stated economic views also became more reasonable. These implicit estimates of the natural rate then fell to around 4.5 percent during the Miller era. These estimates (except for those late in the Burns era) are dramatically lower than almost any modern estimates of the natural rate for this period (see Staiger, Stock, and Watson, 1997) and lower than the implicit estimates in the Greenbook forecasts for the Volcker and Greenspan eras. That the Federal Reserve's internal estimates of the natural rate were so overly optimistic during the late 1960s and much of the 1970s makes it unlikely that they were chomping at the bit to tighten but were prevented from doing so by political concerns. Rather, the Federal Reserve was doing what it thought was right, given the beliefs that it held at the time.

A final consideration that forces me to guestion Meltzer's explanation of the Great Inflation in the United States is the fact that the inflation of the late 1960s and 1970s was worldwide. As Figure 2 makes clear, though the inflation may have started sooner in the United States, by 1970 it had enveloped all of the major industrial countries. (The data are from Global Financial Data and show the annual percentage change in the consumer price index for each country.) A story that focuses on the delicate relationship between the Federal Reserve and the executive and legislative branches or on the particulars of Federal Reserve operating procedures just seems too small. One inherently wants an explanation that crosses borders.

Now, Meltzer is surely right that some of the worldwide inflation was simply American inflation exported to other countries by the Bretton Woods system. Countries such as Japan and Germany were strongly committed to fixed

Figure 2

Inflation in Five Countries



exchange rates. As a result, when American inflation caused large trade surpluses for those countries, they responded, in part, by allowing inflation to rise (see, for example, Cargill, Hutchison, and Ito, 1997, and Johnson, 1998). It is also surely the case that Meltzer's politics story is right for some countries. For example, Fratianni and Spinelli's (1997) analysis of Italian monetary history stresses fiscal dominance and structural rises in the budget deficit as the key sources of Italy's unusually severe inflation in the 1970s. And, in a number of countries, there was surely at least some of the pressure toward cooperation with fiscal authorities that Meltzer thinks was important for the United States in the late 1960s.

But, for most of the key industrial countries, ideas played a more central role. Ideas, such as a belief that very low unemployment was sustainable or that inflation caused by supply factors won't respond to contractionary monetary policy, can easily spread across countries. And there is a growing body of research that suggests that such ideas fueled the inflation of the late 1960s and 1970s in a number of countries. Nelson (2004a,b), for example, has shown that policymakers in the United Kingdom, New Zealand, Australia, and Canada all subscribed to the belief that aggregate demand contraction could do little to cure inflation and so refused to adopt anti-inflationary monetary or fiscal policy. Johnson (1998) shows that the tenets of optimistic Keynesianism led German fiscal authorities to adopt quite expansionary policies between 1969 and 1973 (see also Kloten, Ketterer, and Vollmer, 1985, and Allen, 1989). And, as Meltzer notes, Germany and Japan resisted revaluation when the Bretton Woods system began to falter in the early 1970s because they feared the output consequences. What, other than a flawed model of the economy, would have led these two countries to believe that the overheated conditions could have endured and not given way to rising inflation?

Perhaps the strongest evidence that the Great Inflation in the United States and elsewhere was

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the result of ideas is the fact that ideas ended it. Countries with vastly different institutions, operating procedures, and fiscal situations successfully undertook painful disinflations and have maintained low inflation in the face of numerous shocks for almost two decades. One need only attend a meeting of central bankers to see that what is consistent across countries is the economic framework—nearly everyone subscribes to the fundamental beliefs that inflation is costly, capacity is limited, and inflation can be controlled by aggregate demand policy. It is these beliefs that fueled the Volcker disinflation in the United States and that broke the back of inflation worldwide. Like all good revolutions, the Volcker revolution was the triumph of better ideas over worse ones.

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