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Abstract: Friedman's Presidential Address was about "The Role of Monetary Policy". Its famous discussion of inflation-unemployment inter-relationships was subservient to this broader topic. The program it promoted influenced monetary policy in the '70s and early '80s with mixed results, but enough of it survived to be a clearly visible influence on today's inflation-targeting regimes.

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A Serious Question

My title poses a serious question. Smoothly written and well organised though it is, the theoretical argumentation of Milton Friedman's 1967 Presidential Address to the AEA (Friedman, 1968, henceforth the Address) is informal, and in one instance apparently inconsistent; its treatment of empirical evidence is impressionistic and, again in one instance, misleadingly imprecise; and it explicitly cites only seven publications, including two by Friedman.[1] Today's academic readers, were they unaware of its venerable reputation, might not take it very seriously. So: why the fuss?

The Address's Message and Style

Over the years a consensus, supported by Friedman himself, developed that the Address was primarily about the interaction of inflation and unemployment. [2] In his own words:

> "I introduced the concept of a 'natural rate of unemployment' to which the level of unemployment would tend whatever the rate of inflation, once economic agents came to expect that rate of inflation. To keep unemployment below the natural level requires not simply inflation, but accelerating inflation" (Friedman and Friedman, 1998, p. 230).

But, as James Forder (forthcoming) has recently argued, this reading is hard to sustain. These ideas occupy less than four of seventeen pages, Friedman did not mention them at all in one important subsequent publication, "The Counter-revolution in monetary theory" (Friedman 1970), and only obliquely in another, his "Theoretical framework . . ." (cf. Gordon (ed.) 1974). Furthermore, he entitled his Address "The Role of Monetary Policy", not "Unemployment versus Inflation?" (cf. Friedman 1975), and summarised its central message as follows.

> "By setting itself a steady course and keeping to it, the monetary authority could make a major contribution to promoting economic stability. By making that course one of steady but moderate growth in the quantity of money, it would make a major contribution to avoidance of either inflation or deflation of prices. Other forces would still affect the economy, require change and adjustment, and disturb the even tenor of our ways. But steady monetary growth would provide a monetary climate favorable to the effective operation of those basic forces of enterprise, ingenuity, invention, hard work, and thrift that are the true springs of economic growth. This is the most that we can ask from monetary policy at our present stage of

[1] On the above-mentioned inconsistency and imprecision, see Footnotes 5 and 4 below

[2] In the past, this author (e.g. Laidler 2012) has accepted this consensus.

> knowledge. But that much – and it is clearly a great deal – is clearly within our reach" (Friedman 1968, p. 17, also quoted by Forder)

Substitute "low and stable inflation" for "steady but moderate growth in the quantity of money", and this passage could fit comfortably into a routine speech delivered by any of today's inflation-targeting central bankers. And this substitution could find some justification in Friedman's own preceding arguments:

> "Of the three guides [for monetary policy] listed, the price level is clearly the most important in its own right. But . . . attempting to control directly the price level is likely to make monetary policy itself a source of economic disturbance . . . Perhaps, as our understanding of monetary phenomena advances, the situation will change." (Friedman 1968, p. 15)

Nor was Friedman's message entirely new in 1967. His audience would have recognised its basis in his *Program for Monetary Stability* (Friedman (1960, cited); and Forder argues that his Address was intended to present, yet again, the Chicago case for implementing monetary policy by "rules" as opposed to "authorities". Perhaps this overstates matters: without explicitly repudiating the idea, Friedman now made no mention of "hundred per cent money", and he downplayed proposals to constrain policy by a legislated rule, suggesting that "the monetary authority should *guide itself*," (p. 14, italics added). Thus in (1968) he sidelined the elements of his earlier program that required wholesale and politically impractical reform of monetary institutions, and emphasised those that were there and then feasible. By 1967, Friedman's metamorphosis from the detached and mathematically skillful winner of the 1949 Clark Medal into the politically engaged public intellectual we now mainly remember, was almost complete, and his Address was surely intended to persuade a large professional audience that the scientific work he had undertaken in the interim, which had often attracted ridicule, let alone skepticism, had in fact generated novel, but also practical and above all currently relevant, policy implications.

Friedman did not vary the substance of what he had to say for different audiences, but he did carefully adapt his style. The discomfort that his Address's expository looseness might cause among today's academic readers must be tempered by an understanding that it was not written for the eyes of contemplative researchers seeking new ideas upon which to build, but for the ears of a large mainly non-specialist crowd, many of whom would already be looking forward to their evening round of visits to hospitality suites. It was carefully crafted to pitch to this audience a particular message about how the monetary economy works, and what can be done about it; and in circumstances which, by convention, permitted no questions from the floor that might have challenged its scientific foundations, still controversial in December 1967.

Consider: by then Friedman and Meiselman's (1965) reply to critics of their CMC study had been in print for only two years, and his own (1966) paper defending his relative neglect of the interest elasticity of demand for money, not least in Friedman and Schwartz (1963a), for but one; the idea that expansionary monetary policy meant lower, not higher, interest rates was still entrenched in most macro-textbooks; and the notion that lower unemployment could be purchased at the cost of higher inflation, which had been bothering Friedman since at least 1960 (See Friedman 1962, p. 284, q. 2) had strong support in academic circles, though it was not yet influencing policy makers.[3] Seen in this context, the Address's bold but casual style and its dearth of explicit references to recent literature were more likely the calculated choices of a skilled intellectual entrepreneur trying to maximise his immediate persuasiveness, than symptoms of scholarly carelessness.

Monetary Policy's Evolving Status

Presidential Addresses are usually delivered at a time of others' choosing, so their authors frequently end up delivering not a polished account of a completed piece of research, but an interim summary of how far they have gotten with their chosen topic. And so it was that much of Friedman's Address was devoted to rehashing the development of the theory and practice of monetary policy over the preceding two decades or so, with particular reference to some of his own past contributions.

Four of its seven citations were to works of the 1940s, serving both as reminders of the low esteem into which monetary policy had fallen after the Keynesian Revolution, and as accompaniments to a brief account of its revival from the early 1950s onwards. Here Friedman told a story of how belief in the market economy's inability to ensure high employment without government support began to erode with the theoretical work of Haberler (1937) and Pigou (1943) (named but not cited) and culminated with his (and Anna Schwartz's) (1963a, Ch. 7) re-interpretation (again not explicitly cited) of the Great Contraction of the early 1930s as an example of the disruptive powers of badly executed monetary policy.[4]

Friedman also re-iterated his well-known skepticism about the efficacy of fiscal measures as means of coping with the residual instability inherent in the economy's workings, questioning both the reliability of their likely impact, and the flexibility with which they could be deployed. Here, with the memory of the

[3] See Forder (2014), who, like Nelson (2005), accurately denies that monetary policies at the beginning of the '70s were based on the Phillips curve. More controversially, Forder also disputes the idea's academic influence.

[4] In summarising events in the early 1930s, Friedman (1968) asserts that the monetary base fell during the contraction of 1929-33. In fact it fell only during the first year, and expanded thereafter, reaching a higher level in 1933 than in 1929. The money supply, however, contracted by over a third. This often-noted slip has led to much controversy, but since data constructed and published by Friedman and Schwartz (1963a) document the true record in great detail, it is hard to sustain any charge beyond expositional carelessness against Friedman.

Kennedy tax cuts of 1964 still recent, and the costs of the Vietnam War beginning to become apparent, he alluded in particular to the then deteriorating fiscal situation in the US and its accompanying political debate about the need for a tax surcharge, scoring one or two then-relevant debating points in the process. Strangely, however, he paid no attention to the theory and evidence supporting the claims to stability of the demand for money function that formed the very basis of his policy proposals. A single footnote declared that

> In principle, 'tightness' or 'ease' [of monetary policy] depends on the rate of change of the quantity of money supplied compared to the rate of change of the quantity demanded, excluding the effects on demand from monetary policy itself. However, empirically demand is highly stable, if we exclude the effect of monetary policy, so it is generally sufficient to look at supply alone" (Friedman, 1968, p. 7 fn 2.)

This was all he said on the topic, and that cryptic reference to "the effects of monetary policy" on the stability of the demand for money was left unexplained.

All in all, Friedman asserted, surely optimistically, that, by 1967, monetary policy had regained the degree of prestige among economists that he believed it had enjoyed in the late 1920s, to a point at which

> ". . . we are in danger of assigning to [it] a larger role than it can perform, in danger of asking it to accomplish tasks that it cannot achieve, and, as a result, in danger of preventing it from making the contribution that it is capable of making.
>
> Unaccustomed as I am to denigrating the importance of money, I therefore shall, as my first task, stress what monetary policy cannot do. I shall then try to outline what it can do and how it can best make its contribution, in the present state of our knowledge – or ignorance. (Friedman 1968, p. 5)

At this stage, Friedman stated specific conclusions about monetary policy's limits: namely, that it was incapable in the long run of pegging either the interest rate or the unemployment rate at values of the authorities' choosing. Thus he explicitly declared out of bounds two key goals that conventional wisdom (but by 1967 more in the second case than the first) still treated as both attainable and important. These conclusions followed from analysis of the role played by endogenously formed inflation-expectations in the dynamics of monetary policy's transmission mechanism, both as they affected nominal interest rates by way of the Fisher effect, and money wages and prices. None of this had been systematically discussed in his previous major accounts of the dynamics of monetary policy's transmission mechanism (e.g. Friedman 1960, or Friedman and Schwartz 1963b).

Natural Values, Endogenous Expectations and Monetary Policy's Limits

Much is often made of Friedman's deployment in his Address of the concepts of the "natural" rate of interest and of unemployment. But these were not new ideas, being simply the values that these variables would take when the economy was in equilibrium, and a Wicksellian "natural interest rate" would equate savings and investment, while a "'natural rate of unemployment' . . . would be ground out by the Walrasian system of general equilibrium equations". (Friedman 1968, p. 8).

Friedman's invocation of Wicksell here has provoked little controversy, but that of Walras has sometimes been interpreted as an approving nod to the perfectly competitive clearing markets that would soon dominate the "New-classical" economics of the 1970s. The sentence in which it occurs, however, also described those equations as follows: "there is embedded in them the actual structural characteristics of the labor and commodity markets, including market imperfections, stochastic variability in demand and supplies, the costs of gathering information about job vacancies and labour availabilities, the costs of mobility and so on" (Friedman 1968, p.8), while an accompanying footnote declared explicitly that the "'natural' rate need not correspond to equality between the number unemployed and the number of job vacancies" (Friedman 1968, p. 8, fn.). And then came a warning that "many of the market characteristics that determine [the natural rate's] level are man-made and policy made" (1968, p.9) accompanied by a non-trivial list of examples, both institutional and legislative. Friedman was thus a long way from Arrow-Debreu, as later deployed by New-classical economics. By (Friedman 1975) he had moved further in that direction, but this story is for another time.[5]

Now in Neo-classical macroeconomics, the labour market analogue to the natural interest rate (a price) is not the natural unemployment rate (a quantity) but the equilibrium real wage, and the real, as opposed to the money, wage does indeed play a crucial role in Friedman's story as the variable which the labour market determines. It was, he claimed, a "basic defect" of Phillips' work that linked money wage inflation to the unemployment rate (Phillips 1958 not explicitly cited) that it had failed to make this distinction. This was true, though Friedman ignored the many instances where it had been acknowledged in subsequent literature on "the celebrated Phillips curve" (p. 8), often when the problem of money illusion

[5] In (1975) Friedman developed the short-run Phillips curve as an aggregate supply curve, a component of a general equilibrium model of short run fluctuations in real variables. In (1968), he had treated such fluctuations as symptoms of "excess" demand or supply and stressed the empirical propensity for quantity responses temporally to precede those in money wages and prices; though there is also a pre-echo of his (1975) analysis in an (1968, p. 10) assertion that employment changes are made possible by agents' misperceptions of the significance of price changes. These two arguments seem to me to be inconsistent as to the timing of price and quantity changes See Laidler (2012) for a detailed discussion. For a more charitable interpretation, however, See Nelson (forthcoming)

was posed and judged to require an empirical rather than a theoretical resolution. The following quotation is illustrative:

> "One might have wondered why money rather than real wages are inserted as a variable into a labour market model. One answer is that it is unwise to commit oneself to a complete absence of money illusion in such a market" (Kaliski 1964, p. 5).

But Friedman differed from earlier commentators precisely in committing himself to just such an absence in the long run – over one or two decades, say - as he analysed in parallel the dangers of targeting either the interest rate or the unemployment rate.[6]

In each case, he argued, the optimistic pursuit of a target below its "natural" value (nominal in the case of the interest rate) would require monetary expansion which would then generate inflation. Hence, and crucially, because agents learn from experience and do not make persistent errors, expectations of further inflation would develop and drive it up further, in a perpetual and non-converging spiral. Such a state of affairs would not be sustainable, so policy, having done its damage, would have to change. Since Friedman explicitly insisted that the natural values of both the rate of interest and unemployment were unknown and prone to vary, he also concluded that it would be foolhardy to set quantified policy goals for either of them.

Striking as they were in their own right, the role of these arguments in Friedman's Address was to highlight "What Monetary Policy Cannot Do", as a prelude to an account of "What Monetary Policy Can Do" (pp. 11-14), which began with a quotation from Mill: "[Money] . . . is a machine for doing quickly and commodiously, what would be done, though less quickly and commodiously, without it: and like many other kinds of machinery, it only exerts a distinct and independent influence of its own when it gets out of order" (Mill, 1929 (sic!), p. 488, as quoted and cited by Friedman 1968, p. 12). To this Friedman added his own extension: "But money has one feature that these other machines do not share. Because it is so pervasive, when it gets out of order, it throws a wrench into the operations of all the other machines."

Depression and inflation alike were obvious consequences of such disorder, and here monetary policy's main task was to avoid creating them. However, he also conceded that ". . . the 1907 episode and earlier banking panics are examples of how the monetary machine can get out of order largely on its own" and cautiously envisaged a positive role for monetary policy makers "to suggest improvements in the machine . . . and to use [their] own powers so as to keep the

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[6] In (1975) Friedman discussed this question as follows: "The evidence is not quite all in. But there is a line of approach in analysis and reasoning which enables you to interpret, so far as I know, all the existing evidence consistently on the hypothesis of a long-run vertical Phillips curve" (pp. 29 – 30)

machine in good working order”. (1968, p. 13). Evidently in 1967 Friedman was not quite as uncritical an advocate of deregulated financial markets as his later reputation would suggest.

But we must not make too much of this. Friedman summarised his own arguments as follows: “The first and most important lesson that history teaches about what monetary policy can do – and it is a lesson of the most profound importance – is that monetary policy can prevent money itself from being a major source of monetary disturbance” (Friedman 1968, p. 12) ; “A Second thing monetary policy can do is provide a stable background for the economy – keep the machine well oiled, to continue Mill’s analogy” (p. 13); and “Finally, monetary policy can contribute to offsetting major disturbances in the economic system arising from other circumstances” (p.14). But he qualified the last possibility in the following terms.

> “I believe that the potentiality of monetary policy in offsetting other forces making for instability is far more limited than is commonly believed. We simply do not know enough to be able to recognise minor disturbances when they occur or to be able to predict either what their effects will be with any precision or what monetary policy is required to offset their effects” (p. 14).

What Happened Next

Friedman’s (1968) policy agenda could, technically speaking, have been adopted then and there, but politics dictated that the regime in place had first to fail before it could be superseded. In the early 1970s, fail it did, conspicuously, not only in the US, but also in other countries linked to the US through the Bretton Woods System.

There is no space here for details. It must suffice to note that in the early-1970s it became increasingly clear not only that the expectations-augmented Phillips curve which Friedman had informally described (and which had been independently and simultaneously developed with much more analytic thoroughness by Edmund Phelps e.g. 1967) could explain the basic facts of emerging “stagflation”, but also that the Fisher effect, to which he had paid an unusual-for-the-time amount of attention, could explain the simultaneous appearance of high and rising interest rates. And the rapidity and instability of money growth that accompanied these phenomena was also conspicuous. By the mid-1970s, then, monetary policies based on stabilising and then reducing the rate of money growth, deriving not only from Friedman’s proposals, but those of other, so-called “monetarists”, notably Karl Brunner and Allan Meltzer, were widely adopted right across what until 1971 had been the Bretton Woods world.[7]

As we all know, these policy-experiments did not last long in most places. But today’s commonly held judgement that this was because they comprehensively failed is too harsh. In West Germany and Switzerland, whose regimes had origins not just in the academic “monetarism” of the 1960s and ‘70s, but in local policy traditions associated with central bank independence, they actually did bring and keep inflation under control smoothly enough to survive into the 1990s, albeit tempered by much pragmatism. And even in jurisdictions where money-growth targeting was abandoned in the early ‘80s, this was not before marked falls in inflation rates had been experienced. The trouble was, though, that these came at costs in terms of unemployment and lost output far greater than the policies’ supporters had anticipated.

Yet again, space considerations dictate that selective assertion must substitute for carefully reasoned argument in explaining why this happened. To begin with – a legacy of Friedman’s Address, of Phelps (1967) and of much subsequent work on the expectations augmented Phillips curve that these inspired – it was already understood by the late ‘70s that the ease with which monetary contraction would bring down inflation would depend upon the extent of policy’s “credibility” among wage- and price-setting agents. The more widespread were initial doubts that even a carefully pre-announced strategy would be effective the slower would be its initial impact on inflation, which in turn would re-inforce such doubts, thus prolonging the problem. In practice, monetarist policy regimes, not least that instituted under Chairman Volcker in the US, encountered just such skepticism, spectacularly failed to eradicate it, and as a result, their impact on unemployment was not only severe but persistent.

Another effect was at work too, involving the influence of inflation expectations on the velocity of money, which, Phillip Cagan (1982) was early to identify.

> We are all aware . . . that if the problem of unemployment reflects a deceleration that is too fast, a slower deceleration would then give hardly any visible support to the policy of deceleration. A related problem concerns velocity during disinflation. An anticipated disinflation will reduce velocity, thus increasing the appropriate amount of money growth. An optimal disinflationary policy might not initially call for much of a monetary decline. But how is an announced policy of disinflation to be made credible without

[7] Friedman and Brunner and Meltzer paid surprisingly little explicit attention to one another’s work, and only seem to have been involved in a direct published exchange on one occasion, in Gordon (ed.1964). It remains a task yet to be tackled to sort out their respective contributions to “Monetarism”. See Brunner and Meltzer (1993) for their own retrospective account of their work.

> visible support? If credibility requires not just good intentions but visible support, and disinflation without pain requires credibility, the two may not be compatible." (Cagan 1982, p. 79)

Such effects should have been foreseen by the advocates of monetary contraction, because they amounted to no more than an application to falling inflation of phenomena which Cagan (1956) himself had earlier analysed so thoroughly for the case of rising inflation; and indeed, analytic diagrams relevant to the disinflationary case are to be found in Friedman (1969, pp. 16-17). But, to the best of my knowledge, the immediate contemporary policy implications here seem not to have been noticed in advance, let alone explored, by anyone. And later, in the US in particular, when policy shifted away from the control of money growth after 1982 and the money supply actually increased significantly in response to these pressures on the demand for money, even as inflation continued to fall, Friedman himself was conspicuously misled into predicting an imminent resurgence of double digit inflation (e.g. Friedman 1984).

Perhaps it was to such effects of monetary policy on the demand for money that Friedman had been so cryptically alluding in his (1968) footnote, but if so, he seems to have either forgotten, or at least seriously underestimated, them in the early '80s.[8] By the mid-80s, discussions of what soon came to be called this "re-entry problem" had become commonplace, but by then, earlier failures to appreciate its significance had done their work, and the policy agenda to which Friedman's Address had contributed so much, seemed discredited.

So, Why the Fuss?

Were this the whole story, though, we would not now be honouring that Address's fiftieth anniversary. In fact its message proved much more adaptable and durable than the first policy experiment that it helped to inspire. Just as Friedman had hinted, economists' understanding of monetary phenomena did indeed change after 1967, partly in reaction to subsequent events, and partly as a result of the workings of their discipline's internal dynamic.

From the painful experience just described, it was learned that Friedman's policy doctrine, designed as it was to support monetary stability, was harder to adapt than had been anticipated to the task of restoring such a state of affairs once it had been disturbed; and in particular, it was learned that there was much more to be said about the chances of policy induced (and other) instability in the demand for money interfering with its execution than his single footnote reference to this topic had hinted at. And systematic analysis of the nature of inflation expectations,

[8] Nelson (2007) argues that the overall evidence from Friedman's writings of the period supports the latter interpretation.

and their role in determining the economy's responses to monetary (and other) shocks would soon open up (among many other topics) an array of insights into the nature of monetary policy's credibility that had simply not been conceived of in 1967.

This is not the place to tell the story of developments in the theory and practice of monetary policy into the '80s and '90s; but note: first, that experience amply confirmed Friedman's skepticism about the extent of our knowledge of its dynamics; and second, that his ideas about those long run equilibrium interest rates and unemployment (and/or output) rates, to which he had attached the unfortunate label "natural", and about those deviations from them that came to be labelled "gaps", would, along-side new ideas about expectations and credibility, play a central part in the evolution in the 1990s of what came to be called "medium-term inflation targeting". This, of course, is why the paragraph quoted at the outset of this brief essay would fit with such ease, and so little modification, into a contemporary central banker's speech.

In short, Friedman's Address turned out to convey not just a message for its own time, but also one that would evolve and reverberate for long enough to make it instructive reading even today. Its informal style makes it is easy reading too. These are surely reasons enough to make a fuss about it, even after fifty years.

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