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Credentialization of expert knowledge in Policy Advisory Systems: bridging expertise and authority in contemporary policymaking

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This article argues that Policy Advisory Systems (PAS) construct authority through a process of epistemic authorization that has heretofore not been analyzed in sufficient depth. Furthermore, this article argues that this process is mediated through institutional, relational, discursive, and procedural interacting "bridges" or relationships among policy actors that embed knowledge within policymaking contexts, thereby rendering it usable for decision-making. First, it implies that PAS are not only institutional arrangements that provide advice but also configurations that construct and stabilize epistemic authority. Second, it implies that the distribution of epistemic authorization across different moments and sites of policymaking should be carefully assessed when making judgments about the impact and influence of knowledge and evidence on policymaking. The study provides a case study of how such processes operate in the climate change area.

KEYWORDS
expert advice, knowledege management, policy advice, Policy Advisory Systems, public policy

Introduction

Policymaking involves the deceptively simple goal of aligning policy goals and policy means to achieve government objectives (Lasswell, 1958). The complexities in this process emerge not only because goals and means belong to two different levels of practice and abstraction (Walsh, 1994) but also because many ends–means linkages are not immediately obvious. Linking the two requires expertise and the provision of advice to policymakers attempting to achieve this match. That is, policymaking requires the capability to transform available information into policy-relevant knowledge, and this capacity may involve a larger or smaller number of actors and sets of ideas about policy content, intent, and feasibility, in a process that always privileges some forms of knowledge over others (Howlett et al., 2025; Migone and Howlett, 2025b).

In contemporary states, this typically involves a set of advisors and intermediaries who are able to straddle the worlds of expertise and policy action (Ball, 2019; Craft and Halligan, 2020; Halligan, 1995). Generally, these bridging functions are institutionalized within Policy Advisory Systems (PAS), which are sets of internally and externally located individuals and organizations who build and maintain close connections between governmental and non-governmental actors and provide knowledge to decision-makers (Margetts and John, 2024). They include a range of individual and organizational types, including consultants, policy

specialists in the public sector, think tanks, universities, non-governmental organization, and even friends of leaders and officials, who provide a variety of knowledge products to governments and the public, sometimes formally and often informally (Bandera et al., 2024; Craft et al., 2024; Howlett and Craft, 2013; Maley, 2000; Prince, 2007).

These formal and informal arrangements and organizations constitute the nodes and links of an advisory ecosystem, a concept that is useful in providing a broad framework for analyzing how advice is created from knowledge and enters policy practice.

Studies of such systems have moved from early "first-generation" descriptions focused primarily on Westminster-style systems, where formal and internal arrangements predominate, to more recent analyses that have expanded comparisons to other countries and have examined more carefully the quality and management of policy advice in more complex environments (Connaugton, 2025; Migone and Howlett, 2025a). This study has produced a variety of interesting lines of analysis, such as research on how advice is selected and managed within different systems (Albert and Manwaring, 2019; Brans and Timmermans, 2022; Capano et al., 2023, 2026), including assessments of the extent to which the concept of PAS applies within non-Organisation for Economic Co-operation and Development (OECD) countries (Howlett, 2019) and in authoritarian or semi-authoritarian systems (Bakir, 2023; Belyaeva, 2019; Emamian and Bagheripour, 2024).

Much of the current PAS research remains largely focused on selected aspects of the structure and activities of advisory systems on the knowledge supply side: mapping who advises whom and telling us little about the demand or use side, including how specific kinds and sources of expertise become authoritative policy-relevant knowledge, or why such knowledge is, or is not, demanded (Manwaring, 2019). All of these efforts, however, ultimately seek to explain how and with what consequences different polities design and manage information systems to supply expert knowledge to policymakers.

In this study, we argue that one of the primary issues in discussions of both the supply and demand for advice is not merely acknowledging the sometimes-mandatory presence of expertise in the process, which has always been an indispensable feature of many systems. Rather, an essential but neglected aspect concerns the conditions under which only a portion of the available expertise in society becomes authoritative or "credentialed" within decision-making contexts (Dunlop, 2014). By this, we understand how some forms of knowledge and some experts are treated or designated as usable and legitimate, while others are not.

Later, we show how this authoritativeness emerges from the interaction among institutional design, relational trust, procedural opacity, and political urgency.

The article is structured into five sections. After this introduction, we explore how Policy Advisory Systems embed the mechanisms that confer authoritative qualities to the knowledge produced by experts and highlight how they have been largely subsumed in the analysis of institutional structures that have dominated the literature.

The third section explores the nature of the bridges that develop between actors and how they affect the process of selection, management, and deployment of policy-relevant knowledge. It shows how this operates in the context of climate change and, in particular, the International Panel on Climate Change (IPCC). We should note here that this is a theory-building article and that the IPCC is in and of itself a peculiar organization. Not only is it an international unit, but it is also disconnected from any government. Hence, the generalizability of the case study's insights needs to be tested through further research. What we propose in this study is a potential approach to examining how knowledge is managed within an organization so that it is vested with policy relevance. Finally, some conclusions are offered.

Policy Advisory Systems and the unexplored mechanisms of authoritative expertise

Policy advice has always been critical for public policymaking (Goldhamer, 1978) and the dominant framework used to help explain its use today is that of the Policy Advisory System (PAS). This concept was originally devised by Seymour-Ure (1987) to positionally map policy advice flows in the UK. It moved beyond the identification of specific kinds of advisors highlighted in earlier decision-making and public administration subfields (Lindblom, 1968; Meltsner, 1976), suggesting that actors were arranged in more system-like ways in which specific kinds of relations between actors could be found in specific jurisdictions and institutional arrangements, leading to particular kinds of knowledge entering policy deliberations rather than others.

The literature on these advisory systems generated over the past 30 years (Manwaring, 2019) is now very broad and layered (Hussain et al., 2024) and consists of three "generations" of studies. The first used the image of a positional/marketplace of ideas to represent policy advice supply and demand, while the second focused on PAS structure and dynamics and extended analysis in a more explicitly comparative fashion (Craft and Wilder, 2017). The emerging third generation explores the quality of advice and its management (Howlett et al., 2025).

Most of the first two waves of analysis centered on Westminster and OECD jurisdictions, especially the UK, Australia and Canada, and continued to distinguish between providers (policy workers mostly in government) and consumers of policy advice (the state itself). In keeping with Westminster traditions, many of these studies assessed the importance or centrality of actors based on their proximity to top executive offices (Halligan, 1995; Plowden, 1987). This model worked well in such contexts because of the traditional creed of Westminster administrators that their role should be that of impartial and professional advisors to ministers (Manwaring, 2018; Turner et al., 2023).

Ultimately, however, by the beginning of the 21st century, the literature highlighted the shortcomings of this first set of case studies. Chiefly, they did not capture jurisdictional differences, compressed the complexity of the process of advice creation, and did not assess whether the advice provided in this marketplace of ideas was of a high quality or not. As a matter of fact, second-generation scholars noted that, even in the relatively homogeneous Westminster space, different jurisdictions handled policy advice creation differently (Marciano and Craft, 2023). Studies of PAS outside of this space also revealed more complex relationships between knowledge suppliers and consumers both in quasi-democratic (Jungblut et al., 2024; Pattyn et al., 2022; Turner et al., 2023) and authoritarian polities (Bakir, 2023; Belyaeva, 2019; Emamian and Bagheripour, 2024).

Second-generation framing also focused on the changing dynamics of PAS, particularly processes of "politicization," which increased the role of specific actors such as party representatives (Craft, 2015; Gouglas, 2015), and "externalization," which examined the growth, even in Westminster systems of external sources of knowledge and

advice, including academics, consultants, think tanks, and research institutes (Abelson, 2018; Galanti and Lippi, 2022; Pritoni and Galanti, 2022; Stone et al., 2021; Wellstead and Howlett, 2022).

More recently, the third generation of PAS research, of which this study is a part, seeks to link advice production to the quality of policy designs and assess how the quality of the advice can best be managed (Connaughton, 2024; Howlett et al., 2025; Mukherjee and Giest, 2020).

In this overall process of exploring how policy advice is constructed and circulated within government, we can see how scholars have progressively taken a more fine-grained look at the political process and have become increasingly sensitive to how the role of power—as embodied by specific actors and specific institutional arrangements—affects the nature of policy advice provision. However, as currently shaped, PAS frameworks have difficulty reconciling policy advice with the dynamics that shape its final form, that is, in understanding influence.

To better understand the relationship between advice and influence, we argue that third-generation PAS studies need to shift from the analytical focus on the configuration or structure of advisory systems, which have preoccupied many analyses conducted to date, to examining in more detail the ways in which expertise is transformed into authoritative knowledge claims.

As we argue later, beneath second-generation discussions of politicization and externalization and first-generation work on actor locations are several different kinds of bridging interactions that confer authority on or "credentialize" certain actors but not others. This designation allows them to exercise greater influence on policy deliberations. We argue that this insight can help third-generation studies advance their agenda of understanding and managing the quality of advice.

In the next section, we explore these bridging mechanisms in more detail.

Authority construction and credentialization

A key insight in addressing quality and management issues is, as first- and second-generation research has noted, that, in any PAS, some knowledge sources are included but not others, and those that are included are often closer to the locus of power and decision-making than others. It is these processes of inclusion and exclusion that are key to understanding authority and influence. That is, it is the construction or designation of some actors as more authoritative than others that enables policy systems to designate selected knowledge claims as "evidence" and certain sources as policy-relevant, usable, and legitimate.

This is an important insight with consequences not only for policy outputs and for understanding many policy and decisional outcomes but also for understanding the manner in which key actors emerge and how they are designated and remain "authoritative".

For our purposes, this authority construction is viewed as the process through which policy systems designate selected knowledge claims as simultaneously credible, intelligible, and actionable, which, in turn, enables considerations of policy choice and implementation based on this knowledge to proceed. While some of these processes occur outside government, in scientific or professional communities that credentialize actors, for example, whether or not this authority carries over into official channels relies more on internal recognition and may be subject to bias and manipulation, a central pre-occupation of a second generation studies of advice in dictatorships and one-party systems, and of great importance to third generation PAS studies focused on improving advice quality and management.

The idea of authorization used in this study is not coterminous with the notion of professional credentialing and certification that traditionally dates back at least to the analyses of Abbott (1991) and Sarfatti Larson (1979), although it shares some attributes of these earlier studies. Rather, our perspective is closer to Dunlop's (2014) approach to credentialization in policy learning processes, in which certain experts become influential not simply because of their knowledge and expertise, but because that expertise undergoes a sociopolitical process that "recognizes" them as being potentially usable within a specific context.

In this sense, authorization is a process that precedes or leads to the designation of certain knowledge and "experts" and establishes the alignment between the epistemic nature of a field and trust in those who articulate the "appropriateness" of its dimensions and activities (March and Olsen, 1989). That is, the designation of evidence in a field is a sociopolitical process of credentialization rather than an assessment of objectively measurable truth.

Hence, we see credentialization as an example of the broader macro process through which organizations construct authority through distributed epistemic authorization. We can think of aspects such as the selection of specific authors for a report or the staffing of certain committees as belonging to this category, thereby affecting the structure and functioning of Policy Advisory Systems.

At the system level, policymaking involves *authority construction*, which builds and organizes authority within policy systems. This includes epistemic authorization, which is tied less to the "truth" of knowledge than to the distributed mechanisms that shape knowledge claims through processes of selection, validation, translation, and embedding into policy decisions.

Accordingly, authority construction is the cumulative outcome of continuous processes of epistemic authorization.

As argued later in the article, a key part of this construction involves the erection of "bridges" or links between specific sets of actors in a PAS. The latter typically include four kinds of bridges—Institutional, Relational, Discursive, and Procedural—which are the mechanisms or transmission corridors through which the selection, validation, translation, and embedding of knowledge that ultimately produce what is designated as policy-relevant knowledge occur.

In other words, bridges connect specific actors and ideas in the knowledge supply realm with actors in the demand space. They carry validation, translation, and rating of knowledge as outputs, which are key to the construction of authority. Ultimately, such credentialization in the broadest sense can be seen as leading to the institutionalization, at least over the medium term, of a specific set of ideas through the selection of people and organizations who serve as proxies for authoritative knowledge or evidence.

In the next section, we develop these arguments in more detail.

Credentializing bridges: linking expertise and policymaking through authority construction

The processes and the corresponding relationships that develop between knowledge and power in a PAS, as noted above, can be seen to be mediated by a set of "bridges" or linkages between different components of policymaking that allow expertise to acquire epistemic authority.

Four types of bridges are immediately apparent: institutional (formal structures that bring together certain actors such as regulators and the regulated in more or less regular ways and places), relational (patterns of trust and authority that can do the same, for example, between leaders and followers in an academic inquiry), discursive (mechanisms transforming technical knowledge into politically meaningful narratives, as occurs in much consulting, academic and specialist policy work), and procedural (mechanisms connecting expertise to policy makers through provisions of specific opportunities for statements, such as mandated public hearings for budgetary processes or environmental assessments).

It is important to note that these bridges do not solely transmit expertise from one layer of the system to another in a purely passive or facilitating manner. Rather, they actively select, translate, authorize, and close knowledge claims and, therefore, manage the appearance of specific kinds of knowledge in the creation of policy decisions. This raises the normative question of who is granted epistemic membership in the policymaking process and how, that is, how the capacity of actors to audit, contest, impute, and meaningfully influence the authorization of knowledge in policymaking occurs, as opposed to a focus simply on the exclusion of certain kinds of actors or simply being allowed to assess policy outputs without impact on formulation. Thus, a local re-zoning process requiring open hearings generates a different kind of discussion than a closed one among council members.

> *In other words, PAS should be seen not just as configurational distributions of institutions and actors, but also as arrangements that embed and stabilize how authority construction is achieved through distributed epistemic authorization mechanisms.*

In short, bridges are pathways or mechanisms of authority construction that embed within them processes of epistemic authorization that, in turn, selectively manage available information and make its claims to knowledge both legitimate and usable for policy decisions.

The four types of bridges—institutional, relational, discursive, and procedural—set out above are described in Table 1, which highlights how each operates.

The institutional bridge serves to label certain actors and the knowledge claims they carry as relevant; the relational one certifies their trustworthiness; the discursive bridge holds the meaning-making task; and the procedural enables policy or deliberative closure.

Within any Policy Advisory System, *institutional bridges* are embodied in formal organizations that link expertise (and, therefore, the knowledge that is encapsulated in that expertise) to decision-makers. These include advisory councils, regulatory agencies, and the policy workers who staff units within the public administration. This kind of bridge accredits authoritative structures or procedures by conferring upon them a role within an institutional structure, such as a court or agency, and is critical in formalizing the expertise of that organization as a purveyor of quality evidence. This is, to a large extent, a selection and gatekeeping function that screens for the legitimacy of individuals and bolsters the role of organizations in credentializing them.

Relational bridges, on the other hand, may be informal and are based on the repeated patterns of interactions that build trust between parties and individuals involved in policymaking. This trust carries a core validation of the knowledge exchanged between parties and carried by trusted actors, which is similar to providing an authoritative institutional label to it. This includes interpersonal trust, reputational authority based on expertise, and elite networks. Long-term, more personalized relationships between subject-matter experts and decision-makers who may share school ties or professional credentials are often important in such cases (Migone and Howlett, 2025a), particularly if formal processes are weakly structured when, for example, an issue is new and institutional bridges are not well developed. These relational bridges play an important role in attributing credibility and trustworthiness to some actors and the knowledge claims that their expertise embodies. Hence, who participates in writing or checking a report, for example, may be important in affecting institutional influence processes.

The construction of authority through a *discursive bridge* differs somewhat from the first two and is tied to the process of transforming knowledge into politically valid narratives. This process is achieved through storytelling, the communication of risk management strategies, the provision of policy narratives and similar activities and may be undertaken by the media or popular figures, for example, who thereby gain authority for their perspectives. At the epistemic authorization level, such bridges render knowledge claims broadly understandable and persuasive to both decision-makers and the public, allowing them to support political narratives favored by the government. Favored television networks and, more recently, podcasters and bloggers often gain authority through this bridge.

The fourth bridge is the *procedural one.* This type of bridge is similar in some respects to the institutional one, except that it is focused on policy closure—that is, when a decision is made to implement a policy option, and therefore appears at the moment of the authority construction being deployed. This is the case, for example, with experts invited to comment on proposals and policies at the final stage of decision-making, such as treasury or trade officials or captains of industry who may have an outsized influence on the final determination of a policy. From an epistemic authorization perspective, this finalization takes place by embedding select knowledge claims into the timelines of established policy processes and in their closure mechanisms.

As this discussion shows, these bridges do not act in isolation from one another and interact in the process of incrementally building up epistemic authorizations so that the interaction and dynamic coupling leading to advice construction is often critical.

TABLE 1 Typology of bridges in Policy Advisory Systems.

Bridge	Components	Authority construction	Epistemic authorization
Institutional	Structures	Locates authority	Certifies knowledge
Relational	Relationships	Stabilizes authority	Confers credibility
Discursive	Meaning-making	Communicates authority	Makes knowledge persuasive
Procedural	Procedures	Closes authority	Ratifies knowledge

Thus, for example, at the intersection of the institutional and relational bridges, a type of accreditation for the credibility of the institutional actors can occur based on familiarity or past relationships. Institutional experts often have a complex relation with trust in the public policy space; however, their relational role can be helpful in garnering such trust when it is lacking (Crane, 2012; Weingart, 2023). Inclusion in a positionally credible organization, for example, an advisory committee, or being given the status of an official expert through professional accreditation, can reinforce the relational authority of those actors and vice versa.

The relational-discursive space similarly has the role of creating acceptable narratives for policy choice by persuading us to believe those who put forward specific policy claims in the media and other public or quasi-public fora. In this case, epistemic authorization generates what we can think of as persuasive credibility. As knowledge claims are put forward by trusted actors asked by traditional and increasingly social media to translate complex policy-relevant knowledge into digestible narratives that resonate with the public, this affects decision-makers as well. Framing an issue in this way by a reputational actor can not only shape the narrative but lead to increased uptake of specific views and perspectives on issues. In this case, it is not just that the trust embedded in the expert, qua expert, allows the narrative to be believed but also that the media discourse itself reinforces any existing relational, or institutional, authority.

With respect to the interaction between discursive and procedural bridges, the core product is actionable meaning. This means that, for narratives to be translated into policy decisions, the meaning created in any previous bridge must be converted into operational action.

Finally, in institutional–procedural interactions, epistemic authorization embeds the specific knowledge that enables the institution to have undue influence due to its role in formalized policy closure put into place by formal rules, procedures, institutions, and the authoritative decision-making structures of a polity. Adopting regulations, for example, locks in (at least for a time) a specific conception of a policy problem and its solution and formalizes the procedures that affect how these rules are created, such as mandatory notice-and-comment procedures and deadlines.

Thus, authority construction, through the use of epistemic authorization, allows specific kinds of knowledge actors and their claims to be selected, trusted, understood, and implemented. This means that, often, for actor influence to proceed, institutional, relational, discursive, and procedural bridges should be aligned so that specific kinds of knowledge are deemed credible and intelligible, but also actionable, often blending policy processes and institutional authority in so doing.

From this analysis, we can see that authority construction and epistemic authorization do not occur at a single moment but have both a spatial and a temporal dimension. It is very important to be able to reconstruct how these processes operate because bridges are not only channels through which knowledge is transmitted through the policymaking process, but they also double as infrastructures of accountability in potentially sanctioning poor advice.

Bridges can reinforce, substitute, and affect one another. On the one hand, there are forward interactions: for example, the exchanges between institutional and relational spaces, where being or becoming part of an institution can immediately affect the level of trust in the knowledge claims a person or an organization carries. Consider how being named a special policy advisor in public administration can affect how something forward is perceived.

The second type of interaction is the reverse, that is to say, when decisions are taken, the results can reshape how knowledge is framed so that feedback takes place between, for example, the procedural and the discursive bridges, with persuasive policy narratives possibly being accorded narrative legitimacy after they are chosen.

Finally, we have interactions between the institutional and discursive bridges, whereby institutions shape the narratives that emerge, often by drawing upon broader political yardsticks, while, in the opposite direction, discourse can reshape what institutions look like or how they act and, consequently, what knowledge they prioritize.

These interactive but temporal relationships are illustrated in Table 2.

Authority construction emerges from the dynamic interaction among these domains, which occurs with varying levels of intensity and across different sequences, and can be portrayed as shown in Figure 1.

The mechanisms that underpin the bridges can be more or less tightly connected depending on the context of the policy process and the type of issue involved.

The nature of bridges, their couplings, and their lack helps explain where success or failure is likely to occur in an advice system and thus where it could potentially be managed and improved or mitigated. For example, in a system where the institutional and procedural bridges are strong, but the relational bridge is weak, we are likely to find a more technocratic approach to policy decisions and advice than if the reverse were true, where there would more likely be a kind of personalistic or possibly crony system. Where the relational and discursive bridges are strong, and the institutional one is weak, we are liable to find that the knowledge claims that underpin policy narratives are based on informal authority and exhibit weak continuity and conflict. If a strong discursive bridge is coupled with a weak procedural one, a PAS may generate largely symbolic policies, while if a strong institutional bridge interfaces with a weak discursive one, we may have expertise that is largely unusable.

An existing illustration: the IPCC case

An illustrative case of these dynamics is the Intergovernmental Panel on Climate Change (IPCC), which was created in 1988 to function as a scientific core providing information and advice that would allow governments globally to design climate policies using an evidence-based approach. The two main tools the IPCC uses for policy-relevant knowledge sharing are the Assessment Reports (AR) and Special Reports (which expand on specific topics), published every 5–7 years and including occasional technical papers, although

TABLE 2 Interaction spaces among bridges.

Interaction	Function	Outcome
Institutional <– > Relational	Accreditation	Credible actors
Relational <– > Discursive	Persuasion	Acceptable narratives
Discursive <– > Procedural	Operationalization	Actionable knowledge
Institutional <– > Procedural	Formalization	Binding decisions

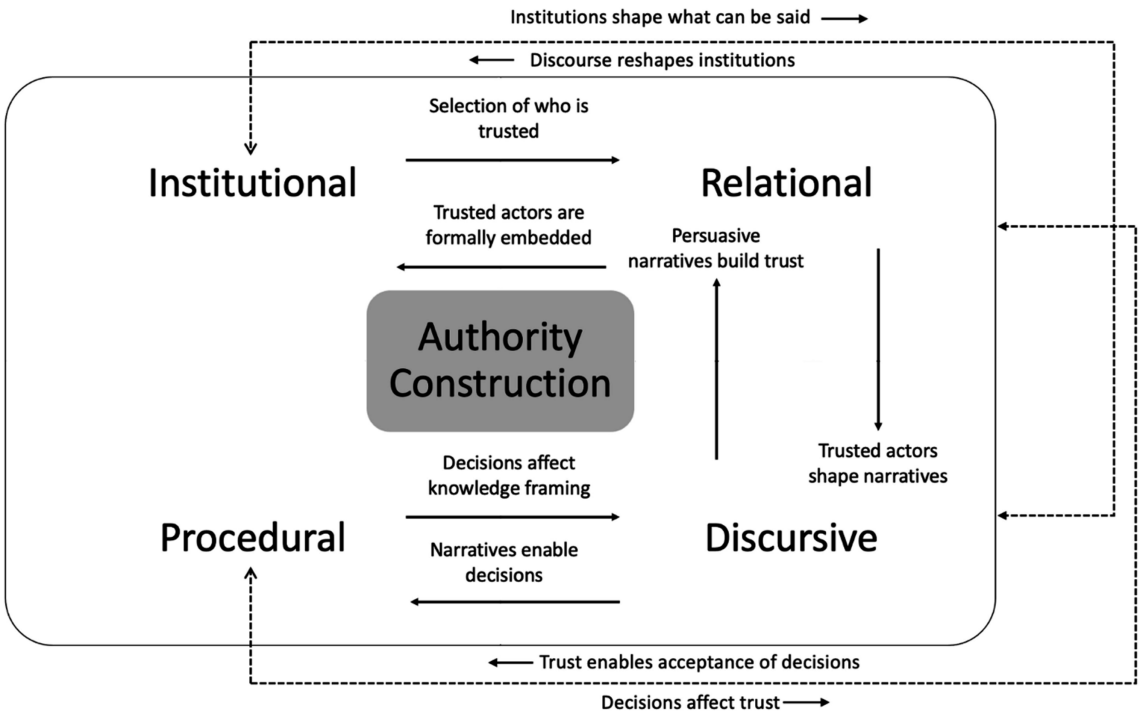


FIGURE 1
Interacting bridges within overlapping domains of distributed epistemic authorization.

interviews with scientists working with the IPCC are also important (Asayama, 2024; De Pryck, 2021).

The IPCC was not established to formally advise individual nations on which policies should be adopted but rather as an external, objective source of cutting-edge knowledge on climate change, thereby serving as a largely institutional bridge through which more evidence-based advice and knowledge could enter climate change deliberations.

However, the evolution of how the IPCC manages policy-relevant knowledge shows that it progressively proceduralized authority in response to controversy using the bridging mechanisms noted earlier. The focus of the IPCC has always been to provide serious climate advice; however, it is clear that both external and internal factors have influenced the way in which this has been achieved (Asayama, 2024; De Pryck, 2021). For example, as noted by De Pryck (2021), the organization initially tended to rely on a relatively informal structure linking scientists and governments that was relatively light on the governance of knowledge production. However, almost immediately after the publication of its first Assessment Report, we see the emergence of multiple internal guidelines regulating how the three Working Groups present in the IPCC would tackle the production of their research, the selection of the authors, and the review of the reports.

As Asayama (2024) shows in assessing the production frameworks and role of the IPCC's Special Reports, two interconnected functions emerge. First, the reports become sites of politicized debate regarding scientific claims, and second, they work as mechanisms that normalize the ideas that used to be contested within authoritative assessment frameworks.

The triggers for the proceduralization of authority construction were most commonly disputes over climate science. This led to the deployment of increasingly formal rules governing author selection, review, government approval, and transparency in reporting designed to increase the legitimacy of climate change assessments issued by the organization. As a result, we shall see the stabilization of particular forms of expertise as authoritative and their embedding within accepted policy processes. This is evident in the Technical Support Unit (TSU) within the IPCC, which, in particular, holds the responsibility to select the authors for the organization's reports, another typical bridging role. Because the criteria for selection are based on research impact and productivity, this tends to favor authors from developed countries and therefore their knowledge claims. The TSU has also increasingly controlled the communication side of things, again in response to the evolution of the IPCC into a settled boundary organization (Hughes, 2024, pp. 162–163).

The contested nature of this form of authority construction is reflected in Boehmer-Christiansen's (1994a, 1994b) argument that, even at a very early stage, the IPCC's production of policy-relevant knowledge about climate change was too weak and too closely tied to political needs. The IPCC subsequently lost its institutional authority while relying increasingly on procedural credentialization (Beck and Mahony, 2018).

The IPCC, in this sense, is a good example of an organization that has "constructed" the meaning of valid policy knowledge over time. As De Pryck (2021, p.82) noted, it almost immediately "began a progressive proceduralization of its activities" by carefully adding multiple layers of processes and rules on how to separate its scientific and advice function but also on how to produce "good" science in its reports. As writing rules became more complex, Review Editors were created to check on every chapter, and as contrasting voices about climate change strengthened, particularly after it was found that the Fourth Assessment Report published in 2009 contained some

mistaken information, "quality control" became increasingly relevant (De Pryck, 2021).

Some of the responses to these challenges spilled over into the relational bridge. The Review Editor role, the increased scrutiny given to work by Working Group members, and the new—very cautious—regime imposed on introducing non-peer reviewed work into the reports after the mistakes made regarding the impending doom of the Himalyan glaciers in AR4 (O'Reilly, 2015), all account for steps conferring greater authority to the knowledge developed by trusted advisors with personal and professional relationships to IPCC members and editors.

As De Pryck (2021), p. 85 notes, this meant that IPCC assessments are presently "produced through a complex bricolage of heterogeneous practices. Compiling the literature or communicating uncertainty in expert judgments, for example, are tasks that different experts perform in different (and sometimes diverging) ways. The difficulty in bringing professionals from different disciplinary and cultural backgrounds to agree on a shared set of practices has often been the source of numerous tensions and controversies in the IPCC."

In terms of the discursive bridge, the IPCC has a rather specific dynamic. While its communication spectrum includes interviews with subject matter experts and some knowledge translation papers, its main knowledge outputs have relied on scientific products commissioned through its Secretariat (Bolin, 1994). It initially did not have a communication structure and tended to fall back on the notion of letting open scientific discussion solve debates. However, once the controversy of the mistaken information included in AR4 hit, the IPCC was forced to revise its structure and hire a communication professional (O'Reilly, 2015; De Pryck, 2021).

Conclusion: moving third generation PAS scholarship forward through the study of credentials and credentialization

As the third generation of Policy Advisory System studies emphasis on management underscores, PAS should not be considered merely as a given or as only supplying policy advice but rather as actively engaged in the demand for certain types of advice and the designation of what is considered "evidence" and policy-relevant knowledge. Here, we suggest shifting the analytical focus from the simple description of the type and location of the actors and institutions involved to the study of the interacting processes that enable knowledge to acquire authority in policymaking contexts and propose the concept of authority creating bridges to help operationalize this concept.

This re-orientation helps to better inform the management and shaping of knowledge systems that support policy choices and highlights how these systems operate through different mechanisms of epistemic authorization that select, validate, and translate knowledge claims before they are finally embedded in policy decisions. Seeing these processes as involving institutional, relational, discursive, and procedural bridges that create various configurations of authoritative knowledge through their interactions is valuable and insightful not only for conceptual purposes but also for practice-oriented ones.

The IPCC vignette illustrates how these bridging dynamics can operate within advisory organizations. The IPCC is relatively tightly managed and demonstrates how an initial effort at epistemic authorization via institutionalization can shift to other more relational or discursive forms of credentialization, particularly procedural ones.

The case emphasizes the importance of future third-generation research to add to existing images of epistemic authorization as a static property of experts toward a more dynamic vision. It also highlights how the concept of authority pathways or bridges can help untangle the web of confusion, which, to date, has been a central feature of studies of policy influence. Another question that will need to be addressed in a more case-oriented fashion is that of credentialization. The notion of providing authority to the management of knowledge within an organization is not new; however, the reasons and processes that each organization utilizes vary. Our theoretical framework posits that credentialization is a neutral instrument in this sense, namely, that organizations have an instrument-neutral approach in terms of which bridge they prefer to ensure the authority of the knowledge they produce, and how the four bridges are used to achieve this. This proposition, however, needs to be validated through additional cases.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

Author contributions

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