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Evolving views on monetary policy in the thought of Hayek, Friedman, and Buchanan

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Abstract Attempting to find the technically optimal monetary policy is futile if the Federal Reserve's independence is undermined by political influences. F. A. Hayek, Milton Friedman, and James Buchanan each sought ways to improve the performance of the Federal Reserve. They each ended up rejecting the possibility that technical refinement or minor reforms might be sufficient. After properly accounting for the concerns of robust political economy, each concluded that a fundamental restructuring of our monetary system was necessary. Friedman turned to binding rules, Buchanan to constitutionalism, and Hayek to competing private currencies. We synthesize their contributions to make a case for applying the concepts of robust political economy to the Federal Reserve through the adoption of professional humility, creative thinking, and an emphasis on the politically possible, not the politically acceptable.

Keywords Federal reserve · Monetary policy · Robust political economy · Austrian economics · Public choice · Central bank independence

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> *To shy away from consideration of the politically feasible has been deemed an admirable trait, but to refuse to examine the politically possible is incomplete scholarship.*
> —James M. Buchanan (1962a, 28)

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1 Introduction

Many economists hold that the financial crisis of 2007 showed monetary economists "the limitations of monetary policy and cast doubt on some of the tenets of its intellectual foundations" (Blanchard et al. 2013, 3), leaving the profession in search of a new consensus (Nowotny 2014).[1] Yet, almost all the debates spurred by this lesson have focused on the technical aspects of monetary policy, missing the insights that a broader perspective of political economy could bring.

We can divide monetary research into two broad categories.[2] The first category aims to refine technical models and improve data collection to better approach optimal monetary policy within a given monetary framework. Researchers in this vein generally assume they can hand over their findings for the monetary authorities to implement. The vast preponderance of monetary research falls into this category.

The second category of monetary research explores the framework of monetary policy itself. Researchers of this sort often recognize that when the technically optimal is in conflict with the politically optimal, as is often the case in a contemporary democracy, political considerations are taken to supersede technical considerations no matter how well refined the latter are (Boettke and Smith 2013; Friedman 1992; Taylor 2009; Wagner 1986; Weintraub 1978).[3]

Ideal people in ideal settings can implement ideal monetary policy (Buchanan 1962b, 164). However, the researcher who takes knowledge and incentive problems—robust political economy—seriously does not set ideal policy for ideal people in ideal settings as their primary objective. As Buchanan (1962a, 28) recognized, "the almost universal neglect of the imperfections that might arise from the political attempts at applying the economists' efficiency criteria represents a serious deficiency" in economic research. Researchers must also study the environment within which monetary policy is carried out and the practical implementation of technical findings within that environment (Mayer 1993, 1).

Put differently, while monetary researchers have found increasingly sophisticated methods for zeroing in on the optimal monetary policy course, they usually neglect to consider the necessarily imperfect institutions within which monetary policy is implemented. Imperfect monetary institutions result in misaligned incentives and imperfect information (Willett and Keen 1993, 14). Such neglect renders technical models fragile to the implicit assumption that monetary authorities are free of political influences and can know how to follow the prescribed monetary course.

The second category of monetary researcher rejects this unrealistic assumption. In other words, researchers recognize the importance of finding the technical optimum but deny that it has paramount relevance because of distorted incentives, lack of information, and high costs of administration. According to them, researchers ought to seek institutions for authorities and settings as they are, not as we hope them to be (Pennington 2011).

[1] See also Colander et al. (2009a).

[2] This distinction is borrowed from Friedman (1984).

[3] A free-banking regime perhaps may be better suited to achieving this purpose (Johnson and Keleher 1996, Chapters 2 & 3; Selgin and White 1994).

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These insights have been incorporated into, or at least acknowledged in, many fields of research in contemporary political economy. It is widely accepted that politicians are self-interested,[4] use policy to bolster their reelection bids,[5] find creative ways to control supposedly independent or discretionary bureaucracies and commissions,[6] and create regulatory agencies and bureaucracies readily captured by special interest groups.[7]

Yet, monetary economists have been reluctant to apply these considerations to their technical debates or to the design of our monetary institutions and the tasks we assign to them. As Mayer (1993, 2) observed,

> there is now a tradition in economics of treating practical problems the following way: Those components that can be analyzed rigorously … are given painstakingly and rigorous attention, but the other components are more or less dismissed by arm-waving. It seems as though the familiar principle that a chain is no stronger than its weakest link is turned upside down, as though it were more important to strengthen further the already strong parts of an argument rather than its weaker parts.

This renders our monetary system prone to any deviations away from the implicit, ideal assumptions of our technical models, no matter how well calibrated the models become. The implicit assumptions of omniscience and benevolence on the part of monetary authorities render the profession's technical optima nonoperational. This is especially disconcerting for an institution that Samuelson and Nordhaus (1985, 294) call "the most important factor in the making of macroeconomic policy."

Among those who came to recognize the importance of applying the concepts of robust political economy to our monetary institutions are F. A. Hayek, Milton Friedman, and James M. Buchanan. Over the course of their careers, they devoted their attention to monetary policy. But in their early work, Hayek and Friedman sought to improve monetary policy within the given monetary framework. They both held that a central bank was necessary and that an optimal course of policy could be found and followed successfully. They held that the primary task of monetary economists was to increasingly refine monetary models and measurement techniques. Over time, as they grew increasingly frustrated with actual monetary policy in practice and doubtful that monetary authorities could remain independent, due to knowledge and incentive problems, their research increasingly recognized the need for more fundamental changes to our monetary regime. By the end of their careers, Hayek advocated a system of competing private currencies (which he referred to as denationalizing) while Friedman suggested a computer was necessary if binding monetary rules were to be imposed.

Unlike Hayek and Friedman, Buchanan more consistently examined the framework of monetary policy through the lens of robust political economy throughout his career, but it wasn't until the end of his career that he argued for the need to bind monetary authorities through what he called the constitutionalization of money. By the end of their careers, Hayek, Friedman, and Buchanan each sought radical alternatives to our

[4] See Brunner and Meckling (1977), Buchanan (1979[1999], 2000), and Mueller (1976).
[5] See Kramer (1971); Nordhaus (1975); Pack (1987); Tufte (1975); Wagner (1977), and Willett (1988).
[6] See McCubbins and Page (1986); McCubbins and Schwartz (1984); Moe (1982); Tullock (2005), and Weingast (1984)
[7] See Becker (1986); Buchanan et al. (1980); McChesney (1987); Peltzman (1976), and Stigler (1971).

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monetary institutions to overcome the motivational and epistemic problems addressed by political economy. In their quest to apply robust political economy to our monetary structures, each researcher's ideas evolved through the consistent practice of professional humility, creative thinking, and emphasizing the politically possible, not the politically acceptable. To build upon their experiences and to continue their search for monetary regimes robust to knowledge problems and incentive issues, we hold that modern monetary researchers should adopt these same habits.

Section 2 traces the evolution of Hayek's research on monetary policy. Section 3 provides the same analysis for Friedman and Section 4 for Buchanan. Section 5 draws three primary lessons from the research experiences of Hayek, Friedman, and Buchanan as monetary researchers: the need for professional humility, creative thinking, and an emphasis on the politically possible, not the politically acceptable. Section 6 concludes.

2 F. A. Hayek: from monetary nationalism to denationalization of money[8]

Hayek (1924[1999], Ch. 1; 1937) began his monetary research focusing on improving the technical aspects of monetary policy, including refining index data. For instance, Hayek (1925[1999], 115) writes that the "most urgent goal is to find the right indicator for determining at which precise moment credit restrictions should be put into effect." Largely, to Hayek, successful monetary policy could be achieved with adequate technical refinement and improved measurement techniques. While central banks might have growing pains in developing monetary policy, Hayek held they could succeed with the help of economists. While he acknowledged public choice concerns, Hayek, in his early years, fell short of incorporating them into his monetary research, outright rejecting the practicality of free banking (Hayek 1937, 77). Hayek (1944[2007], 72) wrote,

> There were many obvious tasks, such as our handling of the monetary system … where there could be no doubt that the governments possessed enormous powers for good and evil; and there was every reason to expect that, with a better understanding of the problems, we should some day [sic] be able to use these powers successfully.

Hayek, in a 1945 radio interview, suggested that no sensible person held that the government should not control the monetary structure (White 1999, 763). Hayek in 1960 (324) argued that the spontaneous forces of the market would be unable to supply a reliable means of exchange: "It is important to be clear at the outset that this is not only politically impracticable today but would probably be undesirable if it were possible." In a footnote, Hayek (1960, 520) explained he was convinced a central bank was necessary, though he doubted it was desirable or necessary for government to have a monopoly on note issue.

Hayek (1960, 325) referred to money as a "loose joint" that could interfere with the entire self-adjustment process of the market, which rendered a central bank necessary.

[8] White (1999) provides a review of the evolution of Hayek's views on free banking.

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He supported this position with three justifications. First, disruptions in the supply of money are far more harmful to the economy than disruptions regarding other commodities. Changes in the supply of money cause ripples that gradually extend throughout the economy, altering relative prices and thereby undermining their epistemic function. Thus, Hayek argued that a monetary authority was necessary for monetary and economic stability.

Second, Hayek felt a central bank was necessary to restrict or ease credit when the spontaneous fluctuations of the market oversupplied or undersupplied it. Hayek believed this was a function that market forces could not carry out, but that monetary authorities, with enough research and experience, could.

Third, Hayek believed that although the high level of government expenditure was undesirable and it would be desirable to divorce monetary institutions as much as possible from financing fiscal policy, if government expenditures were to be high relative to national income, monetary policy needed to be coordinated with the financing of fiscal policies.

Hayek (1976a, 14) showed disillusionment with the ability of government to manage monetary affairs with the publication in 1976 of *Choice in Currency*, an essay based off a speech he had delivered at the Geneva Gold and Monetary Conference:

> I do not want to question that a very intelligent and wholly independent national or international monetary authority might do better than an international gold standard, or any other sort of automatic system. But I see not the slightest hope that any government, or any institution subject to political pressure, will ever be able to act in such a manner.

Hayek (16) went on: "Money is certainly too dangerous an instrument to leave to the fortuitous expediency of politicians - or, it seems, economists." Hayek was beginning to realize that monetary institutions could not be designed without a proper accounting of robust political economy. Hayek (1976b) followed up this lecture in depth with *The Denationalisation of Money*. In it, Hayek expressed frustration that government's monopoly on currency invariably leads to inflation, economic instability, undisciplined fiscal profligacy, and economic nationalism. Radically departing from his previous views, Hayek explored the theoretical possibility and political feasibility of eliminating government's monopoly on note issue.

Hayek now held that in a contemporary democracy there are always some special-interest groups clamoring for inflationary measures to benefit themselves in the short term. Politicians, thinking not about the long-run consequences of their policies but about their next election, pursue inflationary policies, even if those policies are at odds with the general interest. These policies, along with their concomitant artificially low interest rates, lead to overinvestment. In addition, Hayek saw that government control of money supported Keynesian policies and caused a vast increase in the size of government relative to national income.

Allowing competition in currency, Hayek (1976b, 100) now argued, is the only way to eliminate these problems:

> We have always had bad money because private enterprise was not permitted to give us a better one. In a world governed by the pressure of organized interests,

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> the important truth to keep in mind is that we cannot count on intelligence or understanding but only on sheer self-interest to give us the institutions we need. Blessed indeed will be the day when it will no longer be from the benevolence of the government that we expect good money but from the regard of the banks for their own interest.[9]

Hayek (1978) next released a second edition of *The Denationalisation of Money* that expanded upon his original arguments. Most conspicuous is the expansion of his "Monetary policy neither desirable nor possible" chapter, which now included a subchapter "The abolition of central banks," in which Hayek argued that the elimination of government's monopoly on money would require the elimination of the central bank as well as interest-rate policy. Just like any other price in the market, Hayek now argued, interest rates should be allowed to develop in an unfettered market. A central bank could never match the free market's ability to adjust the interest rate continuously to the dispersed and rapidly changing factors influencing the supply of and demand for money. However, as Hayek acknowledged, even under this type of monetary regime, the government would still have some influence over interest rates through debt-financed fiscal policies; the government would just no longer have the ability to keep interest rates artificially low to support government debt. Hayek (1981[1999]) ultimately turned his monetary research to investigating the operation of free-market competition in currency.

As a young researcher, Hayek had argued not only that a central bank was necessary and desirable. Toward the end of his career, Hayek argued to the contrary that money can and should be provided through market mechanisms rather than by politically influenced and imperfectly informed monetary authorities. His earlier case had depended upon generous assumptions about the motivations and cognitive abilities of monetary authorities. When Hayek later more thoroughly applied the concepts of robust political economy to monetary regimes, he came to the conclusion that the only robust monetary regime was the free market.

3 Milton Friedman: from monetary rules to computer programs[10]

Friedman (1948, 246) started off his research on monetary policy holding that "government must provide a monetary framework for a competitive order since the competitive order cannot provide one for itself." However, Friedman also argued that the monetary system must be ruled by law rather than discretion, and proposed requiring 100 % reserves to reduce discretionary monetary powers and, furthermore, abolishing open market operations (247). Friedman acknowledged that there were important public choice concerns—for instance, that

[9] It is important to note that competition in currency as Hayek understood it differs in important ways from what modern scholars refer to as "free banking" (Selgin 2015; White 1999).

[10] Nelson and Schwartz (2008); Nelson (2007), and Lothian (2009) provide overviews of Friedman's contributions to monetary economics. Selgin (2008) provides a historical analysis of the progression of Friedman's thinking on monetary policy along with critiques of Friedman's early positions.

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> explicit control of quantity of money by government and explicit creation of money to meet actual government deficits may establish a climate favorable to irresponsible government action and to inflation. The principle of a balanced stable budget may not be strong enough to offset these tendencies.… It can probably be avoided only by moving in a completely different direction, namely, toward an entirely metallic currency, elimination of any governmental control of the quantity of money, and the re-enthronement of the principle of a balanced actual budget (264).

Echoing these same concerns, Friedman (1958, 254) wrote a paper for the Joint Economic Committee arguing that a fluctuating price level negatively affects economic growth and that the primary problem of monetary policy is preventing it from becoming a source of economic disturbance. Twelve years later, in *A Program for Monetary Stability*, Friedman (1960[1992], 23) more systematically made the argument for incorporating the concerns of robust political economy into monetary institutions:

> The central problem is not to construct a highly sensitive instrument that can continuously offset instability introduced by other factors, but rather to prevent monetary arrangements from themselves becoming a primary source of instability. What we need is not a skilled monetary driver of the economic vehicle continuously turning the steering wheel to adjust to the unexpected irregularities of the route, but some means of keeping the monetary passenger who is in the back seat as ballast from occasionally leaning over and giving the steering wheel a jerk that threatens to send the car off the road.

Friedman (1960[1992], 100) proceeded to present a list of potential technical reforms to the Federal Reserve, ranging all the way from requiring a 4 % growth-rate target for the money stock (the famous k-percent rule he continued to advocate throughout the rest of his career) to eliminating the gold reserve requirement.

However, around this time, Friedman (1962a, 38) also argued that government had to have a central bank in order to "provide a stable monetary framework for a free economy" as part of its mandate to provide a stable legal and economic framework that would allow individuals to carry out their own plans. But, even in those early days, Friedman (27) understood the importance of monitoring and restraining monetary authorities in order to avoid excessive inflation (Nelson and Schwartz 2008).

Friedman (1962b, 219) elsewhere argued that "there is widespread agreement that government must have some responsibility for monetary matters" and that "there is also widespread recognition that control over money can be a potent tool for controlling and shaping the economy." Friedman (220) went on to suggest that the "problem is to establish institutional arrangements that will enable government to exercise responsibility for money, yet will at the same time limit the power thereby given to government and prevent the power from being used in ways that will tend to weaken rather than strengthen a free society." Milton Friedman (1962a, 50–1) called for applying the concepts of robust political economy to our monetary institutions:

> It may be that these mistakes were excusable on the basis of the knowledge available to men at the time—though I happen to think not. But that is really

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> beside the point. Any system which gives so much power and so much discretion to a few men that mistakes—excusable or not—can have such far-reaching effects is a bad system. It is a bad system to believers in freedom just because it gives a few men such power without any effective check by the body politic—this is the key political argument against an "independent" central bank. But it is a bad system even to those who set security higher than freedom. Mistakes, excusable or not, cannot be avoided in a system which disperses responsibility yet gives a few men great power, and which thereby makes important policy actions highly dependent on accidents of personality. This is the key technical argument against an "independent" bank. To paraphrase Clemenceau, money is much too serious a matter to be left to the Central Bankers.

Friedman (1962b) outlined three ways government could do this: (1) a commodity standard, (2) an independent central bank, and (3) legislated rules. Friedman immediately ruled out a commodity standard as neither feasible nor desirable. He also saw weaknesses in attempts to establish an independent central bank, listing three defects: (1) that due to division of responsibility, there would be shirking during times of uncertainty, (2) that an independent central bank would have an enormous dependence on the people put in charge, and (3) that it would likely cater to bankers. This, combined with the difficulty of keeping a central bank actually independent of political influence, led Friedman (1962b, 239) to conclude that "the case against a fully independent central bank is strong indeed." Friedman (1962b, 243) concluded that "the only feasible device currently available for converting monetary policy into a pillar of a free society rather than a threat to its foundations" is a legislative rule that would mandate a specific monetary stock growth rate, preventing monetary fine-tuning.

Friedman (1962a, 38–9) envisioned optimal monetary policy as charting a course between two extreme views that he felt were economically and politically undesirable, "Scylla" and "Charybdis." The "Scylla" belief held that a purely automated gold standard was the only politically feasible and economically desirable monetary regime. The "Charybdis" view held that the monetary authority should have wide discretionary powers to respond to unforeseen circumstances. Friedman (1962a, 54) believed both views had failed in the past and would likely fail in the future, which is why he proposed a legislated money-growth rule.

In testimony before the House Committee on Banking and Currency (Friedman 1964) and in his academic work (Friedman 1968), Friedman continued to argue that monetary policy had all too often become a destabilizing force under the Fed and that it ought to aim to be a neutral force with a money-growth rule. Friedman (1968, 17) argued that this type of monetary regime was not only optimal, but politically feasible:

> Steady monetary growth would provide a monetary climate favorable to the effective operations of those basic forces of enterprise, ingenuity, invention, hard work, and thrift that are the true springs of economic growth. That is the most we can ask from monetary policy at our present stage of knowledge. But that much—and it is a great deal—is clearly within our reach.

However, while he acknowledged in some of his *Newsweek* columns that deficits financed by the creation of money were quickly becoming the norm and led to inflation

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(Friedman 1967b), many of his columns blamed the failure of monetary policy on technical issues, not the concerns of robust political economy (Friedman 1966, 1967a, c, 1970b, 1971). For example, Friedman (1969) argued that "inflation is made in Washington" because "they have taken the behavior of interest rates rather than of the quantity of money as their guide–and this mistake has led them far astray from their intended path." When Arthur Burns was appointed chairman of the Federal Reserve, Friedman (1970a) praised Burns's qualifications for the position, holding that his superior economic training and expertise, unequaled by past chairmen, would allow him to set the nation on a stable path of economic growth for the first time in its history.

However, Friedman began to realize that solving the technical problems or putting trained people in charge was not enough. Friedman (1972) wrote that "if we really knew enough to use monetary policy for fine-tuning, we would probably experience a four-year cycle, with unemployment reaching its trough in years divisible by four and inflation reaching its peak in the succeeding year." In a letter to Senator Proxmire, Friedman (1974, 23) voiced his dismay that the Fed was not using its independence to undertake monetary policy measures appropriate for a long-term perspective, and, instead, neglecting this responsibility for short-term policies that proved more popular.

Friedman was recognizing a pattern in the supportive role that the Federal Reserve continued to play in relation to the Treasury. In his *Newsweek* column, Friedman (1978) observed,

> We, the public, have been asking Congress to provide us with ever more goodies—yet not to raise our taxes. Congress has obliged, enlisting inflation as a hidden tax to finance the difference (and surreptitiously raise taxes by pushing more and more income into higher tax brackets). The Fed has cooperated—except when the public outcry against inflation has overcome Congressional pressure.

At a luncheon at the June 1980 International Monetary Conference held in New Orleans, Friedman remarkably suggested there was no need for the Federal Reserve and that the economy would be better off without a central bank (Bennett 1980). When a lunch companion suggested they could just hand it over to a computer, Friedman responded, "Indeed" (as quoted in Bennett 1980). Friedman expressed similar sentiments in November 1980 from the Coordinating Committee on Economic Policy at a conference drafting a memo for president-elect Reagan (Silber 2012, 194). However, Paul Volcker and, to a lesser extent, Arthur Burns interpreted the suggestion as a metaphor (Silber 2012, 194).

Friedman (1982, 118) was growing frustrated at the failure of the Federal Reserve to reform itself, even in his academic work:

> The only two alternatives that do seem to me feasible over the longer run are either to make the Federal Reserve a bureau in the Treasury under the Secretary of the Treasury, or to put the Federal Reserve under direct congressional control. Either involves terminating the so-called independence of the system. But either would establish a strong incentive for the Fed to produce a stabler monetary environment than we have had.

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Friedman (1984) increasingly shied away from research and popular work focused on what he referred to as the tactics of monetary policy—research on the technical specifics of current monetary policy—and directed his monetary research and popular writings toward incremental and fundamental changes to the framework for monetary policy. Interviewed for a newspaper article in the *Daily News*, Friedman suggested that the "United States would be better off if the Federal Reserve had never been established" (Rainie and White 1981).

Friedman (1984, 24) even made the bold claim that "no major institution in the United States has so poor a record of performance over so long a period yet so high a public reputation as the Federal Reserve." Friedman (1984) explored drastic recommendations for restricting the Federal Reserve, including through constitutional rules, combining it with the Treasury Department, transitioning to a gold standard, competitive note issue, and holding high-powered money to a zero growth rate. Only this radical restriction of our monetary institutions would "end the arbitrary power of the Federal Reserve System to determine the quantity of money and would do so without establishing any comparable locus of power" (Friedman 1984, 51).

Friedman (1984[2014], 634) acknowledged the evolution in his beliefs. Initially, Friedman admitted, he believed improving monetary policy required improving our understanding of money and refining the technical models we hand over to the monetary authorities. After a lifetime of working on the issue, Friedman said, he had concluded it was the wrong research endeavor. Instead, the correct research questions were as follows:

> What is the structure of monetary policy that will have the effect of making the political invisible hand work the same way as the economic one? How can we set up a structure of monetary policy under which government officials who intend only to promote their private interests are led by an invisible hand to promote the public interest? (Friedman 1984[2014], 633)

These questions require that we consider the more "fundamental structure of our monetary institutions" (Friedman 1984[2014], 634). Friedman began to see monetary reforms as merely the first step toward a form of competitive currency issuance, as proposed by Hayek.[11] While he had reservations about some aspects of completely denationalizing money, Friedman (1984, 47), approved of "Hayek's proposal to remove restrictions on the issuance of private moneys to compete with government moneys."

In 1986, Friedman along with Anna Schwartz (39) revealed that his desired course had moved even closer to the "Scylla" view, that the monetary authority should be more tightly bound:

> Even granted the market failures that we and many other economists had attributed to a strictly laissez-faire policy in money and banking, the course of events encouraged the view that turning to government as an alternative was a

[11] "Although personally I would favor the deregulation of financial institutions, thereby incorporating a major element of Hayek's proposed competitive financial system, it would seem prudent to proceed in stages: first, freeze high-powered money; then, after a period, eliminate reserve requirements and other remaining regulations, including the prohibition on the issuance of hand-to-hand currency by private institutions" (Friedman 1984, 49–50).

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cure that was worse than the disease, at least with existing government policies and institutions. Government failure might be worse than market failure.

Friedman and Schwartz went on, "Our personal conclusion … is that rigid monetary rule is preferable to discretionary monetary management by the Federal Reserve" (40). However, Friedman and Schwartz (1986, 46) made it clear that they still saw a role for government in monetary policy and were skeptical of Hayek's case for completely denationalizing money.

In a stark change from when Arthur Burns was appointed chairman of the Federal Reserve, when Alan Greenspan was appointed chairman of the Federal Reserve, Friedman was quoted in the *San Francisco Chronicle* stating bluntly that the Federal Reserve should be replaced with a computer because the chairman did not matter since the Federal Reserve controls the chairman, not the other way around.[12]

In *Money Mischief*, Friedman dedicated an entire chapter to explaining his now-famous adage that "substantial inflation is always and everywhere a monetary phenomenon," but warned that its recognition is only the first step in finding the cure to inflation (Friedman 1992, 193). Friedman saw that the problem is not just finding the technically optimal monetary path or "knowing what to do," because "that is easy enough" (213). The problem is having the "political will to take the necessary measures" to curb profligate government spending and thus to find institutions that would be robust to the imperfections of monetary authorities and the political environment they operate in (213). For Friedman, this provided even more reason for the implementation of his previous proposal for a k-percent rule, which would require the monetary authority to keep the difference between the yields on standard bonds and indexed bonds it issued below a specified limit. Friedman (229) suggested performance pay and the threat of being removed from office could be used to help enforce this rule.

Friedman's thinking developed even further over the next 20 years. When asked in an interview published posthumously whether it would be desirable to turn monetary policy over to a computer, Friedman (2007) replied that a constant money-growth rule should be assigned to a computer because our current system relies too much on the people in charge. At this point, Friedman argued minor tweaks and better appointees to the Federal Reserve simply would not suffice. Friedman even went on to suggest eliminating the Federal Reserve by freezing the current amount of money in the form of Treasury notes through constitutional amendment, though he held that it was politically impossible. In addition, Friedman alluded to other viable solutions, including a legal-tender gold standard and competitive note issue.

Friedman long recognized a tradeoff between complete monetary discretion and binding monetary rules. At the beginning of his research career, he had argued that a course could be navigated between these two extremes, and focused primarily on technically refining monetary policy. Friedman's confidence in the ability of the monetary authority to implement a specified monetary course fell throughout his life. By the end of his research career, Friedman was arguing that monetary authorities could not be entrusted with any discretionary powers and that monetary policy should be conducted by a computer. Similarly to Hayek, as Friedman's research on monetary

[12] "Milton Friedman Says He'd Dump the Fed," (1987). *San Francisco Chronicle*, June 8, p. 23.

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regimes progressed, he came to the conclusion that a discretionary monetary regime was not robust in a world with knowledge and incentive problems.

4 James M. Buchanan: from brick standard to monetary constitution

From the start, James Buchanan eschewed the presupposition that economic policy could be crafted and implemented by a group of benevolent and enlightened elites. Buchanan employed an institutional analysis that compared monetary regimes in real, not ideal, settings.

For Buchanan (1962b), the obvious criterion for comparing monetary regimes was their ability to foster a predictable monetary environment for economic actors. Buchanan (1962b, 164) saw two approaches: either policy makers could directly achieve predictability, or institutions could be designed in such a way that it would emerge spontaneously. Buchanan warned that the supposed superiority of a managed monetary system derived from incomplete research that assumed ideal people operating in ideal circumstances. The relative merits of an automatic monetary system become apparent only when one considers incentive issues and knowledge imperfections.

Buchanan argued that the ideal automatic system would be based on a commodity whose value fluctuated as closely as possible with the average level of prices in the economy. Constitutional rules could then be set to dictate that the monetary authority would either buy or produce and sell that commodity at scheduled prices. Market forces would then continuously correct any deviation of real prices from the set prices, providing price predictability. Buchanan suggested that even a brick would work for this purpose since it is, in his mind, a reliable representation of the goods and services produced in the economy. Buchanan argued that a brick standard, a labor standard, or having a manager confined by well-defined rules would all put a stop to the government growth let loose by fiscal profligacy.

For Buchanan (1962b) at that time, it was a toss-up between a commodity standard and rules limiting the discretion of monetary authorities. What Buchanan felt mattered most for monetary predictability was that the rules of the monetary regime be constitutional. In other words, the rules must be set to be relatively absolute rules to protect them from political tampering.

After witnessing the Keynesian-inspired growth in government, Buchanan became more skeptical of the possibility of confining a monetary authority. Buchanan and Wagner (1977[2000], 124), stated that "permanent insulation of an effective monetary authority from politics is not something upon which hopes for rescue should be based." In *The Power to Tax*, written with Geoffrey Brennan (Buchanan and Brennan 1980[2000], Ch. 6), Buchanan argued for a comparative institutional analysis of government control of the money supply and private note issue: "even if the market alternative should be rejected after careful institutional comparison, predictions about likely outcomes when government is assigned the power to create money remain crucial in setting the terms of the constitutional restrictions that the rational citizen-taxpayer might desire to impose on government in the exercise of that power" (130).[13] Buchanan and Brennan (1980[2000], 153) argued for a monetary constitution that

[13] See also Brennan and Buchanan (1981).

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enforced a specified level of inflation. However, they admit the limitations of even monetary constitutions: "There is no way that the power to create money can be divested of its revenue implications by a money rule alone. This may be viewed as a persuasive argument for relying on possibly imperfect market alternatives, and denying government the power to create money under any circumstance at all" (155).

Buchanan (1983, 144) urged shifting the debate from changes within the current monetary framework to comparison of alternative monetary frameworks. Buchanan saw no way out of a politicized monetary authority except through constitutional constraints: "until and unless we begin to take the long-term perspective in our private and in our public capacities, including the adoption of new and binding constitutional constraints on the fiscal and monetary powers of government, we are doomed to remain mired in the muck of modern politics" (146).

Buchanan (1986[2001], 333) soon after argued that "At best … the truly benevolent despot can only be partially successful, even given the most clearly defined target for policy." Then, criticizing the benevolence assumption, Buchanan (334) went on, "it is evident, quite apart from any historical record, that the despot will find it advantageous to resort to money creation over and beyond any amount that might characterize the 'ideal' behavior of the benevolent counterpart considered above."

After the onset of the recent financial crisis, Buchanan's (2009a) views progressed even further: "critical evaluation and assessment suggests that the structure of the whole monetary economy is flawed, which points toward genuine constitutional revolution rather than either a change in participants or piecemeal adjustments in the regulatory apparatus." Buchanan (2010, 253) went so far as to assert that monetary policy in the wake of the financial crisis had "an eerie similarity to that in the seventeenth-century imagination of Thomas Hobbes concerning nonmonetary rights and claims." Buchanan (2010, 2015) then argued for the constitutionalization of money—putting control of money explicitly into the constitution—because neither the market nor politics can provide an effective monetary regime.

Buchanan, more consistently than Hayek and Friedman, applied robust political economy to monetary institutions throughout his career. While initially examining alternative monetary regimes such as a brick standard, his thinking eventually led to his call for the constitutionalization of monetary policy.

5 Applying robust political economy to our monetary institutions

We can draw important lessons from the transformation of Hayek, Friedman, and Buchanan's ideas on money. All three consistently strived for professional humility, creative thinking, and focusing on what was politically possible, not just what was politically acceptable. Advancing monetary research from policy tactics to the institutional framework requires the consistent application of these three traits.

5.1 Professional humility

Hayek, Friedman, and Buchanan displayed a remarkable degree of professional humility during their careers, especially in regard to their favored monetary policy. All three economists acknowledged, and consistently sought to understand, the limits of

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economic expertise.[14] The limits were especially consequential when the experts did not fully account for real-world deviations from ideal knowledge and incentives.

In his Nobel Prize lecture, Hayek connected the public's recognition of the scientific stature of economics, as reflected in the Nobel Prize, to the fact that "economists are at this moment called upon to say how to extricate the free world from the serious threat of accelerating inflation which, it must be admitted, has been brought about by policies which the majority of economists recommended and even urged governments to pursue" (1974). In light of the financial crisis, it is clear that economists have not fostered a reputation for professional humility (Colander 2011).

Mayer (1993, 1–2), suggests that monetary economists who focus on strictly technical matters have two options: either stick strictly to their theoretical expositions and refrain from drawing or offering policy prescriptions; or, incorporate the concerns of robust political economy into their research. Economists, to offer policy prescriptions, must thoroughly understand and appreciate the significance of incentive and knowledge problems and incorporate them into their monetary models. Even economists, when they step outside the scientific boundaries of the profession and enter the realm of monetary policy, are susceptible to cognitive and motivational shortcomings.

Unlike most contemporary monetary researchers, then, each of these researchers gradually came to the realization that our monetary system was fragile to deviations from idealized assumptions. They had the professional humility to admit it. This drove each of them to forge a unique path of research, away from the tactics of monetary policy and toward the framework of monetary policy itself. Designing a monetary system robust to deviations away from the ideal became the primary goal of their monetary research programs.

5.2 Creative thinking

Beyond their professional humility, Hayek, Friedman, and Buchanan were also willing to engage in creative thinking when it came to exploring alternative monetary systems. Their creative thinking led each of them to suggest radical alterations to our existing monetary institutions.

Creative thinking has not been widely adopted by the profession. After the financial crisis, most monetary researchers went back to the drawing board to reassess technical monetary policy. Few wondered, as Hayek, Friedman, and Buchanan did, whether we should go back to the drawing board for our entire monetary framework.

However, a small but growing number of researchers are picking up where Hayek, Friedman, and Buchanan left off and engaging in creative thinking. Their research has been spurred by the mounting evidence that the Federal Reserve is politically controlled (Boettke and Smith 2013, 2015) and has often failed to provide monetary and economic stability (Selgin et al. 2012; Hogan 2015; Meltzer 2012). In the wake of the financial crisis, some monetary researchers have been calling for more creativity of this sort (Colander 2011, 2009b).

Other prominent economists have also stressed the need for creativity. Barro (1982, 106) called for more drastic changes to the monetary framework if we wanted to seriously tackle inflation: "it would make a major difference if institutional changes

[14] See Hayek (1974); Friedman (1953), and Buchanan (1979).

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were made that once again provided a nominal anchor for the monetary system." Barro (1982, 110) even suggested examining the possibility of turning to a monetary constitution or some type of gold standard, writing that "discussions of the inflation problem would be usefully phrased in terms of the desirable or undesirable operating characteristics of alternative monetary regimes, which include the gold standard and other possibilities."

A wide range of creative solutions have come from a few monetary researchers (Mayer and Willett 1988; Havrilesky 1995; Kotlikoff 2010). Some suggest turning to some form of commodity-based system akin to Buchanan's suggested brick standard (Johnson and Keleher 1996; Greenfield and Leland 1983) or the related system of inflation targeting (Bernanke and Mishkin 1997). Others have explored the possibility of constitutionally restraining monetary authorities (White et al. 2015; Salter 2014; Bernholz 1986). Researchers have also examined returning to the gold standard (Kydland and Wynne 2002; White 2008, 2015) and the possibility of competitive banking (Hogan 2012; Selgin and White 1994; Dowd 2001; King 1983; Selgin 1988).

Even so, still more creative thinking to compare alternative monetary regimes is necessary.

5.3 An appeal for the politically possible, not the politically acceptable

We hold that monetary research that focuses exclusively on technical considerations of monetary theory is nonoperational because it calls for changes that are not politically possible; meanwhile, many radical suggestions for reforming monetary institutions fall outside the realm of political acceptability (Havrilesky 1995, 104). Political possibility refers to the epistemic and motivational constraints arising because economic and political actors are human, and political acceptability refers to whether ideas have advanced to a state of acceptance that would make it possible to implement them in a contemporary democracy. Implementing ideal monetary policy crafted for an ideal world with ideal people is not possible in the real world. However, it is possible to implement radical monetary regimes that just have yet to become politically acceptable. As Timberlake (1978, 420) concludes,

> Popular sentiment has become conditioned to the rule of men and women in monetary policy, no matter the evidence that documents its failure. So the case rests: Until the government's monopoly over money is abolished, good private competitive enterprise money will never have the chance to drive out bad governmental monopoly money.

Limiting the acceptability of such proposals is the fact that, as with most government bureaucracies and programs, entrenched interests within and surrounding the Federal Reserve have a strong interest in maintaining it even after it has been proven ineffective (Hayek (1981[1999], 247). As Havrilesky (1995, 104) observes, "The principle [sic] actors in the monetary policy process simply would not surrender the considerable benefits that they enjoy from current institutional arrangements."

As Buchanan (1986) and Friedman and Schwartz (1986) explained, though, even if there is no current political aperture for the type of monetary regime that Hayek, Friedman, and Buchanan advocated, it is the job of academics to have theories

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worked out and prepared for when they are wanted. In addition, as Selgin and White (1994, 1745) conclude, “a verdict on the desirability of monetary laissez faire may motivate the direction taken by marginal reforms, within the constraints of the politically possible.”

If economists are going to continue to make monetary policy recommendations, they should not focus strictly on what is politically acceptable, which often does not expand beyond the narrow confines of technical adjustments. Often, the most important practical advancements in the social sciences have come from ideas initially considered politically unacceptable. Hayek and Friedman spent much of their research careers pushing for adjustments to our monetary regime that were politically acceptable. Each abandoned these efforts, choosing instead to join Buchanan and to advance more fundamental changes that fell outside of what was currently politically acceptable.

6 Conclusion

Traditionally, improving monetary policy has focused on better solving knowledge problems with better information and models (Morris 2000, 6). The intellectual evolution of Hayek, Friedman, and Buchanan suggests that improving monetary stability and predictability will require more drastic alterations to our monetary institutions to make monetary policy operational in a less-than-ideal world.

Hayek, Friedman, and Buchanan set out to find a central-banking regime that could operationalize increasingly refined technical monetary policy models. Each ended up rejecting the possibility, primarily due to their increasing realization that our monetary authorities did not have the requisite knowledge to conduct monetary policy and, even if they did, could not be shielded from political influences. Unfortunately, their insight has not been widely shared. Nevertheless, the path by which they came to that insight—a path of professional humility and creative thinking—and used in their studies of monetary frameworks offers an insightful example for the profession to follow going forward.

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