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Post-Pandemic Greenness? How Central Banks Use Narratives to Become Green

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Abstract: Suggested only a few years ago, green central banking has received a new impetus with the central bank interventions implemented in the wake of the COVID-19 pandemic. Several central banks, with the European Central Bank (ECB) and the Bank of England (BoE) being prominent examples, have stepped up their public communication on this issue in an effort to explain and justify their planned or ongoing policy actions. Carefully recorded and easy to find, these public communication messages are a rich source of insight into the process of monetary policy formation. In this article, we analyze the messages from two central banks, with the primary objective of identifying the narratives they use (if any) and describing the key features of these narratives, thus shedding new light on an ongoing process of policy change. A secondary objective of the article is to contribute to the growing literature related to the use of narratives in public policy by studying narratives in monetary policy through qualitative means, an approach that, to date, has received relatively little attention from scholars. To this end, we discuss two expectations related to the use of policy narratives derived from the literature. Thus, we hope to show how the two central banks devise and deploy narratives to help implement an unprecedented turnaround in monetary policy.

Keywords: monetary policy; monetary sustainability; central banking; green central banking; European Central Bank; Bank of England; low-carbon transition; central bank activism; policy paradigm shift; narrative policy framework

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1. Introduction

Central banking is undergoing a revolution due to various central banks implementing green monetary and macroprudential policies. This projected or ongoing renovation is not just a sweeping break with the traditional central banking template; it bears the hallmarks of a paradigm shift. Monetary policy and various other policies dealing with climate change have been shown to use narrative devices to help legitimize their goals. Similarly, a narrative may be developing to justify the involvement of central banks in pursuing environmental goals in the context of today's all-encompassing green transformation.

The old central banking template is being challenged in the age of climate concerns. Evolved from private banks, nowadays, central banks are government agencies tasked with issuing high-powered money and managing the economy via monetary and macroprudential policies. With such essential responsibilities, central banks are influential players in today's economies. As they operate in constitutional democracies, various legal regulations and parliamentary oversight are used to check and limit the power of central banks. In particular, the supremacy of central banks to issue the country's legal tender currency is constrained, as it has significant distributional consequences. The power to levy taxes to generate expendable revenues for the provision of essential public goods is a traditional responsibility of the government's legislative branch, which delegates to central banks the power to levy taxes through money creation. Therefore, central banks legitimize their power by pointing to the legitimacy of the political process that was the source of this power. However, in the age of climate change, central banks feel the pressure to find new sources of legitimacy, as the public may consider the traditional template an outdated and unnecessary obstacle to achieving new environmental objectives.

In this article, we hope to contribute to the policy literature in several ways by looking at central bank communication accompanying the ongoing green revolution. First, we aim to identify the use of narratives that can be used to explain and justify the new monetary policy stance. Second, we want to show how these narratives are strategically implemented to complement a policy paradigm shift. Third, we hope to determine the tactical use of narratives by central banks preparing to win the public debate that is likely to accompany the ongoing revolution in monetary policy.

The structure of this paper is as follows. In the next section, we establish the conceptual and policy background of green central banking and discuss the application of the narrative perspective in various related policy areas. In Section 3, we describe the research design, the data collected, the methods used to analyze the data, and a few secondary expectations derived from the narrative policy literature. Section 4 presents and discusses the results, while the last section concludes the paper and suggests directions for future research.

2. Theory and Background

2.1. Central Banks Take on Climate Change: A Policy Paradigm Shift in the Making

An important insight into central banking is the observation that the central bank acts on delegated power as part of the country's constitutional scaffolding [1]. This reflection has important consequences for the way we look at the legitimacy of central banks. In constitutional democracies, the central bank borrows legitimacy from the legislature that decided to delegate its monetary powers to a separate agency, which in turn derives its legitimacy from the people's consent. In its day-to-day operations, however, a central bank is very similar to a bureaucracy, with appointed officials unconstrained by the profit motive [2].

A central banking template evolved along these lines of reasoning. The political authority sets an objective for the central bank, usually in the form of price stability, and awards the central bank a certain degree of discretion over using various instruments to achieve it. As a result, central banks enjoy instrument independence but not goal independence. The rationale for assigning central bank independence is the reasoning that experts in the central bank have a longer horizon than politicians, who are usually constrained by short electoral cycles [3]. Central banks have traditionally used indirect instruments such as buying and selling different short-term assets and have stayed away from using direct instruments such as interest rate and credit controls [4]. Therefore, the clear and limited mandate, the operational independence from public and private pressures, and the use of indirect instruments are the pillars on which traditional central banking has been supported for many decades.

Although prescribed by international financial institutions (or perhaps because of this) and implemented to varying degrees in the vast majority of economies, the traditional central banking template has seen increasing criticism in mainstream economics for various reasons. For example, central banks have lately been criticized for assuming stabilization while eschewing a developmental role, promoting excessive financialization biased toward the so-called neoliberal economic project [5]. Consequently, financing the government and using credit and exchange controls to carry out sectoral policies to support development are suggested as tasks more appropriate for the central bank [5].

Criticism has intensified in the last decade, as monetary measures implemented in the wake of the financial crisis were suspected of having severe adverse distributional and environmental consequences. Unconventional monetary policies, such as quantitative easing, have had considerable spillover effects in terms of income and wealth inequalities, as central bankers were overly attached to the goal of price stability and felt that addressing these outcomes was beyond their responsibility [6]. Therefore, the solution lies in expanding the central bank's mandate beyond price stability and implementing novel ways of issuing money, such as the helicopter drop or the monetization of public debt [6]. The environmental concern appeared in the same line of reasoning: quantitative easing is biased in favor of carbon-intensive industries [7].

Limited to the academic and policy expert communities, a new central banking template began to take shape as a result of these debates. Income and wealth inequality, sustainable development, and environmental degradation were the central concerns that this framework set out to address. Two points are commonplace in the mainstream criticism of the central bank. First, price stability is inappropriate as the sole or primary objective of the central bank, and the resulting prescription is to replace or complement its legal mandate with different and more up-to-date goals. Second, the central bank should issue currency by directly financing the government [5–7].

More recently, the academic literature and policy analysis reports have begun to advance a new goal for central banks: contributing to climate change mitigation. There are several reasons for this suggestion. Climate-change-induced physical risks (such as floods and heat waves) may affect the financial position of the insurers that cover them and the banks exposed to such risks. Moreover, given the political decision to transition to a carbon-neutral economy, additional risks may appear in the form of financial losses for companies that own fossil resources and the banks that finance them [8,9]. Therefore, the participation of central banks is required to safeguard macroeconomic financial stability in an environment affected by new risks. The legal difficulties of this novel involvement are not a concern, as some central banks already have explicit sustainability-related provisions in their mandates, while many others are legally required to support the government's policy priorities [10].

Against the backdrop of these debates, the academic literature has suggested concrete steps for central banks in their quest to become green. Given that its quantitative easing programs and portfolio of assets and collateral have proven to be biased in favor of high-carbon companies, the ECB is uniquely suited to commit to greening its monetary policy. Various "tilting" mechanisms whereby the central bank increases the share of low-carbon companies and decreases the share of high-carbon companies in its asset and collateral portfolio are suggested [11,12]. The ECB has taken successive steps to implement these policy suggestions, limiting the assets issued by high-carbon entities accepted as collateral and decarbonizing its corporate bond holdings [13]. Once again, legal difficulties are nothing to fear, as the legal mandate stipulated in the treaties requires the ECB to support the general economic policies of the union without endangering price stability. Although a relatively new venture, central bank green activism has spurred policy analysts and academics to devise various ranking methodologies [14,15] that award points not only for action, but also for advocating in favor of the green monetary policy.

In any case, as some of the authors of this article have suggested elsewhere [16], addressing climate change is only the most recent novel objective that academics and social activists have advanced for central banks. It also appears to be the most widely accepted new target and one that has found its way into policy implementation. Therefore, understanding this latest policy shift requires the investigation of the debate concerning the update of the traditional central bank mission to respond to various challenges of the new economy.

The academic literature has only just begun investigating this social activism by central banks and has identified several detrimental consequences. By stretching its legal mandate to address novel social or economic problems, a central bank assumes unconstitutional powers, creates opportunities for political pressures, and sees its legitimacy and independence undermined [17]. Similarly, by joining prevalent causes, central banks increase the risk of conducting time-inconsistent monetary policies, as different widely held beliefs may force central banks to change course in the future.

The COVID-19 pandemic has provided academics and social activists with an additional opportunity to argue for a complete makeover of monetary and macroprudential policy regime. Across the board, central banks responded to the pandemic by further accentuating their expansionary monetary policies enacted during the Great Recession. This policy set in motion several problematic forces, ranging from accentuating the knowledge problem faced by central monetary planners and the consequent experimental nature of their interventions [18], to distorting the perceived financial risks by investors unable to distinguish between fundamental and policy-induced changes in economic variables and the ensuing mistakes [19].

In terms of the objective of these interventions, the emphasis began to shift from a traditional recovery measured by the rate of GDP growth to a new and superior type of recovery. Considered *sustainable* and *more inclusive*, this recovery is rooted in an alleged behavioral change triggered by the pandemic that helped the private sector, authorities, and society in general understand the costs of inaction when facing acute public health, social, and environmental issues [20]. Under the slogan "Never waste a crisis", the ECB began advocating for a green recovery, arguing that the significant relocation of capital required by the pandemic crisis is an opportunity to adopt green technologies—a case of Schumpeterian creative destruction [21]. Therefore, central banks, including the ECB, should join this battle and contribute to the greening of financial markets to safeguard price stability threatened by the effects of climate change.

These projected or ongoing policy actions dramatically alter the traditional central banking template, as they, at a minimum, question the validity of long-established traditions such as political independence, the financing of the state through money creation, and the primacy of price stability as the overarching goal of monetary intervention [16]. At a maximum, they completely break with these traditions and reframe the goal of monetary policy in terms of its contribution to climate change mitigation. In the language of policy studies, this ongoing transformation is a monetary paradigm shift. Hall [22] offers what has become the classic definition of a policy paradigm as a framework of ideas used by policymakers to define a policy problem and the goals and instruments used to address it. Unlike first-order and second-order policy changes, which are incremental alterations of given instruments, and the introduction of new ones, respectively, a third-order policy change is a transformative revision of the fundamental policy goal that results in a paradigm shift [22]. Empirically, to conclude that a paradigm shift has occurred, policy scholars must investigate not only the outcomes of a policy, but also the change in actual normative and cognitive ideas of policy actors, since the process of policy change has a critical ideational dimension [23].

Researchers suspected that the monetary innovations implemented in the wake of the 2008 financial crisis constituted a monetary paradigm shift. However, several authors concluded that this was not the case, despite the magnitude of the transformation, e.g., [24,25]. Continuing down the path of de facto expanding their mandates, all major central banks have added new layers of interventions to deal with COVID-19. By taking on climate change, the ECB has fundamentally altered the nature of the relationship between politics and central banking and has therefore adopted a new paradigm [26]. Price stability is the only monetary objective compatible with a constitutional democracy [1]. As green central banking jeopardizes the supremacy of this objective [16], the resulting monetary policy paradigm is centered on a different set of values. A related observation essential to establishing the transformative nature of the current monetary greening is that this change is taking place without prior parliamentary debate [26]. Therefore, in this article, we assume that a monetary paradigm shift is indeed unfolding, and we proceed to investigate its narrative dimension in the cases of the ECB and the BoE.

2.2. Narratives in Policy and the Case of Climate Change

Narratives are widely used in all facets of human interactions, such as politics, economics, and business. Within the realm of economics, narratives that help people make sense of reality may become viral and give rise to social phenomena such as fake news, real estate booms and busts, and stock market bubbles, especially since their circulatory power goes beyond individual self-interest to touch on identity and is unaffected by fundamentals, such as whether these narratives are true or false [27]. Inherent in a rapidly expanding field of research, there is the problem of a consistent definition, as different authors have used diverging definitions in their work. To remain economically relevant, a story must help individuals make sense of a complex social context and suggest actions to a social group [28].

Given the indisputable observation that stories have the power to influence beliefs, actors involved in public policymaking employ narratives to persuade others and advance their position. The multiple actors involved are incentivized to form advocacy coalitions to increase their chances of success. Exceptional conditions such as emergencies can disrupt these otherwise stable advocacy coalitions as new actors are brought in and resources are redistributed [29]. Shared narrative elements and strategies are developed within coalitions that could be used to help explain policy learning, policy change, and policy outcomes [30].

The policy solutions proposed to address climate change have offered fertile ground for developing narrative devices to convince and influence public behavior. People make sense of the complex phenomenon that is climate change through discursive practices and socially constructed ideas and positions. Along with the traditional political science approaches, the linguistic perspective of climate change documents helps complete the picture through the identification and analysis of the textual problem (or complication), the sequence of events (or reactions), the final solution, and the ethical positions advanced [31]. The support for a proposed policy solution to mitigate climate change increases when people feel a positive affect for the hero [32]. Similarly, the degree to which people can imagine the events presented in climate change stories contributes to the affect for the hero [33].

As a result of these general observations, many studies have aimed to describe and empirically evaluate the effectiveness of using narratives in various environmental protection and climate change movements. For example, effective social movements for environmental protection, such as the one initiated by Greta Thunberg, use narratives to communicate their message, portraying themselves as the hero and identifying the villains in the older generations of politicians and the fossil fuel industry [34]. The two competing interest groups involved in redefining the environmental policy in the Greater Yellowstone Area use narratives to advance their positions, identifying winners and losers, referring to costs and benefits, using condensation symbols and policy surrogates, and discussing scientific certainty or disagreement in their discourses [35].

Beyond the mere description and assessment of existing narratives, several scholars have recently proposed the deliberate creation and deployment of a coherent strategic narrative for climate change intervention, especially given the presumed gap between necessity and action. Such a strategic narrative would explain and legitimize government action and tap into drivers for change manifesting at the individual level, thus helping to coordinate the efforts of influencers such as celebrities and religious group leaders used to communicate (mainly politically driven) action on climate change [36]. This narrative would focus on the detrimental local and regional effects of climate change while linking the positive consequences of government action with personal benefits [37]. The door to effectively using a professionally crafted climate change narrative to persuade an unsuspecting audience is now open.

2.3. Narratives in Central Bank Communication

Communication is essential to the ability of central banks to influence the economy, as they have complete control over a single interest rate but must influence the entire spectrum of interest rates in the economy [38]. Therefore, the central bank's communication strategy enhances the effectiveness of its monetary policy by helping financial markets anticipate future policy decisions. Moreover, in the 1990s, a more direct and transparent style of central bank communication replaced the sober and cryptic style that had prevailed before, as central banks began to emphasize openness and transparency as means of sustaining their democratic accountability and political independence [39].

Central banking is no exception to the rule that adequate policy understanding and communication require the use of narratives. Central bank experts develop a shared narrative about the economy's past, present, and future functioning and use it as a cognitive and rhetorical device to represent, decide, and communicate monetary policy issues [40]. Using the BoE as an example, Tuckett et al. [41] show how verbal data collected by the central bank about the state of the economy are narratively transformed internally for the use of monetary policy decision makers. Technical reports issued by central banks are typical examples of narrative sources. They are widely used to devise and distribute an economic narrative that emphasizes consensus as a source of theoretical progress in macroeconomic theory and the idea of exogenous technical change [42]. A more effective reach of unsophisticated audiences may be another advantage of using narratives in monetary policy communication [43].

For these reasons, our primary expectation in this article is that central banks use narratives to explain and justify their ongoing monetary policy shift to embrace environmental objectives. To explore this expectation, we look at the public communication documents released by the ECB and the BoE to identify the form and content of the narrative they construct and deploy.

3. Research Design, Data, Expectations, Methods

Although only formally introduced in 2010 [44], the Narrative Policy Framework (NPF) has become a well-established theoretical framework for public policy analysis. The basic principles of the NPF derive from the observation that narratives are a device regularly employed to set the policy agenda, debate alternative policy solutions, and implement the resulting policy decisions. By systematically investigating policy narratives over the last two decades, public policy scholarship has gained new insights into the mechanisms and outcomes specific to the field.

NPF scholars distinguish between a policy narrative's form and content [45,46]. In terms of form, policy narratives have specific elements such as a setting, characters, plot, and the moral of the story. The setting of a narrative refers to the geographical, social, or economic environment in which a story unfolds. Characters are the narrative entities who act, such as the hero, the villain, and the victim. Finally, the story's plot links the characters to each other and the environment, while the moral of the story is usually the policy solution that would resolve the conflict if enacted. In turn, the content of a policy narrative comprises those mechanisms that confer meaning to the narrative, and formal elements, such as the belief system and the narrative strategy employed.

Typically, research conducted in the NPF tradition has used quantitative methods to reach generalizable conclusions via deductive hypothesis testing. However, the NPF has recently begun to expand its methodological tools once the need to investigate policy areas suitable for interpretive and inductive analysis was established, and the rigid distinction between quantitative and qualitative methods was deemed unfruitful [47]. Reflecting this methodological shift, instead of testing *hypotheses*, researchers using the NPF have increasingly chosen to formulate and discuss *expectations*—propositions derived from the policy literature investigated through qualitative means [46,48]. As an exploratory study of the narratives constructed and deployed by central banks implementing a policy paradigm shift, we have chosen to use qualitative means first to describe the narrative and then to discuss expectations. As such, we have followed the guidelines for conducting NPF qualitative research set out by Gray and Jones [47]. First, in Section 1, we have identified and described the policy issue: the paradigm shift represented by the introduction of green central banking. Second, in this section, we describe the research design, data collection, and analysis methods and present our expectations from the literature. Third, in the next section, we present the policy narrative elements, followed by an analysis of our expectations.

With these methodological delineations in mind, in this article, we examine the public communication messages formulated by the ECB and the BoE to describe the emerging narrative used to explain and justify what we identify as a monetary policy paradigm shift by adhering to the tenets of the NPF. We obtained the data from the websites of the two central banks, which carefully record their public interventions on this topic. From the ECB's web page dedicated to publications on climate change (https://www.ecb.europa.eu/home/search/html/climate_change.en.html, accessed on 3 July 2022), we have selected speeches, interviews, and blog posts, thus excluding more technical materials such as the *Roadmap for actions*. From the BoE's web page dedicated to public interventions (https://www.bankofengland.co.uk/news/speeches, accessed on July 2022), we have used the built-in search engine to select those speeches that contained the word *climate*. Given the focus of this Special Issue, in both cases, we have limited our selection to materials released after the outbreak of the COVID-19 pandemic (March 2020). We have thus reached a total of 105 articles (76 from the ECB and 29 from the BoE) that we have included in our database. Table A1 in the Appendix details our sources database.

Two expectations derived from the policy literature structured our data analysis in terms of the content of the policy narrative. The first expectation follows from the suggestion put forward by van 't Klooster [26]: given the technocratic (rather than political) source of the ongoing monetary paradigm shift, central bankers will practice strategic ambiguity, justifying their new-paradigm actions in terms of the old, (more) market oriented, liberal order. They will advocate for continuity in their quest to tackle new challenges, making sure to avoid suggestions about involving the legislature in clarifying their new goals.

We expect this strategic ambiguity to be part of the narrative constructed and deployed by the two central banks. A problem may arise here, since, as some of the authors of this article have argued elsewhere [16], the source of the current change in monetary policy appears to be political rather than bureaucratic, dealing a decisive blow to the long-established practice of central bank independence from political pressures—a key feature of the old central banking paradigm. However, we suggest that regardless of the source of this policy shift, central banks will practice strategic ambiguity in public communication, and this choice can be identified in the narratives they use.

In pursuing policy change, especially a radical change such as the one in question, central banks have a strong incentive to maintain the status quo of their privileged position. Given their monopoly power over high-powered money issuance [2] and the political source of their current environmental concern, a business-as-usual narrative strategy will most likely emerge in the public communication of central banks. In contrast with van 't Klooster [26], therefore, we suggest that the political nature of the central banks' action will reinforce rather than lessen the apparent strategic ambiguity in central bank public communication: central bankers must leave room to maneuver should politicians change their stance. An asymmetry of communication may appear, as the monetary bureaucrats will be tempted to accentuate the unprecedented dangers posed by the acute climate change crisis while proposing to take action using ideas and conceptual delimitations typical of the old monetary paradigm, keeping away from such radical suggestions as a change of legislation to include new, environmental objectives.

A second expectation relates to the complexity of the environment in which the public discussion takes place. Since the debate on the involvement of central banks in promoting green goals is still in its infancy, by making their views and objectives known at this early stage, central banks become critical players in setting the agenda of the public and technocratic debate on this issue. To date, central bank involvement in environmental matters appears to be supported by academia and the public, while a coalition opposing this participation has yet to develop. We expect that central banks' communication practices reflect this lack of competition, presenting central banks as part of a winning coalition.

As NPF scholars show, coalitions involved in the public debate of a proposed policy solution construct and deploy their narratives to expand or limit the scope of the conflict [49,50]. A coalition that regards itself as the winner of the debate has the incentive to limit the scope of the conflict; a coalition that sees itself as the loser is motivated to widen the scope of the conflict. Therefore, a winning coalition will develop a narrative centered on identifying winners, presenting costs as concentrated on particular groups and benefits as diffused, emphasizing scientific knowledge, and avoiding a principled debate. In contrast, a losing coalition will construct a narrative based on identifying losers, presenting costs as diffused and benefits as concentrated, emphasizing scientific uncertainty, and preferring a normative debate.

In our case, given the absence of a challenger, central banks and their allies are privileged to decisively influence the agenda for discussing central bank involvement in environmental protection. Therefore, their narrative will most likely resemble a winning coalition narrative, employing tactics such as identifying winners, presenting policy benefits as diffuse and costs as concentrated, and relying on scientific certainty while avoiding normative debates [50].

Therefore, we formulate and evaluate the following two expectations:

E1. *Given their monopoly power and political backing, central banks employ a business-as-usual narrative strategy in a case of policy paradigm shift.*

E2. *Given the lack of a challenging narrative, central banks employ narrative tactics specific to winning coalitions, such as identifying winners, accentuating benefit diffusion and cost concentration, and emphasizing scientific certainty while avoiding a more principled debate.*

To identify the narrative structure of central bank communication and evaluate our expectations, we established the coding system detailed in Table 1. The coding frame for evaluating the narrative structure draws upon typical codes used in previous studies to identify the characters, plot, and moral of the narrative; for example, [48,51], while the coding frame for dealing with our expectations draws on the cited literature to derive criteria specific to each expectation.

Table 1. Coding framework.

Policy Narrative Form	
Setting	What is the environmental, economic, and social context in which the action takes place?
Heroes/Victims	Which actors are seen positively, and which actors are harmed by the current state of affairs?
Alliance	Who are the actors aligned with the hero?
Plot	How do the characters relate to each other and the context?
Policy Narrative Content: Expectations	
Business-as-usual narrative strategy	
• Continuity vs. novelty	What elements of the old monetary paradigm are emphasized in the new conditions? How innovative are the elements of the new paradigm?
• Legislative involvement	How do central banks refer to the need for legislative change to legitimize their involvement in pursuing environmental objectives?
Winning-coalition narrative tactics	
• Winners vs. losers	How are the winners and losers of the policy shift identified?
• Benefit diffusion/cost concentration	Who bears the cost vs. who benefits from the policy shift?
• Scientific certainty	What are the scientific reasons that support the policy solutions presented?
• A normative debate	How is the "why" of the monetary policy turn discussed?

Source: own representation.

4. Findings and Discussion

In this section, we first briefly describe the narrative elements that the two central banks deploy when communicating with the public about the need to green their operations. With this contextual account in the background, we then proceed to evaluate the expectations formulated earlier.

4.1. Constructing the Narrative of Green Central Banking

The first result of our research is that central banks produce and disseminate a shared narrative in their official communication to explain and justify their actions. As detailed in the methods section, narratives usually have four elements: settings, characters, plot, and moral. We analyze each of these elements in the following subsections.

4.1.1. Settings

The central banks studied here cite various objective conditions that serve as the background for their intervention proposal to deal with climate change and environmental degradation. First, a global climate crisis (sometimes dubbed a climate emergency) is unfolding. Evidence of the climate crisis is readily discernable in the form of weather conditions characterized as extreme. At the same time, the effects are depicted in equally dramatic terms, such as destruction and damage. This characterization has the narrative role of establishing the power of the forces that the characters must face and the epic proportions of the ensuing struggle.

> *This year [2021] has demonstrated, in a most striking way, that the consequences of the climate crisis are not just a long-term underlying threat but that they are materializing here and now, and with ever greater frequency. From disastrous floods and devastating fires in Europe, Africa, and Asia, to extreme cold weather outbreaks in South America this summer, the cascade of dramatic weather events experienced all over the globe is causing widespread destruction and major damage to agriculture and food production.* [source 19]

> *[I]t is worth reiterating the dramatic scale of global warming, rising sea levels, and extreme weather events. The ten hottest years ever recorded have all occurred since 1998—and the current signs are that 2020 will be no different. Despite some fluctuations, the evidence is clear that Earth's climate is warming rapidly, and the pace of change is increasing.* [source 104]

Considered *growing* [source 1] and *overwhelming* [source 11], a consensus is emerging that the climate crisis must be addressed by every member of the global community. Emphasizing the need to be attentive to the needs of future generations often conveys a sense of urgency in this context.

> *The climate crisis is an international and intergenerational issue. It is without question the biggest challenge of our generation, which now has a unique responsibility: as has been said before, we are the first generation to see the impact of the climate crisis unfold before our eyes, and we are the last one to be able to address it.* [source 19]

> *There can be no doubt that broad-based action is urgently needed to mitigate climate change and its consequences.* [source 37]

Second, the unfolding climate crisis poses financial risks. The two central banks devote a lot of energy to establishing a causal connection between climate change and higher levels of financial risks and price instability. This association, in turn, allows central banks to argue that combating the effects of climate change falls within their current mandate that requires central banks to safeguard price and financial stability.

> *[W]hat has become self-evident now, even if it was not five years ago, is that climate change creates financial risks.* [source 105]

> *[C]limate change causes two main types of financial risk.*

> *The first type is physical risks (acute and chronic), which we have all been hearing about with ever-increasing frequency. They include extreme weather events—such as heatwaves, landslides, floods, wildfires and storms—but also longer-term and more*

structural climate shifts—such as changes in average regional precipitation levels, extreme weather variability, ocean acidification and rising sea levels.

[. . .]

Transition risks are the second type of financial risk caused by the climate crisis. They include all costs associated with making the adjustment to a low-carbon or a net-zero economy. [source 19]

[C]limate action is fully consistent with the mandates of central banks and supervisors. From where we currently stand, the risk of doing too little too late is significantly larger than the risk of central banks and supervisors overstepping their mandate. [source 39]

An intervening variable in the relationship between climate change and financial risks is our dependence on fossil fuels. This reality strengthens the case for transitioning to renewable energy sources, as additional factors come into play: "Today, our dependence on fossil energy sources is not only considered a peril to our planet, it is also increasingly seen as a threat to national security and our values of liberty, freedom and democracy" [source 4].

Third, there is the crisis of the COVID-19 pandemic and the subsequent monetary reaction to this crisis. The pandemic crisis is sometimes considered unusual and extraordinary, while the reaction of the monetary authorities in the context is seen as rational and evidence based.

The coronavirus pandemic has been a most unusual crisis. We saw the sharpest contraction in output ever recorded and one of the steepest recoveries ever observed. The response from policymakers was bold, in terms of both the support provided and the alignment between policies. [source 13]

We have had a striking demonstration of the need to integrate scientific analysis into policymaking during the pandemic. This has been a fast-moving crisis that could not be addressed through hunches or preconceived notions. The only way to fight [the pandemic] has been to act on the basis of the emerging evidence. [source 11]

Fourth, as an example of a success story, central banks cite their monetary response to the pandemic, implemented in close cooperation with commercial banks under government direction. "Thanks to this exceptional crisis response, banks are now [November 2021] playing their role in supporting the economic recovery" [source 13]. Therefore, there is every reason to celebrate as, with crucial input from central banks, the economic costs of the pandemic have proven to be relatively small and short lived:

We are emerging from this pandemic, with economies that are stabilized, with, in a way, little sustained disruption. When you look at the unemployment levels in advanced economies, not much damage has remained from the pandemic. When you look at the level of GDP, the size of our economies, we will be back to where we were pre-pandemic at the end of the year. [source 27]

In this context, a coalition begins to take shape: the central bank acts in concert with the commercial banks under the direction of the government. This coalition is now ready to take on a different and more serious task: contributing to climate change mitigation by monetary and macroprudential means.

4.1.2. Characters

The two central banks often state that the onus to greening the economy lies primarily with politicians. They refer to the national governments or political authorities as mentors—wise figures who guide and inspire central banks on their perilous journey. However, an appropriate distance should be kept: central banks are careful to present themselves as separate from the government.

[T]he key actors in the fight against climate change and the preservation of biodiversity are not central banks. There are parliaments, there are governments, there are regulators

who have to decide and who have to convince the public that these matters actually impact their life [. . .] [source 27]

We have always stressed that it is governments that are primarily responsible for climate policy [. . .] We cannot conduct climate policy, but we can support it. [source 63]

[T]he ECB cannot be transformed into an environmental agency conducting climate policies autonomously. [source 51]

After acknowledging that governments take center stage in the fight against climate change and environmental degradation, the two central banks portray themselves as the protagonist of the climate-change-mitigation-via-monetary-policy narrative and reliable allies of governments.

We are not here to "solve" climate change or drive the transition. Those with the mandate and the tools to lead this fight sit elsewhere. But, central banks do have a role to play, and an important one at that. [source 93]

It is for governments to set out a pathway to net-zero and the policy levers that will be used to deliver it. However, as central banks, we will need to understand any implications of the transition for the economic outlook and our potential policy responses. [source 93]

Governments will of course play a central role in laying the track, removing hurdles and setting the pace as we move to net zero. [. . .] However, climate change and climate policy will affect everyone—businesses from all sectors of the economy, public bodies like the Bank of England, households and individuals. And so we all have a stretch of the race to run. [source 95]

The hero does not act alone: central banks are merely one part of a larger coalition with other financial institutions, of which commercial banks are the most prominent, but which also includes insurers, etc. The commercial banks and the other minor members of the alliance are onboard. They acknowledge the risks related to climate and the urgency of intervention through the central bank. For example, banks have been part of the solution during the pandemic crisis: "Unlike in past crises, banks were not part of the problem—they were part of the solution" [source 13]. They provided financial resources necessary for the recovery. Furthermore, banks are ready to act on the front lines of climate change, as they will most likely feel the impact on their financial performance: "[M]ost banks recognised that they have significant exposures to [climate and environmental] risks, which they expected to materialise in the short to medium term. And, we see that banks are consequently allocating more and more financial and human resources to managing these risks" [source 1].

The two central banks do not go into much detail regarding the victims of the current state of affairs. However, in a few cases, they critically refer to inequality (of income and wealth) as a concern for central bank interventions, especially in crises.

[M]ost experts agree that central banks do not have the tools to address inequality. However, the absence of tools does not free central banks from carefully examining the distributional consequences of unconventional policy measures, and from taking such findings into account when weighing and calibrating policy options. [source 40]

What you learn from history is that in all these major crises, whether they are natural disasters, whether they are pandemics, generally the most vulnerable, the poorest, the women and the young people are the ones that are most affected and that are the clear first victims of those situations. [source 72]

In the end, "As custodian of the euro we [at the ECB] fight for the citizens" [source 38].

4.1.3. Plot

The net zero is the treasure the hero and its allies are willing to find. Reaching a net-zero-emissions economy by 2050 is the objective that central banks are in a position to help achieve. The transition to net zero is already underway, as politicians have already decided. This view also implies that the power to address climate change rests primarily with politicians, not central banks. Nevertheless, central banks can and should have a role in this historic endeavor. The hero's journey is primarily about organizing the orderly transition of the economy in pursuit of this goal. The journey is hazardous; most of the risks manifest during this transition. Specific steps in the hero's journey are therefore advisable.

> *I like to think of our journey in phases. The first phase was identifying what risks climate change posed to the financial system and convincing the financial sector of the need to act. We have done this. [. . .] We have now entered the far more difficult second phase, where we must answer the question of how to turn aspiration into action. That means collecting data, building tools and frameworks that enable changes in strategy and risk management. [. . .] The third and final phase—which I hope we are fast approaching—is using these tools to make financial and business decisions that progress us on that orderly transition to net-zero.* [source 105]

The stages in action mirror the stages in knowledge: the hero is also engaged in a knowledge journey. Given our better understanding gained in the context of the pandemic, we now know enough to make our journey easier.

> *Just as the banking sector has contributed to a successful solution to this [COVID-19 pandemic] crisis, it can also provide one to our next challenge: facilitating the transformation of our economies towards a greener and more digital future.* [source 13]

> *Having seen the incredible progress we can make when science and policy are united behind a common goal, in my view we should not now slide back into the pre-pandemic status quo. We must strive to continue this joined-up approach if we are to tackle the challenges we face today—and this applies perhaps most of all to climate change.* [source 11]

> *Over the past year, we have seen scientists and academics, universities, pharmaceutical companies and governments work together at unprecedented speed in a race to develop COVID-19 vaccines. A task that was seen as nigh on impossible back in March 2020 has been achieved through urgency, innovation, and collective action. We must bring that same urgency to tackling climate change.* [source 95]

Central banks declare their willingness to join the battle, especially given how much is at stake.

> *The existential threat posed by climate change implies that all policymakers must contemplate how to contribute to the fight against global warming. While governments are the primary actors, a consensus is building that central banks cannot stand on the sidelines.* [source 28]

However, governments must do more, and the two central banks are ready to encourage the political authorities. It is only natural for a true hero to lead the way: in the face of inflation caused by high energy prices, some of the hero's allies are tempted to back down.

> *Governments need to advance the green transition and protect the most vulnerable [. . .] It would be a serious mistake if governments, faced with rising energy prices, would backtrack from their commitment to reduce emissions.* [source 9]

> *The regulated financial sector plays an important part in long-term investment, including supporting the government's macroeconomic objectives, and the pursuit of net zero economy. Many commitments to such investments have been made. The Association of British Insurers' Climate Change Road Map in particular signals what insurers can do to finance the transition to a net zero economy, and calls on regulators and government to play their part.* [source 86]

4.1.4. Moral

The first moral of the narrative is that the coalition of governments, central banks, and commercial banks is now acting assertively towards a common goal—climate-change mitigation. Our generation is facing unprecedented challenges, as the dual climate–pandemic crisis poses acute risks to our well-being. The welfare of future generations is also at stake, as the detrimental trends due to climate inaction may gain momentum and cause irreversible damage. Central banks have not set this goal for themselves. They simply acknowledge that their mandate requires them to act and declare they are ready to honor this legal obligation. Central banks are finally becoming part of the global movement toward carbon neutrality. The call to action is in fact a call for the government to act more decisively.

The second moral of the story is the need for urgency in action. We need to act fast, as time is running out. Given the severity of the crisis, now is the time to act. Old ways of thinking and outdated institutions—such as the constraint of market neutrality in interventions—must be cast aside. Given this urgency, our task is monumental, and the contribution of central banks is essential. Table 2 summarizes the narrative elements of the central banks' communication form.

Table 2. The green central banking narrative: form.

Narrative Element	Summary
Setting	There is a climate crisis. The climate crisis poses financial risks. There is a pandemic crisis. The response of central banks to the pandemic crisis has been successful.
Characters	
• Heroes	The government (the mentor) The alliance of central banks and commercial banks, plus other minor characters such as insurers.
• Victims	The public Marginalized groups
Plot	Central banks declare their willingness to help orchestrate an orderly transition to a net-zero economy under government guidance. A change of mandate is unnecessary, as climate change endangers financial and price stability. The first steps in the journey are taken toward this goal. Commercial banks are onboard. The government needs some encouragement to act more decisively, and the central banks are quick to provide it. A knowledge journey is also underway: central banks use the experience from pandemic interventions in their planned climate interventions.
Moral	The contribution of central banks (via monetary and macroprudential policies) to achieving net zero is necessary and timely.

Source: own representation.

The hero has embarked on a journey full of unknowns. However, the hero is not alone: a coalition is forming to increase the chances of victory. In this gallery, the government figure stands out and bears the signs of a mentor.

4.2. Expectations versus Reality: Continuity, Novelty, and Setting the Stage for Winning the Debate

4.2.1. Continuity versus Novelty

The narrative strategy employed by the central banks studied consists of a mix of elements from the old and new monetary paradigms. Financial and price stability are elements of the old monetary paradigm that the two central banks often emphasize. They are ready to embrace the new green objective, but only if price stability is not jeopardized. The essential values of the old order are still worth defending verbally: "Strict adherence to our primary mandate is crucial in order to safeguard the legitimacy of our actions as an independent institution" [source 51]. Furthermore, as we have shown above, the narrative strategy of the two central banks is to accentuate their obligation to act within the current mandate, given the high probability that climate change will have detrimental consequences for financial and price stability. "Evidence suggests that climate change has crucial implications for price stability and also affects other areas of central bank competence, such as financial stability and banking supervision" [source 28]. Therefore, central banks never question financial and price stability as their ultimate goal.

The prospect that following green targets could lead to higher prices was not addressed directly, but was alluded to once by the ECB: "[T]he precedence of price stability over other objectives implies that if monetary policy needs to be tightened to achieve our price stability objective for reasons unrelated to climate change [. . .] then we must not hesitate to act" [source 51]. Similarly, the ECB once addressed the notion of a possible contradiction between objectives, emphasizing the priority of price stability but leaving some room for interpretation: "[P]rice stability takes precedence, but we have a certain amount of flexibility because we aim to achieve our primary objective over the medium term" [source 63].

The principle of market neutrality presents a notable case of an element of the old monetary order that needs to be updated to accommodate the needs of further interventions in the new order. In accordance with this principle, the ECB's corporate bond purchases implemented in the wake of the 2008 financial crisis should reflect the market and thus avoid influencing the prices of the securities traded. However, following this principle exacerbates the climate crisis, as bonds issued by high-carbon companies end up over-represented in the ECB's portfolio [52]. Submitting to this idea, the ECB began publicizing the need to abandon this principle in order to favor securities issued by green companies. While in May 2020, market neutrality was considered "a fundamental principle of private sector asset purchases" [source 76], in August 2020, the accent shifted as "[. . .] markets are not pricing climate risks properly, so there is a market distortion and therefore market neutrality may not actually be the right benchmark" [source 68]. Finally, as of March 2021, the ECB considered itself free from the obligation to adhere to this standard "under all circumstances" since it falls short of being "a legal concept" [source 49].

As elements of novelty in the new monetary paradigm, central banks' attitude towards government fiscal deficits and public debt has become more favorable. On numerous occasions, the two central banks declared their support for the increases in public spending engaged during the pandemic. This inspired fiscal policy is part of the narrative that portrays the overall economic policy reaction to the pandemic as a success story. Key to this accomplishment is the coordination between fiscal and monetary authorities. This triumph is then advanced as a valuable precedent: the success story must now be translated into interventions to address the climate emergency. Therefore, central banks encourage governments to move forward on the green path despite fresh challenges: "Fiscal policy also has an important role to play in buffering the current supply shocks [caused by the war in Ukraine]. However, these measures need to remain consistent with advancing the green transition" [source 4]. Bolder steps in this direction are needed while becoming aware of new constraints: "Governments will have to protect the most vulnerable parts of society from higher energy prices in a way that does not delay the green transition" [source 9].

Similarly, running large fiscal deficits is justified as a necessary fiscal reaction to the pandemic to support recovery. This context provides the perfect opportunity to "incur fiscal deficits, to spend correctly and once the pandemic is over, we will be able to look at the need for a fiscally responsible response to the current situation" [source 52]. The need for an overhaul of the fiscal framework in the EU to allow greater flexibility in dealing with future crises is also mentioned.

> *It was certainly important for the European rules to be temporarily suspended. It is equally important to return to a framework of fiscal rules after the pandemic. But there is broad consensus about the need to reform these rules—above all, because the rules are not binding enough in good times and are too restrictive in bad times. This limits their effectiveness. And that is why I think it makes sense to consider modifying the regulatory framework.* [source 56]

Regarding the high level of public debt that resulted from these interventions, the two central banks mentioned several times that a return to sustained growth after the pandemic is the best solution. The reasons for spending and, therefore, the destination of the funds are key: “The best protection against [sovereign over-indebtedness] is good fiscal policy. By that I mean that states should not save during the pandemic but take on debt and use the money to invest in growth” [source 46].

The appetite for credit guidance is evident in how the ECB expresses its preference for directed corporate funding via banks. Although the ECB took drastic measures to boost lending across the board during the pandemic, small and medium-sized companies seemed to be the preferred funds targets, at least in speech. “In order to ensure that lending reaches even the smallest borrowers, the ECB has also started to accept loans to micro firms and sole traders as collateral in our operations” [source 65]. Similarly, channeling loanable funds to ease the transition to a carbon-free economy is a common suggestion in the ECB’s green finance discourse. However, financial regulators must first address the difficulty that banks still need to differentiate between green and regular loans. The ECB has already set a precedent for channeling loans to desired destinations with its targeted refinancing operations for long-term loans established in 2014.

As expected and consistent with a strategic ambiguity approach, an asymmetry is evident in the public communication of the two central banks. While the dangers of climate change are cast in dramatic terms and the scientific consensus around the issue is emphasized, the experimental nature of planned monetary interventions is never invoked.

Suggestions for legislative involvement to clarify the legal mandate regarding green objectives are absent from our database. The two central banks consider that the current legal requirements to safeguard financial and price stability are sufficient for their involvement in supporting the fight against climate change. The idea of a causal relationship between climate change and increased financial risks is often emphasized. Therefore, central banks are not only *free* to act but are also *required* to act under the current mandate. Central banks take note of the political decision to implement green policies across the board and act accordingly in monetary policy. “While a reorientation of our policies in line with the political priorities set by European decision-makers seems necessary, this must not question our commitment to price stability [. . .]” [source 51].

4.2.2. A Winning Coalition

The central banks studied here are primarily concerned with the costs of not dealing with climate change, whereas they address the costs of going green much less frequently. They widely emphasize that continuing down the path of carbon dependency is a source of financial risks. Further, this translates into costs that all members of society must bear. This is the case of inflation caused by climate inaction. To make this point, the ECB coins the term “climateflation”, i.e., the price level increase resulting from climate degradation. “[E]xceptional droughts in large parts of the world have contributed to the recent sharp rise in food prices that is imposing a heavy burden on people who are struggling to make ends meet” [source 4].

On the other hand, dealing with climate change comes with its own set of costs, but overall, the benefits of going green outweigh the costs:

> *An orderly transition to carbon neutral entails greater costs in the near term, but these are far outweighed over the longer term by lower physical risks and higher output. It is a no-brainer option. We need to take action. Even a disorderly transition, where policies are enacted in a haphazard way or before green technologies are fully mature, is still less costly than sitting down and watching and there being no transition at all. The long-run benefits from acting early on climate are clear.* [source 22]

In terms of benefits, not dealing with climate change benefits the fossil fuel industry, a reality that is repeatedly presented as unfair. “In part, those transition paths require carbon pricing that fully reflects its current and future environmental and social costs. This is far from the case at present. Even worse, fossil fuels received $450 billion of explicit subsidies in 2020” [source 15].

On the other hand, an orderly transition to a carbon-free economy is portrayed as beneficial for banks and companies. Included in the idea of an orderly transition is the channeling of benefits to the most vulnerable members of society. Rising energy prices in the second half of 2021 allowed central banks to argue that going green will benefit all consumers, as renewable energy sources are cheaper.

As regulators of commercial banking, central banks can refer to the costs and benefits of going green that banks and other financial institutions incur. As guardians of financial and price stability, central banks can speak of the effects of inflation on all members of society. In our case, central banks do not routinely address the concentration or diffusion of the costs and benefits of going green in monetary policy. The diffusion of costs of not addressing climate change is presented in the form of inflation stemming from climate-related events. Similarly, the concentration of benefits in today's unreformed economy is sometimes alluded to as an example of a reward for bad behavior.

Our data source abounds with references to the scientific basis for understanding the climate situation. The sense of urgency to deal with climate change also stems from the views of climate scientists, as "[...] climate scientists are [...] stressing that while it may soon be too late, it is not too late now" [source 19]. Once again, the all-encompassing interventions prompted by the COVID-19 pandemic set a precedent. As these policy reactions were firmly grounded in medical science, the policies to address climate change via monetary means should be based on climate science. This argumentation allows central banks to underscore the collective nature of climate change and efforts to address it. "We are working domestically and internationally with key stakeholders including government, industry, investors, regulators, and climate scientists to further this critical agenda [to address climate change]" [source 105].

Equally frequent are references to the scientific basis for the effects of novel monetary interventions to contend with climate change. They are presented as already solid and still under construction. "We recognise that there are some areas where the science, data or tools are not yet sufficient to estimate risks accurately" [source 105]. In contrast, here, the central banks are in a position to present the results of their own research and suggest directions for future research, since the source of much of this research is the central banks themselves. Beyond that, the challenge is integrating this research into policymaking, thus mimicking the practice inaugurated during the pandemic.

As expected, there is little evidence in our database of the willingness of central banks to engage in a normative debate on the implementation of green central banking. As we have shown above, central banks talk at length about the benefits of addressing climate change in the form of lower financial risks during the ongoing transition to a carbon-free economy. The downside of this endeavor is presented in general terms, such as the allusion to short-term costs discussed above. Although a cost–benefit analysis is never explicitly invoked, central banks seem to suggest that the benefits of enacting green monetary policies outweigh the costs. This observation is compatible with the expectation that central banks practice strategic ambiguity as a means of coping with a complex and variable political context. Table 3 summarizes the narrative elements of the central banks' communication content.

4.3. Discussion

The paradigm change in monetary policy that is in full swing is accompanied by an intense deployment of narrative devices by central banks to help justify and explain the new orientation. Central banks depict themselves as protagonists in the struggle against climate degradation via monetary and prudential means, a trusted ally of the government. By emphasizing elements of both the old and new monetary order in public communication, they are able to maintain strategic ambiguity. By invoking climate and medical sciences as the basis for describing the environmental and pandemic predicament and monetary research for the ongoing interventions to help mitigate climate change, central banks try to limit the scope of conflict and thus act as the winner of the debate.

By emphasizing the government's primacy in orchestrating the policy reaction to climate change, central banks willingly or unwittingly draw attention to the political nature of the current shift in monetary policy. A latecomer, monetary policy joins the plethora of green policies already being implemented across the board under the guidance of politicians. Therefore, it is not surprising that central banks do not address the problem of legal restrictions on their endeavor. Certainly, van 't Klooster [26] is right to worry about the absence of legislative debate and decision that should accompany a strategic reorientation of monetary policy in a constitutional democracy. However, this deficiency speaks more to the loss of transparency and independence than to the discretion of central banks to interpret the legal basis of their operation. Indeed, the ECB shows significant discretion in construing the provisions of the treaties that form its legal basis. For example, although it considers the provisions on the preeminence of price stability and the prohibition of monetary financing of the government to be binding, it rejects the legal validity of the market neutrality principle and acts accordingly in its quantitative easing interventions. Yet, this leeway is not used in spite of, but rather in support of politicians who had set the tone on how and to what extent to tackle environmental problems long before.

Table 3. The green central banking narrative: content.

Narrative Strategy/Tactics	Narrative Element
Business as usual	Elements of continuity: financial and price stability; market neutrality (phased out)
	Elements of novelty: fiscal deficit; public debt; EU's fiscal framework; credit guidance
	No need for a legislative involvement
Winning coalition	Winners: not identified Losers: not identified
	The diffused costs of climate inaction: "climateflation" The concentrated benefits of climate inaction: subsidies for the fossil industries
	Scientific certainty: solid and settled climate science as the basis for understanding the effects of climate change; solid and under-construction monetary science as the basis for designing interventions via central banks
	The absence of a normative debate

Source: own representation.

Similarly, the idea of a calculus of political feasibility by central banks that independently decided to become green (suggested in [26]) is equally problematic. Whereas minor, day-to-day choices, or even countercyclical monetary policy decisions such as raising interest rates, can go against the dominant political preference, it is hard to conceive that a strategic reorientation that bucks the trend of political views is tenable. The green revolution in central banking lends support to the body of theories that regards central banks as bureaucracies (documented in [2]) to the detriment of the utopian views that consider central banks as agents interested in promoting the public interest.

Consistent with prior observations, our analysis shows that the stance of the two central banks is Keynesian. This orientation is evident in the way they publicly argue for continuing fiscal support for the post-pandemic recovery, even at the risk of unsustainable public deficits and debt. The benevolent attitude towards credit guidance points to the same positioning, as do the repeated references to the inability of private financial markets to assess the risks derived from climate change. Accentuating the ideational shift brought about by the 2008 financial crisis and updating it with novel goals, central banks suggest that policymakers should be bold in guiding financial markets to support the green transition. Coupled with the previous observation, this monetary policy regime would be properly described as *bureaucratic Keynesianism*. Political economists have long proposed that a politically independent monetary authority is incompatible with Keynesianism, since in this context, the government's financing needs are bound to increase beyond a certain threshold and central banks would face insurmountable pressures to ease the government's burden [53]. Green central banking is, therefore, a case in point for this general observation.

The supporters of green central banking, e.g., [5–12] worry that the absence of a legislative grounding for the current revolution poses the risk of reversing course and returning to the old, more market-oriented monetary paradigm. In fact, embracing green central banking sows the seeds of its own destruction, as it inspires requests to adopt other burning issues as legitimate targets for central bank action. Coupled with the political pressure likely to accompany popular topics, central banks may see themselves constrained to implement policies to address a wide range of novel targets.

The ECB sought to legitimize its interventions in the wake of the euro crisis by increasing communication with the public in an effort to boost its output legitimacy (i.e., legitimacy gained as a result of effective policymaking) [54]. This trend is clearly visible in our database, as the central banks talk at length about their pandemic interventions and make a case in favor of launching a green monetary template. Central banks seem to target output legitimacy by embracing prevalent causes and addressing grassroots concerns—in the words of President Christine Lagarde, the ECB has "made a point of listening to the people" [source 30]. Throughput legitimacy (i.e., legitimacy gained through strict adherence to rules [54]), on the other hand, seems to have lost its appeal, as the two central banks do not spend much time presenting the legal rules as constraints on their involvement in greening the economy, and thus capitalizing on their role as a good player.

Targeting novel problems situated at the fringe of the legal mandate without a legislative debate and decision is the hallmark of central bank activism [17]. Climate change is one such target, but central banks invoke additional issues that should be the object of policy efforts. This newfound activism is evident in how the two central banks publicly urge governments to continue fiscal support while considering novel goals such as addressing the needs of the most vulnerable members of society, tackling gender inequality, and promoting sustainability and inclusivity. The idea of climate rights once defended by the ECB representative in a speech points to the same conclusion. However, this overreach raises legitimacy concerns, as green central banking is affected by distributional consequences and inevitably requires value judgments [16,17]. Therefore, the quest to find alternative sources of legitimacy in the new template is understandable.

Indeed, the reorientation of central banking to address new, widespread concerns and the increased communication efforts to explain the revolution can be understood as a search for a legitimacy-enhancing mechanism. The root of the need for these alternative sources of legitimacy can be traced back to the central banks' poor performance, which became apparent shortly before the COVID-19 crisis. The unprecedented expansionary monetary policies implemented across the board in the wake of the 2008 financial crisis began to show their ugly faces.

The aftermaths of the easy money policy have long been familiar to economists from the work of several scholars belonging to the Austrian school of economics. As Ludwig von Mises [55] explained, the artificially low interest rate caused by an increase in money supply (in the form of fiduciary media) promotes investment projects that lack a solid foundation in savings. Purposely designed to hide a grim economic reality, an artificial boom in economic activity is thus created. However, given its disconnection from economic fundamentals (such as the time preference and saving behavior of individuals), the boom is inevitably followed by a bust that acts as a corrective mechanism, as it discourages the production of future goods in insufficient demand. An increase in prices is also inevitable, first for lower-order goods (i.e., goods applied in the early stages of production), then for higher-order goods, for both consumption and investment goods [56].

Central banks set this sequence of events in motion with the monetary interventions they enacted after the 2008 financial crisis. The fact that inflation did not keep pace with the increase in the money supply for a long time should come as no surprise. The increase in consumer prices usually measures inflation; however, the flow of credit can be directed toward purchasing financial assets such as stocks, bonds, and foreign currencies, instead of producing consumer goods. Based on the concept of asset price inflation [57,58], the otherwise puzzling delay in inflation becomes explainable by drawing attention to the increase in transactions and prices of financial assets such as gold, cryptocurrencies, and sovereign bonds that accompanied quantitative easing [19]. This phenomenon is similar to the repressed inflation that plagued the socialist economies in Central and Eastern Europe in the 1980s [59].

Although moving towards sustainable development is the ultimate goal behind green central banking, the chances of success in this endeavor are relatively low. A large body of literature (reviewed in [60]) identifies the key factors most likely to stimulate sustainable development and growth. Unfettered entrepreneurship is one such element, which thrives in an institutional environment based on secure private property rights and the accumulation of private savings. Since innovation and technological progress are downstream of private entrepreneurship and economic freedom [61], economies that cultivate property rights are better positioned to achieve sustainable development. Green central banking is unlikely to promote sustainable development by neglecting or obstructing these factors.

Since effective policymaking is a source of legitimacy [54], analyzing the chances of success in meeting traditional central bank objectives can help complete the picture of central bank legitimacy in the new paradigm. Several reasons have been put forward to anticipate that the new template will lead to higher inflation [16]. First, given the political source of the current revolution, the resulting loss of independence leads to higher inflation through heightened short-termism. Second, the loss of reputation caused by the failure to reach the stated environmental objectives can lead to less control over inflationary expectations. Third, a redefinition of price stability is also expected by excluding increased prices due to decarbonization—which would most likely be presented as a small price to pay now to achieve greater goals in the future. Furthermore, given the theory and experience of boom–bust cycles created by central banks, it is now rational to fear a "green asset boom" followed by a "green asset bust" set in motion by the green central banks.

Thus, far from being a legitimacy-enhancing policy twist, by being unable to embolden sustainable development and by jeopardizing the achievement of the core tasks for which central banks were created, green central banking will likely lack the sources of legitimacy that, for better or worse, have supported traditional central banking for many years. Whether the new sources of legitimacy gained from following prevalent causes can sustainably compensate for this loss remains to be seen.

5. Conclusions, Limitations, and Directions for Future Research

This article contributes to the policy literature in three ways. Firstly, we identify the use of well-crafted narrative devices in the communication efforts of two central banks that are beginning to implement a monetary and regulatory policy change to consider environmental objectives. Secondly, since this shift is in fact a recasting of the traditional central banking template, we show how a policy actor uses narratives to explain and justify a policy paradigm shift, strategically blending elements of the old and new paradigms in its communication. Thirdly, we tentatively indicate that the two central banks are acting tactically to set the stage for becoming the winners of a possible future debate.

A limitation of this research is that its focus is limited to the discursive side of a strategic reorientation in central banking. The degree to which central banks' deeds match their words in tackling environmental issues will undoubtedly be the subject of future academic research, as central banks' talk-and-do-nothing attitude is already denounced in policy analyses. Nevertheless, the insight gained by probing the discursive practices of central banks may point to an ideational shift that heralds lasting changes.

Less significant in itself at this point, our expectation regarding conflict containment is in fact an attempt to suggest future research on this topic. If and when an opposing coalition develops, a comparison between the chosen narrative tactics will be possible. Although critical voices have been raised in the popular press (documented in [16]), a coalition opposing the current path in central banking has yet to form. Nevertheless, we expect the central bank-centric coalition to see itself as a winner and the opposing coalition to regard itself as a loser, with predictable implications for the narrative tactics each uses.

Investigating this expectation can shed new light on how monetary policy actors try to contain or expand the scope of conflict in their strategic communication.

Our research also points to the profoundly political nature of central banking today. Central banks seem keen to embrace sizzling topics in their discourse, such as the need for change in general and regarding environmental issues in particular, supporting disadvantaged groups, and tackling inequalities. Granted, some of these topics appear in our database as answers to questions asked by journalists and members of the public during press conferences and online meetings. However, a deeper analysis may reveal a close correlation between the themes and style adopted in political communication on the one hand and central bank communication on the other, both in messages aimed at a broad audience and in technical reports. Matched with deeds, this communication strategy would speak more strongly to the politicization of central banking today.

The social and economic activism that central banks have recently discovered can also be investigated along these lines. The emerging academic literature devoted to central bank activism can benefit from analyzing how this shift is reflected in the new discursive practices employed by central banks. This investigation has the potential to complete the picture of the loss of central bank independence that inevitably accompanies addressing burning issues stemming from political concerns.

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Appendix A

Table A1. Database of sources analyzed: European Central Bank (ECB) and Bank of England (BoE).

Source Number	Source
	ECB
1	Frank Elderson: Good, bad and hopeful news: The latest on the supervision of climate risks, 22 June 2022. https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220622~860a2aef6b.en.html (accessed on 3 July 2022).
2	Philip R. Lane: Statistical implications of the ECB's monetary policy strategy review, 27 April 2022. https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220427~df7c9ea061.en.html (accessed on 3 July 2022).
3	Christine Lagarde: IMFC Statement, 21 April 2022. https://www.ecb.europa.eu/press/key/date/2022/html/ecb.sp220421~589f9733bc.en.html (accessed on 3 July 2022).
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