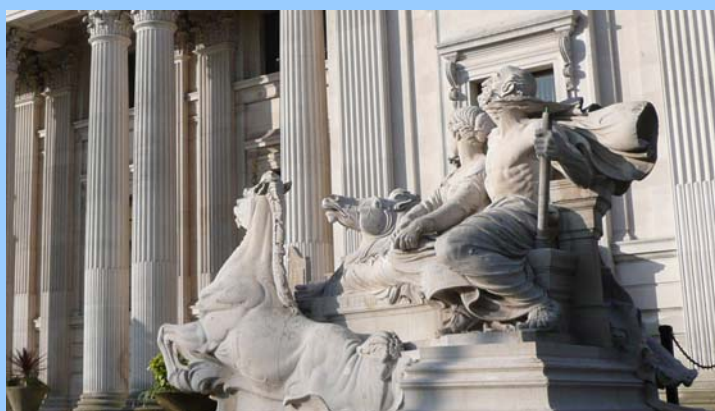




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Political interpretative flexibility and the economics of inflation and unemployment¹



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ABSTRACT

Macroeconomics is political. The very variables used in macroeconomic models – unemployment, inflation, interest rates – are frequently heard in political debate. The work of macroeconomists underlies these discussions as it mingles in contested political narratives. In this paper I present the findings of a research project studying macroeconomists working on the relationship between unemployment and inflation between the 1960s and early 1980s. Central to the paper is the macroeconomists own political beliefs and how they shape their economic modelling. A minority saw no relationship between their macroeconomic work and their political beliefs. Yet many others did identify exactly that; often seeing their academic work as a political activity. The fascination here is in the contingency of these connections; how each individual negotiates the complexity and ambiguity of the political connotations of their own work. I develop the concept of Political Interpretative Flexibility to aid our understanding of how macroeconomists can (a) espouse similar theories yet inscribe radically different political connotations, and (b) promote similar political agendas through radically different economic theories.

INTRODUCTION

This paper uses the example of debates about the introduction of Adaptive and Rational expectations Augmented Phillips Curves in the 1970s and 1980s to explore the relationship between macroeconomic ideas and the political connotations associated with them by macroeconomists. The analysis is drawn from a wider project studying the development of the Phillips Curve debate conducted from a Science and Technology Studies (STS) perspective (Stephens 2005, 2007). The paper is in four sections. The first describes the central theoretical development of the paper: Political Interpretative Flexibility. The second briefly introduces the concept of the Phillips Curve so the reader can follow the paper while avoiding an excessive description of abstract economics. This is followed by the longest section of the paper that uses interview data with macroeconomists to empirically demonstrate Political Interpretative Flexibility. The final section provides some conclusions on the empirical work and offers some theoretical implications for changes in macroeconomic orthodoxy.

1. POLITICAL INTERPRETATIVE FLEXIBILITY AND THE SOCIAL INTEREST MODEL

The classic model for a social interests explanation in the STS literature is Steve Shapin's (1975, 1979) account of 18th Century Phrenology in Edinburgh. Shapin argues the shifting nature of Scottish society produced a political culture that was both shaped and reinforced by the debates concerning the acceptance of Phrenology as a scientific practice. To the newly established bourgeoisie the Phrenological claim that differences in the physical construction of people's brains led to diversity in people's skills and character lent scientific legitimacy to their political interest in promoting the emergent division of labour. Conversely groups keen to promote traditional social hierarchies in Scotland saw their values expressed through the old Scottish Common-Sense philosophical explanation of the mind, and invested resources in sustaining the field.

This paper argues that a social interest explanation cannot account for the experience of debates about the Phillips Curve because the political significance of the various formulations are subject to Interpretative Flexibility. The paper draws upon a set of interviews conducted with macroeconomists engaged in the Phillips Curve debate to demonstrate the dynamics that allow this to be the case, and then explores the implications for macroeconomic debate.

Political Interpretative Flexibility does not mean that macroeconomic theories are apolitical. The empirical section of this paper will show that many macroeconomists believe their political goals were expressed through the version of the Phillips Curve they supported, and saw the promotion of that Phillips Curve as a political activity. Instead Political Interpretative Flexibility means that a single scientific notion has flexibility in the political goals it embodies. Subsequently, in the case of the Phillips Curve debate, we find two implications. Firstly each version of the Phillips Curve is used to express multiple political ideologies. Secondly macroeconomists with the same political background adopt opposing constructions of the Phillips Curve to represent their social interests. In effect the various formulations of the Phillips Curve are not apolitical but any-political.

For macroeconomists the exact relationship between political ideas and macroeconomic ideas is complex, heterogeneous, and contingent. Some macroeconomists do not perceive any political connotation to their work. Others claim no political allegiances in or out of macroeconomics. Yet others identify clear political interests in their work. Of these a further subset assert that their support for a particular form of expectations augmented Phillips Curve is a deliberately ideologically motivated act. These positions will be demonstrated empirically shortly. For now the vital insight is that the pattern of linkages between political ideology and Phillips Curve augmentation is not systematic. Despite the existence of ideologically motivated participants in the debate, there is no consistent association between any version of the Phillips Curve and sets of social interests. Since a systematic link is missing, shifts in the wider political power struggle do not produce analogous changes in macroeconomic orthodoxy. Social interest theories of the sort so fruitfully employed in the characterisation of Phrenology in 18th Century Edinburgh fail to provide equivalently insightful accounts of mid 20th Century Anglo-American macroeconomics.

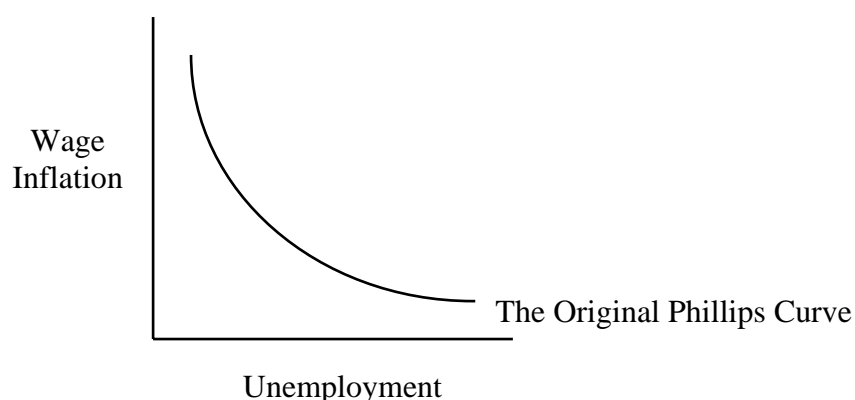
THE PHILLIPS CURVE

The term Phillips Curve is used in macroeconomics used to describe a range of theories about the relationship between unemployment and inflation. Between the late 1950s and the early 1980s three versions of the Phillips Curve became widely adopted by the profession only to lose popularity and be replaced by another conception. For the purposes of this paper, the three versions of the Phillips Curve will be referred to as the Original Phillips Curve, the Adaptive Expectations Phillips Curve, and the Rational Expectations Phillips Curve¹. The

¹ The various curves are referred to by a wide variety of names by macroeconomists themselves. The first curve, here the Original Phillips Curve, is frequently referred to as simply the Phillips Curve, the Phillips Curve or Phillips' Phillips Curve. The second curve, here the Adaptive Expectations Phillips Curve, is more often

Original Phillips Curve, developed by Bill Phillips (1958) and Richard Lipsey (1960), suggests an inverse non-linear relationship between inflation and unemployment as shown in fig. 1. One implication often associated with this version is that a government can lower unemployment by injecting money into the economy to create jobs: as workers would be willing to work at new higher levels of wages. However this would result in increased inflation.

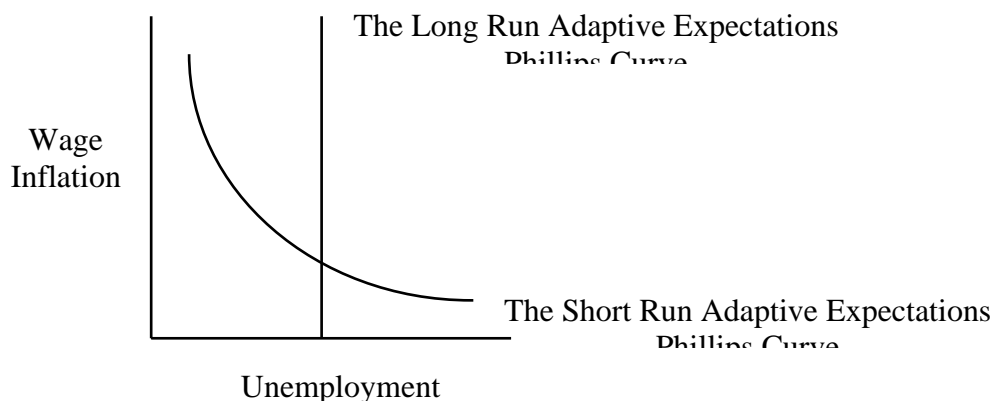
Fig 1. The Original Phillips Curve



The second version, the Adaptive Expectations Phillips Curve, was developed by Milton Friedman (1968) and Edmund Phelps (1967). Here the Phillips Curve is assumed to hold as Phillips and Lipsey argue in the short run. However in the long run the relationship breaks down and the curve becomes a vertical line, as shown in fig. 2. This is because, to continue the example above, after workers had been attracted to work because of the increased wages they would come to realise that the wages had only raised in nominal terms, i.e. the physical number of currency they receive has increased, but the actual spending power gains are an illusion because prices have also risen due to inflation. Subsequently the workers expectations of the changes in the price level gradually become realistic and they leave their jobs and the unemployment rate returns to the original position on the long run vertical Adaptive Expectations Phillips Curve. This learning process is termed adaptive expectations.

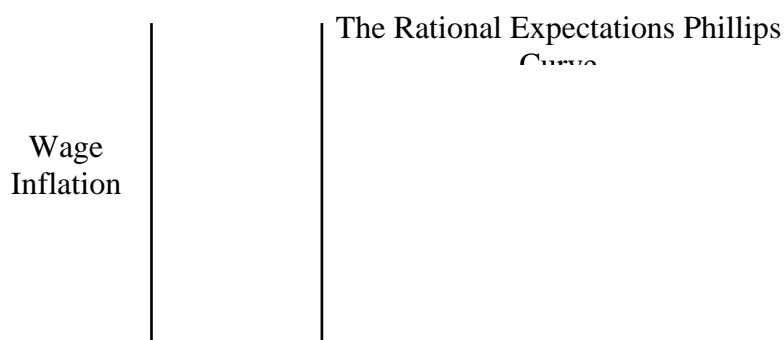
referred to as the Natural Rate of Unemployment or NAIRU (Non-Accelerating Inflation Rate of Unemployment), although is also know as the Adaptive Expectations Augmented Phillips Curve, the Monetarist Phillips Curve, the vertical long-run Phillips Curve, or even simply the Phillips Curve. The third curve, here the Rational Expectations Phillips Curve, is sometimes known as the Rational Expectations Augmented Phillips Curve, the New Classical Synthesis Phillips Curve, or again simply the Phillips Curve.

Fig 2. A Basic Adaptive Expectations Phillips Curve



The third version, the Rational Expectations Phillips Curve, does not use adaptive expectations, which work with a time lag. Instead it asserts that economic agents base their expectations of future price changes on all the available information and will, on average, have correct expectations of the future in all but a few instances. Consequently people are never ‘fooled’ into believing their wages are anything other than what they realistically will be, and thus the short-run period in the Adaptive Expectations Phillips Curve – where the Original Phillips Curve is still deemed effective – never occurs. Thus in fig. 3 the Rational Expectations Phillips Curve is always found in the long run position.

Fig 3. A Basic Rational Expectations Phillips Curve



As we will see, the political connotations of each of these Phillips Curves is contingent and locally negotiated due to Political Interpretative Flexibility.

3. POLITICAL INTERPRETATIVE FLEXIBILITY IN MACROECONOMICS

Claims of Apolitical Macroeconomics

As stated above, some macroeconomists expressed political neutrality for either their theories or their personal beliefs. An example is Peter Stoney; an economist who during the 1970s was based at the University of Liverpool and published two contributions to the Phillips Curve debate with Leighton Thomas. The first a critique of Bertie Hines' Trade Union militancy argument (Hines, 1964, 1968, 1969, 1971), the second exploring the role of unemployment dispersion (Thomas & Stoney 1970, 1972):

Interviewer: "How would you characterise your political position in the early 70s, late 60s, when [your Phillips Curve] papers were being published?"

Peter Stoney: "Inchoate, undeveloped, not clear, it's only recently through the last fifteen, twenty years that I've become more clear about that kind of issue, yeah, didn't really have any political definition, clear definition, in my mind if that's what you're asking"

And secondly Dale Mortensen, an early advocate of the microfoundations of the Adaptive Expectations Augmented Phillips Curve literature, and also later advocated the Rational Expectations Phillips Curve. Mortensen published a contribution to Edmund Phelps' seminal *Microeconomic Foundations of Employment and Inflation Theory* (Mortensen 1970):

Interviewer: "Do you think the political impact of [your work on the Phillips Curve] is obvious, or is it ambiguous in terms of policy choices?"

Dale Mortensen: "In terms of policy choices, well no it's probably somewhat ambiguous, it depends on how you look at it, the idea of a vertical Phillips Curve does not imply that there isn't room for short run counter-cyclic policy and the costs and benefits of that policy"

And elsewhere in the interview:

Dale Mortensen: “Frankly I was more interested in making a name for myself, ha ha, and the political impacts of the work weren’t the first order of consideration”

We can see that some macroeconomists perceived no clear political connotation of their work and no political motivation to their actions. We now turn to the more engaging demonstration of the Political Interpretative Flexibility of the Adaptive Expectations Augmented Phillips Curve.

Political Interpretative Flexibility in the Adaptive Expectations Phillips Curve

We begin with a quotation from David Laidler on ideological motivations in the Phillips Curve debate. Laidler moved to Manchester University in 1969 where he was awarded a grant with Michael Parkin to establish the Manchester Inflation Workshop. During this period Laidler made frequent and influential contributions to theorising the Adaptive Expectations Augmented Phillips Curve (Laidler 1971, 1972, 1975, 1976, Parkin and Laidler 1975² Laidler and Purdy 1974). Here he is discussing an exchange between himself and Joan Robinson, one of a number of Cambridge economists famous for their staunchly left wing and Keynesian views (Turner 1989, King 1998):

Interviewer: “Do you think that there were people who were trying to express directly political views, and were making theories and using data in such a way that supported political opinion?”

David Laidler: “Oh what a good question. I suppose the answer is yes and no ... when you are concerned with economic policy and someone comes up with a position you

² This paper is a review article of the previous Phillips Curve literature. Although it offers no unique empirical work of its own, the paper made an important contribution to framing and subsequently closing the debate about Adaptive Expectations Augmented Phillips Curves. For a parallel example on the Post-Keynsians and the 1960s capital controversies, see Mata (2004).

don't agree with, and seems to leave out evidence that you think is absolutely critical, the first reaction is usually to think that this is an ideologically motivated piece of work that was being written for ulterior motives, I mean I think that's just human nature to react that way, but I've been treated that way by other people often enough ha ha"

Interviewer: "You mean people assume your work is ideologically motivated?"

David Laidler: "See my work in exactly that way... if you turn to the proceedings of the 1972 BAAS conference, which was edited by Joan Robinson, ... you'll find she goes out of her way to be extremely nasty and hang ideological motives around my neck in her editor's introduction"

Interviewer: "She was accusing you of ideologically motivated work?"

David Laidler: "Yeah, and I'm sure I was accusing Joan of that as well, ha ha, no question about it"

Interviewer: "Do you think that what you were doing was ideologically motivated work?"

David Laidler: "Well you can look at the paper ... no I didn't think so"

Laidler locates macroeconomic debate in a politically motivated discourse, but declines to implicate his own involvement. This reminds us that even in the context of Political Interpretative Flexibility macroeconomics is also pervaded with the norms of value neutrality³.

We continue with a discussion by Laurence Copeland, a macroeconomist working at the Manchester School Inflation Workshop headed by Michael Parkin and David Laidler. Copeland identifies himself as right wing. Here Copeland reflects upon his publication criticising a paper by John Eatwell, John Llewellyn and Roger Tarling (1974) about the Key Industry Hypothesis (Copeland 1977). Their paper supported the use of the Key Industry

³ For more on value neutrality in macroeconomics see Morgan and Rutherford (1998) and Stephens (2005).

variable as a superior explanatory variable to unemployment on the horizontal axis of a standard Phillips Curve without expectations augmentation:

Laurence Copeland: “There was a political background to this in the sense Eatwell, Llewellyn & Tarling were, you know, lefties, don't ask me how lefty or the what the theology of the left was or where they fitted on that spectrum in those days, but they were certainly left wing and that went, this Trade Union leadership and all the rest of it, went with a broadly sort of anti-market attitude. We didn't see it in those terms but they saw it in terms of this sort of right versus left, business market verse anti-market”

Interviewer: “Do you think that that came through very strongly in their paper?”

Laurence Copeland: “...you must remember that it wouldn't have to, because everybody knew who was working in the area, even those who were not working in the area, even the bloody politicians and all the rest of it were aware of the fact that there was cost push and demand pull, and the conventional wisdom in those days was all cost push. I mean you ask the bloke in the street he'd say cost push, he wouldn't use those terms but he'd describe it in those terms, everybody was cost push it was only us weirdoes at Manchester who were right in both senses of the word”

Here Copeland's account identifies a strict political distinction between the left and the right, and associates these groups with positions in the Phillips Curve debate. Copeland also describes the distinction as being very explicit and public. We continue the discussion with reference to the political make-up of the Manchester University Economics Department, where the Adaptive Expectations Augmented Phillips Curve promoting group of which Copeland was a member came to be called the Manchester School, or the Inflation Workshop:

Interviewer: “There were left wing thinkers at Manchester though?”

Laurence Copeland: “Oh Christ that's what I said, I mean within the department we knew we were unorthodox, the department was, you could divide the department into three, not two, the department was in three segments and you could go round the department, it was like when I was a kid at school you knew who was a [Manchester]

City supporter and who was a [Manchester] United supporter. It was exactly like that, everybody was one of those three groups. I could have gone through the whole bloody lot right down to RAs and PhD students the whole lot. You were always one of three groups. There were the Marxists, who no doubt saw themselves as being variegated, you know Trotskyites and Neo-Ricarians, bloody Maoists and shit knows you know, but basically Marxists, and then there was a central group of old fashioned Keynesians and then there was the group around the inflation workshop, the Manchester School”

Copeland's account continues to construct strict linkages between Key Industry and Trade Union power oriented Phillips Curves and the left and the Manchester Schools Adaptive Expectations Augmented Phillips Curve advocacy and the right. However, as the interview probes deeper Copeland begins to question the boundaries he had previously been describing through a discussion of George Zis and David Purdy, two Manchester colleges who shared his views on the Phillips Curve (Purdy and Zis 1974a, 1974b Ward and Zis 1974):

Laurence Copeland: “Well George Zis is a Marxist, George is a Marxist who let’s say is one of a group of several Marxists I know in the British profession who are let’s say flexible”

Interviewer: “OK”

Laurence Copeland: “Now don't ask me how they square it with what they do, that's not my affair, you know, a man’s religion is his own affair, but em, that was a fact. So George worked both sides of the park, I mean, you see George is not quantitative, ... George is alright, but as I say how he squares it with his Marxism. He did a paper with David Purdy and it was published in the *Manchester School [of Economic and Social Studies]* I think, remember this, that when it comes to subjects like the influence of Trade Unions on inflation, the left was ambiguous, for some purposes they wanted to make it cost push, for some purposes they didn't, now don't ask me how they square that with this and all the rest of it”

And from George Zis himself:

George Zis: “Myself and [David] Purdy were well to the left of the labour party, I mean I have always personally identified with Greek Communism so in that sense I never espoused reliance on the market mechanism, but again this so called Keynesian analysis of inflation intellectually looked very, very weak”

Copeland’s initial account of steadfast linkages between political interests and macroeconomic theories is amongst the most stringent of its type in the data collected. Despite this he still introduces ambiguities into the relationship. By identifying Marxists who support the Adaptive Expectations Phillips Curve, Copeland also provides a striking contrary position to the leftist construction of Joan Robinson and the Cambridge macroeconomists offered by David Laidler. Copeland never questions the ties between the right and monetarism, but does identify distinctions within left wing political interpretations.

These differences are in the political connotation of what Copeland terms cost push inflation. Cost push explanations of inflation stipulate that inflation is a product of passed on increases in production costs, usually wage costs through Trade Union influence. The Political Interpretative Flexibility for the left wing is in attaching a positive or negative judgement to Trade Union influence causing inflation. A positive left wing interpretation of accepting a cost push explanation is the implication that Trade Unions work well in representing workers’ pay and conditions. Furthermore, for those cost push advocates who go so far as to exclude unemployment as an explanatory variable altogether, the theory suggests an impotency for incomes policies in controlling inflation, which means workers’ wages will not be systematically repressed. However, on the negative side the argument that Trade Unions cause inflation negates the benefit of wage rises and could lead to calls for a reduction of Trade Union power.

The analytical insight here is not that all left wing thinkers were in continual paradox over these concerns. Neither is the argument that cost push inflation is politically neutral for the left. Indeed for many it may be obvious to each individual thinker whether advocating cost push is politically advantageous or disadvantageous. Several sources have confirmed that Bertie Hines, a left winger well known as an advocate of the Trade Union militancy variable, considered the cost push explanation an embodiment of his political ideology (Hines 1964, 1968, 1969, 1971). Two public challengers of Hines were George Zis and David Purdy, the left wingers Copeland acknowledges muddy his tightly drawn connections between politics

and macroeconomics and were avid critics of Hine's cost push explanations (Purdy and Zis 1974a, 1974b).

Let us return to the constructions of the Adaptive Expectations Augmented Phillips Curve as right wing. Here is a quotation from left winger Richard Lipsey, who during his time at the London School of Economics between 1955 and 1963, worked with Bill Phillips and others at the Measurement and Methodology Seminar group on a seminal early contribution to the Phillips Curve debate (Lipsey 1960, Lipsey and Steuer 1961)⁴. When asked if the Adaptive Expectations Augmented Phillips Curve had an obvious political connotation, Lipsey responded:

Richard Lipsey: "Oh yeah, yeah, I mean it was basically anti any form of stabilisation policy, whether monetary or fiscal, it said that monetary policy should be directed at the price level and the macro unemployment should just be left to the market, very strong political implications about macro economic policy"

Interviewer: "Towards the right you're saying?"

Richard Lipsey: "Well I guess you'd call that the right, yeah. But I don't have any problem saying monetary policy should be relatively concerned with the price level, but I am for saying fiscal policy is a pretty blunt instrument, from which I say we must learn to do better at macro policy, and they say we shouldn't have any macro policy, but I think it was very cogent, we learned from it, but it definitely had political implications which are in a loose sense right wing anti-interventionist in terms of macroeconomic policy"

Interviewer: "And small government?"

Richard Lipsey: "Yeah"

Lipsey's account identifies a clear political interpretation for the Adaptive Expectations Augmented Phillips Curve. He couches it as an expression of anti-interventionist ideology. He associates this with right wing thought, while introducing locations of agreement with his

⁴ For more on the Measurement and Methodology Seminar group, see De Marchi (1988).

own position and a reconfiguration of the interpretation that increases the congruence with leftist political ideology.

The most famous advocate of the Adaptive Expectations Augmented Phillips Curve as a politically right wing phenomenon is Milton Friedman (1962, 1968, 1975, 1977, 1980). Claims such as “[i]nflation is a disease, a dangerous and sometimes fatal disease, a disease that if not checked in time can destroy a society” (Friedman 1980 p289) and his preference for small government solutions led Friedman to use the Adaptive Expectations Augmented Phillips Curve as a justification for using supply-management policies including reductions in social security provision, privatisation of industry and curtailing Trade Union power⁵. These policies are in this context typically associated with right wing thought.

In the following quotation, Friedman provides an engaging exploration of the links between macroeconomic ideas and political connotations. He both acknowledges the existence of these typical and expected relationships between macroeconomic schools and political opinions while offering examples of counter cases. He then offers an articulation of how he could embody his own political goals through a Keynesian economic theory:

Milton Friedman: “We can find any number of cases in which people hold what seem like wholly incompatible political and scientific positions. There are people who profess to be Keynesians in the United States who are explaining how surpluses offset recessions”

Interviewer: “Incompatible in what way?”

Milton Friedman: “Well in the United States you have the Democrats today [February 2002] who are trying to blame [George W.] Bush for the economy going into a deficit, and they are essentially arguing that surpluses are stimulating, which of course is the opposite of the basic Keynesian view”

Interviewer: “So by saying that that is incompatible you are making an association between Keynesianism and the left, the Democrats?”

⁵ These policies were pursued by Conservative Prime Minister Margaret Thatcher in the UK during the 1980s. For a discussion of this, see Bateman (2002), Backhouse (2002), Green (1999) Maynard (1988).

Milton Friedman: “That has been the relation in the United States, yes”

Interviewer: “Do you think that's inevitable?”

Milton Friedman: “Don't misunderstand me, the left is Keynesian but not all Keynesians are left ... there are some on the left who are Marxian ... but certainly the policies of the left have largely been Keynesian”

Friedman continues:

Milton Friedman: “But let me emphasize; a right wing person could use Keynesianism as well. The left has been largely interested in having a big government and the notion that the way to solve problems of depression and recession is by spending government money - the way to make government big. But as someone as myself who would prefer to see government small rather than big, if I thought Keynesian notions were right, I could use them as well. Instead of recommending government spending you would recommend tax cuts, and during booms instead of recommending higher taxes you would recommend lower spending. So the same theory can be used for different political purposes”

Friedman articulates several of the tenants of Political Interpretative Flexibility, while acknowledging a prevailing wisdom about political affiliations; and expressing surprise that that this wisdom does not always hold. The later part of the quotation states how Friedman would pursue his right wing political goals through a Keynesian framework. This is a central component of Political Interpretative Flexibility: the potential for expressing the same political goals through differing theoretical frameworks. For a demonstration of the remaining central component of Political Interpretative Flexibility - the potential for the same theoretical framework to express differing political goals – we will contrast Friedman’s position with that of Edmund Phelps.

Phelps’ first work on the Phillips Curve was his PhD dissertation, supervised by James Tobin at Yale, that supported the original Phillips Curve (Phelps 1961). After eight years at Yale, and the Cowles Foundation, Phelps moved to University of Pennsylvania for five years and

then to Columbia University where he remains today. During the mid 1960s Phelps' work on the introduction of expectations to the Phillips Curve created a foundational basis for the Adaptive Expectations Augmented Phillips Curve (Phelps 1967, 1970). On this, Dale Mortensen:

Interviewer: "Were you aware of any writers that you felt were doing politically motivated work?"

Dale Mortensen: "I think probably Phelps was"

Interviewer: "How?"

Dale Mortensen: "Motivated by it, he felt more than others that ... the policy makers were not taking into account the potential for future inflation in what they were doing, the potential consequences"

Interviewer: "OK, so sort of reins the importance of future inflation within the political agenda"

Dale Mortensen: "Right"

Interviewer: "Would you say that that would cling to a specific party political position?"

Dale Mortensen: "Not necessarily, it was more within the policy debate generally, it wasn't democratic or republican"

Mortensen claims a non-party political basis for Phelps' political motivation. However he does acknowledge a political motivation in the work. The ideological origins of Phelps' research are better revealed in his own reflections on the issue:

Edmund Phelps: “I would be a living example of somebody who arrived at a theoretical perspective that has a lot of kinship with Milton Friedman, but on a whole range of policy things I don’t agree with Milton Friedman ...”

Interviewer: “How would you characterise your political position [in the Nineteen Seventies] briefly?”

Edmund Phelps: “Oh, probably just a mainstream Keynesian, a mainstream Democrat, I mean I still believed in using anti-cyclical tools of the government to fight recessions and to fight unsustainable booms and I was relatively moderate on the inflation side ... I had the activism of Keynesians, I still retain the activism of Keynesians”

In the following quote Phelps is discussing the taxation implications of running supply side policies. By negative income taxation, he is referring to income subsidies paid to those living below the poverty line. This quotation is particularly interesting because Phelps alludes to the Interpretative Flexibility of the notions he believes in while accounting for them.

Edmund Phelps: “I favoured a negative income tax when I was a young, very young economist myself but then later on I felt well wait a minute, why should we just splash this money on people independently of whether they work? Why don’t we, I know you may say this is a more conservative idea, and it is and it isn’t, wouldn’t it be much better if instead we paid subsidies to employers to employ low wage people to pull up their wage rates and to pull up their employment? And then they would be self supporting and they would be more fulfilled individuals and they’d be happy and productive and it would be a revolutionary change”

By doing this Phelps is suggesting the use of supply side policies to lower unemployment. This is akin to investment to create high levels of aggregate demand as seen in many Keynesian schemes. To Phelps the negative income tax is a means of providing the unemployed with jobs beyond those created by the free market. Here Phelps is constructing supply side policies in such a way that they are expressive of his left wing political orientation. There is another way in which Phelps does this:

Edmund Phelps: “I wrote a book in which I said, ‘look four percent inflation per year is not so bad, and there might be certain things to recommend it’ ”

As we know, the Adaptive Expectations Augmented Phillips Curve suggests that any attempt to reduce unemployment below the natural rate will result in ever increasing inflation. By constructing an account in which inflation is not necessary an unquestionable negative event for an economy he negates the assumption present in right wing accounts of the Adaptive Expectations Augmented Phillips Curve that unemployment must not be tackled through stimulating demand because it risks inflation. For Phelps reducing unemployment does not cause a negative effect. It will cause inflation, but inflation is no longer deemed unbearable so-long as it remains a stable low level inflation. Thus the Adaptive Expectations Augmented Phillips Curve remains compatible with the welfare state and the other state apparatuses attacked as inflationary in right wing variants of the relationship.

Let us conclude the section on the Political Interpretative Flexibility of the Adaptive Expectations Augmented Phillips Curve. We have had accounts of macroeconomists providing politically motivated work from Laidler, Copeland and Lipsey. We have seen a standard right wing construction of the Adaptive Expectations Augmented scheme, typified by Milton Friedman, and seen Friedman’s articulation of how a Keynesian framework can be used to embody right wing political interests. Then, in contrast to this, we have seen Phelps’ articulation of a left wing construction of the adaptive scheme. We have also had accounts in and around the Manchester Inflation workshop of economists associating themselves with forms of Marxism and the far left, some of whom act very aggressively towards the Adaptive Expectations Augmented Phillips Curve, and others who support it. We will now see that these multiple usages of economic theory are also present with the Rational Expectations Augmented Phillips Curve.

Political Interpretative Flexibility in the Rational Expectations Phillips Curve

The leading proponents of rational expectations in both the US and UK are well known for their right wing positions, Robert E Lucas and Patrick Minford (Lucas 1972, 1973, 1975; Lucas and Rapping 1969a 1969b; Minford 1980, 1981, 1986). In the right wing mould the vertical, or nearly vertical, Rational Expectations Augmented Phillips Curve offers a very

similar policy interpretation as the Adaptive Expectations Augmented Phillips Curve (Friedman 1975). However, as Political Interpretative Flexibility predicts, this does not mean all rational expectations advocates are right wing. On Lucas and his sometimes co-author Thomas Sargent (Lucas & Sargent 1979, 1981), rational expectations convert Dale Mortensen says:

Dale Mortensen: “I mean you can go through it, there are no two people more politically different than each other than Bob Lucas and Tom Sargent, their politics are 90 degrees to each other, but their methods as researchers are similar”

Just as in the U.S., where frequent rational expectations co-authors Lucas and Sargent were political opposites, in the U.K. the prominent research team of Minford and David Peel, both at the time based at Liverpool University – and the ‘Liverpool School’ – also experienced far reaching political differences (Minford and Peel 1980, 1981, 1982a, 1982b, 1983). In this lengthy articulation of the issues at hand, Peel provides an account of the political connotation of the Rational Expectations Phillips Curve, firstly as right wing, then as apolitical, and finally his own position as expressive of left wing ideology. Responding to whether the relationship had an obvious political implication, Peel revealed:

David Peel: “Well I suppose this one did, that's why it was so challenged. Maybe it was put in that form because the proponents of it wanted it to be taken that way ... Everything got rolled together so a word like Monetarist became a dirty word to some. ... I would have thought of myself as a Monetarist in that I believed in a vertical Phillips Curve, certainly in the long run, but for instance I thought of myself as a socialist, so my views on defence expenditure, health or whatever, taxes, were totally irrelevant to that position. But I think a lot of people thought that if you took up a position on rational expectations it implied that you were somehow a right winger and pushing a certain view, but those things are never logically related”

We continue:

Interviewer: "So to make it clear you're saying that it's completely sensible and not incompatible for you to be a socialist and believe in rational expectations"

David Peel: "Not at all, not at all"

Interviewer: "That's what you're saying or you don't think it's a contradiction?"

David Peel: "Not a contradiction at all ... it's simply a proposition about money stock and inflation, there's nothing to say per se about your views on health or what the appropriate ratio of government expenditure to income are, it's simply a proposition about control of inflation"

Peel's acknowledges a public perception of connections between the Rational Expectations Phillips Curve and the right. He asserts his disagreement with the claim through a discourse of objectivity. However as the interview continues he is willing to reinstate political connotations for the relationship:

Interviewer: "OK, so you've said you don't feel there's any link between rational expectations and a political position, do you think..."

David Peel: "Well there needn't be, there have been people who have clearly been associated with rational expectations who've been very political, Patrick Minford is an example, there are many others"

Interviewer: "And have you seen, say, the Friedman style Phillips Curve or even the original Phillips Curve, do you think there have been political advocates that have been using these for their positions as well?"

David Peel: "Well it's, ha ha ha, funnily enough you see if properly interpreted even the zero trade-off idea, which caused a lot of problems ... actually from a left wing perspective could have been taken on board and used much more effectively, because essentially what it was saying [was] there was no long run trade-off between inflation and unemployment, Now remember what economists of a so called middle ground or left wing persuasion were saying, remember what policy advice was based on that. It

was, to quote Frank Page, that we need to keep a pool of unemployment to moderate inflation, having a long run trade-off implies you can only keep inflation down by maintaining unemployment at a high enough rate to keep it down. What the zero trade-off position is saying, particularly under [Rational Expectations], is that there's essentially no meaningful trade off, so you don't need to keep pools of unemployment to keep inflation down, what it's saying is that if you want to reduce unemployment you don't do it by inflating, you do it by having active labour market policies that bear on real factors such as mobility of labour, housing, unemployment benefits, retraining, the whole cacophony of policies that make the labour market function more smoothly, but you can't just fix it by simply inflating or having a pool of unemployment. Now you know if having a pool of unemployment is a good left wing idea then I wouldn't particularly want to be associated with it"

Peel's account identifies clear left wing connotations for the Rational Expectations Phillips Curve. The promise of eradicating pools of unemployment provides expression for the leftist political goal of full employment. As with the Adaptive Expectations Augmented Phillips Curve, the Rational Expectations version experiences Political Interpretative Flexibility. It can be constructed as expressive of multiple political agendas.

4. UNDERSTANDING POLITICAL INTERPRETATIVE FLEXIBILITY IN THE PHILLIPS CURVE DEBATE

This paper has demonstrated the existence of Political Interpretative Flexibility in the adaptive and rational expectations augmented Phillips Curves. Both symptoms have been illustrated, each incarnation of the Phillips Curve is expressive of multiple political ideologies, and macroeconomists with the same political beliefs can consider these beliefs best expressed by differing versions of the Phillips Curve. Through comparison of the discussions of each form of augmentation it is clear that all right wingers, all left wingers and all Marxists have not supported the same Phillips Curve. In many of these cases the embodiment of a political ideology in the theory has also been established.

The above analysis leads to the conclusion that in the period studied political interests failed to provide impetus for opening and closing macroeconomic debates. This is not because Phillips Curve theories are apolitical, but because the patterns of linkage between political

ideology and macroeconomic concepts were not systematically distributed. Unlike Phrenology in 18th Century Edinburgh, shifts in the wider political culture did not impact upon consensus in macroeconomics through the social interest dynamic exemplified by Shapin (1975, 1979). This is because a wider political shift in any direction will not spur an increased public profile or strengthen the research effort of a particular Phillips Curve construction. Since the expression of political ideology was diffuse amongst opposed macroeconomic positions the increased power associated with shifts in the dominant political position was equally dispersed and thus diluted.

Political Interpretative Flexibility implies that as well as being insufficient to cause shifts in macroeconomic orthodoxy, political interests are also insufficient to prevent such shifts. When a shift between macroeconomic orthodoxies begun the ideological interests were too weak a restraint to impede it. This is for two reasons. Firstly, on an individual level, macroeconomists who did express their political views through their work were able to reconfigure their construction of the political connotations into compliance with their acceptance of a new version of the Phillips Curve. An example of this is Phelps, whose position on negative income taxes shifted in such a way that constructed supply side policies as expressive of left wing values. The second reason why political interests do not repress shifts in orthodoxy under conditions of Political Interpretative Flexibility highlights the role of young macroeconomists in shifts of orthodoxy. The new generation of macroeconomists were less entrenched in old theories and were more willing to explore new research agendas (Stephens 2005). We can see that if strong systematic linkages between political positions and incarnations of the Phillips Curve had existed then the flexibility for young politically motivated macroeconomists to adopt the latest position would have been curtailed. This is because young right wing macroeconomists would have been more inclined to adopt the position systematically constructed as right wing, as with left wingers. The lack of these linkages removed further tension and added further lubricant to the cycle of contest and closure in the Phillips Curve debates.

The Phillips Curve debates, then, not only exhibited Political Interpretative Flexibility, but were also shaped by it. The political connotations of the Phillips Curve relationships were contingently assembled, with infinite potential configurations. Political Interpretative Flexibility prevented established political interests from constraining shifts in macroeconomic orthodoxy. This is not to claim that macroeconomics is a-political, many macroeconomists did perceive their work as an explicitly political act, but instead that

political connotations were not systematically distributed and did not structure the lines of the Phillips Curve debate.

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