Zentrum für Ökonomische und Soziologische Studien

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New Economics, paradigm shifts and the lack of philosophical foundations in economics or: is the future of economics heterodox?

ZÖSS
ZENTRUM FÜR ÖKONOMISCHE
UND SOZIOLOGISCHE STUDIEN

ZÖSS-Discussion Papers
ISSN 1868-4947/112
Discussion Papers
Hamburg 2024

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ISSN 1868-4947/112

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Universität Hamburg

Oktober 2024

Impressum:

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Abstract

The article discusses the ongoing debate about a potential paradigm shift in eco-nomics. Institutions like the Institute for New Economic Thinking, the New Economics Foundation, and the Forum New Economy have been established to foster new approaches to understanding and transforming economies. While some main-stream economists see this as a significant and positive change, many heterodox economists remain sceptical, recalling past failed revolutions in economic thought, like the 'Keynesian revolution'.

The article examines whether purported changes in economic policy indicate a true paradigm shift in the scientific sense (à la Kuhn) or just variations within the existing neoclassical framework. Despite some studies suggesting a paradigm shift is underway, it is argued that these shifts in policy do not necessarily stem from fundamental changes in economic theory. Instead, they represent swings within the dominant paradigm, such as the rise of behavioural or Schumpeterian economics, rather than a complete overhaul of the discipline.

The article concludes that while mainstream economics may become more diverse, this should not be mistaken for a revolutionary change. Heterodox economists must continue to advocate for broader acceptance and genuine transformation in the discipline, rather than assuming that time alone will bring about such changes.

JEL codes: B40, B51, B52, E11, E12, E13, E14

Key words: New Economics, paradigm shift, Post Keynesianism, heterodox economics

1. Introduction

In recent times, the call for 'New Economics' has grown louder: prominent mainstream economists have advocated for a paradigm shift in economics[1], and new institutions have been established to foster a new understanding of the economy and help transform it, such as the Institute for New Economic Thinking in the US, the New Economics Foundation in the UK, and the Forum New Economy in Germany. A recent study (Fricke et al., 2023), supported by other works (e.g. Stirling/Laybourn-Langton 2017; Laybourn-Langton/Jacobs 2018; Macfarlane/Laybourn-Langton/Jacobs 2019), suggests that the academic discipline is undergoing a significant paradigmatic change and is likely to present a very different face in the near future.

What may seem like a very promising development for most heterodox economists[2] must be met with skepticism, especially when considering the fate of the 'Keynesian revolution that never was' (see Hutton, 1986) and the resilience of the incumbent economic paradigm. Ludwik Fleck (1979) reminded us that the 'thought style compulsion' is a necessary basis for any thought style to become a reliable foundation for a scientific discipline to flourish: 'thought style extensions and supplementations' will be provided, but 'thought style transformations' will be hampered or even disallowed. Moreover, the highly affirmative outlook of some influential mainstream economists contrasts with the more pessimistic view of many heterodox economists, even when the goal is downgraded from a paradigm shift (i.e., the replacement of the existing neoclassical mainstream by a heterodox alternative) to merely a pluralisation of the discipline[3].

Are these differing perspectives merely misperceptions by one of these groups of economists, or can they be reconciled? To answer these questions, we first need to establish what is meant by 'paradigm' in the respective context and, moreover, what a paradigm shift entails (Part 2). The next step will be to revisit the 'revolutions' in economics and economic policy-making that we allegedly experienced in economic history and the history of economic thought (Part 3). Based on this historical approach to our topic, we will scrutinise the studies that optimistically predict a changing face of economics (Part 4). This will be followed by a consideration of the importance of distinguishing between paradigm shifts, on the one hand, and swings between variants of the same paradigm, on the other hand (Part 5) — if both can equally authorise policy paradigm shifts, would the insistence on keeping them apart be inane or, at the very least, overly purist? The paper ends with a brief conclusion (Part 6).

[1] See e.g. Beinhocker (2006), Stiglitz (2002), Stiglitz (2009), Wilson/Snower (2024).

[2] There is, and cannot be, a single, generally accepted definition of 'heterodox' as opposed to 'orthodox' or 'mainstream' economics. This is the case because definitions always follow a given purpose. Sometimes, 'heterodox economics' is defined categorically as rejecting some of the basic axioms of orthodox economics, sometimes it is sociologically defined as being the less prestigious and less influential part of the economic community (see e.g. Dequech 2012: 354f.). The definition used here has a philosophy of science foundation: heterodox economic paradigms must be separated from orthodox or mainstream economics by an incommensurable ontological dimension. And heterodox economists are those economists who apply thus defined heterodox approaches and mainly interact (by citations and using heterodox journals as publication outlets) with the heterodox community.

[3] See e.g. Mirowski (2013), Dobusch/Kapeller (2013), Hoang-Ngoc (2013), Hodgson (2019), Heise (2023a).

2. Paradigms and paradigm shifts in economic theory and policy

'Paradigm' is a frequently used but rarely well-defined concept, popularised by Thomas S. Kuhn in his seminal study on the structure of scientific revolutions. Colloquially, a revolution implies a far-reaching, drastic change within a domain. For Kuhn, this 'domain' was the economic discipline in which the prevailing, dominant paradigm needed to be replaced by a competing paradigm to trigger a scientific revolution, or in short, a paradigm shift, resulting in a structural break in how economic reality is understood and explained. To describe something as not merely 'new' or 'different' but genuinely 'revolutionary', the structural break must involve such a fundamental change in the 'large-scale principles' (see Wray 2011: 283) that the different paradigms become incommensurable. Without a clear definition of 'large-scale principles' and the meaning of 'incommensurability' in this context, we have not advanced far in understanding revolutions in science in general and in economic theory and economic policy in particular.

I propose using Imre Lakatos's concept of 'scientific research programmes', characterised by methodological, epistemological, and ontological dimensions, to describe paradigms in the realm of economic theory[4]. For the sphere of economic policy, Peter Hall's definition of a policy paradigm as "a framework of ideas and standards that specifies not only the goals of policy and the kind of instruments that can be used to attain them, but also the very nature of the problems they are meant to be addressing" (Hall 1993: 279) is useful. Incommensurability in the context of scientific paradigms, therefore, implies the existence of different, incompatible pre-analytic visions in the ontological dimensions of the competing paradigms. In the context of policy paradigms, it entails a third-order change, encompassing not just an adjustment (first-order) or a change in the instruments used (second-order), but a change in policy objectives and instruments (Hall 1993: 283f).

It now becomes clear that scientific paradigms and policy paradigms, along with their respective shifts, refer to different concepts: scientific paradigms are distinguished by their inputs — pre-analytic visions — and shifts involve incommensurable ontologies, whereas policy paradigms are differentiated by their outputs, specifically the (targeted or realized) objectives, with shifts referring to significant discontinuities in policy-making and policy goals. But how are scientific and policy paradigms and their respective shifts related? Is there a direct connection from a scientific paradigm to a policy paradigm, implying that any shift in the scientific paradigm will result in a corresponding shift in the policy paradigm? Or, conversely, does a policy paradigm shift necessarily rely on a preceding shift in the scientific paradigm?

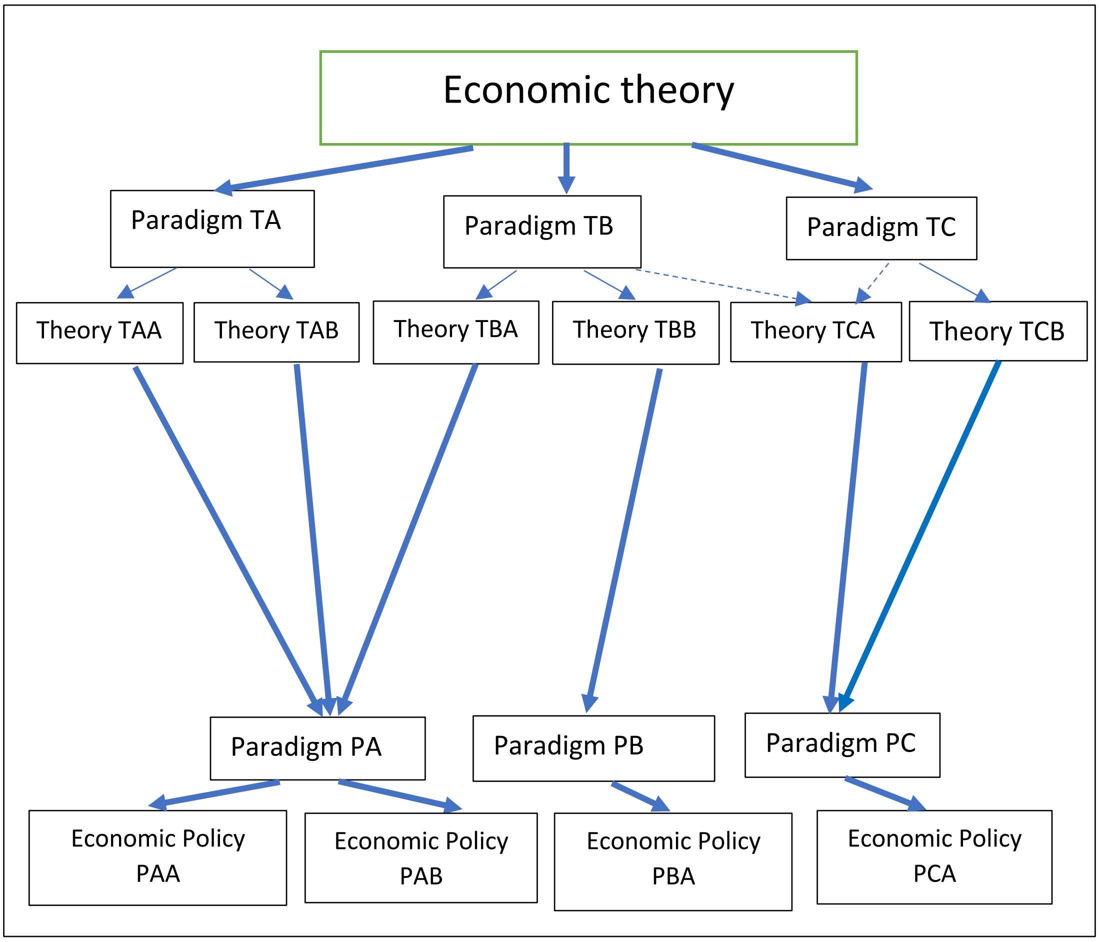
Most observers who diagnose radical changes in economic theorising and policy-making seem to assume such a direct connection, as they do not clearly distinguish between scientific and policy paradigms in their analyses, but rather, use these terms interchangeably[5].

[4] There a other concepts such as Kuhn's concept of 'paradigm', Fleck's 'thought styles' or Laudan's 'research traditions' which all have advantages and disadvantages and overlap in many respects. However, for my purpose – to clearly distinguish different paradigms and to establish affiliations between theories and paradigms – Lakatos's concept of 'scientific research programmes' appears to be the clearest, less ambiguous one. If I still choose the term 'paradigm,' it is only because it is more catchy and fits better with Hall's terminology. I hope this does not lead to confusion.

[5] As Laybourn-Langton/Jacobs (2019: 113) state: "We shall refer to a dominant group of ideas as a politico-economic paradigm. Such paradigms generally encompass political/economic goals, analytical/theoretical

I believe that the direct connection between scientific and policy paradigms, and their respective shifts, cannot be upheld upon closer examination. Consider Figure 1: Suppose the economic discipline presents three competing paradigms, named TA, TB, and TC. These paradigms consist of different theories (TAA, TAB, TBA, TBB, TCA, and TCB) that share – within the same paradigm – the same pre-analytic vision in the ontological dimension and the same core axioms in the epistemological dimension, while allowing for variations in auxiliary assumptions.

Figure 1: Scientific and policy paradigms



Note: own representation; not all possible lineages are shown but only those referred to in the text

Now, let's assume there are three different economic policy paradigms, PA, PB, and PC, each with its core goals and associated instruments (means-ends systems). One of these, PA, can be further subdivided based on the use of instruments (first- and second-order changes) into PAA and PAB. The arrows in the figure indicate the linkages between economic paradigms, theories, economic policy paradigms, and economic policy programs. For clarity, not all

frameworks for understanding the functioning of economies and societies, narratives which describe and justify the goals and analytical framework, as well as economic and social policies, based on the analytical framework, that seek to achieve specific goals." And this approach is backed by Hall (1993: 279) when he declares: "These policy paradigms are rather like the scientific paradigms that Thomas Kuhn has identified, and we can take advantage of this analogy to develop some hypotheses about how the learning process in public policymaking might proceed."

possible connections are shown; only those that can be historically substantiated are depicted. It becomes evident that the economic paradigm TB can be associated with all three different policy paradigms—PA, PB, and PC.

In other words, a policy paradigm shift from PB to PA — resulting in a change in economic policy from PBA to PAA or PAB — or from PB to PC — resulting in a change in economic policy from PBA to PCA — does not necessarily require a scientific revolution in economics, such as a paradigm shift from TB to TA or TC. Instead, it could simply involve a theoretical reorientation within the same paradigm TB, such as a shift from TBB to TBA or TCA.

The only potential critique of this conclusion might question the likelihood of a policy paradigm drawing on two (or more) incommensurable economic paradigms. More specifically, is it possible that incommensurable economic paradigms could still advocate the same policy remedies, and if so, how likely is such an outcome? While no definitive answers can be provided regarding the likelihood, there is no logical contradiction in the possibility. Given the positivistic nature of economics, all paradigms aim to explain the same reality: the (mal)functioning of the economic system. Although they approach this differently, the curative instruments used to address widely acknowledged problems or undesirable outcomes may still overlap[6].

3. Paradigm shifts in historical perspective

To bring the above reflections to life and make them easier to grasp, let's try to apply the variables in Figure 1 to historical contexts. Let’s consider paradigm TA as the Post-Keynesian paradigm, TB as the Dynamic Stochastic General Equilibrium (DSGE) paradigm, and TC as the Evolutionary-Complexity paradigm. Within TA, TAA represents fundamentalist Keynesian theory, and TAB denotes the Kaleckian variant of Post-Keynesianism[7]. TBA refers to standard IS-LM Keynesianism, while TBB stands for more radical general equilibrium models such as Monetarism or New Classical Macroeconomics. Finally, TCA includes Schumpeterian models, while TCB represents Veblenian models of economic evolution[8]. It is important to note that TCA is linked to both TB and TC — suggesting that it is unclear whether Schumpeterian evolutionary economics truly belongs to an alternative paradigm incompatible with the DSGE paradigm, or if it is simply an ‘evolutionary version’ of it. We will revisit this issue later.

At the policy level, PA stands for Keynesian demand-oriented, market-correcting intervention policies. This includes a PAA variant that centres on cooperative behaviour among

[6] This should neither be interpreted as support for TINA (‘There Is No Alternative’) rhetoric nor as an argument for the irrelevance of paradigmatic accuracy. The TINA rhetoric overlooks the fact that policy is primarily about the interest-laden choice of objectives, not just the functional selection of instruments once those objectives are determined. Furthermore, paradigmatic accuracy is not solely about choosing the right means but also about doing so for the right reasons.

[7] Heise (2024a) argues that Kalecki's and Keynes's economics are not part of the same paradigm. However, both scholars and the economics based on their thinking are commonly viewed as champions of a unified Post-Keynesian paradigm, and whether this assessment is convincing or not is irrelevant to the argument presented here. Of course, TA could be further subdivided by incorporating more Post-Keynesian variants, such as Kaldorian, Minskian, or Neo-Ricardian approaches. The main point here is not the exact number of variants within a paradigm but the mere existence of these variants.

[8] If it is linked to economic paradigm TB, it should more appropriately be named TBC instead of TCA in which case in would be affiliated with economic paradigm TC.

macroeconomic actors, guided by fiscal, monetary, and wage policy rules (see e.g., Heise 2012), and a broader global demand management variant, PAB, which relies on deficit spending and expansionary monetary and wage policy assignments. Policy paradigm PB refers to market-making supply-side policies, which, in the PBA policy program, include microeconomic measures such as deregulation, liberalization, and privatization, combined with a macroeconomic orientation of restraint. Finally, the Schumpeterian policy paradigm PC, and its policy program PCA, primarily focus on industrial policy aimed at fostering innovation and business adaptation within a competitive market environment.

The literature generally identifies two paradigm shifts in the history of economic thought: the 'Keynesian Revolution,' which occurred after the Great Depression of the early 1930s and became particularly prominent after World War II, and the 'Monetarist or Neoliberal (Counter-)Revolution'[9], which followed the end of the 'golden age of capitalism.' The latter began when the post-WWII reconstruction period ended, and the two oil-price crises of the mid-1970s and early 1980s exposed the vulnerability of Western capitalist economies. For nearly three decades, Keynesian economic demand management had appeared to overcome business cycles and stagnation (see e.g., Bronfenbrenner 1969).

In both cases, the narrative is that the policy paradigm shift is accompanied by a preceding scientific revolution, i.e. a shift in the dominant economic paradigm. In the terms of Fig. 1, the story would be that the period after World War II experienced an economic policy paradigm shift from the classical 'laissez-faire' doctrine PB to Keynesian demand management PA. This shift involved a drastic change in policy implementation from externally oriented monetary policy (maintaining gold standard parity) and balanced public budgets PBA to domestically oriented fiscal ('deficit spending') and monetary policies ('easy money') PAB, with the aim of stabilizing output and employment (see e.g., Booth 1978; Middleton 1985). This is often described as the development of the 'National Keynesian Welfare State', replacing the classical economic night-watchman state. The policy paradigm shift drew its legitimacy from the 'Keynesian Revolution' after the publication of the *General Theory of Employment, Interest and Money* in 1936, which led to a departure from the (neo-)classical general equilibrium model TB and a re-orientation towards the 'New Economics' (TA) championed by John Maynard Keynes (see e.g., Skidelsky 1981)[10].

The 'Monetarist or (Neo-)Classical Counter-Revolution' occurred when these 'New Economics' TA appeared to struggle with incorporating the economic phenomenon of 'stagflation' into their models TAB. Keynesian demand management PAB was increasingly seen as part of the problem—contributing to inflation—rather than part of the solution (addressing stagnation). As a result, supply-side policies shifted focus, micro-economically towards market-making and macro-economically towards price stability and budget consolidation: PBA replaced PAB (see e.g., Skidelsky 1977; Hall 1993). Moreover, this policy shift was legitimised by a re-orientation of the economic discipline towards general equilibrium modelling TB in the form of

[9] Laidler (2013) identifies three revolutions, distinguishing between the 'Monetarist' and 'Rational Expectations' revolutions, which are combined into one here.

[10] The phrase 'we are all Keynesians now' which has been attributed both to Milton Friedman and Richard Nixon is often taken a signifier for the paradigm shift in both the economic science as well as economic policy.

Monetarism and New Classical Macroeconomics based on rational expectations theory TBB (see e.g., Brunner 1970; Friedman 1970)[11].

The above narratives can be challenged on the grounds that the policy paradigm shifts that occurred were not based on scientific revolutions but rather changes in the dominant variation within the existing paradigm[12]. In the case of the 'Keynesian Revolution,' this implies that there was never a paradigm shift from TB to TA that would justify the use of the term (and concept) of a revolution. Instead, there was a shift from one variation of TB — TBB — to another variation, TBA. More concretely, (neo-)classical general equilibrium theorising in the Marshallian and Walrasian traditions was replaced by the standard Keynesian IS-LM analysis. This shift was termed the 'neoclassical synthesis' by those who sought to emphasize continuity with the old paradigm, and 'bastard Keynesianism' by those who lamented the misconception of what Keynes had intended when he published his *General Theory:*

> *"This book is chiefly addressed to my fellow economists.… its main purpose is to deal with difficult questions of theory, and only in the second place with the applications of this theory to practice. For if orthodox economics is at fault, the error is to be found not in the superstructure, …, but in a lack of clearness and of generality in the premises…. Those, who are strongly wedded to what I shall call 'the classical theory', will fluctuate, I expect, between a belief that I am quite wrong and a belief that I am saying nothing new" (Keynes 1936: XXI).*

During the first phase of the perception of the *General Theory*, the reaction was to absorb the Keynesian conceptions into the old paradigm as a special case (short-term disequilibrium). Even close allies of Keynes such as Roy Harrod denied a revolutionary content of the *General Theory*:

> *"In my judgement Mr. Keynes has not affected a revolution in fundamental economic theory but a re-adjustment and a shift of emphasis" (Harrod 1937: 85)*

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[11] To underscore the significance of the paradigm shift, the following statement was attributed to Robert Lucas (1980: 18): "At research seminars, people don't take Keynesian theorizing seriously anymore".

[12] At least the first narrative involving the 'Keynesian Revolution' has also been challenged on the grounds that there was never a policy paradigm shift from PB to PA (see Tomlinson 1981, Tomlinson 1983). On the one hand, it has been argued that policy-making does not simply follow a perceived revolutionary shift in economic theory, as the direct lineage hypothesis suggests. On the other hand, the historical period during which a demand-management paradigm is claimed did not actually necessitate the implementation of stabilization policies PAB. It can be acknowledged that the long period of stable economic growth, combined with low inflation and low unemployment—known as the 'golden age of capitalism'—was not primarily a result of economic management, but rather a combination of historically unique circumstances. These included vastly unsaturated markets, a fixed exchange rate regime with disintegrated international financial markets, and strong but encompassing industrial partnerships that fostered favourable economic development. Marxian economists termed this period 'Fordism' and demonstrated how a particular institutional setting allowed for the pacification of class struggle (see e.g., Aglietta 1979). Post-Keynesian economists describe 'market constellations' or 'regimes' that helped keep Western capitalist economies on a warranted growth path (see e.g., Marglin/Schor 1990), while neoclassical economists relied on politico-economic explanations for why distributive coalitions were not strong enough in the post-WW2 era to cause significant harm (see Olson 1982). However, the dominance of Keynesian demand management became immediately apparent when the first signs of stagnation appeared. This was perhaps most evident in Germany, where a Keynesian-oriented 'Stability and Growth Act' was passed in 1966 after the country was hit by its first post-WW2 economic shock, but similar trends can also be observed in other Western capitalist nations (see e.g., Booth 1983 for the UK and Savage 1988: 175ff. for the US).

Moreover, the spread of Keynesian ideas in the US (see e.g., Galbraith 1965; Skidelsky 1979; Hirschman 1988) — the emerging scientific hegemon after World War II that played a crucial role in shaping economics as 'normal science' — by figures such as Alvin Hansen, Paul Samuelson, and Franco Modigliani, largely followed the IS-LM approach. This contributed to the further reduction of the 'Keynesian Revolution' to merely an extension of existing thought style[13]. However, due to a shift in the focus of economic governance from long-term structural policies to short-term business cycle management, the variant of the (neo-)classical paradigm TB that could better explain short-term business fluctuations, TBA, became dominant. This shift laid the foundation for a policy paradigm change without the need for a scientific revolution. The quest for a true scientific revolution from TB to TA, as envisioned in Keynes's *General Theory*, was only pursued by post-Keynesians after the (neo-)classical theory suffered a significant blow to its internal deductive (logical) structure during the so-called 'Cambridge Capital Controversy' of the 1960s and 1970s (see e.g., Harcourt 1972; Eichner/Kregel 1975; Crotty 1980).

However, this second phase of the interpretation of the *General Theory* was not focused on a better or more revolutionary understanding of 'what Keynes really meant' (see Coddington 1974), but was instead shaped by those opponents of Keynesian economics who believed that Keynes 'was quite wrong'[14]. These opponents—including the Monetarists, New Classical economists, and Austrians, who upheld the liberal orthodoxy in economic policy and general equilibrium in economic theory—modernised General Equilibrium Theory by introducing concepts such as forward-looking behaviour (rational expectations), the notion of 'natural' unemployment, and the recognition of real business cycles as equilibrium phenomena. By rehabilitating the ideas of economic self-regulation, monetary neutrality, and the general ineffectiveness of (fiscal) policy within general equilibrium theorising, they initiated a shift from standard Keynesian TBA to New Classical Macroeconomics TBB within the (neo-)classical paradigm TB. Thus, the term 'counter-revolution' is a clear misnomer for what actually occurred in the economic discipline.

4. A revolution in the making?

Although there might have been economic policy changes of the third degree, i.e., changes not only in the instruments used but in the primary goals targeted, which could be called 'policy paradigm shifts', they were not based on and legitimised by underlying scientific revolutions but by mere swings of dominance from one variant of the ruling paradigm to another variant of the same paradigm. These historical experiences should make us skeptical when upcoming revolutions in economics are predicted: firstly, any dominant paradigm shows immense resilience (see e.g. Lee/Bond/ Hanson 2021), and secondly, the notion of 'revolution' is often not used in a traceable, scientifically founded way, but simply carries the colloquial meaning of 'new' or 'different from the old'. Such new approaches, rather, seem to absorb a general feeling of discontentment with the answers the economic discipline provides for the

[13] Actually, Lorie Tarshis, a Canadian student at Cambridge at the time when Keynes wrote the *General Theory* and lectured on parts of his forthcoming book, published the first 'Keynesian' textbook in the US which conveyed a more revolutionary interpretation than the ISLM model popularised particularly by Paul Samuelson. Unfortunately, Tarshis's textbook quickly fell victim to a McCarthian witch-hunt (see Harcourt 1982).

[14] See e.g. Hayek (1972), Lucas/Sargent (1979)

multiple crises that our economies and societies are going through. However, this lack of rigour may not only stem from a deficit in methodological training or awareness on the part of economists but may also be used to prevent a more radical — truly revolutionary — paradigmatic shift from happening. Therefore, let's take a look at the proposals offered for the upcoming revolution.

As previously argued — and dismissed as unjustified — policy paradigm shifts and scientific paradigm shifts are often either treated interchangeably or, at the very least, directly linked to one another. Consequently, a clear genealogy and association between these two distinct occurrences are rarely provided. Instead, historical circumstances such as the World Financial Crisis after 2007, the ongoing Global Climate Crisis, and the extraordinary period of zero-interest rates during the 2010s are taken as signifiers (anomalies, in the terms of Thomas Kuhn) of an imminent end to the dominant policy paradigm PB, which has shaped the neoliberal age with its supply-side agenda PBB. New market-correcting policy approaches are emerging and are being interpreted as precursors to a revolution in both policy-making and economics — without recognising or identifying them, for instance, as PAA, PAB, or PCA, or associating them with an alternative economic paradigm like TA or TC.

The economic discipline is a complex adaptive system undergoing continuous change. Some of these changes can be seen as cumulative advancements in the application of a given set of methods and epistemological structures to ever more aspects of social life — 'normal science' in Kuhnian terminology and 'thought style extension' in Fleck's terms. Other changes may be based on improvements or modifications in methods and epistemological structures, adding to existing knowledge or 'repairing' the basic model where anomalies challenge its predictive and explanatory power. This epistemological repair work mainly concerns auxiliary assumptions within the protective belt of the paradigm. When core assumptions are affected, it becomes a matter of ontological loyalty whether such changes are accepted as 'thought style supplementation' (Fleck) within the paradigm. As long as the ontological 'pre-analytic vision' of a paradigm is not questioned, dissenting approaches are not only accepted but welcomed, as they are seen as the 'cutting edge' of the discipline (or, rather, of the dominant paradigm!). However, changes that challenge some or even all core assumptions of the dominant paradigm — doing so based on a different pre-analytic vision — result in 'thought style transformations' in Fleck's terms or paradigm shifts in Kuhn's sense. Such changes are opposed by proponents of the dominant paradigm, as they might undermine their authority, while 'dissenters' are typically courted not only as 'cutting-edge' scholars but also because their approaches are considered sufficiently novel to satisfy demands for a change in perspective without requiring a true revolution or submission to a heterodox paradigm[15].

When Colander, Holt, and Rosser (2004) identified 'a changing face of mainstream economics', they seemed to anticipate the developments under scrutiny here and reinforced the notion that a policy paradigm shift requires a preceding economic paradigm shift, which they

[15] Colander/Holt/Rosser (2004: 495) seem to be of the opinion that the dividing line between dissenter and heterodox is subjective, depending on the attitude (defensive-appeasing or offensive-rejecting) of the scholar: "Whether what works at the edge is considered heterodox or mainstream is primarily a matter of the individual's proclivity to fit within the existing mainstream, and the degree to which they directly attack, rather than softly criticize, the work of the elite". This view is not supported here but a clear objective differentiation offered based on ontological distinctiveness.

primarily saw in the then-emerging field of Evolutionary-Complexity economics. In the context of Fig. 1, Colander, Holt, and Rosser did not predict a paradigm shift towards the post-Keynesian paradigm TA — despite its long struggle for recognition and its likely status as the largest component of heterodox economics. Instead, they foresaw the rise of a new alternative, where it remains unclear whether this would involve a paradigm shift towards the Evolutionary-Complexity paradigm TC or merely another variation, TCA (shown in Fig. 1 with dotted lines of affiliation connecting to paradigms TB and TC), within the dominant (neo)classical paradigm TB.

Unfortunately, more recent studies attempting to map the 'state of a shifting paradigm' have not built upon the arguments laid out by Colander, Holt, and Rosser, but instead start from policy areas where they predict major discontinuities that could lead to a policy paradigm shift. Therefore, what is needed is a comprehensive survey of the policy areas and the "new policy" proposals, connecting them to their paradigmatic foundations in order to assess their revolutionary potential.

In Table 1, the economic policy paradigm shift from the old 'market-liberal' to the new 'interventionist' or 'active state' policy paradigm is depicted, which has supposedly been taking place in policy-making not only in several major countries but also in key international organizations (see Fricke et al. 2023: 34ff.). The various macro-, meso-, and micro-economic policy shifts, all characterised by attributing both the potential (at the polity level) and the necessity (at the policy level) of government intervention, are based on work published by authors from a wide range of scientific paradigmatic backgrounds. Stephanie Kelton, Daniela Gabor, and Warren Mosler are undoubtedly categorised as 'heterodox', while Paul de Grauwe, Moritz Schularick, Olivier Blanchard, and Thomas Piketty are prominent members of the economic mainstream. Others, such as Mariana Mazzucato and Joseph Stiglitz, might be seen as 'mainstream dissenters,' while figures like Philippa Sigl-Glöckner, Adam Tooze, and Adair Turner are more difficult to categorise, as their published work does not clearly indicate a specific affiliation.

These categorisations are backward-looking and are relevant to our investigation mainly because the likelihood of a significant impact on the development of a discipline — such as a revolution — is likely to be greater when the proponents are endowed with social and symbolic capital. The assumption here is that mainstream economists in general, and prominent, renowned ones in particular, are more abundantly endowed with these types of capital than heterodox economists.

To assess whether the purported economic policy shift is truly aligned with a scientific paradigm shift, we must examine the paradigmatic foundations underlying the policy changes in various areas. In the case of monetary policy, the 'new policies proposition' to rebalance the objectives of monetary policy can be derived from or integrated into extended New Keynesian models (see, e.g., Schularick 2022; Kaplan/ Moll/Violante 2018)[16]. The call to broaden the objectives of monetary policy to include environmental and distributional goals is normative and therefore does not stem from any particular paradigmatic foundation.

[16] They are termed ‚HANK' (Heterogenous Agent New Keynesian) models as supplement to 'RANK' (Representative Agent New Keynesian) models.

However, the demand to subordinate monetary policy to fiscal policy objectives, as advocated by Modern Monetary Theory (MMT), is often claimed to be 'heterodox' (see, e.g., Armstrong 2024).

Table 1: Shifting economic policy paradigms

Policy paradigm	Policy area	Source	Economic Paradigm
Market-liberal	**Macro-economic** *Monetary policy*: restrictive policy stance to maintain price-stability (only) *Fiscal policy:* rule-based, restrictive policy stance (balanced structural budgets) *Wage policy*: productivity-oriented policy stance **Meso-economic** Laissez-faire orientation **Micro-economic** *Deregulation* (particularly labour and financial markets) *Privatisation*		Mainstream: New Keynesian; New Classical Macroeconomics
Interventionist	**Macro-economic** *Monetary policy*: more balance policy stance to maintain price and output stability; extending policy goals to environmental and distributional issues; subordinating monetary policy to fiscal policy goals	De Grauwe (2013), Schularick (2022) Tooze (2022), Turner (2013) Mosler (2010)	Mainstream: New Keynesian No clear theoretical base Heterodox: MMT
	Fiscal policy: Re-thinking fiscal policy rules and orientation;	Blanchard et. al (2021), Sigl-Glöckner et. al (2021)	Mainstream: New Keynesian or no clear theoretical base
	re-orientation from 'sound finance' to 'functional finance'	Kelton (2020)	Heterodox: MMT
	Income inequality: reducing growing income and wealth inequality through taxation	Piketty (2014), Piketty/Saez (2014)	Mainstream
	Meso-economic *New industrial policy*	Mazzucato (2011, 2021)	Mainstream dissenter: Schumpeterian economics
	Micro-economic *Re-regulation* of financial markets *Taming* financialisation	Schularick (2022), Turner (2013) Gabor (2020), Stiglitz (1989)	Mainstream: New Keynesian Mainstream, mainstream dissenters: New Keynesian, behavioural economics Heterodox: Minskian Economics

Source: own presentation based on Fricke et al. (2023), Macfarlane/Laybourn-Langton/Jacobs (2019)

Regarding fiscal policy, the new proposals for rethinking fiscal policy rules and orientations to better stabilise economic development do not necessarily require a heterodox foundation but can be easily derived from mainstream economic models, particularly of the New Keynesian type (see, e.g., Heise 2024b: 7ff.). Moreover, the primary focus of the fiscal policy shift lies in softening the rule-based framework (allowing for more discretion) rather than altering the content of the rules (such as the structural balanced budget or 'zero deficit'). However, the 'rules versus discretion' debate is largely independent of the paradigmatic foundation of fiscal policy. The new fiscal policy proposals take on a heterodox character only when a reorientation from 'sound finance' to 'functional finance' is advocated, and the 'functional finance' perspective is derived from post-Keynesian or MMT foundations (see, e.g., Heise 2023b).

The issue of income distribution re-emerged as inequality began to rise again during the neoliberal era from the 1980s onwards. Although income distribution has long been a core topic in heterodox post-Keynesian theorising — particularly in the Kaleckian tradition — it only re-entered the policy debate after Thomas Piketty's widely discussed publication *Capital in the Twenty-First Century*, which framed inequality as a mounting problem to be addressed through income, wealth, and inheritance taxation (Piketty 2014). Despite the extensive Kaleckian literature on distributional regimes — perhaps the most prominent heterodox research in recent times — Piketty himself (Piketty 2015) and the authors of studies mapping the 'changing field of economics' largely ignore this body of work[17].

At the meso-economic level, the new industrial policy, particularly advocated by Mariana Mazzucato, re-emphasises the role of the state in incentivising and financing inventions and turning them into profitable innovations through supportive market regulations and direct public demand. This approach not only corrects market failures in a static sense, as seen in the Dynamic-Stochastic General Equilibrium paradigm, but also creates markets from a dynamic perspective (see Mazzucato 2011, Mazzucato 2016). While it is clear that the economic dynamics of inventions and innovations require a theoretical foundation beyond static general equilibrium, it remains unclear whether evolutionary economics, as such a foundation, truly belongs to an alternative, 'heterodox' paradigm (as defined in footnote 2). Schumpeterian economics — the variant of evolutionary economics that Mazzucato refers to[18] — is commonly viewed as a mainstream dissenter within a 'pluralist mainstream', supplementing rather than challenging the micro- and macro-orientation of mainstream economics by adding a dynamic meso-level perspective[19].

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[17] Heterodox economists accuse Piketty of using the wrong (neoclassical) theory for his research (see King 2017: 7).

[18] Another renowned mainstream economist, Dennis Snower, recently called for a paradigm shift—i.e., a scientific revolution—towards an evolutionary economics paradigm based on Darwinian and Veblian foundations as a 'new integrative framework' (Wilson/Snower 2024). Although this variant of evolutionary economics is often considered 'heterodox' (see, e.g., Schütz/Rainer 2016: 738; Jo 2021: 288ff), making Snower one of the few mainstream economists advocating the end of general equilibrium hegemony, his contribution has not been included in the mapping of the new economic landscape. This may be because it has not generated policy proposals (so far) that could contribute to a new economic policy paradigm.

[19] See e.g. Schütz/Rainer (2016: 738), Davis (2006), Jo (2021: 288ff.). Hodgson and Lamberg (2019: 110ff.) accordingly deny Schumpeterian evolutionary economics the status of a separate paradigm, arguing that "its impact was more inspirational than constitutional, particularly in applied studies." Moreover, Schumpeter

Finally, the World Financial Crisis after 2007 was indeed a major challenge for mainstream economics in general and for mainstream financial market microeconomics, particularly as represented by Eugene Fama's famous 'efficient market hypothesis' (Fama 1970). However, the period of self-critique was as brief as the renaissance of alternative, heterodox theorizing based on Hyman P. Minsky's 'financial instability hypothesis' (Minsky 1986). It is therefore not surprising that new policy proposals regarding the re-regulation of financial markets and the management of international financial markets and financialization, put forward by scholars such as Moritz Schularick, Adair Turner, and Joseph Stiglitz, make no reference to Minsky's work. Instead, they rely predominantly on core mainstream ideas or, at most, dissenting mainstream concepts like imperfect information or behavioural (financial) economics insights, such as herd behaviour (see, e.g., Stiglitz 2018). Only Daniela Gabor explicitly draws on Keynes, Minsky, and other heterodox authors, though her focus is more on exposing vested interests and explaining state-driven policy adaptations ('de-risking state') rather than proposing alternative policy measures that might contribute to a new policy paradigm.

To summarise, among all the works considered as potentially igniting an economic policy shift, only Modern Monetary Theory (MMT) provides a scientific paradigmatic basis that can be classified as heterodox and thus might genuinely spark a scientific revolution. However, the visibility and appeal of MMT in political and academic spheres derive not from its rigorous theorising[20] but from specific economic circumstances (such as low inflation, low interest rates, and a negative interest rate-growth differential; see Krause/Lubik/Rhodes 2021) and the endorsement by influential figures like former US presidential candidate Bernie Sanders, which has driven academic and political discussion that may not be fully supported by substance (see, e.g., Mankiw 2020). Moreover, MMT and the related reorientation of monetary and fiscal policy have not been adopted by any government or international organization (see e.g. Macfarlane/Laybourn-Langton/Jacobs 2019: 24), raising questions about why MMT and some of its proponents have been included in the 'new economics map' instead of more rigorous heterodox approaches such as post-Keynesian economics. The perceived economic policy paradigm shift is certainly not rooted in a scientific paradigm shift but is rather the result of variations within the reigning Dynamic-Stochastic General Equilibrium paradigm, possibly pushing formerly mainstream dissenters— behavioural and Schumpeterian evolutionary economics —towards the core and reinforcing the ongoing shift from New Classical to New Keynesian economics, a shift that has been underway for some time (see, e.g., Lucas/Sargent 1979, Ploeg 2005, Akerlof 2007). This conclusion is supported by the fact that the key figures involved show no clear affiliation with heterodox economics.

5. Why it is important to distinguish between a 'revolution' and 'something new'

Having established that the 'new economic policy' identified by some observers is not, in fact, based on 'new economic thinking' in the sense of a shift in the scientific paradigmatic

himself was opposed to the idea of a distinct (heterodox) paradigm: "I have never tried to bring about a Schumpeter school. There is none and it ought not to exist. … Economics is not a philosophy but a science. Hence there should be no 'schools' in our field" (Schumpeter, in Haberler 1950: 372).

[20] MMT has received a critical reception from orthodox as well as heterodox economists; see e.g. Krause/Lubik/Rhodes (2021); Davidson (2019), Kregel (2019), Murphy (2019), Summers (2019).

foundations of the economic discipline — i.e., a veritable scientific revolution — indicates that history is repeating itself. Real-world economic circumstances challenge the dominant economic paradigm, yet the discipline manages not only to extend the existing mainstream paradigm — which underscores its resilience — but also to present this extension as the 'emergence of a new paradigm' (Fricke et al. 2023: V). But why is it relevant to distinguish between the emergence of new variants within the mainstream, to which the pendulum of dominance may eventually swing, and the emergence of a new paradigm involving a scientific revolution once the paradigm becomes accepted and dominant, if both developments equally support a policy paradigm shift? Isn't the insistence on this difference overly pedantic, stubborn, and merely a matter for the academic ivory tower?

Clearly, even if the primary goal of science is to produce effective policy proposals and determine the correct instruments to be applied, it remains important not to do the right things for the wrong reasons. Science not only aspires to accurately understand its object of inquiry but also needs to gain legitimacy for its policy prescriptions. Furthermore, ignoring the paradigmatic foundations of a desired policy paradigm shift can be seen as a strategy to reinforce the old paradigm[21], setting the stage for another policy paradigm shift when economic and political circumstances change. As history has shown, a back-swing from one variant of a paradigm to another — mistakenly called a 'counter-revolution' — is much more likely than a return to a previous scientific paradigm[22].

These considerations are particularly relevant given that there is no shortage of truly heterodox paradigms (e.g., various schools of post-Keynesianism or the heterodox branch of Complexity-evolutionary economics) from which new economic policies at the macro, meso, and micro levels could be consistently derived (see e.g. Gnos/Rochon 2006, Colander/Kupers 2014). Yet, these paradigms are often mentioned only in passing or unaccounted[23].

6. Conclusion

The trajectory of the economic discipline is a subject of open debate: some argue that the reigning mainstream shows strong resilience despite economic circumstances that could be considered a 'crisis' in a Kuhnian sense, while others detect significant changes and foresee the 'death of neoclassical economics' as a useful category (Colander 2000). Recent studies claiming to 'map the state of a shifting paradigm' appear to support the latter view, describing a paradigm shift in the making. Although this paradigm shift is linked to a policy paradigm shift, it is supposedly accompanied by and based on a scientific paradigm shift.

[21] Haering (2014: 91) speculates on the nature of an initiative – the Institute for New Economic Thinking (INET) founded and funded by George Soros – which was "dedicated to the renewal of economics" to "be a Trojan horse of the financial oligarchy, meant to control the movement for reform of economics".

[22] Although in both Lakatosian and Laudanian philosophy of science—and arguably contrary to Kuhnian philosophy—a 'back-shift' is theoretically as possible as a 'back-swing', I am not aware of any 'back-shifts' (certainly not in economics), but, as indicated, there have been 'back-swings' in the history of economic thought.

[23] Sterling/Laybourn-Langton (2017: 568) give the impression that there is not yet an alternative paradigm that could eventually replace the incumbent one when they argue: "The missing ingredient is an alternative with the power to displace the existing 'world view'". Surely, such alternative (heterodox) paradigms do exit, however none of them had – until now – 'the power' to replace the mainstream economics (see Heise 2016).

The quest for such a scientific paradigm shift — i.e., a scientific revolution in Kuhnian terms or a thought style transformation in Ludwik Fleck's terminology — has long been pursued by heterodox economists from various paradigmatic backgrounds. However, the studies mentioned do not disclose the method used to select their sample and almost exclusively rely on mainstream economists, largely ignoring heterodox economists with significant contributions to alternative economic theory and policy. The few heterodox economists included seem to be chosen arbitrarily. Favouring mainstream economists, especially those who are prominent, may be a promising strategy due to their greater social and symbolic capital, which could amplify their impact on the discipline. Conversely, mainstream economists might find it more challenging to break away from the paradigm on which their status is built.

We have attempted to demonstrate that there is no direct link between a policy and a scientific paradigm shift. Rather, the policy paradigm shifts observed in the past were not grounded in scientific paradigm shifts — i.e., scientific revolutions or thought style transformations — but were instead derived from swings among different variants within the same paradigm or from thought style extensions and supplementations. After scrutinising the studies in question, it can be concluded that the purported economic policy paradigm shifts detected in some countries and international organizations were not based on scientific paradigm shifts but were merely swings in variants within the same paradigm.

Even if the future reveals that the first two decades of the 21st century have seen the end of neoliberalism and its market-oriented policy paradigm in favour of a more state-interventionist policy paradigm, this will not necessarily contribute to a revolutionary renewal of the economic discipline or, at the very least, its pluralisation. What can be expected with some degree of certainty is that some of the mainstream dissenting variants, which have thus far been on the cutting edge of research—such as behavioural or Schumpeterian evolutionary economics—will become more prominent as 'normal science' in a Kuhnian sense, and the mainstream will become more diverse in general. This diversity will likely be mistakenly celebrated as a fundamental change and the discipline's ability to adapt to new economic challenges.

Furthermore, we have tried to show that distinguishing between a scientific revolution and a shift in dominance within the mainstream paradigm is crucial, and ignoring this distinction can help reinforce the incumbent paradigm. Heterodox economists cannot simply wait for change to occur; they must continue to actively strive for acceptance and a different direction for the economic discipline.

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