



Finding the sweet spot in climate policy: balancing stakeholder engagement with bureaucratic autonomy

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For several decades, stakeholder engagement in climate change decision-making has been well chronicled. Recently there have been renewed calls for governments to be agents of climate change policy innovation. However, an overlooked actor is the bureaucracy, particularly the degree of autonomy in relation to elected politicians. This paper argues that successful climate change policy will depend on finding the right balance of stakeholder engagement and bureaucratic autonomy, which we label the 'sweet spot.' To make this claim, we introduce and discuss recent advances in three areas in the public management literature. First, we discuss how a public value perspective provides a valuable lens to understand *why* the sweet spot matters. Second, we develop a framework for identifying the sweet spot by building on recent stakeholder and bureaucratic autonomy literature. Third, the role of procedural policy instruments that could potentially facilitate the sweet spot is discussed.

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Introduction

In light of a growing demand for innovative solutions to address increasingly complex environmental issues, the climate change governance literature is influenced by two main assumptions: increasing stakeholder engagement leads to better outcomes, and government-based involvement is typically a top-down phenomenon. This article challenges these assumptions and argues that effective and successful climate change governance demands that stakeholder engagement and bureaucratic autonomy be

tailored to specific contexts. One explanation for the unbalanced perspective is that public management scholarship continues to play a minimal role in the climate change field [1,2]. Swilling also notes that despite the pressure for governments to address critical issues like climate change, very few in the environmental sector know-how state systems work [3,4]. This disciplinary divide overlooks the concept of bureaucratic autonomy, which is concerned mainly with an agency's discretion from elected and appointed political officials and the extent that they can independently decide for themselves about critical issues.

This knowledge gap may negatively affect climate change decision-making, specifically the increased risk of governance failures such as collective action and legitimization problems caused when public and private actors fail to deliver an optimal policy formulation or implementation process [5]. Thus, an important consideration to this research and the focus of this paper is determining the optimal balance between stakeholder involvement and bureaucratic autonomy. To do so, we examine three themes derived from the public management literature that informs our approach.

- Central is determining the stakeholder involvement-bureaucratic autonomy 'sweet spot' unique to each country.
- We introduce a modified version of Moore's strategic public value triangle as a framework accounting for the context of bureaucratic autonomy in climate change governance. It forms the context for the sweet spot.
- In order to navigate the 'sweet spot' within a country's climate change policy sector, potential policy procedural instruments are identified. They range from the funding of stakeholder groups, policy innovation labs, and inquiry commissions. They activate procedural policy mechanisms that facilitate the sweet spot.

We begin by briefly describing the literature on stakeholder engagement and bureaucratic autonomy, both of which have developed without any systematic integration within the climate change field.

Stakeholder engagement and the environment

Since the early 1990s, a large body of social science literature has assigned a vital role to stakeholders in the decision-making process [6]. The nature of these relationships has been extensively examined broadly and within an environmental context [7–9]. Greater societal involvement

in policymaking is often a goal in and of itself, with the intent of increasing democratic responsiveness and the legitimacy of decisions [10]. Stakeholders, specifically those actors directly affected by environmental impacts, may include industry, businesses, consultants, not-for-profit organizations, and individual citizens. The roles of stakeholders in public service delivery are reflected in all stages of the policy process, particularly in co-initiating, co-designing, and co-implementing societally relevant responses to climate change. Figure 1 summarizes three popular dimensions of stakeholder participation, namely inclusivity, the intensity of decision-making, and the level of authority and power [11].

Some acknowledge that how stakeholder engagement contributes to policy processes and outcomes remains poorly understood [12]. Others assume that two-way collaborations are driven either from the ‘bottom-up’ (community-led) or are ‘top-down’ (agency or expert-led). However, what is often overlooked is that government agencies possess autonomy, are aware of local conditions, and have bottom-up processes of their own.

Governments can exert a tremendous amount of influence on the type and level of democratic engagement. Studies show that the attitude of administrators and politicians towards involving citizens as valuable partners is sometimes limited, thus not stimulating their involvement [13,14]. Some detractors are critical that stakeholder engagement is sometimes cynically used as a symbolic act with the lowest possible engagement [15]. Empirical evidence points to a long-term growing disillusionment with the quality and quantity of these participation efforts [16].

Some administrative traditions are not conducive to incorporating stakeholder interests and goals into the policy process. Particularly in these cases, where there are such tensions, administrators are risk-averse, and stakeholders can be unpredictable or unreliable [17]. For example,

stakeholder engagement will differ in more closed bureaucracies (Canada) than in countries with open bureaucracies (Netherlands) [18]. This well-developed literature introduces bureaucratic autonomy and the inroads some scholars have made in the environmental field.

Climate change bureaucratic autonomy: bringing the state in, yet again

The role of the state, specifically bureaucratic autonomy, has received relatively limited coverage across the environmental policy field [19]. Some bureaucratic autonomy case studies have examined the ‘environmentalization’ of mining [20], US land management, clean air policymaking [21], and hazardous management [22]. Recently, there has been a renewed interest in governments’ role as potential agents for policy innovation and entrepreneurialism. Inspired by the economic historian Karl Polanyi’s thesis about the interventionist role of the liberal state as indispensable for market society [23], Mazzucato’s ‘mission-oriented’ recommendations for EU innovation policy stressed the need to reinvigorate capacity building within the state, specifically the role of the bureaucracy and the expertise that they can offer [24]. This approach points to government agencies often overlooked analytical, organizational, and political expertise, capacity, and experience dealing with decision-makers [25,26,27]. The degree to which government agencies and the professionals within them function independently of political influences has been well developed in the public management literature [28]. We argue that public servants involved in environmental policymaking and implementation may need to be shielded from the involvement of political actors (elected and appointed officials), but in other countries, they may be subordinate with regard to the larger climate change goals [29].

Bureaucratic autonomy has been measured using sociological and principal-agent approaches (e.g. an agency’s management and policymaking capacity, relative

Figure 1

Level of Engagement	Inclusiveness (Participation selection)	Intensity (Modes of communication and decision)	Extent of authority and power
High	Diffuse public sphere Open targeted recruiting Lay stakeholders	Deploy techniques and expertise Deliberate and negotiate Bargain	Direct authority Co-governance Co-production Advise Consult
Low	Expert administrators Professional stakeholders	Spectator Express preferences Develop preferences	Communicative influences Personal Benefits

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Indicators of Stakeholder Engagement.

freedom from structural, financial, legal constraints imposed by the central government) [30]. Others have developed widely used taxonomies considering such variables as an agency's administrative cohesion, administrative differentiation, the autonomy of action, statutory powers, and administrative resources [31[•],32]. [Figure 2](#) summarizes three common dimensions from the bureaucratic autonomy literature, namely the role of bureaucrats in the policy process, their legal powers, and internal organizational dynamics. These dimensions can be measured by the formal legal, or conventional distance a public organization has from direct political influence.

The context for bureaucratic autonomy and the sweet spot: public value

Before discussing the sweet spot, we highlight why public value is important for understanding bureaucratic autonomy in a larger context. Originally, Mark Moore sought to develop an approach in which the 'aim of managerial work in the public sector is to create public value just as the aim of managerial work in the private sector is to create private value.' [33] Over the past 25 years, public value has been subject to much development and spirited debate [34]. However, there are three key common guiding points. First public value focuses on how public managers, with some degree of independence, can develop normative consensus about 'the rights, benefits, and prerogatives to which citizens should (and should not) be entitled. Second, it maps out the obligations of citizens, the state, and the relationship between them. Third, it provides the principles on which governments and policies should be based.' [35] Central to Moore's scholarship is a 'strategic triangle' of public value

consisting of (1) producing valued outcomes and doing so within the constraints of (2) available resources and capability, and (3) the authorizing environment of formal and informal jurisdiction, legal frameworks, and mandates. Common indicators of public value include a wide variety of outcomes, including but are limited to trust and legitimacy, service delivery quality, and efficiency [36]. The links with public values in the environmental sector have rarely been made despite the conceptual overlaps in the sustainability literature. For example, the well-known United Nations Sustainable Development Goals (SDGs) can be considered a measurable public value that public managers can advocate [37,38]. National governments have committed to adopting SDGs, but it is the civil service that is responsible for analysis, policy integration, and reporting of them. Coffey acknowledges concepts unique to the environmental sector, including the nature of public goods, transboundary problems, complexity and uncertainty, irreversibility, temporal and spatial variability, administrative fragmentation, and regulatory intervention pose challenges to developing an environmental public value approach; this may have detracted any attention from public management field [39[•]].

[Figure 3](#) takes up this challenge and presents a slightly modified version of the public value strategic triangle. The authorizing environment provides the context for the sweet spot between bureaucratic autonomy and stakeholder autonomy discussed below. Other factors include but are not limited to administrative traditions, policy regimes, resource allocation, and political values. These influence and are influenced by both the public values and the operational capacity. In addition to policy capacity discussed above, operational capacity can include

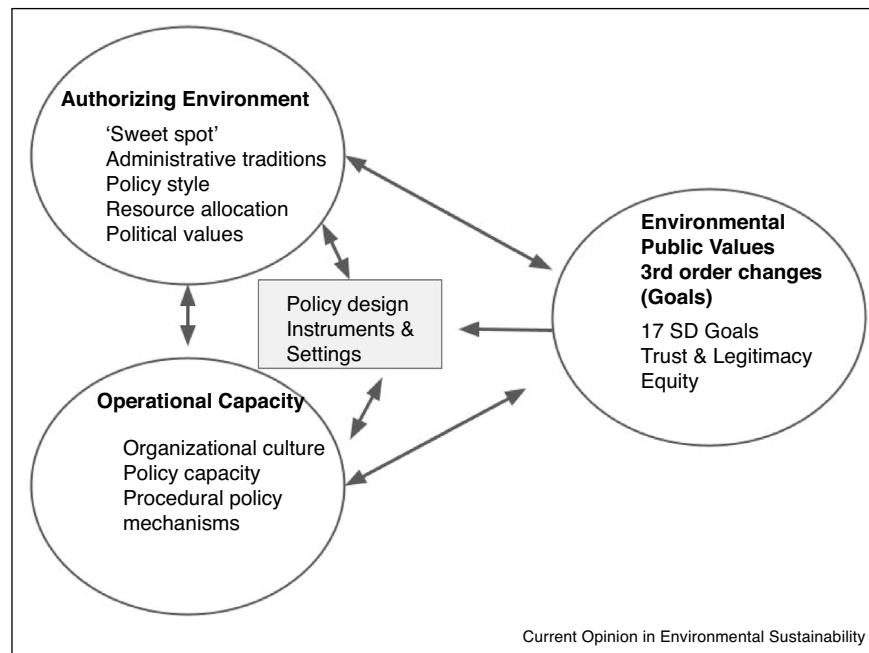
Figure 2

Level of autonomy	Polymaking Process	Legal/Statutory Powers	Internal Decision-making
High	Sets broad policy goals and develops policy instruments. Develops criteria for evaluation	Legal separation from the central government. Can influence the agenda-setting process	Complete control of finances, personnel, and reporting requirements.
Low	Provides only advice to the central government on the technical aspects of policy instruments	Directly reports to the central government. Provides mainly an advisory role.	The central government has greater control and oversight of finances, personnel, and reporting requirements.

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Indicators of Bureaucratic Autonomy.

Figure 3



Bureaucratic Autonomy, the Sweet Spot, and the 'Strategic Triangle of Public Value'.

organizational capacity, skills, partnerships, and highlighted later, and the role of procedural policy mechanisms. Finally, our modification includes the role of policy design, policy mixes, and civil servants' role in influencing substantive policy instruments. Changing public values correspond to what Hall [40] and others refer to as third-order high level and abstract changes and influence concrete policy instruments and their on-the-ground settings and calibrations [41–43].

Finding the stakeholder engagement – bureaucratic autonomy 'Sweet Spot'

Bureaucratic autonomy is embedded within long-standing 'administrative traditions' — the historically based set of values, structures, and relationships with other institutions that define the nature of appropriate public administration [44]. Administrative traditions are entrenched in legal, administrative, and cultural institutions and are shaped through reconfirming civil servants' activities.

Figure 4

	Bureaucratic Autonomy		
Stakeholder Engagement		High	Low
	High	Pluralism	Issue networks/Clientele pluralist
	Low	Iron Triangles/Concertation (Closed)	State Direction

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Stakeholder Engagement and Bureaucratic Autonomy sweet spots [56].

Figure 5

- Define or alter policy actors' positions
 - Add actors to policy networks
 - Change access rules for policy actors
 - Influence policy network formation
 - Promote self-regulation
 - Modify governance structures used in policy delivery
 - Change policy evaluation criteria
 - Influence pay-off structure for policy actors
 - Influence professional and other codes of policy-relevant conduct and behavior
 - Regulate policy and social conflict
 - Change how actors interact with each other
 - Incentivize certain types of policy actions (and discourage others)
 - Change supervisory relations between policy actors
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Procedural policy mechanisms [64].

While research attention has focused on western traditions (e.g. Scandinavian, Germanic, Napoleonic, and Anglo-American), the concept can be globally applied [45]. In addition, various policy styles are rooted in administrative traditions across different fields (e.g. agriculture, climate change, forestry, water resources) [46]. They refer to the long-term configurations of specific processes of interactions among policy actors combined with the inclusiveness of decision-making [47]. The patterns of long-term behavior and decision-making within these traditions and policy styles are somewhat institutionalized and fixed [48**].

Stakeholder engagement, while more variable, also tends to be static over the long term and typically considered an essential characteristic of administrative traditions [49]. An important aspect of stakeholder engagement is how the relationship between the state and society is institutionalized. For example, in societal systems that are typically more network orientated, such as many Northern European countries, the state is closely bound to society, thereby traditionally preferring active stakeholder engagement. Other systems, for

example, those where the state-society relation is more clientelistic (e.g. Latin America), corporatist (e.g. Netherlands), or through social contracts (e.g. UK), can have implications on the preferred type of stakeholder engagement. Simply advocating for increased stakeholder engagement and bureaucratic autonomy could potentially lead to poor policy design outcomes because such a universal prescription will lead to misalignment between institutionalized practices and proposed policy innovations.

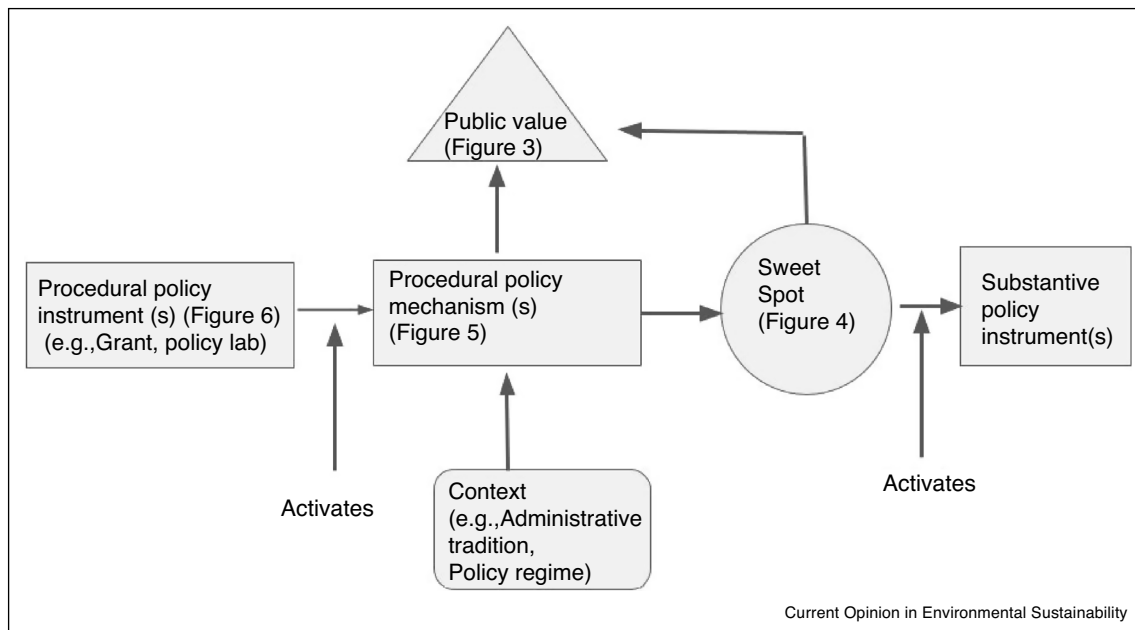
We argue that, rather than advocating for high intensity (top right cell) in Figure 4, the desired research strategy should be a combination of stakeholder engagement and bureaucratic autonomy that reflects the specific administrative tradition and policy regime. Each of the cell's labels corresponds to well-known configurations in the policy literature that were first developed in the early 1990s [50]. *Iron triangles*, which originate in the US, indicate well-organized relationships among the congressional committees, the bureaucracy, and interest groups [51,52]. Concertation relationships suggest a limited degree of autonomy between a small group of stakeholders and government officials who collaborate on an equal footing [53]. In *clientele pluralist* arrangements, various groups often organize themselves to work out their differences, engage in the process of making policy trade-offs, develop a consensus position, and possess a considerable degree of autonomy [54]. *Issue networks* tend to contain a broader range and an unpredictable number of actors devoted to the issues and not each other [55]. *State direction* suggests that elected officials rather than civil servants or stakeholders influence policy directions. Finally, a *pluralist* sweet spot occurs when many stakeholder groups and state agencies are freely engaged in a wide network of activities.

Figure 6

- Advisory group formation
 - Behavioral Insight Teams (BITs)
 - Inquiry commissions to introduce new ideas into policy processes
 - Focus groups
 - Grants to fund stakeholder groups
 - Policy innovation labs
 - Public hearings
 - Research funding
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Examples of procedural policy instruments to facilitate the sweet spot.

Figure 7



Causal illustration of procedural policy instruments and the sweet spot [66].

Developing these four possible cells indicating the ideal balance between bureaucratic autonomy and stakeholder engagement can be evaluated in terms of the successful implementation of procedural policy instruments.

Achieving the sweet spot: deploying procedural policy instruments

Achieving the sweet spot will be facilitated by a variety of available procedural policy instruments [57^{*}]. In contrast to well-known substantive policy instruments that directly affect the type, quantity, price, or other characteristics of goods and services by the private or public sectors, their procedural counterparts are utilized to influence policy processes [58,59]. These procedural policy instruments, if correctly employed, activate mechanisms that are responsible for generating the desired sweet spot outcome. Some key procedural policy mechanisms recently identified in the literature are listed in Figure 5 [60,61]. One or more of them may be deployed to achieve the sweet spot. Figure 6 identifies popular examples of possible procedural policy instruments that may activate these mechanisms [62]. Administrative traditions and policy regimes represent unique contexts in which the procedural policy mechanisms are found. [63].

Figure 7 illustrates the procedural policy instruments, their mechanisms, and the contexts in a causal pathway [65^{**}]. Additionally, public value would be affected by the procedural policy instrument mechanisms (e.g.,

legitimation) and achieving the sweet spot (e.g. trust and legitimacy). While beyond the scope of this paper, we assume that achieving the sweet spot would lead to the deployment of more substantive policy instruments (e.g. regulations, carbon markets, etc.), ultimately leading to policy change.

Conclusion

The current climate change crisis reminds us that the state will play an increasingly critical role in developing innovative solutions. The concept of bureaucratic autonomy is important, yet it is understudied within the environmental field. Central to formulating and implementing policies and programs are government agencies, specifically the thousands of employees tasked with carrying out many different mandates and promoting public value—specifically those values that underpin society and stakeholders' interests. The localized nature of environmental problems has given rise to a rich stakeholder engagement literature focused on decision-making powers. The sweet spot plays a critical role in regulating the degree of bureaucratic autonomy and stakeholder engagement. We argue that both phenomena need to be studied together as their interplay is vital to ensuring long-term sustainability.

Conflict of interest statement

Nothing declared.

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References and recommended reading

Papers of particular interest, published within the period of review, have been highlighted as:

- of special interest
- of outstanding interest

1. Pollitt C: **Wickedness will not wait: climate change and public management research**. *Public Money Manage* 2015, **35**:181-186.
2. Tosun J, Howlett M: **Managing slow onset events related to climate change: the role of public bureaucracy**. *Curr Opin Environ Sustain* 2021, **50**:43-53.
- This overview examines how public agencies are understated in their management of long term issues such as climate change.
3. Swilling M: **Greening public value: the sustainability challenge**. In *Public Value: Theory and Practice*. Edited by Benington J, Moore M. Palgrave MacMillan; 2011:89-111.
4. Biesbroek R, Dupuis J, Jordan A, Wellstead A, Howlett M, Cairney P, Rayner J, Davidson D: **Opening up the black box of adaptation decision-making**. *Nat Clim Change* 2015, **5**:493-494.
5. Howlett M: **Governance modes, policy regimes and operational plans: a multi-level nested model of policy instrument choice and policy design**. *Policy Sci* 2009, **42**:73-89.
6. Wiesmeth H: **Stakeholder engagement for environmental innovations**. *J Bus Res* 2020, **119**:310-320.
7. Painter M, Peters BG: **Administrative traditions in comparative perspective: families, groups and hybrids**. *Tradition and Public Administration*. London: Palgrave Macmillan; 2010, 19-30.
8. Biesbroek R, Peters BG, Tosun J: **Public bureaucracy and climate change adaptation**. *Rev Policy Res* 2018, **35**:776-791.
9. Few R, Brown K, Tompkins EL: **Public participation and climate change adaptation: avoiding the illusion of inclusion**. *Clim Policy* 2007, **7**:46-59.
10. Gramberger M, Zellmer K, Kok K, Metzger MJ: **Stakeholder integrated research (STIR): a new approach tested in climate change adaptation research**. *Clim Change* 2015, **128**:201-214.
11. Fung A: **Varieties of participation in complex governance**. *Public Adm Rev* 2006, **66**:66-75.
- This overview examines how public agencies are understated in their management of long term issues such as climate change.
12. Eaton Weston M, Brasier Kathryn J, Burbach Mark E, Whitmer Walt, Engle Elyzabeth W, Burnham Morey, Quimby Barbara, Kumar Chaudhary Anil, Whitley Hannah, Delozier Jodi et al.: **A conceptual framework for social, behavioral, and environmental change through stakeholder engagement in water resource management**. *Soc Nat Resour* 2021, **34**:1111-1132 <http://dx.doi.org/10.1080/08941920.2021.1936717>.
13. Voorberg WH, Bekkers VJ, Tummers LG: **A systematic review of co-creation and co-production: embarking on the social innovation journey**. *Public Manage Rev* 2015, **17**:1333-1357.
14. Bendtsen EB, Clausen LPW, Hansen SF: **A review of the state-of-the-art for stakeholder analysis with regard to environmental management and regulation**. *J Environ Manage* 2021, **279**:111773.
15. Reed MS, Vella S, Challies E, De Vente J, Frewer L, Hohenwallner-Ries D, Huber T, Neumann RK, Oughton EA, Sidoli del Ceno J, van Delden H: **A theory of participation: what makes stakeholder and public engagement in environmental management work?** *Restor Ecol* 2018, **26**:S7-S17.
16. Reed MS: **Stakeholder participation for environmental management: a literature review**. *Biol Conserv* 2008, **141**:2417-2431.
17. Hood C: *The Blame Game*. Princeton University Press; 2010.
18. Bemelmans-Videc ML, Elte R, Koolhaas E: **Policy evaluation in the Netherlands: institutional context and state of affairs**. *Program Evaluation and the Management of Government*. Routledge; 2020:105-118.
19. Orihuela JC, Mendieta A, Pérez C, Ramírez T: **From paper institutions to bureaucratic autonomy: institutional change as a resource curse remedy**. *World Dev* 2021, **143**:105463.
20. Orihuela JC: *The Environmentalization of Mining in Colombia, Chile, and Peru: a Comparative Analysis of Green State Formation*. The Extractive Industries and Society; 2020.
21. Potoski M, Woods ND: **Designing state clean air agencies: administrative procedures and bureaucratic autonomy**. *J Public Adm Res Theory* 2001, **11**:203-222.
22. Boullier H, Demortain D, Zeeman M: **Inventing prediction for regulation: the development of (Quantitative) structure-activity relationships for the assessment of chemicals at the US environmental protection agency**. *Sci Technol Stud* 2019, **32**:137-157.
23. Holmes C, Dale G, Markantonatou M: *Karl Polanyi's Political and Economic Thought: A Critical Guide*. 2019.
24. Mazzucato M: **Mission-oriented innovation policies: challenges and opportunities**. *Ind Corporate Change* 2018, **27**:803-815.
25. Mukherjee I, Bali AS: **Policy effectiveness and capacity: two sides of the design coin**. *Policy Des Pract* 2019, **2**:103-114.
26. Howlett M, Wellstead AM: **Policy analysts in the bureaucracy revisited: the nature of professional policy work in contemporary government**. *Polit Policy* 2011, **39**:613-633.
27. Mayer IS, Van Daalen CE, Bots PW: **Perspectives on policy analyses: a framework for understanding and design**. *Int J Technol Policy Manage* 2004, **4**:169-191.
- This classic article describes the complexity and diversity of policy work in bureaucracies.
28. Cooper CA: **Politicization of the bureaucracy across and within administrative traditions**. *Int J Public Adm* 2021, **44**:564-577.
29. Evans PB: *Embedded Autonomy: States and Industrial Transformation*. Princeton University Press; 2012.
30. Verhoest K, Peters BG, Bouckaert G, Verschuere B: **The study of organisational autonomy: a conceptual review**. *Public Adm Dev* 2004, **24**:101-118.
31. Bauer MW, Ege J: **Bureaucratic autonomy of international organizations' secretariats**. *J Eur Public Policy* 2016, **23**:1019-1037.
- The indicators used in empirical bureaucratic autonomy studies are developed. Results from studies in the EU are presented.
32. Huber JD, Shipan CR: *Deliberate Discretion?: The Institutional Foundations of Bureaucratic Autonomy*. Cambridge University Press; 2002.
33. Moore MH: *Creating Public Value: Strategic Management in Government*. Harvard University Press; 1995.
34. O'Flynn J: **Where to for public value? Taking stock and moving on**. *Int J Public Adm* 2021:1-11.
35. Bozeman B: *Public Values and Public Interest: Counterbalancing Economic Individualism*. Georgetown University Press; 2007:7.
36. Faulkner N, Kaufman S: **Avoiding theoretical stagnation: a systematic review and framework for measuring public value**. *Aust J Public Adm* 2018, **77**:69-86.
37. Sadiqi J: *Evaluating the Development of SMART Communities: a Public Value Perspective*. 2018.
38. Osborne SP, Powell M, Cui T, Strokosch K: **New development: 'Appreciate-Engage-Facilitate' — the role of public managers**

- in value creation in public service ecosystems. *Public Money Manage* 2021:1-4.
39. Coffey B: **Environmental challenges for public value theory and practice.** *Int J Public Adm* 2021:1-8.
This paper evaluates how public value can be examined in an environmental context, its connection to sustainable development, and possible research avenues.
40. Hall PA: **Policy paradigms, social learning, and the state: the case of economic policymaking in Britain.** *Comp Polit* 1993:275-296.
41. Bali AS, Howlett M, Ramesh M: **Unpacking policy portfolios: primary and secondary aspects of tool use in policy mixes.** *J Asian Public Policy* 2021:1-17.
42. van Geet MT, Verweij S, Busscher T, Arts J: **The importance of policy design fit for effectiveness: a qualitative comparative analysis of policy integration in regional transport planning.** *Policy Sci* 2021:1-34.
43. Wellstead AM: **Mechanisms of environmental policy change in a federal system: the case of open federalism and the 2006-15 Harper government.** *Reg Fed Stud* 2018, **28**:177-197.
44. Biesbroek R, Lesnikowski A, Ford JD, Berrang-Ford L, Vink M: **Do administrative traditions matter for climate change adaptation policy? A comparative analysis of 32 high-income countries.** *Rev Policy Res* 2018, **35**:881-906.
Administrative traditions in the context of climate changes are examined.
45. Yesilkagit K: In *The Future of Administrative Tradition: Tradition as Ideas and Structure*. Edited by Painter M, Peters BG. Tradition and Public Administration. New York: Palgrave Macmillan; 2010:157.
46. Howlett M, Tosun J (Eds): *Policy Styles and Policy-making: Exploring the Linkages*. Routledge; 2018.
47. Lesnikowski A, Biesbroek R, Ford JD, Berrang-Ford L: **Policy implementation styles and local governments: the case of climate change adaptation.** *Environ Polit* 2020:1-38.
48. Clarke A, Craft J: **The twin faces of public sector design.** *Governance* 2019, **32**:5-21.
This paper compares the policy design and design thinking approaches to policy making.
49. Pierce JJ, Peterson HL, Hicks KC: **Policy change: an advocacy coalition framework perspective.** *Policy Stud J* 2020, **48**:64-86.
50. Van Waarden F: **Dimensions and types of policy networks.** *Eur J Political Res* 1992, **21**:29-52.
51. Adams G: *The Iron Triangle*. Transaction Publishers; 1981.
52. Ogunlana SO: **Beyond the 'iron triangle': stakeholder perception of key performance indicators (KPIs) for large-scale public sector development projects.** *Int J Project Manage* 2010, **28**:228-236.
53. Lindquist EA: **Public managers and policy communities: learning to meet new challenges.** *Can Public Adm* 1992, **35**:127-159.
54. Atkinson MM, Coleman WD: **Policy networks, policy communities and the problems of governance.** *Governance* 1992, **5**:154-180.
55. Hecl H: **Issue networks and the executive establishment.** *The New American Political System*. 1978.
56. **Adapted from Fukuyama F.: What is governance?** *Governance* 2013, **26**:347-368.
57. Bali Azad Singh, Howlett Michael, Lewis Jenny M, Ramesh M: **Procedural policy tools in theory and practice.** *Policy Soc* 2021:295-311.
This conceptual paper provides a systematic overview of understudied procedural policy instruments.
58. Howlett M: *Studying Public Policy: Principles and Processes*. Oxford University Press Global; 2020.
59. Capano G, Howlett M, Ramesh M: **Disentangling the mechanistic chain for better policy design.** *Making Policies Work*. Edward Elgar Publishing; 2019.
60. Biesbroek R, Dupuis J, Wellstead A: **Explaining through causal mechanisms: resilience and governance of social-ecological systems.** *Curr Opin Environ Sustain* 2017, **28**:64-70.
61. Mahoney lists 24 possible causal mechanism definitions, Mahoney J: **Beyond correlational analysis: recent innovations in theory and method.** September *Sociological Forum*. Eastern Sociological Society; 2001:575-593.
62. Howlett M: **Structural mechanisms affecting policy subsystems activity: beyond individual and group behavioral propensities in policy design and policy change.** *Making Policies Work*. Edward Elgar Publishing; 2019.
The role of causal mechanisms is examined in the policy design process.
63. (a).
Process tracing maybe a useful method for building and testing procedural policy mechanism theories that determine the sweet spot. It is a qualitative analytic tool for "drawing descriptive and causal inferences from diagnostic pieces of evidence—often understood as part of a temporal sequence of events or phenomena.;
(b)
Collier D: **Understanding process tracing.** *PS Political Sci Polit* 2011, **44**:823-830 p.824
64. Bali AS, Howlett M, Ramesh M: **Unpacking policy portfolios: primary and secondary aspects of tool use in policy mixes.** *J Asian Public Policy* 2021:1-17.
65. Falleti TG, Lynch JF: **Context and causal mechanisms in political analysis.** *Comp Political Stud* 2009, **42**:1143-1166.
One of the first political science papers to advocate the importance of causal mechanism and context.
66. Howlett M: **Structural mechanisms affecting policy subsystems activities: beyond individual and group behavioral propensities in policy design and policy change.** In *Making Policies Work*. Edited by Capano G, Howlett M, Virani A. Northampton, MA, USA: Edward Elgar; 2019.