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Abstract

This special issue argues that to make sense of the increased prominence of central banks after the 2008 financial crisis and COVID-19 pandemic requires interrogating the sources of and limits to their governmental power. In a time in which the 'big state' has returned alongside new forms of financial speculation, the theoretical claim advanced by this introductory paper is that the state 'effect' is in crucial respects conditioned by the economic governance arrangements set in place by central banks. We show that at the same time as promoting entanglements between states and markets, central banks attempt to draw new boundaries between state and economy, lending an unstable and sometimes contradictory character to their interventions. Providing the outlines of a new historical sociology of central banking which introduces the papers in the special issue, we explore the double movement that has underpinned the evolution of central banking since early modernity and holds clues for unravelling the paradoxes of the present.

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There will inevitably be those … who will begin to ask why the Fed can't fund repairs of the country's ageing infrastructure, or finance the building of a border wall, or purchase trillions of dollars of green energy bonds, or underwrite the colonisation of Mars. (Randy Quarles, 2021)

The state thus appears as the central bank which guarantees all certificates. One may say of the state, in the terms Leibniz used about God, that it is the 'geometrical locus of all perspectives'. (Pierre Bourdieu, 1989, p. 22)

Introduction

It used to be so simple. In the decades preceding the 2008 financial crisis, central banks throughout the Western world converged upon narrow mandates with a single task: price stability. Beyond inflation targeting, their role was proscribed. Compared to the central banks of the mid-twentieth century, which sometimes coordinated with treasuries in supporting industrial strategy (Monnet, 2018), twenty-first century independent central banking seemed the culmination of a neoliberal form of technical rationality deflating the hopes once invested in Keynesian economic programmes (Abolafia, 2012; Wansleben, 2023). The dominant image of central banking was of a triumphant technocratic prowess which folded monetary policy into the background of economic life and insulated it from democratic interference.

In the space of just a few years, beginning with the collapse of Lehman Brothers on 15 September 2008, the certainties of this era would be upended. When the banking system teetered on the edge of collapse and central banks took the lead in propping it up as lenders of last resort and by boosting the economy through quantitative easing programmes, the role played by central banks in sustaining financial capitalism came squarely into the public spotlight (Bowman *et al.*, 2012). The onset of the COVID-19 pandemic in 2020 only reinforced the sense that once supposedly clear-cut boundaries between state and economy had become irretrievably fuzzy. Faced with economically damaging lockdowns and costly furlough schemes, central banks intervened in a coordinated fashion to buy up government debt and supress borrowing costs (a form of fiscal support sometimes termed 'monetary financing'). In doing so, central banks entrenched what were meant to be temporary post-crisis measures as the new normal, extending the reach of their influence throughout the economy and provoking febrile talk of the return of the 'big state' (Forsyth, 2021; Gerbaudo, 2021; *The Economist*, 2020).

And yet, if central banks have helped usher in a return of the big state it is not the reassuringly familiar Keynesian model of the 1960s and 1970s. As argued by Laura Bear (2020) in a recent special issue of *Economy and Society*, the post-crisis era has seen the power of state directed towards the provisioning of ever more speculative capital and financial accumulation. One manifestation of the state's attempts to stimulate a wealth effect is the rapidly increasing stock prices and house prices seen after the financial crisis, a trend which only accelerated during the COVID crisis. More exotic forms of financial speculation have also boomed over the last decade with the emergence of a frothy market in cryptocurrencies and the assetization of everything from wine to non-fungible tokens (Langley, 2021).[1] Driving the explosive growth in asset values is the expansion of central bank balance sheets. After a decade of quantitative easing and the large-scale bond purchases conducted in 2020, the Federal Reserve now holds approximately 20 per cent of US public debt,[2] while the Bank of Japan continues to lead the world in this respect, holding approximately 35 per cent of the country's 1.4 quadrillion yen of government securities.[3] If the Keynesian big state of the post-war era was predicated on economic stabilization and the institutionalization of labour relations, the post-crisis big state is defined by ever-increasing quantities of public debt serving to backstop an aggressive governmental programme of financial expansion (Streeck, 2017).

How can we make sense of the role played by central banks in enabling this situation? A growing literature informally dubbed the social studies of central banking has done much over recent decades to demystify central banks and pierce through the fusty bureaucratic image they cultivate (Abolafia, 2012; Braun, 2015, 2016, 2020; Coombs, 2020; Walter & Wansleben, 2020; Wansleben, 2018). Combining ethnographic sensibilities derived from the social studies of finance with the structural vision of political economy, these studies home in on the public-private hybridity underpinning money creation, public debt and financial market governance. Pushing back against an image of the 2008 financial crisis as caused just by greedy bankers, scholars have shown that central banks share responsibility, not only for 'taking their eye off the ball' with a blind spot to speculative bubbles but also because they actively promoted shadow banking as a vehicle for monetary policy transmission (Gabor, 2016; Gabor & Ban, 2016). Nevertheless, despite all the productive insights yielded by this work, when seeking to explain these agendas the assumption is that central banks act coherently as carriers of neoliberal ideology or as agents of financialization (Krippner, 2007, 2011; Walter & Wansleben, 2020). Whether attempting to avoid political backlash or allying with financial markets in the process of reshaping monetary policy implementation, the literature converges on the same depiction of 'captured' central banks beholden to the market. The problem with such accounts is that they struggle to reconcile their narratives with recent trends which suggest an expansion of the state's role in the economy. Examples include central banks' new financial stability powers, their activism on climate change, and their support for the governments' job retention schemes during the pandemic, all of which have taken central banks far beyond the narrow mandates they were expected to adhere to in the 1990s and 2000s.

In this special issue, we argue that existing work in the social studies of central banking struggles to make sense of these contradictions because it grants excessive internal cohesion to central banks while neglecting to ask how central banks' governmental programmes play a pivotal role in drawing the boundaries between state and economy. To be clear, in insisting on the vitality of the state concept we have no intention of resuscitating the universalist image of the state with hard boundaries that Foucault (2007) sought to displace by foregrounding the emergence of a diffuse governmentalized state from the sixteenth century onwards (p. 109). In stressing the analytical salience of the state 'effect' (Mitchell, 1991) we mean to understand central banking as an institution which operates within and defines the realm of state sovereignty through its varied practices, devices and forms of calculation. At the same time, in insisting on the connection between central banks and the state, we are pointing to the role played by central banks as the key node of a network of public and private institutions which together jointly produce the bank-based credit-money at the foundation of capitalist modernity.

This is not an entirely novel line of argument. In addition to the well-documented role played by central bank money in early modern state formation (Bindseil, 2020; Helleiner, 2003; Ingham, 2004), the capacity of central banks to create credit-money in collaboration with private agents (first and foremost banks, Desan, 2015), has made central banks a uniquely frustrating, and for the same reason attractive, focus for theorists attempting to define the limits of the state (Bourdieu, 1989; Bourdieu *et al.*, 1994; Luhmann, 1994, p. 117f).[4] The sense that central banks both belong to the state yet operate in networks which extend beyond it also provides one of Timothy Mitchell's (1991) key examples supporting his influential theorization of the state 'effect' (about which more below). However, this special issue goes further by picking up on these theorists' illustrative examples and interpreting them as a key to understanding the central role played by central banks in producing, policing and transforming the state-economy boundary.

The argument takes the following steps. We begin by asking what it means to understand central banks as shaping the boundaries between state and economy. We propose that the state 'effect' is in crucial respects conditioned by economic governance arrangements set in place by central banks and discuss the conceptual resources available to theorize the boundary work they engage in. In the next section, we provide the outlines of a new history of central banking from the early modern period to the present, highlighting a dialectical dynamic in which with every entanglement of states and markets promoted by central banks the desire to uphold liberal principles of limited government has required central banks to engage in boundary work to draw new lines between state and economy. We conclude with reflections on the implications of our analysis for engaging the contradictions of the present.

Theorizing central banks as boundary organizations

The significance of central banking pivots on a deceptively simple question: do these institutions belong to the state or the economy? Central banks have diverse functions, which poses difficulties for their categorization. In addition to their control over the money supply and ability to set interest rates, central banks have in different countries and in different historical periods also served as the bankers for national treasuries, the reserve of gold for maintaining the international value of the currency, lenders of last resort to banks and corporations, and regulatory supervisors of the banking sector. Central banks are of course not the only institutions that involve the state in the functioning of markets. As Carruthers (1996) has shown, the capital markets and joint stock companies founded in England in the late seventeenth century were politically motivated, state-market innovations. Still, sitting at the apex of the monetary hierarchy, central banks are arguably the most systemically important of capitalism's public-private institutions. Central banks' ability to project state agency into markets is why of all the major institutions of nineteenth-century capitalism Marx and Engels (2002 [1848]) envisaged powerful, credit-allocating central banks as playing a role in the transition to communism (p. 243). It is also why Karl Polanyi (2014 [1944]) saw central banks' ability to mitigate economic cycles as a form of social protection from the excesses of unfettered markets (pp. 201, 211).

The malleable status of central banks continues to provoke debates to this day. The political right, when not calling for an outright abolition of central banks, warns against the scientistic 'pretence of knowledge' justifying the use of discretionary monetary levers in the pursuit of full employment and economic stabilization (von Hayek, 1989). The political left, on the other hand, has typically followed in the spirit of Marx and Polanyi in being sharply critical of the movement since the 1980s to establish independent central banks with narrow price stability mandates (McNamara, 2002), preferring a model of central banking responsive to the political issues of the day. It is possible to see these disputes as just regional skirmishes in a broader ideological struggle over the role of the state in the economy. However, our claim is that these debates reflect deeper uncertainty about how to analytically situate central banks. Put simply, if we accept the idea that central banks straddle the state-economy boundary, then it remains necessary to ask: what is this boundary, where does it come from, and how is it transformed?

The limits of the state have been extensively probed in a body of literature termed 'state theory'. This theoretical programme is motivated by dissatisfaction with the reductionist view of the state as the 'managing committee' of the bourgeoisie (Marx & Engels, 2002 [1848], p. 221) as well as the pluralist, interest-group understanding of the state influential in American political science. Yet, for all the conceptual innovations offered by this body of work, in seeking to surpass reductionist or realist accounts of the state, some state theorists have assumed the state-economy boundary is a merely ideological construction held in the minds of analysts.[5] That perspective is to some extent echoed by poststructuralist theory inspired by Foucault's (2007) characterization of the state as a 'mythicised abstraction' (p. 109), with the field of governmentality studies attempting to understand the mechanisms of government without having to invoke the hand of a sovereign state (Langley, 2015; Rose & Miller, 1992). For our purposes, the problem with this work is that while it has succeeded in highlighting the diversity of governmental forms, it has done so by weakening the sense that there is a boundary separating the state from the economic sphere in a meaningful sense.

It is within this context that Timothy Mitchell's (1991) work stands out for attempting to explain rather than debunk the apparent metaphysical solidity of the state boundary. Mitchell argues that the state is an 'effect' produced by the ritualistic repetition of discursive, symbolic, and material practices of state-making. Both 'state' and 'economy' are products of governmental techniques intended to implant discontinuity within the networks of smoothly interlocking public and private institutions that comprise modern government. Even though the terms state and economy overlay a network of ineluctably hybrid public-private institutions, for Mitchell the state 'effect' is no less real as it is encoded in material and discursive practices intended to prevent the economy collapsing into the directives of the state. Mitchell draws on the example of central banking. Against the folk image of central banks controlling the monetary order autonomously from the financial sector, Mitchell highlights how the relationships between corporate banking groups, central banks and state treasuries are better understood as 'networks of financial power and regulation'. The impression of a clear boundary is established by banks being 'set up and present[ing] themselves as private institutions clearly separate from the state'. Rather than acting as an external limit, the boundary demarcating the state from other spheres is a 'line drawn internally, *within* the network of institutional mechanisms through which a certain social and political order is maintained' (Mitchell, 1991, p. 90).

We broadly adhere to Mitchell's approach in this special issue while interpreting central banking not as a mere example of the state effect but as one of the premier institutions shaping the state-economy boundary. Furthermore, though Mitchell's work liberates us from both realist and idealist understandings of the state-economy boundary, the boundary itself remains rather underspecified in his work. Mitchell tells us what the boundary is not – an external limit or a subjective impression – but he does not offer a very concrete sense of the institutional mechanisms which sustain the boundary or drive changes in its formation. To develop Mitchell's theorization it is therefore necessary to take inspiration from different traditions, several of which have already been adopted within the social studies of central banking and are elaborated by papers in this special issue.

Forging connections in the space between fields

The first is Bourdieusian field theory. Alongside the forms of capital and habitus, the notion of the field is one of Bourdieu's most important contributions to sociological theory. Possessing affinities with Einsteinian relativity theory, a field is a relational concept used by Bourdieu to conceptualize how the positions of actors in a field affect each other without directly interacting. Fields are 'arenas of production, circulation, and appropriation and exchange of goods, services, knowledge and status' (Swartz, 2016, n.p.) in which actors struggle over power resources, sometimes only semi-conscious of the field dynamics structuring their behaviour. For Bourdieu there is a plurality of fields with their own logics – religious, scientific, political, economic, bureaucratic – but they are all embedded in and structured by a global field of power. The advantages of Bourdieu's notion of a field have been shown by Frederic Lebaron (2008) in empirical work on how the strategies of central banks are inflected by the struggles between central bankers in an elite 'sub-space' of the global field of power. Bourdiesian field theory has also been effectively deployed to explore the governmental affordances created when central banks cross fields, or what Mudge and Vauchez (2016) term the 'field effect' in their analysis of the scientization of the European Central Bank (ECB). That said, it is worth conceding that the boundaries between fields remain somewhat neglected by Bourdieu; his field theory understands fields as dividing social space into self-evident 'spheres' of social action, the boundaries of which are more porous than Bourdieu himself acknowledges.

Gil Eyal (2013) attempts to raise the profile of the boundary in field theory by arguing that Bourdieu does not give sufficient attention to the spaces between fields, where networks of actors enrol allies and translate between the interests of actors embedded within different fields. As Eyal points out, innovations that come to structure Bourdieusian fields often emerge from interstitial spaces 'where things can be done and combinations and conversions can be established that are not possible within fields' (Eyal, 2013, p. 177; see also de Souza Leão & Eyal, 2019). Understanding the work done in and through a boundary therefore requires reconceptualizing it as a 'real social entity with its own volume' (Eyal, 2013, p. 162). The boundaries between fields are not thin lines; they are a thick 'zone of essential connections and transactions between them' (Eyal, 2013, p. 162). Interpreted as Bourdiesian boundary organizations, central banks can therefore be seen as *inhabiting* the state-economy boundary where the bureaucratic and political fields meet economic and scientific fields. What's more, from this perspective the state-economy boundary is not static but is transformed by the novel connections central banks forge with their surrounding fields, introducing a greater temporal dynamism into the analysis of the state-economy boundary than in Mitchell's work (Mudge & Vauchez, 2022; Thiemann, 2022; see also Riles & Miyazaki, 2022, who make similar points albeit not framed in field theoretical terms).[6]

The infrastructural state-economy boundary

A second approach to theorizing how central banks shape the state-economy boundary draws on historical sociologist Michael Mann's (1984, 1993) concept of 'infrastructural power'. Mann proposed this concept to help understand why modern, capitalist states are so well equipped to mobilize civil society to achieve their goals compared to absolutist despotic states. Mann's answer focuses on the paradoxical quality of state autonomy in democratic, liberal polities. Because modern state power is achieved by working through civil society's infrastructures, states power is reliant on those infrastructures and the network of actors which sustain them – as well as allowing states to exert power over civil society, infrastructures allow civil society to exert power over states. The social studies of central banking has travelled down Mann's conceptual 'two-way street' to explain why central banks have resisted reforming shadow banking in the wake of the financial crisis. Braun (2020) argues that the ECB has continued to support risky securitization and repo markets because their power as monetary policymakers has become entangled with shadow banking. When central banks rely on such financial instruments to transmit their policy decisions, finance can exert infrastructural power over central banks which discourages attempts at regulatory reform. Such infrastructural entanglements also explain why central banks 'learned to love financialization' (Walter & Wansleben, 2020), as they aligned their governing practices with deregulated financial market practices since the 1980s.

These studies have elucidated important reciprocal dynamics between states and markets in contemporary financial governance. However, in translating the infrastructural dynamic of 'governed interdependence' (Weiss, 2006) into a synonym of financialized state action, there is a danger that the theoretical scope of Mann's work is truncated. An exclusive focus on the infrastructural entanglements between central banks' policy instruments and financial markets has the potential to miss how Mann's concept is embedded in a theoretical architecture concerned by the evolution of social power and how the boundary between states and civil society is rearticulated with every infrastructural extension of state power (Coombs, 2022). Seeking to restore the scope of Mann's work and borrowing a turn of phrase from Polanyi, we argue in this special issue that there is a 'double movement' unfolding across history where with every entanglement between states and markets promoted by central banks, central banks also engage in attempts at disentanglement in which they draw new lines between states and markets in their endeavour to uphold liberal principles of limited government. In other words, infrastructures are a site of active contestation where the state-economy boundary is continually transformed, in turn provoking new boundary work by central banks as they attempt to find ways to keep the economy afloat without bringing about autarkic central bank planning of the economy.

We develop the point in the following section, which presents the outlines of a new history of central banking attentive to this dialectical dynamic of entanglement and boundary drawing. While serving to introduce the papers in the special issue, concentrated in the latter half of the twentieth century and in the early twenty-first century, our historical overview provides additional context by taking the reader back to the early modern origins of central banking through to the post-financial crisis emergence of central banking as 'the only game in town' (El-Erian, 2016). We now turn to how sustaining boundaries between state and economy, both real and imagined, has been at the heart of central banks' evolving practices and the dialogues that frame their activities in public life.

A new historical sociology of central banking

The foundation of modern central banks from the fifteenth century onwards was from the start accompanied by debates about their potential contributions to the economic order,[7] ranging from the expansion of the money supply, to the fight against financial instability, to the financing of the state, all acknowledging the hybrid nature of these institutions (Desan, 2015). Such reflections justified the founding of the Bank of England in 1694 (seen by many as the first fully fledged modern central bank, Capie *et al.*, 1994), which doubled the money supply and eased the financing needs of the king, who was at the time fighting the Dutch and the French. The Bank's founding thus cemented a 'memorable alliance of financiers and the state' (Weber, 1981, p. 280) in an initially tenuous political compromise between the two competing political factions, the Whigs and the Tories and their respective economic interests (Carruthers, 1996). That fusion of public and private power gave a clear advantage to the British Empire against its continental rivals. By linking the king as the largest debtor to the credit-granting bourgeoisie, the foundation of the Bank permitted the establishment of state-backed credit money, which was both more flexible than coinage-based state money and more stable than private credit (Ingham, 2004).

The growth of the network of private and public institutions with the central bank at its helm went hand in hand with a discursive reinterpretation of the 'making of money' (Desan, 2015). Up until the founding of the Bank of England in the seventeenth century, the metaphor of money as the blood of the kingdom held a central place in the public discourse, symbolizing the vital connection between the minting of money and the fate of the public realm. Afterwards, the metaphor of money as 'water', advanced by liberal thinkers such as Hume and Locke, became dominant. This metaphor de-emphasized the role of the sovereign in the creation of money, instead proposing a quasi-anthropological state of nature in which money and private property are natural priors of the state. In proposing the natural evolution of money out of humankind's 'natural propensity to truck and barter' (Smith, 1970 [1776]) this literature was central to the creation of the modern imaginary of an independent economic sphere, in which private agents pursue their personal interests (Graeber, 2011). Hence, the founding of central bank-backed credit money accompanied a first representation of the state-economy boundary in liberal political economy, which sought to play down the crucial role of the sovereign in the monetary realm. And yet, this discursive manoeuvrer was complicated by the persistent need for the Bank of England to intervene in the monetary system to maintain financial stability.

While more stable than a fully private credit system, the state-backed monetary system was still prone to failure in an expanding private banking system based on fractional reserves. Central banks therefore had to evolve over time with the financial system, as they sought to control the system's credit production and to keep it from collapsing (Knafo, 2013). In the process, central banks' repeated interventions in the financial system to stabilize it made their public role ever-more evident, even if central banks tried to hide the true intentions of their interventions.[8] The public backstopping of the banking system, which would later be called central banks' lender of last resort function, came only to be fully acknowledged by the Bank in the second half of the nineteenth century, when the English essayist and former *Economist* head Walter Bagehot (1896 [1873]) formulated the famous principles for how the Bank should behave in times of crisis.[9] The need for credit expansion by private banks and for central banks to intervene in the financial system to stabilize it led to the evolution of what Dow (1996) calls the 'social contract' of banking (see also Desan, 2017). The submission of banks to regulation and supervision became the *quid pro quo* for the provision of a public backstop by the central bank (for the Bank of England, see Hotson, 2017, for a general take, Dow, 1996; Gabor & Vestergaard, 2017).

The importance of central banks' role of lender of last resort for transforming the state-economy boundary was vividly demonstrated during the Great Depression, which started in 1929 with a steep fall in stock markets. The crisis led to massive bank failures which would prove to have devastating consequences for the economy in the United States and Europe. The Fed has since been judged as overly timid in providing liquidity to banks, and the economic cataclysm which followed opened the space for a re-envisioning of central banks along the lines of fiscal Keynesianism where they would be subjugated to state treasuries.

After their use as direct instruments of state financing during the Second World War, the following decades saw central banks evolve into the rationalized bureaucracies that remain with us until today. Yet, while state-led economic management became the political common sense of the post-war period, the refashioning of central banks into macroeconomic management agencies unfolded more slowly and elliptically than might be expected. For example, although the Bank of England was nationalized in 1946 with the intention that as a public institution it could better serve the needs of the post-war economy, this was done in an *ad hoc* fashion underpinned by 'no vision of how a central bank should function in the new era of the planned economy; no convincing model of the ideal triangular relationship between government, central bank and commercial banks; and no insistence that the Bank shed its culture of secrecy and deliberate cultivation of mystique' (Kynaston, 2017, p. 398).

Retaining its core identity as an independent private bank even under government ownership, over the following decades the Bank was involved in frequent tussles with elected politicians. Seeing its main role as preventing the currency's devaluation within the international Bretton Woods system (where currencies were pegged to the gold standard), the Bank preached the austere virtues of limited government expenditure and high interest rates to keep pound sterling an attractive choice for global trade. A corollary of the Bank's only partial conversion into a public body was that economic theory took surprisingly long to embed within the institution's decision-making. Even by the time future governor Mervyn King assumed the position of Chief Economist in 1991 he would criticize the institutional culture of deference to market intuition and generalist expertise (James, 2020). The Bank was thus surprisingly immune to pressures for 'scientization' (Acosta *et al.*, 2020) until quite late in its evolution, because the Bank had for the most part already successfully warded off political influence over its policymaking since nationalization.

By contrast, although the Federal Reserve was established in a national political climate deeply sceptical of centralized economic power – and which finds echoes today in libertarian calls to 'end the Fed' – the fact that it began as a public non-profit maximizing bank enabled it to leapfrog the Bank's drawn out metamorphosis (Goodhart, 1988). Not a central bank proper at its founding in 1913 due to the inclusion of private sector bankers on the boards of the 12 Reserve Banks, the 1935 Banking Act centralized power in the Board of Governors and Federal Open Markets Committee, in so doing announcing the creation of 'a new central banking model altogether' (Conti-Brown, 2016, pp. 31–32). The 1946 Employment Act laid the groundwork for a new state-economy boundary by compelling the Fed to foster an economic environment conducive to full employment. The Fed's accommodation of New Deal and Keynesian ideas did not, however, translate directly into the Fed assuming responsibility for macroeconomic governance. At first, the Fed's contribution to economic growth was conceived as maintaining stable interest rates and liquid credit markets as it had done so during wartime when it closely coordinated its actions with the Treasury. The leap to reimagining the Fed as a fully fledged macroeconomic governor required an epistemic machinery and governance programme that would picture the economy as an entity that could (and should) be scientifically manipulated using monetary tools.

Mitchell (1999, 2014) argues that the representational work involved in macro-modelling of the economy and the data collection necessary for the new national income statistics was responsible for redefining the economy as a thing and not a process, as it was understood from the time of Aristotle until the post-war period. We question whether the naming of the 'economy' in the modern sense is necessary for analysing how state-economy boundaries have been *de facto* constructed and transformed since the emergence of early modern central banking in the seventeenth century. This semantical debate notwithstanding, it is plausible that representational technologies played a critical role in reconceptualizing what a central bank is and where the limits of the state lie in the mid-to-late twentieth century. For central bankers to be able to imagine using financial markets as tools for economic management, they needed a formal apparatus of models and statistics that would enable them to hypothesize causal connections between their monetary levers and macroeconomic indicators as well as to monitor empirically the effects of their interventions.

Özgöde (2021) argues that the Fed's reinvention as a macroeconomic manager also involved a transformation in its governance paradigm. The change required an expert grouping of 'formalists' focused on promoting economic growth to displace 'substantivists' wedded to an older vision of the central banking as providing liquidity for productive investments and controlling financial speculation. At the operational level, the victory of the formalists is expressed in the increased usage of Open Market Operations (OMOs) for controlling the money supply. Under the chairmanship of William McChesney Martin, the Fed focused its monetary operations on using its balance sheet to make interventions in the market for short-term treasury bonds (Conti-Brown, 2016, p. 43). A decision not without controversy – critics would object that restricting its purchases to government securities constituted an implicit fiscal backstop for the government – the decision to restrict its purchases to government debt with short maturities was an attempt to draw a line between states and markets within this institutional arrangement. Recent controversies surrounding the erosion of that line, with central banks expanding their purchases to long-dated government bonds in their quantitative easing programmes, speak to how successful McChesney's decision once was in depoliticizing OMOs and taking them out of the public spotlight.

If OMOs have proven a destabilizing sociotechnical apparatus for central banks wishing to shore up their identity as public institutions autonomous from private finance, the advent of stagflation during the 1970s inflicted a blow to the scientific credibility of central banks' decision-making. The key development in this period was the convergence of the monetarist revival of the quantity theory of money (Friedman & Schwartz, 2008 [1962]) with Lucas's (1976) rational expectations critique in economic theory. Lucas (1976) argued that while monetary authorities might be able to provoke a one-off economic stimulus through monetary interventions, repeated interventions would cease to have an effect as they would be priced in to market expectations and merely result in inflation. Friedman's monetarist solution was that central banks' discretion should be reined in and they should instead commit to a fixed target of growth in the rate of the money supply, leaving interest rates to adjust to these targets. The election of Reagan and Thatcher, against the backdrop of destabilizing changes in financial markets that had liberated banks from credit controls while exerting inflationary pressures (Krippner, 2011), would push central banks to adopt Friedman's proposal. This led the Fed as well as the Bank of England to experiment with monetarism, as they sought to constrain the money supply (Walter & Wansleben, 2020). However, though tying their behaviour to monetarist quantities when justifying their actions, central banks soon decoupled their decision-making from monetary targets as they proved unworkable (Krippner, 2011). In giving up on this attempt to control monetary aggregates, the Fed 'shifted credit growth to speculative uses' (Walter & Wansleben, 2020, p. 636f). Contenting itself with controlling consumer price inflation, it left asset inflation unattended, and finally came to build its macroeconomic policy around stimulating the wealth effect that consumers experience from asset-price inflation.

Independent of whether this newly facilitated growth of credit without inflationary consequences was a serendipitous discovery by policymakers seeking to place blame for credit rationing on financial markets (Krippner, 2011), or an explicit goal of the new policy programme at the Fed (Özgöde, 2021), the move fuelled the expansion of private and public indebtedness that was at the centre of the financialized, asset-led growth regime that came to install itself first in the United States and the United Kingdom (Aglietta, 2000), subsequently expanding to other developed countries. Central banks' prominent role in this transition resided on the one hand in acting as the focal point for the stabilization of expectations regarding inflation (Braun, 2015), but on the other in the backstop they provided to fragile money markets which became the dominant means of funding banks (Konings, 2011).[10] Thus, while financial instability was displaced from the centre of central banks' programmatic concerns, the reconfigured network of private and public institutions which made up the financial system helped to blow bubbles in financial markets, leading to repeated bouts of financial instability.

The success in bringing down inflation from the second half of the 1990s onwards through inflation targeting transformed central banks around the globe largely into one-issue organizations, as additional mandates such as full employment came to be equated with the pursuit of low inflation (Singleton, 2010; Woodford, 2011). As Wansleben (2018) shows, the structural reasons which allowed for the successful application of inflation targeting around the globe were the decline of the strength of unions as well as a growing reliance on liquid (and fragile) capital and money markets, whose expansion central banks would then actively encourage (Gabor & Ban, 2016). The apparent success of the inflation targeting approach, which came to focus on the governance of the expectations of financial market agents rather than monetary aggregates, contributed to the depoliticization of central banks, which successfully concealed their initial ignorance in the pursuit of monetary policy.

It is here that the special issue's first paper stresses how important central banks' engagement with the 'uncomfortable knowledge' of their own ignorance is for interpreting the recent history of central banking. Jacqueline Best (2022), argues that because central banks' expertise occupies a central, but contested role in producing the boundary between politics and economics, central bankers face a 'visibility dilemma' – they are keen to project a certain mastery of their expertise, while at the same time concealing their ignorance in the face of an uncertain and complex economy which they do not fully understand. Central bankers' suppression of this 'uncomfortable knowledge' has taken different forms: from a more reflexive and experimental approach in the monetarist experiment, through the denialism of the Great Moderation, and the exceptionalism and new experimentalism of the post-2008 era. Throughout these changes, the result of central banks' skilful management of 'unknown knowns' has been to support a drive towards 'scientization' (Marcussen, 2009), allowing central banks to attempt to convert the contentious act of setting interest rates into a depoliticized realm suited to technocratic expertise.

The process of depoliticization found a clear expression in the movement towards formal central bank independence which began in New Zealand at the end of the 1980s and spread throughout the entire developed world in the following two decades, also enveloping the post-Soviet bloc (Johnson, 2016). The movement towards central bank independence, coupled with the rising political power of a rentier class that sought to permanently control inflation (Kirshner, 2003) found its apex in the creation of the ECB in 1999, which based on the Maastricht Treaty of 1992 became the most independent central bank in the world.

The second paper of the special issue, by Stephanie Mudge and Antoine Vauchez (2022), delves into the back story of the ECB by demonstrating that in the hands of the Working Group of Legal Experts of the European Monetary Institute (EMI) – the ECB's predecessor – the notion of independence was repurposed by lawyers in ways that went far beyond its original meaning. In the process, 'independence' became a uniquely flexible and open-ended category, which continues to allow the ECB to navigate its multiple field locations as well as internal organizational struggles. Yet as Mudge and Vauchez also show, this discursive construction has become increasingly tenuous in the post-crisis period. After the EMI's *unbounding* of the category of independence in the 1990s, the task of maintaining an autonomous European economic field has proven unusually complex, leading to controversies over the constitutionality of the ECB's post-crisis interventions in monetary and economic governance of the eurozone.

Running parallel to developments in the 1990s which moved the control of monetary policy beyond the grasp of political forces, the supervision of financial markets, which for a long time had been the responsibility of central banks, came to be viewed with increasing suspicion due to perceived conflicts of interest, leading many central banks to shed this function (Singleton, 2010). During the so-called Great Moderation lasting from the mid-1980s until 2007, central banks became highly confident in their capacity to manage the macroeconomy through the single mechanism of interest rates (Bernanke, 2004). However, concealed by this apparent success were central banks' infrastructural entanglements with processes of financialization. In particular, the persistent backstopping of fragile financial markets through emergency programmes supported the emergence of a shadow banking system of run-prone financial markets on which the whole system came to depend (D'Arista, 1994; Thiemann, 2018).

The accumulation of such risks, in conjunction with a financial boom in the 2000s sustained by the 'Greenspan put', led to the cataclysmic crisis events of 2008, which forced central banks to act in violation of the lines between states and markets they had previously upheld, assuming a new role as the buyer of last resort for all assets on financial markets (Birk & Thiemann, 2020; Mehrling, 2010).[11]

Facing a potentially catastrophic failure of the financial system in 2008, central banks would have no option but to experiment with novel practices that would make it hard to uphold the state-economy boundary they had previously maintained. Not only did central banks step in with unprecedented emergency liquidity facilities for banks, buying up toxic assets that could find buyers nowhere else; in the context of fiscal austerity, they would emerge as the 'only game in town' shouldered with the responsibility of using monetary policy to stimulate the economy. With interest rates hitting the zero lower bound of 0 per cent, that would require tearing up the institutional norm set in place by Fed Chairman William McChesney Martin whereby central banks restrict their OMOs to buying short-dated government bonds. Seeking to stimulate the money supply by pushing beyond this limit, they began a purchasing spree of long-dated government bonds and corporate bonds. But lacking a clear theory of how these purchases and their growing balance sheets were meant to stimulate economic growth (Cassar, 2021), central banks would further undermine the image of market neutrality cultivated by monetary policy (Mudge & Vauchez, 2022). Visibly infringing the line between state and markets they had previously upheld, their interventions provoked a popular backlash accusing central banks of funnelling cheap money to the banks responsible for the crisis and turbo-charging inequality (the accusation not without basis given that over the period 2009–2021 the value of the S&P500 stock index grew by a staggering 15.41 per cent per year even while US economic growth during the same years was less than 2 per cent per year).

In the third paper of the special issue, Annelise Riles and Hiro Miyakazi (2022), turn to the case of the Bank of Japan (BoJ) which has led the world on quantitative easing – albeit without clear success – by experimentating with the technique since 2001. Riles and Miyazaki examine the failure of 'Abenomics', named after the populist leader Shinzo Abe, to address the economy's deflationary pressures and drive a change in market expectations through the announcement of an inflation target and a boost to the money supply in 2012. Setting Abenomics in the context of the Fukushima disaster, Riles and Miyazaki note that the policy shift announced by the Governor of the BoJ, Haruhiko Kuroda, involved an explicit appeal to market expectations. Riles and Miyazaki further explore the resonance of Kuroda's appeal with Abe's populist desire to foster political expectations about his nationalist agenda. For Riles and Miyazaki, then, the Kuroda event overflows the boundaries between economics and politics established during the neoliberal era as well as categories offered by sociological analyses when they assume the world is parcelled into self-evident spheres of interaction.

However, the transformation of the pre-crisis state-economy boundary by central banks was not just through their quantitative easing programmes, but also in their enhanced role for financial stability operations. As noted, in the decades before the crisis financial stability had been squeezed out by the singular focus on inflation, even while systemic risk was cited regularly as a justification for bank bailouts. In the aftermath of the crisis, central banks would seek to put monetary and financial stability policy on a more level pegging. To equalize the standing of financial stability operations required that the policy field gain a basis in economic theory. The impetus came in the form a request by the G20 that central banks should adopt a macroprudential approach to bank supervision attentive to the interconnected systemic risks in the financial system and the potential for them to spill over and damage macroeconomies. The new Basel Accord in 2010 followed suit by offering new tools for capital regulation intended to recognize the dangers stemming from the system becoming overleveraged and the cyclical dynamics of financial lending. Influentially construed as an 'ideational shift' offering the potential for paradigmatic change in global financial governance (Baker, 2013), much has been written since on the seeming failure of this project, attributing it to a lack of political will or awareness on the part of regulators that their interventions may have self-defeating, counter-performative effects (Stellinga, 2019a, 2019b; Stellinga & Mügge, 2017).

The fourth paper of the special issue, by Matthias Thiemann (2022), offers a different perspective. Thiemann argues that to understand the evolution of central banks' post-crisis financial stability governance programmes requires examining the work of 'boundary walkers' operating in the zone between academic economics and central banking. Thiemann documents how the efforts of these 'economists in the wild', driven by the practical needs of central banks tasked with seeing and acting upon systemic risks, shifted the boundary of 'things economic'. Enrolling allies in the academic field, these boundary walkers engaged in a knowledge production effort, which shifted the state-economy boundary within economic discourse as well as preparing the regulatory devices which would allow central banks to enact counter-cyclical regulation. Their efforts transformed central banks into 'centres of calculation' (Latour, 1987) for systemic risk, which helped to establish the 'stylized facts' regarding the cyclical nature of finance that both legitimize and guide central banks' financial stability interventions.

The fifth paper of the special issue by Edin Ibrocevic (2022) examines how these developments played out in a specific institutional context. Ibrocevic shows that the Bundesbank cultivated expertise on financial stability to shore up its legitimacy after handing power over monetary policy to the ECB. In the immediate aftermath of the crisis, this expertise was moulded into a new financial stability department within the central bank. That resulted in an acrimonious merger of expertise due to scarcity of resources. In turn, the attempt of this department to reshape the state-economy boundary as well as the entanglement of the central bank with the institutional network that makes up the financial system has been stymied by larger organizational concerns over the independence of the Bundesbank. Thus curtailed in its aspirations, the space created for macroprudential policy at the Bundesbank has been characterized by a distribution of powers, which allows the Bundesbank to see but not act upon systemic risk.

The final paper of the special issue, by Nathan Coombs (2022), addresses the narratives mobilized by central banks post-crisis to justify and implement their financial stability interventions. In contrast to scholarship on the persuasive labour performed by central banks' monetary policy narratives, Coombs argues that stress testing narratives are better understood as exerting infrastructural power over the banking sector. At the Bank of England, this new form of infrastructural power has manifested in macroprudentiual supervisory interventions, which by taking advantage of the entanglement of the Bank's forward-looking narratives with supervisory rules and legally binding capital requirements, aim to shape banks' risk management and influence their capital allocation. From this perspective, it is possible to understand why there is concern amongst industry actors that the Bank's stress tests are robbing them of decision-making autonomy even though the tests work through banks' own 'risk sensitive' calculative infrastructures. Extending these insights to a broader historical frame of reference, Coombs concludes that financial stability narratives and stress testing are pushing the temporal frontier of the state-economy boundary further into the future than has traditionally been considered the appropriate operational domain of central banks.

Concluding remarks

This special issue is a response to the present moment in which central banks are presiding over a state-economy boundary that has not looked so porous since the Keynesian era. The aim of the theoretical perspective we have developed in this introductory paper and our history of central banking is to make sense of why our own era cannot be seen as a mere continuation of neoliberalism nor a return to an earlier age of economic planning. The paradoxical situation we have grappled with is the re-emergence of a big state characterized by both the aggressive public backstopping of financial speculation and increased inequality, alongside efforts to control financial instability, retain jobs during the pandemic, and act on climate change. We have argued that central banks, sitting at the apex of monetary hierarchy, play a crucial role in conditioning the economic governance arrangements that construct and transform state-economy boundaries. From this perspective, if the present moment appears unstable and contradictory that is because the state effect has been shaped by central banks' own conflicted practices. At the same time as operating within the boundary zone of public-private interaction and entangling states with markets, central banks attempt to uphold a liberal model of limited government in which they actively prevent their realization of totalizing state control of the economy. Given the contingencies of history, there is no guarantee that this dialectical double movement of entanglement and disentanglement will unfold in a tidy, linear, or coherent direction.

Apropos the social studies of central banking, our history has shown that the entanglements central banks forge with financial markets are not just a product of the era of financialization; such entanglements are baked into the institutional form of central banks as hybrid public-private institutions providing state-backed credit money. What has changed over the centuries is the increasingly expansive nature of the entanglements built atop the institution of money creation. The interest lies with how central banks have constructed this complex state-economy boundary space while attempting to maintain the lines between states and markets expected of liberal governmentality. It is those lines which seem increasingly threadbare in the post-financial crisis, post-pandemic era. It remains to be seen whether there is any reverse gear from the situation in which central banks have become the largest players in financial markets and the great unelected powers of contemporary political economies.

Central banks' newly adopted strategies, first and foremost quantitative easing, face a difficult test with the resurgence of inflation since the pandemic. Initially framed as 'unconventional', these policies have proven to be of helpful in stabilizing financialized capitalism. And yet, with the persistent upward movement of inflation, techniques for maintaining 'a financialized way of life' (Langley, 2015, p. 180) now directly collide with the core task of central banks to control inflation, forcing them into an irresolvable dilemma. While recent revisions to the monetary frameworks by all major Western central banks in 2020 and 2021 have provided them with some interpretative latitude to delay the moment of adjustment, upward moving inflation is forcing their hand to end the era of ultra-low interest rates, leading to the resurgence of contradictions inherent in financialized economies these policies were meant to overcome.

There is no doubt that the persistent interventions of central banks have invited and continue to invite political controversy. Central banks' actions to prop up financial markets to keep the economy growing are widely held to be deepening wealth inequality and entrenching an asset economy where what one owns (or what ones' parents own) is emerging as key determinant of individuals' life chances. Central banks are also increasingly recognized not as innocent bystanders but as key actors responsible for driving the financialization of the economy and entrenching speculation on assets such as housing as the dominant mode of navigating the uncertainties of economic life. We submit that the analytical framework offered by this special issue can help us to understand the origins of the policy programmes which brought us to this point, as well as the future impact of public debates upon the actions of central banks. Taken as a whole, the papers in this special issue show how central bank boundary work – often bracketed as merely technocratic in nature – effects our understanding of the configurations of state and economy in the twenty-first century. What new boundaries will be drawn and how they will be supported by central bank practices is a central question for our times.

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Notes

1 There is widespread agreement that central banks' quantitative easing programmes have contributed to driving dramatic increases in wealth inequality (Adkins *et al*., 2020).

2 Data provided by the St. Louis Federal Reserve Bank: https://fred.stlouisfed.org/series/FDHBFRBN.

3 Bank of Japan Accounts (10 March 2022): https://www.boj.or.jp/en/statistics/boj/other/acmai/release/2022/ac220310.htm/.

4 It is no accident that a theorist as careful with his words as Pierre Bourdieu would repeatedly draw an analogy between the state and central banks when defining the state as the institution with a monopoly of symbolic violence (Bourdieu, 1989, p. 22; Bourdieu *et al*., 1994, p. 12). Here, Bourdieu plays on Weber's famous definition of the state as having the monopoly of violence by drawing on the fact that just as central banks can convert any private capital into high powered central bank money in their Open Market Operations, similarly the state can convert any form of capital into symbolic capital (Bourdieu, 2018, p. 217).

5 An exception is Nikos Poulantzas (2014) who argued that there can be no general theory of where the limits of the state lie because the state can only be understood as relationally constituted and historically articulated in respect to the economy. We agree with this perspective, but emphasize the role played by central banks in constituting that relationship.

6 Medvetz (2012a, 2012b) provides an example of the fertility of this approach when analytically situating US think tanks. Objecting to the standard view which sees the power of these organizations as stemming from their capacity to *span* between different fields, he argues that think tanks are better conceptualized as operating in a 'hybrid subspace of knowledge production … at the cross-roads of the academic, political, economic and media fields' (Medvetz, 2012a, p. 42). On this basis, Medvetz argues that it is best to say that 'the boundary of the field is part of what is at stake inside of the organization'; or more emphatically, 'the organization is the boundary' (Medvetz, 2012b, p. 128). Situated in this interconnected manner, the activities of influential think tanks such as the RAND

corporation played a constitutive role in the mid-twentieth century in changing where the limits of the state lie (Medvetz, 2012a, p. 185ff).

7 New scholarship contests the dating of modern central banks to the foundation of the Bank of England and points to the emergence of central banking much earlier, the outcome of conscious design decisions by public bodies after public debate in the sixteenth and seventeenth century (Bindseil, 2020; Desan, 2015).

8 In this vein, Schumpeter complains about the impossibility to understand the Bank of England's motivations for their interventions in the 1763 crisis. These interventions were justified by such common place justifications that these were largely useless to discern true motivations (Schumpeter as cited in Bindseil, 2020, p. 19).

9 The most famous of these principles is that the Bank should dispense public duty as the nation's central reserve by lending freely against good collateral to stem a panic. The Bank should, however, ask for an interest rate higher than the market rate to discourage such actions in the future (Bagehot, 1896 [1873], pp. 198–199).

10 This backstop, which extended to large, 'too big to fail banks' soon was expanded to financial markets as a whole during the Greenspan era, famously captured in the concept of the 'Greenspan put' (Mallaby, 2019).

11 The specialist literature calls this role 'market-maker of last resort'.

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