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The resilience of the regulatory state in an age of polycrisis

La resiliencia del Estado regulador en una era de policrisis

A resiliência do Estado regulador na era da policrise

Abstract

The world of 'polycrisis' poses fundamental questions about the resilience of the regulatory state. This paper introduces the core challenges of the polycrisis era for the regulatory state. Particular attention is paid to debates surrounding resilience and how regulatory regimes may develop capacity for resilience. The paper considers resilience in terms of information processing capacity. It identifies four possible futures for the regulatory state in an age of polycrisis, but notes that such futures depend on assumptions regarding the resourcefulness of regulators and the regulated. It suggests that building resilience into regulatory capacity requires continuous mediation and conversation, rather than relying on fixed blueprints.

Keywords: polycrisis, regulatory state, resilience, information processing capacity, regulatory capacity.

Resumen

El mundo de la "policrisis" plantea preguntas fundamentales sobre la resiliencia del Estado regulador. Este artículo presenta los principales desafíos de la era de

la policrisis para el Estado regulador. Se presta especial atención a los debates en torno a la resiliencia y cómo los regímenes regulatorios pueden desarrollar capacidad para ser resilientes. El artículo considera la resiliencia en términos de capacidad de procesamiento de información. Identifica cuatro posibles futuros para el Estado regulador en una era de policrisis, pero señala que dichos futuros dependen de las suposiciones sobre la capacidad de recursos tanto de los reguladores como de los regulados. Se sugiere que construir resiliencia en la capacidad regulatoria requiere una mediación y conversación continuas, en lugar de una dependencia en planes predefinidos.

Palabras clave: policrisis, Estado regulador, resiliencia, capacidad de procesamiento de información, capacidad regulatoria.

Resumo

O mundo da “policrise” coloca questões fundamentais sobre a resiliência do Estado regulador. Este artigo apresenta os principais desafios da era da policrise para o Estado regulador. Dá-se atenção especial aos debates sobre resiliência e sobre como os regimes regulatórios podem desenvolver essa capacidade. O artigo considera a resiliência em termos de capacidade de processamento de informações. Identifica quatro futuros possíveis para o Estado regulador na era da policrise, mas observa que esses futuros dependem de suposições sobre a capacidade de recursos tanto dos reguladores quanto dos regulados. Sugere-se que a construção da resiliência na capacidade regulatória exige mediação e diálogo contínuos, ao invés de depender de modelos fixos.

Palavras-chave: policrise, Estado regulador, resiliência, capacidade de processamento de informações, capacidade regulatória.

Introduction

A series of crises has marked the first quarter of the 21st century. National and international regulatory frameworks have been challenged by, among other things, terrorism, environmental disasters, and financial crises. Notable examples include the 9/11 attacks, the Boxing Day Tsunami of 2004, the 2008 economic and subsequent sovereign debt crises, the 2010 Chilean Copiapó mining disaster, the 2015 Mariana Dam disaster in Brazil's Minas Gerais, the COVID-19 pandemic that emerged in January 2020, the Russian invasions of Ukrainian territory in 2014 and 2022, extensive electricity blackouts, such as those affecting Spain and Portugal in late April 2025, and the accelerated move away from a multilateral international order. Some of these examples might be regarded as contemporary examples of well-known phenomena. Others might be considered qualitatively different 'known risks'; for example, the increasing frequency and intensity of extreme weather events at least raise questions about existing approaches. Other examples include the concept of 'unknown unknown'; for instance, cybersecurity-related risks pose new challenges in the emerging world of a fully connected 'Internet of things,' leaving public and private entities vulnerable to various threats—as witnessed in the 2022 cyberattack on Costa Rica.

Crises are associated with irreversible harm to social systems that expose the vulnerabilities of (regulatory) systems that were intended to prevent or, at least, mitigate against precisely these types of events (Hood & Jackson, 1991a, b). While much has been said about crises in the context of actual, measurable harm (e.g., death counts, reconstruction costs), other types of crises expose vulnerabilities in institutional arrangements without necessarily causing directly quantifiable harm. Such crises include the considerable extent of democratic backsliding across the Global North and South, including challenges to election results and the outright denial of the legitimacy of the political 'rules of the game.' The disregard for often unwritten 'rules of the game' has exposed the limits of regulatory regimes intended to regulate political conduct, whether related to ethics or electioneering (Bakke & Sitter, 2022).

For the past three decades, much emphasis has been placed on regulatory institutions to mitigate and respond to crises. Indeed, the past three decades have witnessed a notable emphasis on relying on so-called expert-dominated agencies, decoupled from direct political oversight, and a reliance on 'enforced self-regulation' that placed the primary responsibility on the regulated entities themselves. These institutional arrangements have increasingly come under strain due to the experience of crises. Moreover, the contempo-

rary capacity challenge for national regulatory states extends beyond whether regulatory regimes have been found negligent in the context of a specific event. The central challenge is that contemporary crises are transboundary, protracted, and involve ‘wicked problems’ (Boin, 2019; Boin et al., 2020; Rittel & Webber, 1973). Such a context poses a set of issues:

Firstly, crises that span across jurisdictions challenge the capabilities of national regulatory systems (Cabane & Lodge, 2024). National regulatory responses may generate externalities in other jurisdictions that are affected. Therefore, national regulatory responses may become potential triggers for crises elsewhere. Secondly, crises are ‘protracted’; they might involve elements of ‘acuteness’—the immediacy of an environmental disaster, the insolvency of an institution that some deem ‘too big to fail’, or concerns over specific behaviors—but they not only persist, but, as initial responses, generate side effects that in themselves require further interventions.

Contemporary crises are also transboundary in terms of representing ‘wicked problems’—they are multifaceted, transcend epistemological boundaries, involve highly ethical decisions, and consequently surpass the limitations of conventional policy analysis (Rittel & Webber, 1973; Head, 2022). The challenge of how regulatory regimes can respond to such ‘wicked issues’ is further complicated by the interconnection of these disparate threats and crises.

The range and variety of fast- and slow-moving crises challenge the resilience of existing regulatory regimes. At the same time, regulatory regimes may also be regarded as part of the problem; a decentralized approach towards governing raises specific coordination challenges. Thus, the contemporary world of crises has thrown the overall resilience of the regulatory state into question: the need to respond to the demands of an acute crisis occurs in the context of significant levels of inequality, evidence of democratic backsliding, and the climate crisis, as well as limited trust in the authority of the regulatory regimes themselves.

Of course, each generation has faced its own set of transboundary and protracted crises that were regarded as existential, transformative, or unprecedented (Lodge, 2009; Radkau, 2017). Different generations have experienced their own ‘crisis of the state’ (Lodge, 2013). However, the contemporary generation of crises might be said to be qualitatively different and therefore may appropriately be called an era of ‘polycrisis’ (Henig & Knight, 2023). For one, this is often described as an age of the Anthropocene, whose im-

pacts are already noticeable (Morin & Kern, 1993; Ellis Erle, 2024; Lawrence, 2024; Seyd, 2025). The certainty about the phenomena (climate change) is coupled with uncertainty about potential futures.

Furthermore, this age of polycrisis is distinctly transboundary—an era of escalating climate change raises questions about the appropriate balance of adaptation and mitigation, but also points to likely cascading effects involving geopolitical tensions, migration, and the exacerbated effects on societal inequality—just at a time when political systems are widely criticized for their lack of problem-solving capacity, and when politicians are said to be increasingly tempted to play populist tunes (Lodge & Wegrich, 2014). Furthermore, the nature of transboundary crises extends beyond the challenges to the structure and operation of regulatory regimes; they directly expose individuals to the vulnerabilities of the governmental institutions that were supposed to protect them. Such exposure to vulnerability, in turn, fosters a growing politics of anxiety that cannot be resolved by the analytical and calculating capacities of regulatory regimes alone (Chalmers, 2005).

Questions regarding the problem-solving capacities of contemporary states in an age of polycrisis, therefore, relate to the dominant ways in which contemporary states have been structured over the past few decades. As noted, over the past three decades, contemporary states in the Global North and South have been described as ‘regulatory states’ (Majone, 1997). This kind of regulatory state has been associated with the creation of regulatory institutions that emphasize ‘expert judgement,’ the reliance on private provision of public services, and extensive formal contractualization. Considering three decades since the ‘rise’ of the regulatory state, what can be said about the resilience of the regulatory state? Does the regulatory state contribute to resilience? Have the institutions of the regulatory state contributed to societal resilience or proven an impediment?

To address these questions, the following argument proceeds in three steps. One is to point to the capacity requirements that the world of polycrisis poses. The second is to define conditions for ‘resilience.’ Ideas regarding ‘resilience’ have been contested in the broader literature on risk regulation, but they broadly refer to the idea that systems can bounce back from disruption. Finally, given the diagnosed capacity requirements, what kind of regulatory state is likely to evolve in the future?

The world of polycrisis

The age of polycrisis presents transboundary challenges, as noted. The term ‘transboundary crises’ implies that crises and crisis responses are influenced by the challenges of overlaps (gridlock due to competing organizational claims over their jurisdiction) and underlaps (the absence of any organization claiming authority over a particular issue) (Boin, 2019). These conditions lead to multi-organizational sub-optimization (see Hood, 1976). Such failures of coordination can arise due to jurisdictional boundaries, such as the lack of coordination across countries during the financial crisis (with governments rushing to support their national banking systems), the global migration crisis with limited interest in cross-country coordination, or pandemic responses where each country outbid others for access to supplies and vaccines.

Jurisdictional boundaries not only present challenges for horizontal coordination across states but also pose challenges for both vertical and horizontal coordination within states (Cabane & Lodge, 2024). One of the central themes in crisis management has been the doctrine of relying on local authorities as the first level of defense, with regional or central governments only becoming involved if lower levels of government are seen to be overwhelmed. However, the interplay between different levels of government, whether in terms of resources, oversight, or coordination, before, during, and after a crisis, has proven highly problematic. Indeed, in a world of polycrisis, establishing the appropriate level of regulatory authority is particularly challenging, as transnational responses to transboundary crises are likely to conflict with the emphasis on crisis management as a core characteristic of national sovereignty.

To explore these coordination challenges, it is worthwhile to focus on the core definitional components of ‘crisis.’ There are several well-established characteristics that define a ‘crisis’ (Rosenthal et al., 2001), including threat, uncertainty, and urgency. For an event to be recognized as a crisis, it requires, therefore, the identification of a threat to the integrity of a social system (at whatever level), the problem of being able to identify, classify, and address an event given a lack of information, and the requirement to respond immediately. The term ‘social system’ highlights that crises can affect different organizational levels, ranging from an individual organizational entity to human civilization. In the context of this paper, the ‘threat’ level links to the viability of political, social, and economic systems.

To explore this world of polycrisis further, it is worth considering the challenges presented by the three key characteristics of crisis, namely threat, uncertainty, and urgency.



(i) Threat: One of the primary distinctions between an individual ‘tragedy’ and a ‘crisis’ lies in the assessment of a ‘threat’ to the survival of a social system, involving both irreversible harm as well as loss of trust in the capacity of institutional arrangements to cope with types of disturbances (or threats).

What is perceived as a threat to the viability of a system, however, varies across domains, particularly in terms of disciplinary or professional perspectives. The challenge, therefore, is to establish an understanding of the ‘threat of what to whom.’ The challenge of detecting well-known threats relates not just to questions of measurement, but to issues of what is identified as ‘threatening.’ Professional and organizational worldviews bias what kind of ‘threats’ are being looked for, but also what kind of ‘risk appetite’ is associated with specific threats. Detecting a ‘threat’ necessitates a continuous examination of what constitutes a ‘threat’ to whom, what, and when. It also requires continuous reflection on how many resources are allocated to such ‘threat’ identification exercises (see also March et al., 1991). The contemporary advocacy of ‘risk regulation’ presents, for example, a method of classifying threats based on ‘probability’ and ‘impact’ (typically perceived as irreversible harm) (Black & Baldwin, 2010). However, this approach contrasts with the well-known crisis management approach, which emphasizes the importance of preparing for ‘worst-case scenarios’ (Pigeon & O’Leary, 2000).

(ii) Uncertainty: Crises invariably entail elements of ‘surprise’ (La Porte, 2007). Uncertainty pertains to the confusing nature of ‘early’ signals when there is a lack of an agreed understanding regarding the significance of these indicators. Uncertainty further relates to the lack of clarity regarding the causes and the extent of emerging disasters. In addition, there is also uncertainty arising from ‘fog of war’ situations during a crisis. In such circumstances, while local information may exist, there is a lack of a ‘big picture’ understanding at a higher level of organization. Consequently, systems that detect and process information necessitate a reliance on the quality and relevance of the information.

The problem of distinguishing between ‘information’ and ‘misinformation’ is further complicated in an environment characterized by intentional misinformation, whether it manifests through explicit problem denial (as exemplified by the Soviet Union’s initial response to the Chernobyl catastrophe) or manipulative issue framing (e.g., ‘information’ generated by hard-to-trace bots).

The world of crisis is characterized by uncertainty regarding probabilities and impacts. Traditionally, as noted, this type of uncertainty is associated with some understanding

of cause-and-effect relationships. However, uncertainty may also extend to genuine ignorance regarding causes and effects. Uncertainty therefore manifests itself in various forms. One manifestation is the absence of understanding the nature of the crisis one may be confronting. While all crises involve elements of surprise due to their unpredictability, some crises are more unpredictable than others. Specifically, some crises are associated with well-established cause-effect relationships. The detection of certain information leads to well-practiced responses, as the causes and consequences are, at least relatively, well-understood. Conversely, other crises may be defined as 'rude surprises' because they do not conform to any existing formula; they are defined by uncertainty regarding 'causes,' 'pathways,' and 'consequences.'

Immediate or acute crises are frequently characterized by a lack of comprehension regarding the nature and extent of the posed threat. For example, there was little discussion in the summer of 2006 of the potential fallout of the freezing of US mortgage markets, namely state bailouts of banking sectors and sovereign debt crises. Cascading effects are also associated with disruptions in energy supply, where very local disruptions can quickly escalate through often-internationally connected transmission systems. Similarly, during the early stages of the COVID-19 pandemic, there was a limited understanding about the risks posed by the virus, particularly in terms of transmission, as well as a lack of insight into the appropriate interventions to contain the virus's spread (mainly as existing global and national pandemic guidelines were quickly found wanting). Furthermore, it could be argued that the world of increasingly frequent extreme weather events necessitates systems to move away from established assumptions about the impact of certain events, transitioning to a world of 'rude surprises' that demand a reassessment of the probability and impact of specific events.

(iii) Urgency: Crises are associated with 'pressure' on systems to respond to diagnosed disruptions immediately. Whether it is dealing with wildfires, flooding, earthquakes, the reduction of infections during pandemics, or the need to ensure the functioning of financial markets, the world of crisis involves decision-making in highly pressurized and concentrated periods, necessitating the initiation of situation rooms, for example. Such 'forced choice' situations might be the result of media-feeding frenzies in the context of dog attacks on vulnerable children. Such crises may not involve significant irreversible harm to large parts of the population (despite the tragedies involving vulnerable individuals in such cases). Instead, it is the perceived need to respond to a wider moral panic that might be viewed as threatening confidence in existing social arrangements (Cohen,

2011/1972). One of the key issues with urgency, then, is to deal with the much-maligned 'knee-jerk' or 'Pavlovian' responses by politicians, where the need to be seen to act overpowers concerns about the actions being taken (in terms of information basis, certainty about the likely effectiveness of proposed measures, and such like) (see Lodge and Hood, 2002; Hood and Lodge, 2005).

While much has been said about 'urgency' as a key characteristic of a 'crisis', the world of climate change (and demographic change), as well as the experience of the COVID pandemic, have contributed to a growing interest in slow-moving or 'creeping' crises (Boin et al., 2021). The lack of 'immediate' urgency in the face of the climate crisis has led to rather limited interest in action, despite growing evidence of irreversible degradation occurring. Similarly, the inability of political and economic systems to deal with continued inequality and lack of social mobility is widely considered a result of a lack of recognition of 'crisis.' The extent of the problem and its consequences are therefore not recognized.

Searching for resilience

Considering the challenges in managing varieties of threat, uncertainty, and urgency, what prerequisites are required for 'resilience' (Boin & Lodge, 2021, 2016)? Among the various approaches to 'resilience' recently, for this paper, resilience is defined as the capacity of systems to respond to disturbances, including the timely recovery of operational functioning (see Comfort et al., 2010). However, the extent to which systems can be assumed to be 'resilient' and the extent to which 'resilience' in terms of 'bouncing back' should be encouraged have attracted considerable controversy. Fundamental to this debate is the role of the regulatory state, with its emphasis on expert analysis and calculation, which contrasts with, on the one hand, more anxious perspectives that fundamentally distrust the capacity of governing (regulating) institutions as well as (private) regulatees to mitigate crisis and, on the other hand, perspectives that relate to the early writings on resilience that expressed great skepticism regarding 'control' and 'prediction' and emphasized collaborative self-organization.

In his work on 'normal accidents', Charles Perrow (1984) illustrated how certain technologies posed impossible challenges for resilience. He noted how particular technological properties influenced organizations' capacities to manage accidents. He categorized technological systems along two dimensions: the degree of tight or loose coupling and the degree to which production followed a linear or complex pattern. Perrow identified the specific challenge presented by, on the one hand, tight coupling, and, on the other hand,

complexity. In terms of tightly coupled systems, he noted that such interdependencies necessitated centralized oversight. In contrast, the complexity necessitated a decentralized approach due to the multiplicity of processes. By combining these two recommendations, Perrow argued, a tension arose that was irresolvable: how to control systems that require both centralized and decentralized approaches.

Given the inevitability of accidents, Perrow asserted that no type of organization could manage the challenges of tight coupling and complexity. In addition, Perrow noted that certain technologies implied the potential for catastrophic, intergenerational effects. Consequently, Perrow advocated that certain technologies should be prohibited and abandoned. This argument can be viewed as consistent with the precautionary approach, which advocates for the prohibition of certain activities until they are proven to be 'safe.'

In contrast to Perrow's abolitionist approach, perspectives that emphasize the opportunities associated with risk have traditionally been more closely linked to the notion of 'resilience.' For example, Aaron Wildavsky (1988) argued that such a precautionary approach reduces rather than enhances overall resilience. Specifically, making sure that 'accidents' could not happen diverted resources away from other, potentially more worthwhile activities. Put differently, seeking to prevent 'last year's crisis from recurring led to a reduced capacity to respond to the inevitably different future crisis in several ways. First, the opportunity to learn from trial and error was lost, thereby reducing the scope for innovation. Second, over-investing in one area was likely to drain resources from other areas. Therefore, in the face of uncertainty, over-investing in 'known' problems was likely to diminish resilience. For Wildavsky, achieving resilience meant accepting that things would go wrong to enhance the prospects of a rapid recovery. Of course, there are certain limitations to such an emphasis on 's' resilience'; for instance, some accidents might be deemed to cause such irreversible harm that a 'trial and error' based approach might appear less appealing.¹

Regardless of the attractions and limitations of Perrow's and Wildavsky's arguments, the idea of 'resilience' as 'bouncing back' has witnessed an increased attention to 'anticipation,' involving most of all an interest in the capacities of regulated systems to respond to disturbances, but also in focusing attention to certain high-risk (or high-hazard) perspectives. In doing so, growing significance has been attached to the ways in which information is processed in organizational settings under the conditions of threat, uncertainty,

¹ Wildavsky (1988) noted that 'anticipation' (e.g., precaution had a role where there was high probability and high degree of certainty.

and urgency (see also Hood & Jackson, 1991a). To achieve resilience, an organizational architecture requires:

An integrated systematic information system that, while not overly centralized, maintains a degree of tight coupling. An information detection system that decentralizes the capacity and willingness to raise alarms, incorporating numerous points of overlap (e.g., the engineering principle of redundancy). A system that balances biases towards efficiency and performance outputs with an emphasis on procedural safeguards.

One way of addressing these three essential requirements for resilience has been developed in the literature on 'high reliability organizations.' According to the literature in this area (Weick & Sutcliffe, 2007; LaPorte, 1991), for organizations (or sets of organizations) to be highly reliable, they require resources and ex-ante professionalism. In essence, 'safe systems' rely on extensive professionalization that not only encourages a willingness to 'report' on matters beyond one's immediate responsibilities but also fosters a willingness to 'respond' to safety concerns by an organization's leadership, even if such a response may conflict with other objectives. Furthermore, it necessitates an emphasis on 'redundancy,' whereby multiple sources may be entrusted with identifying 'threats,' even if such systems are subject to efficiency considerations. Through such an emphasis on 'heedful interrelating,' the identified prerequisites for resilience were addressed. In sum, a world of 'high reliability' offers appeal: it relies on human knowledge to manage risks without prohibiting the opportunities arising from risk-taking.

Such 'high reliability organizations' are, however, difficult to find (Boin & van Eeten, 2013). Indeed, the lack of 'high reliability' is often a good indicator as to where and how failure incubates and leads to disaster (Vaughan, 2005). Even if the emphasis of resilience is on 'quick recovery,' such systems are dependent on functioning information processing systems that are based on the three components identified above. Such prerequisites for resilience are highly challenging in any organizational context, especially in the context of transboundary (poly) crises.

The promises of the regulatory state

As noted, for the past thirty years, one primary emphasis in public sector reform has been the creation of a 'regulatory state,' characterized by the establishment of quasi-autonomous regulatory agencies, the marketization of public services, and an increasing codification of contractual relationships. Starting first in the world of 'economic regula-

tion' (considering network industries, such as energy, communications, and transport), features of the regulatory state have moved into other public services (Majone, 1997). The language of risk has been central to the regulatory state with its emphasis on expert judgment based on careful calculation. It offered a persuasive response to a society that was seen as increasingly intolerant of accepting crisis as 'fate' (Beck, 1992).

One of the key justifications for organizing regulation through the device of free-standing regulatory agencies was 'credible commitment' —the emphasis on addressing investor concern about the potential meddling by politicians (see also Cunha & Lodge, 2025; Dussauge-Laguna et al., 2024). At the same time, the regulatory state of the past thirty years is also associated with the idea of 'enforced self-regulation'. Accordingly, standard setting occurs based on 'principles', enabling regulated entities to respond in reflective and discretionary ways, thereby encouraging learning and improvement. Such an 'enforced self-regulation' approach was associated with performance-based and management-based regulatory frameworks; the former focused on the measurement of outputs and outcomes, while the latter focused on the level of attention paid to key hazards and risks (Coglianese & Lazer, 2003). In either case, a link to credible sanctions for non-compliance was seen as sufficient to encourage those organizations that might not be too motivated to engage with such an approach.

The 'enforced self-regulation' approach responded to a range of criticisms of how regulatory activities were pursued in the past, which were said to have enhanced vulnerability rather than resilience (see also Lodge, 2024). These criticisms can be distinguished on two dimensions: first, questions about the appropriate distance between regulator and regulatee, and second, the extent of regulatory prescriptiveness. Each of these dimensions also had implications for resilience. First, criticisms of 'too much distance' argued that regulation could not ensure resilience in the face of potential crisis as it was ill-informed and detached from 'real-world' contexts. When coupled with an emphasis on highly prescriptive rules, regulatory settings were accused of being 'highly formalized.' In cases where criticisms of 'too much distance' combined with concerns regarding a 'too discretionary' approach, a lack of resilience was attributed to excessive leeway granted to regulated entities, thereby allowing risks to incubate and inevitably leading to their realization.

Second, criticism of 'too close' regulatory relationships, when coupled with accusations of highly prescriptive provisions, can be associated with concerns about 'paternalism' (a criticism that resonated with Wildavsky's position, outlined earlier): regulators were criticized for assuring themselves through close involvement and prohibition, thereby reducing the

overall ability of systems to ‘learn’ through trial-and-error processes. Coupling the criticism of ‘too close’ regulatory relationships with a criticism of ‘too discretionary’ rules, reflected concerns with professionalism dominance that detached itself from external accountability. Such dominance of single professional perspectives reduced overall resilience by incurring risks of selective perceptions and blind spots (see Lodge, 2019; Bach & Wegrich, 2019, for more general discussion). Table 1 summarizes the argument (see also Lodge, 2024).

Table 1. *Typology of Regulatory Relationships*

	High regulatory distance	Low regulatory distance
High regulatory rule intensity	<p>Problem of formalism Diagnosed problem of ill-considered application of rules without professional judgment</p> <p><u>Reduced resilience due to limited informed adaptability to circumstances.</u></p>	<p>Problem of paternalism Diagnosed problem with rule prescriptiveness and close entanglement with state interest</p> <p><u>Reduced resilience due to limits of information deficits as ‘state knows best’.</u></p>
Low regulatory rule intensity	<p>Problem of business self-regulation Diagnosed problem of lack of professional discipline and absence of understood rules</p> <p><u>Reduced resilience due to short-termism incentives of business self-control</u></p>	<p>Problem of professionalism Diagnosed problem with dominance of in-group deliberation without external accountability</p> <p><u>Reduced resilience due to blind spots of single professional perspective</u></p>

As noted, the past thirty years offered a particular response to these concerns. Relying on detached expertise in delegated agencies and ‘enforced self-regulation’, the past thirty years were characterized by the decentralization of risk management responsibility to the entities directly involved in the risk, namely the producer. This approach was intended to mitigate the inherent information asymmetry problem in any superior-subordinate relationship. It was intended to foster flexible and creative responses rather than imposing standardized prescriptions. Furthermore, it was intended to promote a cooperative rather than adversarial relationship between the regulator and the regulatee(s). This collaborative approach was meant to free regulators from the need to spread themselves too thinly and to allow them to concentrate on critical cases.

In addition, the promotion of systems of ‘self-observation’ by regulated entities was intended to encourage proactive promotion of operational ‘safety’ rather than relying solely on formal regulatory assurance exercises. The approach was to enable designed regulatory entities to focus on key output/outcome measures or specific hazard mitigation strategies, combining decentralized and centralized intervention. Finally, the requirement for regulated entities to balance competing objectives, such as efficiency and security, was believed to be more effective than relying solely on external oversight.

How, then, did the regulatory state perform? Does it represent a ‘high reliability organization’ or has it been seen to encourage regulated ‘high reliability organizations’? The past thirty years have offered a mixed picture in terms of performance, at best. At the time of writing (2025), none of the criticisms of regulation have gone away. Regulation continues to be criticized for being ‘too distant’ or ‘too close’ on the one hand and ‘too discretionary’ or ‘too prescriptive’ on the other. Indeed, what was once advocated as ‘high intelligence’ regulatory techniques for mitigating crisis have turned into a criticism of regulatory ‘rituals of verification’ whose overall effect is likely to aggravate risks rather than reduce them; in addition, the emphasis on decentralization has become widely criticized for the lack of coordinative capacity.

Indeed, considering some of the crises noted at the outset of this paper, regulation was accused of being ‘too close’ and ‘discretionary’ during the financial crisis, which, a decade later, led to concerns that regulation was ‘too prescriptive’. Relying on enforced self-regulation was not just found wanting during the financial crisis, where regulated entities were found to be neither motivated nor capable of regulating themselves. The Wirecard scandal highlighted the limitations of national oversight regimes. Equally, emissions scandals involving a range of car manufacturers, especially Volkswagen, highlighted the incentives for regulated entities to ‘cheat’ given the low likelihood of detection.

Elsewhere, calls for more ‘discretionary’ regulation were generally accompanied by demands from regulated parties for ‘more guidance’. For example, on the day of drafting, the higher education regulator for England, the Office for Students, published its ‘guidance’ on how universities were to facilitate ‘freedom of speech’. This guidance included a 66-page document including 54 ‘vignettes’ (Office for Students, 2025). Similarly, while regulators were seen to be increasingly under pressure to justify their actions and witnessed closer political oversight (for the UK, see Koop and Lodge, 2020), there was also concern with the self-expanding (crisis) authority that regulators had assembled during periods of crisis (see Tucker, 2019). Indeed, regulators were blamed for ‘strangling’ political attempts at financial regulatory reform (see Carpenter, 2010).

More generally, there was a concern that the dispersed authority that characterized the age of the regulatory state stood in the way of addressing the ‘grand challenges’ of the 21st century. In other words, regulatory states have been found wanting in terms of finding the appropriate balance among the three resilience-building components identified earlier. The regulatory state, as conceived in the 1990s, aimed to facilitate markets and establish a supposedly fine-tuned balance between the state and markets. While the regulatory state overall seemed resilient in that its main features — reliance on agencies and enforced self-regulation — had not been replaced, it is less clear whether it has reduced or enhanced the resilience of regulated activities. In the European context, it was notable how transnational arrangements increasingly sought to coordinate national crisis management in the regulatory state, leading also to an increased merger of the worlds of risk and crisis management that, until the early 21st century, had been largely kept distinct (Cabane & Lodge, 2024). Against this perspective of incremental transformation towards a multi-level world of regulatory regimes, the age of polycrisis may be said to require a different age of a regulatory state. Such a response regards regulation not as a facilitator of markets, but as one that constitutes markets to redirect economic incentives towards more sustainable futures and one that focuses on the generation of infrastructural ‘public goods’ that are unlikely to be generated by markets alone (Beckert, 2024, pp. 191–193).

In sum, therefore, although the regulatory state offered the promise of addressing criticisms regarding the lack of resilience provided by earlier periods of regulation, it was confronted, by the mid-2020s, with considerable criticism. Indeed, it was widely questioned whether a type of regulatory arrangement that emphasizes detached expert judgment is sufficiently responsive to the new age of populist politics and the cross-cutting demands of the polycrisis era.

Building regulatory capacity for resilience

What kind of regulatory capacity might, then, provide for resilience of and by the regulatory state in an age of polycrisis? Any response to such a question requires a focus on the available resources of regulators and regulatees. Focusing on the resources available to regulators and regulatees presents four potential futures, each with distinct implications for establishing resilience in an era of polycrisis (Lodge, 2024).

Firstly, a world where resourceful regulators and regulated entities coexist could be characterized as a ‘regulatory state 2.0’, where the same methodologies applied over the

past three decades would be further refined. This would imply an emphasis on enforced self-regulation overseen by free-standing or 'independent' regulatory agencies. A key emphasis might therefore involve a reconsideration of 'regulatory burden' along the lines of Klein and Thompson's Abundance agenda (2025). Accordingly, a key focus would be on removing procedural obligations that have been placed on regulated organizations as part of 'management-based' approaches towards regulation. The primary challenge for regulators would be to ascertain, in a transboundary context, whether regulated entities were both 'capable' and 'motivated' to comply. Such a system would also necessitate an increasing emphasis on how to organize regulation in multi-level settings.

Alternatively, a future where regulators are limited in their capacity, but where the state can rely on its resources, could be termed the 'control state'. In such a scenario, regulatory activities would shift away from free-standing bodies and into ministerial departments. This development aligns with the criticism that free-standing regulators have become mini-governments, incapable of making joined-up decisions. It also criticizes a world of regulators that have taken on a wide range of tasks that should be decided in the political domain (e.g., debates on whether central banks should consider climate risks). The 'control state' assumes that states possess the resources to guide regulated actors and can overcome the criticisms of 'too prescriptive' and 'too distant' regulatory regimes. Similar to arguments supporting an 'orchestrating' role of the state in a 'mission-oriented' machinery of government (Mazzucato, 2018), a world of the 'control state' would address the criticism that existing approaches have, failed to address the kind of problems identified with the existing regulatory institutions and, in addition, that the challenges of the kind of transboundary, wicked polycrisis require more state intervention and coordination.

Third, a world that assumes limited regulatory capacity but perceives regulated entities as having the capacity (in both resource and motivational terms) to 'do the right thing' might lead to a 'self-certification state'. Following existing transnational governance arrangements, transboundary regulation to address transboundary crises would emphasize industry-led self-regulation, building on examples in international standard-setting or international environmental or social initiatives. The argument in favor of such a future would be to point to the limited resources of states to address the sources of polycrisis, and that a reliance on industry would encourage industry innovation, in terms of both regulatory systems and the development of resilient systems. A potential criticism is that the track record of such transnational governance regimes is debatable.

Fourth, a world of limited resources leads to a world with limited overall capacity to build resilience. In this world, individuals and societies are essentially ‘on their own’. Such a world of ‘abandonment’ might lead to novel forms of societal resilience and resemble the well-known contexts of limited (or failed) state capacity, characterized by private networks that adapt to and mitigate potential harm. Whether such a world can address questions of migration and environmental catastrophe is questionable. At most, this is a world that emphasizes mitigation by individuals and local actors.

Table 2 provides a summary of the argument. The emphasis of this discussion is to accentuate difference. The worlds of ‘regulatory state 2.0’, ‘control state’, and ‘self-certification’ offer distinct responses to building resilience in prescribing how to balance tight and loose coupling, addressing questions of redundancy and multiple objectives. Discussions on ‘capacity’ here focus on the type of authority different organizations should have and how informational and financial resources are utilized to support resilience.

The world of ‘abandonment’ similarly presents a scenario of selective responses to demands for building resilience, lacking the capacity for synoptic and long-term commitment. Societal forms of resilience may emerge to compensate for the lack of regulator or regulatee capacity. Such a perspective is desirable but deserves to be taken seriously. Suppose we cannot assume that either states and their regulators or the regulated entities are sufficiently resourced to provide for resilience. In that case, the world of ‘abandonment’ might appear as the sole viable option.

Table 2. *Building regulatory capacity for resilience*

	Low regulatee capacity	High regulatee capacity
High regulatory capacity	Control state Return of regulatory oversight to ministerial departments and more explicit state involvement <i>Resilience through purposeful and authoritative governmental involvement</i>	Regulatory state 2.0 Enforced self-regulation—based regulation with more responsive regulatory bodies <i>Resilience through enforced self-regulation relying on high quality oversight and capable and motivated regulates.</i>
Low regulatory capacity	Abandonment Ad hoc regulatory activities without long-term commitment <i>Resilience by ‘every community is on its own’</i>	Self-certification state Reliance on industry self-regulation and certification to guide consumer choice/ enabling of experimentation <i>Resilience through the self-interested activities of corporate actors</i>

Conclusion

Building resilience against institutional vulnerabilities and mitigating irreversible harm constitutes the primary function of public management (see also Beck, 1992). A world of transboundary polycrises in which crises spill across jurisdictional borders presents a particular challenge for regulatory states. As the underlying assumptions of the regulatory state of the late 20th century have become questioned, there is no dominant set of doctrines as to how regulatory regimes (and societies more generally) build resilience ready to be 'rudely surprised' (LaPorte, 2007) in the sense of both the extent of irreversible harm and the limited resilience of institutional architectures to mitigate and adapt.

The regulatory state that emerged over the past three decades—in both its national and transnational forms—presented a particular set of instruments to provide for enhanced resilience, offering the prospect of embracing risk as an opportunity for growth. A world of transboundary crisis collides with such a logic—it reveals the vulnerabilities of the regulatory state, and thereby also the vulnerabilities of individuals. A world of polycrisis, given its transboundary nature, exposes not only the potential inevitability of irreversible harm but also the need for collective action. However, it also questions the legitimacy of state authority as crises reveal not just individual exposure to risks (such as a cyber-attack) but also immediately expose the precarious nature of institutional arrangements that were presented as resilient.

While the regulatory state and its emphasis on enforced self-regulation by regulatory agencies offered the promise of enhanced resilience, it has been found wanting across a series of crises in the early 21st century, and it has not escaped the very same criticisms that it was supposed to address in the first place. Indeed, the world of transboundary crisis, especially considering the kind of democratic backsliding that has been observed across continents, requires the acceptance that regulatory institutions need to provide for both a world of 'expert' judgment—and thereby embrace 'risk' as opportunity—but also engage with the logic of vulnerability and anxiety that is central to understanding transboundary crises. This paper has highlighted that ways of adapting the regulatory state to the contemporary world of polycrisis require an exploration of the resources of both regulatees and regulators alike. In other words, a debate needs to be central to any discussion of resilience.

Drawing upon the literature on resilience, the paper underscores the informational requirements for any system to effectively manage risks and crises. The demands of a system strike a balance between tight and loose coupling, an emphasis on redundancy, and the incorporation of managing competing objectives may appear daunting. It appears particularly daunting as resilience does not provide for an easy-to-copy recipe.

This paper emphasizes the absence of a fixed blueprint for resilience. Instead, it has emphasized a further critical capacity requirement: resilience is expressed through continuous debate and adjustment, rather than relying on a specific organizational approach. To prepare for the world of unexpected surprises in a polycrisis, conversations about regulatory capacity should begin with the essential prerequisites for building resilience. It is through the ongoing regulatory conversation surrounding issues of 'excessive' or 'insufficient' coupling, the support and challenge of professional attention, and the balancing of redundancy with other key objectives that resilience can be established within any regulatory regime.

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