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Economic Ideas, the Monetary Order and the Uneasy Case for Policy Rules*

by

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Abstract: The problems posed by monetary policy cannot be dealt with by legislating enduring policy rules. With the passage of time, economic understanding does not systematically converge ever more closely on a “true” model of the economy, a process which is now sufficiently far along that our current ideas can form the basis for designing such measures. Rather, economic ideas evolve unsteadily and unpredictably and disagreement about them is routine. They influence the behaviour of the economy and they are influenced by it as they develop, requiring policy principles to adapt as well. Monetary policy thus poses problems that cannot be solved once and for all, but must be coped with continuously.

JEL Codes: E5, B1, B2

Key Words: Monetary Policy, Rules versus Discretion, Gold Standard, Revolutions in Macroeconomics

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Introduction

A market economy requires (among other things) a smoothly functioning system of monetary exchange if it to deliver efficiently allocated resources in the present and over time, incentives and opportunities for innovation that will enhance the productivity of those resources, and hence a rising level of social well-being, not to mention, as some would insist (See Taylor (2016) for a recent and powerful example) a firm foundation for a free society. Nowadays, the task of keeping monetary mechanisms working is usually assigned to a central bank, perhaps operating in conjunction with other governmental institutions, and its successful execution should not be taken for granted. That is why questions about the desirability of imposing rules on the design and/or implementation of monetary policy are worth discussing.

As will become apparent, I am skeptical about subjecting today's monetary authorities to rules that would thereafter be fixed in place over a long horizon, let alone in perpetuity. The qualifying phrase here is important, because word "rule", as deployed monetary economics, is anything but precisely defined. At one extreme it refers to a legally binding, even quasi-constitutional, constraint placed on, or goal assigned to, the conduct of monetary policy, such as Milton Friedman's (1960) money supply growth rule, or Henry Simons' (1936) price stability rule. At another it indicates no more than an operating procedure adopted by a central bank to guide its own day to day behaviour, of which the archetype is perhaps the Bank of England's "Palmer rule" of the 1830s. And there is much well occupied space between these extremes. These semantic distinctions matter for what follows, because my blanket skepticism is about rules of the first kind. I am willing to judge less rigid arrangements on their own specific merits.

My doubts arise because I do not believe that our ideas about how the monetary economy works develop as a series of ever closer approximations to a "true" model, which has always been there awaiting revelation and to which today's versions have now come close enough to be used safely as a basis for tying the hands of policy makers. Rather, it seems to me: that the evolution of monetary thought has been, and still is, routinely subject to unexpected twists and turns, and is often marked by sharp disagreements as well, sometimes with the same good (or bad, depending on one's point of view) ideas disappearing and then re-emerging as subjects for debate; that this unsteady and unpredictable process in turn impinges on the institutions through which the monetary system functions, the perceptions of how it does so held by economic agents, including policy makers, and hence upon the economy's behaviour, which in turn influences ideas; and that, in such a changeable and disputatious environment, agreement on goals and/or procedures precise enough to be enshrined in rules for the conduct of monetary policy seems

unlikely to be either widespread or durable enough to provide such rules with the lasting support they would need to be successful.

As I have already noted, however, these observations do not support an “anything-goes-that-might-seem-to-work-right-now” approach to monetary policy. Michael Parkin (2016) is surely right to insist that empirical evidence suggesting that we can do better than this continues to accumulate. Rather, as will become apparent, I agree with Jacob Viner (1962) that it is desirable at any time for policy to follow “publicly approved principles”, and hence to be rules-based in this more limited sense; but I also agree with Viner that the principles in question should be broadly enough formulated to permit policy makers a meaningful degree of discretion in their application, and crucially, should also be understood to be tentative and open to revision as economic ideas evolve.

The Monetary Order and the Case for Policy Rules

The phrase “monetary order” used in my title needs a little clarification. Monetary policy rules of any sort impinge not just upon the actions of policy makers, but upon much else also, and this phrase is a useful label for that “much else”. It suggests something grander than a “monetary system” or a “monetary policy regime”, but whether it should be thought of as standing above these in a relationship such as a constitution might bear to a legislative system, or simply as encompassing more elements of economic life, has not always been clear in the literature.¹ My own earlier work has adopted the latter more down-to-earth usage because it has dealt with specific practical questions which presumed that broader issues, about, say, whether monetary policy should be undertaken by institutions that exist specifically for that purpose, were already settled. The same presumption is in place here, so, to indulge in self-quotation:

It is helpful to think of any monetary order as consisting of four components:

- (1) A set of goals for the monetary authorities;
- (2) Institutional arrangements that permit those goals to be attained;
- (3) Private sector expectations consistent with them; and
- (4) Political arrangements that permit goals to be changed, institutions to be modified, and through which the monetary authorities can be held accountable for their performance. (Laidler 2000, p. 59)

¹ I seem to have first used this phrase in Laidler (1993). There I acknowledged that I borrowed it from Karl Brunner (1984), but it was also used by Robert Mundell (1972) and S. Herbert Frankel (1977), two sources that I had certainly read at their times of publication. This paper also took a skeptical position on monetary policy rules, but based its arguments mainly on the problems inherent in the evolution of monetary institutions, rather than, as here, monetary ideas. I believe that the two sets of arguments are complementary.

This schema can encompass a wide variety of arrangements, including many, whether imaginary or matters of historical record, that are incapable of providing the support needed by the monetary economy if it is to keep those fundamental economic and social promises mentioned earlier. In particular, each element of any monetary order needs to be compatible with the others if the whole is to function coherently, and they can be incompatible in an endless variety of ways.²

To create a durably coherent monetary order is hard, but today's economists do have widely accepted models of how the monetary economy functions to guide the choice of feasible policy goals and help deduce what policy makers have to do to achieve them in the face of the myriad shocks to which the economy is subject. And should a skeptical commentator with a longish memory recall that some of the econometric modellers of the 1960s seemed to make just these claims on their own behalf as authorities on monetary policy, but arguably with unhappy results, today's economists can respond that, unlike their predecessors, they understand the importance of paying attention to not just the first two, but also the third and fourth components of the monetary order.

Specifically, thanks to Robert Lucas, (e.g.1976), Thomas Sargent and Neil Wallace (e.g.1976) and all those who have developed and used their ideas, they now take it as given that monetary policy measures work in conjunction with expectations held by the agents whose behaviour underlies the policy transmission mechanism, and that these expectations must be compatible with these measures if they are to support them; with regard to the political and institutional context within which monetary policy is conducted, they also know that the government's fiscal stance , if only in the long run, must be compatible with monetary policy's goals if these are to be credible; and finally, thanks to the literature begun by Michael Parkin and Robin Bade (1976) they also know that they need to pay attention to the links between the electorate – the above-mentioned agents in another social role – and policy makers, to ensure that the latter are able to carry out the plans assigned to them without undue piecemeal political interference. Or to put these matters another way, there now exist large inter-dependent literatures

² For example, the pursuit of certain mixes of multiple policy goals – price-level stability *and* full employment, particularly when these have been optimistically defined, a fixed value for the exchange rate *and* price-level stability, or perhaps all three in combination - has often been a frequent source of trouble. And even when the goal for monetary policy is simple and therefore apparently attainable – for example price-level stability alone – if, say, institutional arrangements for managing the interaction of monetary policy with the fiscal elements of the broader policy framework enable budget deficits to be treated with insouciance, and assign to the central bank the subsidiary task of supporting the market for government debt, it may not be. This is so whether or not the public believes that the trick can be worked, and regardless of whom they decide to hold accountable and how they do so when it isn't.

on rational expectations, the fiscal background to monetary policy and central bank independence that were not there in the 1960s.

This is where the idea of the monetary order becomes helpful to current discussions of monetary policy rules. The macroeconomics on which today's dominant theory of monetary policy (see, e.g. Michael Woodford 2002) is so firmly based has it that individual behaviour is fundamentally forward looking, and that maximising agents need to be able to make reliable predictions about the outcomes of their plans before they can formulate them. But, often downplayed, the behaviour of the environment in which each individual agent makes and executes such plans is a product of similar activities on the part of every other agent. Thus, there are more constraints on the choices made by such agents than those inherent in endowments and technology. The fundamental problem that the monetary order is there to cope with is the co-ordination of individual plans both in the present and over time, and stability and predictability in its functioning is of the essence here. Clear and attainable policy goals, competently pursued by monetary authorities that use mechanisms well understood by themselves and the agents they serve, under the watchful eye of those same agents who have the authority to call them to account whenever competence begins to flag, is what is needed. What better way to ensure that the monetary order displays such coherence than to embed in it a set of well-defined, widely understood and consistent principles for the conduct of policy.

Explicit and legally enforceable rules constraining central bank behaviour are not strictly necessary to produce this outcome. Policy practices informally adopted but systematically adhered to can first help create and then continue to support expectations on the part of the public that in turn re-inforce the effectiveness of those practices, in a process that might benignly converge on a coherent monetary order that includes stable and well-informed political support for them. But perhaps it is risky to rely on such an outcome arising and persisting spontaneously, so there is a case to be made that it is better to take the extra step of locking it in place by explicit rules.³ After all, if it is desirable for the monetary authorities to have a well-defined goal that agents can understand, why not help them to do so by announcing what it is? If the authorities are using procedures based upon a clearly specified model of the transmission mechanism to achieve that goal, knowledge of which will also help private agents with their planning, why not spell it out also, instead of leaving those agents to make inferences about

³ The reader is reminded that before it emerged as a policy prescription, the Taylor rule was presented as a description of how the Fed. actually made policy. See. John Taylor (1993). Nevertheless, the literature on time-inconsistency, set in motion by Finn Kydland and Ed. Prescott (1977), makes a strong case that the authorities may need a little outside help in credibly pre-committing themselves to following a rule of any sort.

these matters from observation? And, crucially, if the promise of continuity in the conduct of policy is important for the co-ordination of agents' plans over time, and if ensuring the accountability of policy makers if that promise is broken has political value, why not frame these announcements as legally binding rules whose violation will trigger consequences?

Such reasoning underlies, for example, today's case for subjecting the Fed to some sort of legislated Taylor rule (See e.g. Taylor, 2016). Not only could such a measure require a quantified-up-to-some-limit procedure for adjusting the target overnight rate, and enshrine in law a specific target time path for a precisely defined measure of price inflation, but it could also subject those executing policy to at least public and perhaps also legislative oversight. And such reasoning can support many of those variations on this basic theme that are also in play in current discussions. Instead of inflation, what about a well specified target for nominal GDP growth (see e.g. Scott Sumner (2016), or Patrick Minford 2016), and instead of the overnight rate as the basic policy instrument, what about money growth (See. e.g. Michael Belongia and Peter Ireland, 2016)? Or the policy target could be the exchange rate, perhaps to be controlled by the automatic workings of a currency board. Or indeed, as the European example has shown us, an individual political jurisdiction's monetary order can be merged into a broader arrangement, a multi-jurisdictional monetary union, with a central bank whose goals and degree of political independence are guarded by an international treaty.

In short, a rule-based monetary order can take many forms, and there is no reason to believe that one size fits all. And, if the local political environment makes it unrealistic to expect that an explicit monetary policy rule can be put in place immediately, then perhaps, as Sumner (2016) argues, it is still worthwhile, in the interim, for economists to try to "nudge" the conduct of discretionary policy in its direction. Nevertheless, once the political choice of a set of rules to guide the monetary order is made and implemented, it is tempting to conclude that the requirement that agents should be able to rely on continuity over time in its performance implies that this should be the end of the matter, that once a specific rules-based monetary order is designed and set in motion, the economist's role, except perhaps as an observer of its operations, is at an end. This is where today's economics might seem to lead us, but this position is not exactly new. Eighty years ago, Henry Simons put the matter as follows.

In a free-enterprise system we obviously need highly definite and stable rules of the game, especially as to money. The monetary rules must be compatible with the reasonably smooth working of the system. Once established, however, they should work mechanically, with the chips falling where they may. To put our present problem as a paradox – we need to

design and establish with the greatest intelligence a monetary system good enough so that, hereafter, we may hold to it unrationally – on faith – as a religion, if you please. (1936, pp. 349-350)

Looking back to 1936 from today, it is tempting to think of Simons as speculating about some hypothetical future, which in 2016 might finally have arrived. But, in 1936, when he advocated a legislated price stability rule supported by what Fisher (1935) called “100 per cent money”, Simons was making what he thought of as practical policy proposals for the monetary order of his own time, not dreaming about some then unattainable economic utopia.⁴ Furthermore, the eighty years that have elapsed since he wrote have seen at least three “revolutions” in monetary thought – Keynesian, Monetarist and New-classical – each bringing its own distinctive vision of what would constitute a desirable monetary order and how it should be regulated. What these observations imply about the robustness of today’s case for embedding currently popular policy principles in a binding-rules-based monetary order is worth a little further thought.

Two Views of How Economic Ideas Evolve

Economic ideas, as we shall henceforth label the state of economic understanding among the agents it is designed to serve, play a ubiquitous role in any monetary order. Most obviously, they inform the expectations on which agents’ day by day decisions are taken, but in addition they are the source of those agents’ opinions about what policy goals are desirable and attainable as well as of the choices made on their behalf by policy makers as they try to achieve those goals, and they also inform the political debates that lie at the heart of the mechanisms through which policy makers are (or are not) made and held accountable for their behaviour.

Today’s monetary policy analysis treats macroeconomic models as virtual analogue computers that mimic the key features of the actual economy. These systems are defined by certain fundamental characteristics: endowments, tastes, technology, not to mention the rules governing monetary exchange. But also, and crucially, the forward-looking maximizers who inhabit them are assumed to possess a correct-up-to-some-limit understanding of these economic fundamentals and how they relate to one another, which they then use in designing their own

⁴ The proposal for 100% money – a requirement that commercial bank liabilities that functioned as a means of exchange should be backed dollar for dollar by holdings of deposit or note liabilities of the Federal Reserve system was a cause that Fisher took up only after the case for it had been developed by others, notably Simons and some of his colleagues at the University of Chicago. See Simons et. al. (1933) It is noteworthy that in this earlier work, the recommended policy rule was a stable money supply, not a stable price level as in Simons (1936). It is also noteworthy that a version of 100% money was independently developed in 1934 by Lauchlin Currie (See Currie 1934, ed. Brunner 1968) as a means of making not rule guided, but discretionary, monetary policy more effective.

strategies in the face of whatever shocks the economy encounters. So do those specialists known as policy makers when they formulate their own responses, which of course, from the viewpoint of all those other agents, create yet more impulses requiring responses. This analysis is thus self-referential: it postulates that ideas about how the economic system works affect its behaviour, and that behaviour in turn affects ideas.

But the self-reference here is restrictive, because today's economics also takes it as an axiom that agents act "as if" their economic ideas consist of a true model of the economy that they inhabit. To be sure, there is still room within the sub-discipline for disagreement, because at any moment the body of knowledge that defines it consists not of one model, universally accepted as "true" in all its details, but of a menu of competing candidates for this label.⁵ Even so, it also rests on the presumptions that, since there is only one economy, there can really be only one true model of it, and that the prime purpose of macroeconomic research is to produce ever closer approximations to this system, a conception of how economic ideas evolve that does not neatly accommodate the three above-mentioned revolutions in macroeconomic thought and practice that occupied the space between Simons' time and ours. Rather than conforming to a narrative of slow but steady progress within a broadly agreed framework for organising knowledge of how the economy operates, these present a story of radical and hotly disputed shifts of opinion about these questions, which prompts us to look for evidence of instability, even downright incoherence, over time in the monetary order.

Nor do we have to search hard to find such evidence. Suffice it to refer to the uncertain monetary environment that persisted until the outbreak of World War 2, the creation and disintegration of the Bretton Woods system that followed this conflict, the great inflation that began in that system's final years and ended in the 1980s, and the slow restoration of macroeconomic stability that culminated in the so-called "great moderation", which in its turn came to a spectacular end after 2007.

The exponents of today's macroeconomics are as well aware as anyone else of this evidence, and of the need to accommodate it within an overall vision of how economic ideas develop that is compatible with the notion that these are converging on an unchanging true model of the economy. They do this by explicitly treating the evolution of macroeconomic thinking after 1936 as a one-time aberration that began with the Great Depression -- itself the product of a particular flaw in the monetary order's structure and hence in its performance in

⁵ To offer one example, competing assumptions about the institutional arrangements underlying phenomena such as the degree of wage and/or price stickiness influence model behaviour in different ways, and hence can present questions in need of empirical investigation when debating the details of the right policy rule

the immediately preceding few years -- and temporarily interrupted the more stable longer term development of macroeconomics.

This interpretation seems to have been set loose at quite an early stage of the New-classical revolution by Lucas and Sargent (1978), and has been reaffirmed on several occasions since.⁶ It is not, however, in any sense an idiosyncratic point of view held by only a few commentators. Rather it is a particular application of the currently dominant interpretation among economists of the nature and history of their discipline, which holds that, as in the natural sciences, knowledge progresses by a process in which successful ideas are continuously refined and developed and unsuccessful ones discarded. From this it follows: that today, the subject is closer to a true conception of how the economic system works than it ever was, that all that is worth knowing from its history is incorporated in today's corpus of knowledge, and that anything from the past that is missing is not worth knowing or studying, except perhaps for entertainment value.

In its particular application to the development of macroeconomics by Lucas and Sargent (1978), this view has it that from the eighteenth century until the 1930s, the area did indeed make slow but steady progress, while building on the fundamental postulates “(a) that markets clear and (b) that agents act in their own self-interest”, but that, in 1936, John Maynard Keynes, faced with the facts of the Great Depression and “after freeing himself from the straightjacket (or discipline) imposed by the classical postulates . . . described a model in which rules of thumb . . . took the place of decision functions that a classical economist would insist be described from the theory of choice” (pp.304-305) For a while, this story continues, but only a while, “Keynesian economics” disrupted the steady progress of macroeconomics along the highway towards ever more refined versions of Classical truth, and diverted the development of economic ideas onto an intellectual side road to nowhere. In the process, it provided an inherently unsteady intellectual basis for what would inevitably turn out to be an incoherent monetary order, whose disintegration was only completed in the 1970s. However, as signs of this disintegration became increasingly visible from the 1950s onwards, older wisdom about the workings of markets inhabited by maximising agents began to reassert itself, first in the form of monetarism, a way-station on the path back to the main highway, and then New-classical economics, which put the development of economic ideas squarely back on to that road in the nick of time.

The trouble is, though, that the part of this story about the how economic ideas evolved before 1936, and hence, implicitly, about how they are now likely to evolve in the future, is misleading. There is an alternative vision of the earlier

⁶ In particular by Robert E. Lucas, who returned to this theme in his 1995 Nobel Prize lecture (Lucas, 1996), and again in (2004)

history of monetary thought in which, far from usually clustering around concepts that are congruent with and inform today's models, ideas about how the monetary economy functions were badly anchored and regularly in flux. One key factor driving this intellectual unsteadiness was actual economic experience, particularly when this seemed to contradict prevailing beliefs and call for new ideas to be conjectured, and another was economic theory's own internal dynamic, which sometimes developed ideas quite independently of the influence of the economy's current behaviour.

On this reading of our subject's earlier history, aspects of which that are particularly relevant to the debate about monetary policy rules are elaborated below, the development of economic thought during and immediately after the Keynesian revolution, and the influence of that development on the monetary order, were far from being unprecedented anomalies that temporarily interrupted an altogether more stable long-run story. Specific details of the rapid changes seen in the post 1936 episode were, of course, unique to their time, but the general forces at work then were of the same kind that drove the development of both economic ideas and the monetary order from at least the 18th century onwards, though sometimes at a more sedate pace; and it seems unwise to ignore the chance that these forces will continue to influence this process in the future.

The Development and Demise of the Gold Standard

The gold standard came into being in Britain by accident in 1717, when Sir Isaac Newton, Master of the Royal Mint, set that institution's silver price of gold too high, thus driving what was intended to be a new and stable bimetallic system to a limiting case of gold monometallism.⁷ But this arrangement, an early example of an unexpected consequence of a monetary policy rule designed to accomplish something else, proved durable, and by the start of the French Wars in 1793, it was, along with the Bank of England's emerging but at the time still largely unappreciated role as a central bank, one of the defining features of the British monetary order. Somewhat paradoxically, ideas about how this order functioned saw their most rapid evolution during the "Bullionist Controversies" that marked the period between the "temporary" suspension of gold convertibility of Bank of England notes in 1797 and its resumption in 1821, so it is convenient to follow Anna Schwartz (1984) and take up the gold standard's main story in the second decade of the 19th century. This was when, in 1816, Lord Liverpool's Act formally established gold as Britain's standard of value (at a price of L46 – 14 – 6 per troy pound of 22 carat gold), and, in 1819, further legislation (which was finally

⁷ George Stigler used to cite Newton's mistake as proof positive that economics really is more difficult than physics. I can't remember whether he ever committed this judgement to writing.

implemented in 1821) not only re-established the convertibility of Bank of England liabilities into gold but also restored gold coinage to the monetary system.

At this time, classical economics closely identified stability of the price of money in terms of gold with its stability in terms of goods in general. It was understood that these were not *quite* the same thing, because the conditions governing the production costs of gold (and/or silver) which were believed to determine their values, could themselves vary. However, at a time when even such an authority as David Ricardo (1816) dismissed the idea of a price index as an intellectual impossibility, the approximation seemed to be not just the best available, but also a good one. Furthermore, though most of the rest of the world was then on a silver standard, the workings of bimetallism in France were effectively stabilising the relative price of gold and silver in international markets, so a fixed price for gold bullion, in addition to acting as a proxy for price stability, also implied a stable exchange rate. In short, ideas about what price stability meant, and about the feasibility of having simultaneous goals for its internal and external aspects were far removed from any that are current today, and seemed to make gold convertibility what Thomas Tooke (1840, p. 177) would call “the *sine qua non* of any sound system of currency”.

The financial crisis that had precipitated the suspension of gold convertibility in 1797 had been brought on by an invasion scare, not by anything apparently inherent in the monetary economy, and in this respect it had looked much like the upheaval that had followed the outbreak of war in 1793. The bouts of domestic instability and exchange depreciation that marked the suspension period were thus widely (though not universally) attributed to misguided Bank of England policies that could not have been implemented under convertibility.⁸ As a corollary, its restoration, finally completed in 1821, was widely expected to put a stop to these, with the Bank of England’s adherence to this rule automatically preventing any serious over-expansions of what was often termed “the circulating medium”, hence ensuring that sudden and disruptive contractionary measures would never be called for to reel these in. A series of balance of payments crises and sharp contractions that began in 1825 would soon reveal that these

⁸ During this period, however, the Bank of England was intermittently following a policy rule of sorts, the so-called “real bills” doctrine, which advised it to discount all good quality short-term commercial paper offered to it, and predicted that this would be a sufficient policy to maintain price level stability. Under a system that also required the convertibility of Bank of England notes into gold, the inflationary tendencies inherent in this doctrine’s lack of attention to the role of the rate of interest (movements in which were in any case subject to usury laws) in affecting the demand for credit would have been kept in check, but in its absence they were left free to do harm. This, at least was the diagnosis of Henry Thornton (1802) and many of the Bank’s subsequent critics including the 1810 House of Commons Bullion Committee (See Edwin Cannan 1919) in whose deliberations Thornton also played an important role. This doctrine also played a destructive role in US monetary policy in the late 1920s and early 1930s, see. fn. 16 below.

expectations needed revising; but nothing remotely resembling a consensus about how to do so would emerge from the Banking School - Currency School - Free Banking School debates (here I follow Anna Schwartz's (1987) terminology) that followed. There were no scientific victories in these controversies, only a political one for the Currency School.

This group's famous 1844 Bank Charter Act imposed on the contemporary monetary order a set of supplementary rules, which reflected a very particular but even then controversial understanding of how the linkages between Bank of England actions and the monetary economy worked. Specifically, its authors believed that bank notes and coin alone represented "money", and that undue fluctuations in the quantity of this "money" were responsible for economic instability. Therefore, their Act froze, with a view to ultimately eliminating, the note issue of English commercial banks, independent fluctuations in which they held mainly responsible for previous troubles.⁹ This was accompanied by an expansion of the Bank of England note issue, variations in which were henceforth to be rigidly linked to those in that institution's bullion reserves, essentially making its Issue Department a currency board based on gold. Meanwhile, the Bank's deposit business was hived off to a separate Banking Department, which was expected to operate just like any other privately owned credit granting and deposit taking bank.

These new rules were intended to eliminate lags between incipient balance of payments problems associated with monetary overexpansion and a corrective response in the money supply and hence domestic prices, thus ensuring the stability that convertibility alone had failed to establish in 1821. Within three years of their enactment however, the crisis of 1847 revealed that the monetary economy's behaviour was still capable of deviating from the expectations inherent in the economic ideas underlying the monetary order, a fact confirmed by further crises in 1857 and 1866. In each case the crisis was alleviated by a temporary suspension of the very rule for the behaviour of the note issue that was supposed to have prevented it, which created conditions for the Bank to act if necessary to stabilise the rest of the financial system, an irony that was not lost on many of those who had opposed the 1844 Act in the first place.

What the Currency School had missed was the significance of the then rapidly growing business of deposit banking in general, and of the Bank of England's own deposit business in particular, developments which, incidentally, their Banking School critics had stressed even before 1844, and to which the restrictions imposed on the note issue by the 1844 Act had themselves given an

⁹ Separate legislation dealing with Scotland left its banks with, albeit restricted, note issuing privileges. For details, which are not germane to the arguments of this paper, see Lawrence White (1984)

unintended boost. By (1873) Walter Bagehot would refer to this Act's provisions as "a minor matter in the money market" and otherwise not mention it in *Lombard Street*, his still famous codification of the procedures to be followed in dealing with crises which the Bank of England, by then generally recognised as the nation's central bank, had informally evolved in the interim.

1866 turned out to be the last time serious bank failures that were not the result of fraud occurred in Britain.¹⁰ Thereafter, widely held expectations, first that the 1844 legal requirements concerning the uses to which the Bank of England's gold reserves could be put would be temporarily suspended if need be, so that the level of these reserves need not constrain that institution's discretionary lender of last resort activities, and second that the Bank's commitment to convertibility would nevertheless always be honoured, had entered general economic understanding. These expectations formed the bedrock of a monetary order anchored by a gold convertibility rule, but which also permitted considerable short-run discretion to the monetary authorities. Though this mixed policy regime did not eliminate cyclical fluctuations – it wasn't intended to do that – it did reduce the financial system instability that had previously accompanied them, and it stayed in place until the outbreak of World-War-1.¹¹

Even so, as Angela Redish (1993) has shown, the economic ideas upon which the - at first sight and at long last – coherent and stable late 19th century British monetary order rested were already changing, as a result of forces that would continue to be in play a century later when a by-then very different order's last links to gold were finally severed. Even in the 1880s, these changes had been a long time in the making, because among their sources are clearly Adam Smith's (1776) interlinked propositions that a monetary system based on gold coinage alone was costly to operate and that paper money convertible on demand into gold convertibility would reduce this cost. Implicit here was the idea of an inherent tension between creating, to use David Ricardo's (1816) well-chosen adjectives, an "economical" currency that used paper instead of gold, and a "secure" one that was nevertheless reliably convertible into that metal on demand.

¹⁰ The story of the evolution of these principles has been told many times, but see in particular Jacob Viner (1937) Ch. V, Frank Fetter (1965) Chs. VII-IX, and Denis O'Brien (2007) Chs. 5-7. Their application in the UK did not eliminate financial instability there, but mitigated its consequences, while in the US, crises continued to be associated with severe instability of a sort that had ended in Britain in 1866 (See Oliver Sprague, 1910). The severity of the last of them before world war 1, that of 1907 was a major factor leading to the founding of the Federal Reserve system, an institution intended to act as a lender of last resort there.

¹¹ During this period, gold convertibility can be analysed, at least *ex post*, as a pre-commitment device that dealt effectively with time-inconsistency problems inherent in the discretionary aspect of the monetary order, as Michael Bordo and Kydland (1996) have convincingly shown.

Before the 1870s, most of the world was on silver (the pre-civil war U.S. being an important *de facto* exception), and French bimetallism was a going concern, while after 1849-51 the exploitation of newly discovered Californian and Australian gold deposits led to significant increases in the world's gold supply. These two factors combined to ensure that, for a while, any potential conflict between economy and security inherent in maintaining gold convertibility had little practical influence over the development of the British monetary order; but from the 1870s onwards, such issues came to the forefront. In that decade, an international gold standard began to evolve and the world's demand for monetary gold began systematically to outstrip its supply, at the very time when innovations within the then fast developing discipline of economics were making it increasingly difficult for its more imaginative practitioners to continue to take it for granted that maintaining a fixed price for gold was the best that could be done to stabilize the general purchasing power of money.

To begin with, usable price index numbers, so widely believed to be an intellectual impossibility earlier in the century had come onto the scene with a vengeance in the 1860s.¹² These revealed the deflationary side-effects of the post-1870 spread of the gold standard from Britain to the US, the German empire, and France, among other places. Moreover, at around the same time, a new subjective theory of value, supplemented by supply and demand analysis, began to replace older Classical ideas about cost of production, or even labour input, as the determinant of the "natural prices" of commodities, a development which had the side effect of depriving gold of its special claim as the "natural" foundation for any monetary system whose goal was stability in the purchasing power of money. By the 1880s, therefore, the scene was well and truly set for a search to begin for arrangements that could deliver a more "economical" basis for a "secure" currency than the gold standard. The Bimetallic controversies of the 1880 and 90s, which played out mainly in Britain and the United States were immediate consequences

¹² A major impetus to their development came from the behaviour of prices in gold-standard economies in the wake of the gold discoveries of 1849-51. Here, the outstanding pioneer was William S. Jevons (1863), the title of whose great monograph notwithstanding, found it very difficult to find any systematically serious inflationary consequences, even for the prices of primary commodities which he studied in detail. Jevons' explanation of this, using ideas developed by the French economist Michel Chevalier, was that the inflow of gold had first to drive silver out of the bimetallic French monetary system, before it could have a serious effect on the gold price level, and that it was barely large enough to accomplish this. Displaced silver, meanwhile, was absorbed into the circulations of India and China with at most minor effects on prices. I can make no claims of expertise sufficient to confirm or deny this explanation, but if true, it would imply that bimetallism, so despised by many later in the century as a potential source of price inflation, actually saved the gold standard from such a disturbance during this episode. Perhaps the moral of the story is that it is in general unwise to rely on the markets for precious metals, with all their vagaries, as a means of guaranteeing monetary stability.

of these development, as were the slightly later beginnings of the gold-exchange standard, notably in India (See Keynes 1912).

The bimetallicists' agenda, that sought to relieve deflation (and in some versions replace it with inflation) by re-introducing silver to the monetary system, created an immense intellectual and political stir, in the US as well as Britain. Though this agenda failed politically, and quickly began to fade from public consciousness in the later 1890s, this was not because its exponents lost any decisive intellectual battle. It was because, as Keynes (1913, p. 393) would later note, developments in techniques of refining gold, and some new mining discoveries as well, increased the growth in this metal's supply to a rate sufficient not only to put an end to the deflation in the gold standard world from which the political campaign for bimetallicism had derived its energy, but even to set in motion a mild inflation that would persist until 1914. It was these events that gave a new international monetary order based on gold a lease on life that would only end with the outbreak of World War 1, not any persistent dominance within economic thought of the ideas from which the gold standard had gained so much strength at the beginning of the century. In particular, gold's loss of authority as the "natural" standard of value that stemmed from developments in value theory was to be permanent and, arguably, ultimately decisive.

The rules of the monetary game that were in place at the outbreak of World-War-1 nevertheless retained enough support for attempts to restore them to be the political default option at its end. Prominent among the arguments for this approach, which, notably in the UK included the proviso that convertibility was to be restored at the pre-war parity, was the proposition that commitments made under the policy rule in place before the war needed to be honoured after it, in the interests of restoring credibility to the monetary order.¹³ However, the dominant economic ideas by then firmly in place, and not just in the UK, notably the subjective theory of value also ensured that, among their adherents, the rules of the gold standard, including those involving the restoration and maintenance of the pre-war parity, appeared as one technically feasible alternative among several, rather than as the unarguably preferred choice.

Even at the time of the war's outbreak, let alone after it, then, the gold standard was not supported by anything approaching the degree of unanimity in the realm of economic ideas that it needed to begin working coherently again once its operations had been suspended for a while. Though the basic rules of the pre-war order retained supporters even into the 1930s despite the problems that efforts to re-impose them caused in the interim, by then, to use Henry Simons' words again

¹³ This choice of parity bears some of the blame for the failure and ultimate collapse of gold convertibility in 1931. Perhaps honouring pre-commitments in monetary policy can sometimes be carried too far, leaving occasional room for surrender to time-inconsistency to be the better option.

“The utter inadequacy of the gold standard, either as a definite system of rules or as the basis of a monetary religion, seem[ed] beyond intelligent dispute” (p.348); all of which brings our story back to the eighty years between 1936 and the present.

Ideas and the Monetary Order after 1936

1936 saw the publication of both “Rules Versus Authorities in Monetary Policy” and *The General Theory of Employment, Interest and Money*. Neither was a spur of the moment response to the Great Depression, and each was a product of the internal dynamics of economic thought that had been set in motion during the bimetallic controversies.¹⁴ Events after 1929 were, however, important in conditioning their very different impacts on subsequent developments. Specifically, Simons’ ideas were from the outset a minority taste, even if they never quite disappeared, while “Keynesian” economics became central to both the economic ideas and the economic policies that, under the Bretton Woods system, dominated the post-World-War-2 years.

This system, which finally became fully operative in the 1950s, was the outcome of the third major attempt in modern monetary history to rebuild a monetary order in the wake of disruptions caused by a major war, and as with the two earlier efforts already discussed, things did not work out as expected. As with them also, a large part of the blame here lay in tensions between the economic ideas on which the rules of the new order was based, and the economic facts that its workings generated. The Bretton Woods system embodied economic beliefs widely held by the early 1940s. These had it that inter-war experience, particularly the years after 1929, not to mention the theoretical contributions of Keynes and others, had confirmed age old conjectures on the part of what up till then had been a minority of economists, that there was a fundamental flaw in the monetary economy that prevented it co-ordinating the choices of individuals without continuous government oversight and intervention. And, in practice, the Bretton Woods system also embodied a widely held but naively optimistic view of the ability of government to carry out these tasks.

¹⁴ Both had deep intellectual roots in economic ideas that had emerged from the bimetallic debates. Thus, long before Simons promoted a legislated price stability goal to supersede the rules of the gold standard, so had Irving Fisher, who, along with his associates in the “Stable Money League”, had been associated with no fewer than three efforts to get such legislation passed in the US the 1920s. As for the *General Theory*, its main purpose was to repair a gaping hole in the logic of Keynes’s earlier *Treatise on Money* (1930), which in turn had attempted to create a theory of economic fluctuations by integrating the version of the quantity theory of money which he had inherited from Alfred Marshall, and which had formed the basis of his *Tract on Monetary Reform* (1923), with Knut Wicksell’s (1898) analysis of the influence of the rate of interest on saving and investment behaviour.

In many of its member countries, domestic monetary orders were to various degrees loaded up with potentially incompatible policy goals – for example, price stability and full employment, not to mention bringing much of the economy into public ownership while building the welfare state– and with macro-policy frameworks that assigned to monetary policy a role subsidiary to those of fiscal and regulatory powers, which in turn were to be wielded with wide discretion by elected politicians. In countries other than the US, the only semblance of an externally imposed monetary policy rule was a commitment to a system of exchange rates pegged, though explicitly not rigidly fixed, to the US dollar, supervised by the newly created IMF. In the US itself, the rule-based element of the monetary order, inherited from the 1930s, was the requirement that the dollar be convertible into gold at a fixed price (but not for domestic agents). In short, overall, the system amounted to an extremely loosely configured gold-exchange standard anchored to U.S. gold reserves.

At first the new monetary order at whose centre the Bretton Woods system lay seemed to work reasonably well, certainly better than had its post-World-War-1 predecessor. However, by the 1960s, fundamental weaknesses, which stemmed from its creators’ general faith in the capacity of policy makers to wield to good effect discretionary powers over the economy on a more or less continuous basis, complemented by a specific belief in the relative unimportance of monetary forces, began to show through. By then, the strong contrary views of France in particular notwithstanding, the exchange rate mechanism lying at the heart of the Bretton Woods system had evolved from what had been envisaged as a gold exchange standard based on the convertibility of the US dollar, into something closer to a pure dollar standard. From the outset, the US monetary authorities had been able to ignore the system’s gold-convertibility requirement in their policy making. As Michael Darby, James Lothian et al. (1983) would subsequently show, this fact became particularly important when, after 1962, Democratic administrations successively implemented a fiscal stimulus program and then a “war on poverty” that coincided with an increasingly expensive real war in Vietnam.

The fiscal stresses thus created were accommodated by monetary policy, which the prevailing economic wisdom of the time, consistent with its overall stance on this tool’s unimportance, erroneously absolved of responsibility for the steadily rising inflation that ensued. Inflation was instead interpreted as a “cost-push” phenomenon, to be countered not with monetary measures but with an increasingly intrusive but futile series of wage-price guidelines and controls.¹⁵

¹⁵ This interpretation of events does indeed involve a rejection of today’s widely held view that the rising inflation of the 1960s and early 1970s was the result of a self-conscious effort on the part of the monetary authorities to “buy” higher employment by moving up the then, rather newly discovered, “Phillips curve”. James Forder (2014) is, in my view, quite correct in treating the latter story as an *ex post* fabrication. I do,

Inflation therefore continued to rise as it spread through the Bretton Woods system. This in turn, as is inevitably the case with any monetary order in which ideas about how monetary policy works prove to be inconsistent with experience, duly started to disintegrate as members began to loosen their currencies' links to the dollar. At the same time, the dollar's own frail link to gold became increasingly untenable, a fact that the US authorities finally recognised in 1972 by severing it.

Meanwhile, macroeconomic ideas had been changing, even in advance of these events just as they had under the gold standard, as scholars re-examined the evidence that had seemed to support opinions about the flawed nature of the monetary economy and the unimportance of monetary policy for its performance, which had played such a decisive role in underpinning the post-war monetary order. Crucially, and particularly under the influence of Milton Friedman and Anna Schwartz (1963), the great US contraction of 1929 -33 began to be widely understood as the consequence of incompetent discretionary monetary policy, as did the post-1930 intensification of the international economy's inter-war Depression, whose origins in the 1920s had long and largely un-controversially been attributed to botched attempts to restore the Gold standard to the post-war world.¹⁶ And along with this re-interpretation of specific events came a more general revival of faith in the self-regulating powers of the monetary economy, tempered by increasing respect of the powers of monetary policy to influence it.

Not surprisingly, as the 1960's slow but steadily rising inflation gave way to the much more violent instability of the 1970s, the old idea that had informed the case for a "secure" (i.e. convertible) currency; namely that badly conceived monetary policy could create inflation just as easily as depression became an increasingly influential component of contemporary economic thought, while policy analysis began to refocus on those long neglected questions about how to render the monetary order proof against both phenomena that Simons had addressed in 1936.

"Monetarism" as it came to be known, having thus created for itself an important though always controversial place among the economic ideas current in the 1960s and early '70s, then took on an altogether more risky role as a foundation for economic policy, with mixed success. On the positive side, once policy makers and a significant share of the public in general had accepted the idea that inflation was a monetary phenomenon, and took measures accordingly,

however, believe that this curve played a more important part in the academic literature dealing with inflation in the 1960s than he is willing to concede.

¹⁶ And it should be noted that the Fed's incompetent policies had drawn considerable support from the same flawed monetary policy rule, namely the "real bills", or, as it was more commonly called at the time, "needs of trade" doctrine, that had underpinned the Bank of England's inflationary errors during the suspension period. See fn. 8, above.

inflation was indeed brought under control. But, in a number of places anti-inflation policy had been based on targets for the slow reduction of money-supply growth, and had been advertised in advance as “gradualist”. In practice, it was anything but. The elimination of double digit inflation by monetary means in the early ‘80s was sudden, and accompanied by savage real contractions. Whether this was because policy makers simply used gradualist rhetoric as a cover for their real intentions, or whether, before the event, they overestimated their understanding of the technicalities of what had to be done, not least given the capacity of monetary institutions to adjust a new policy regime in unexpected ways, is an issue that we do not have space to debate here. Suffice it to say that the actual outcomes of policy did much to destroy the intellectual authority of the idea of basing monetary policy on money growth targets, let alone on a money growth rule such as Friedman had proposed in (1960).

Perhaps this consequence was unfair. What Friedman had advocated, in a self-conscious variation on Simons’ (1936) proposal for a binding price stability policy rule, was the legislation of a steady rate of money growth in order to maintain the macroeconomic stability that the US was then enjoying. He also had stated a preference, though not an absolute one, that this rule be implemented alongside the imposition of 100 per cent reserve requirements against those bank deposits that functioned as money – another acknowledged borrowing from Simons. What were actually implemented at the end of the ‘70s were not legislated rules that constrained policy makers, but discretionary targets that they themselves set for reducing money growth as a means of eventually restoring stability to economies already in serious inflationary trouble; and this in monetary orders characterised by fractional reserve banking where portfolio behaviour, linking the variables that the authorities had under their more or less direct control and those for which they were setting targets, turned out to be less stable and predictable than expected.

Monetarism would in any event soon cede its prominent place among contemporary economic ideas to the New-classical analysis which had begun to appear in the early 1970s in the guise of technical refinements of monetarist doctrine, but which soon turned out to be altogether more radical and novel, as the extraordinary range of topics which they were capable of illuminating became apparent. Out of these beginnings, which were more the product of the discipline’s internal dynamics, than of any direct interaction between ideas and contemporary events, was eventually created what has been labelled earlier in this paper “today’s macroeconomics”, in an intellectual upheaval every bit as dramatic as the Keynesian Revolution, but indisputably more durable in its influence. Its fundamental tenets are, as we have noted earlier, still providing the intellectual

basis for today's debates about whether, and if so how, to configure rules for the conduct of monetary policy.

These rules, of course, must be capable of clearing up the lingering after-effects not to mention avoiding any repetition, of the unexpected and violent bout of instability that began in 2007. This seriously disrupted what at the time was beginning to look like a stable, coherent and durable monetary order based on targets for price level behaviour, or rather a family of such monetary orders among which there were many differences of detail across political jurisdictions, including the extent to which they were subject to formal rules.¹⁷ The development of these arrangements, beginning in the 1990s, had at first been improvised and haphazard, but soon it began to run parallel to, and interacted with, that of academic work on monetary policy. By the turn of the millennium, monetary orders in many jurisdictions were displaying a considerable degree of harmony between policy practice and prevailing economic ideas, just as the economic models that embodied those ideas required: all the more reason, then, why their violent disruption after 2007 came as such an intellectual shock, leaving policy makers with no choice but to improvise responses, to the extent that local rules permitted them, based on "Keynesian" and "monetarist" ideas that had by then come to be widely regarded as obsolete and discredited.

And yet we now seem to be bringing to bear on the repair of these monetary orders economic ideas that before the event were widely understood to have nothing to say about how asset market crises arise, progress, and influence the whole economy, and that after the event have been subjected to many and various extensions, whose mutual consistency remains to be seen. Evidently economists' tendency to overestimate the capacity of their current ideas to provide a reliable and durable basis for the design of monetary policy rules for the future, which has been a constant feature of the evolution of the monetary order for two or more centuries, still persists. It will make mischief in the future just as it has done in the past if it leads to the adoption of rules that are binding in the manner that Simons (1936) or Friedman (1960) envisaged

Coping with Monetary Policy

This paper has deployed an idea that also informs today's mainstream economics; namely, that there is something fundamentally self-referential about economic experience, that the monetary economy's behaviour is strongly conditioned by the beliefs held by those within it, policy makers and other agents alike, and that those

¹⁷ This, in (2006) Andrew Rose would write a provocative article in which he suggested that, as inflation targeting was adopted by more and more countries, an international monetary system resembling "Bretton Woods reversed" was emerging. Interestingly, John Taylor (2016, pp. 21-22) detects a similar convergence in policy regimes across countries in the wake of the great recession.

beliefs in turn respond to the behaviour in question. But this is as far as a commonality of view goes. Where today's economic orthodoxy has it that the economic ideas that drive behaviour have always represented, now and in the past, ever closer approximations to a "true" model of the economy (apart from one major and destructive detour after 1936), this paper has suggested that the self-referential evolution of the monetary economy involves frequent discord between economic ideas and economic experience.

If this latter view is correct, then the idea that we can ever be secure enough in our knowledge of the structure and dynamics of the monetary order to be able safely to lock a currently preferred version of it in place with rules to which, thereafter we must adhere as a matter of "as if" religion, is surely hard to swallow. It seems instead that the problems of creating and maintaining a coherent monetary order, and hence of providing the monetary foundations for economic prosperity and political freedom, are not to be solved once and for all by developing and then following a definitive blueprint embodied in a set of policy rules based on today's ideas. Rather, it implies that they are problems constantly to be coped with over time as events and ideas unfold and interact.¹⁸

These ongoing interactions require continuous attention, which should be applied, of course, by policy makers who deploy principles grounded in today's ideas "with the measure of good faith, intelligence, judgement, and skill which it is reasonable to expect them to possess", to use Viner's phrase (1962, p. 246). And to these qualities I would add explicitly the wisdom to know when it is time to modify even those principles themselves in response to economic experience and the evolution of ideas. In such a world also, the "nudging" of policy makers by economists in what they currently perceive as the right direction, that Sumner (2016) has recently recommended as a temporary activity pending the adoption of a specific policy rule, would become a desirable permanent activity. Continuous coping comes with no guarantee of perpetual success, but, if the lessons drawn in this paper about how economic ideas evolve and interact with the monetary order are correct, perhaps it is the best we can do.

¹⁸ The distinction between policy problems which can be solved, and those with which we can do no better than continuously cope, is one that I owe to Scott Gordon, who deployed it at length in (1980). Though the implications of this distinction for practical policy making are not explicitly discussed in this book, which is concerned with reconciling (or not) trade-offs among the fundamental social values of *Welfare, Justice and Freedom*, I recollect conversations in which Gordon insisted that mistaking a "coping" for a "solvable" problem, and then acting accordingly, was the source of much error in economic and social policy.

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