

Achieving cross-sectoral policy integration in multilevel structures—Loosely coupled coordination of “energy transition” in the German “Bundesrat”

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Abstract

The big policy challenges of our times are complex problems cutting across policy sectors and levels of government. To answer the question how cross-sectoral policy coordination in multilevel structures can be achieved, we argue in line with policy integration and multilevel governance scholarship that “loosely coupled” institutions create the interdependency necessary to secure complex coordination. This argument is substantiated empirically by investigating coordination of energy transition in the German Bundesrat. Expectations are derived on how loosely coupled institutions promote coordination. They are tested using a mix of empirical data. It can be shown that loosely coupled institutions indeed enable coordination by linking powers across multiple dimensions, creating incentives for cross-sectoral communication, using personal ties in negotiations to bridge different institutional backgrounds, and sequencing the decision process to allow strategic shifts between coordination dimensions. Those mechanisms may not guarantee the best possible result, but they provide a satisfactory solution at least.

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energy transition, German Bundesrat, loose coupling, multilevel governance, policy integration

INTRODUCTION

The big policy challenges of our times, such as energy transition and climate change, migration and integration, or sustainable urban development, all cut across traditional policy sectors and require intense cross-sectoral coordination and cooperation (Briassoulis, 2004). Furthermore, policy making and policy implementation typically involve several territorial units and levels of government (or administration) and thus call for structures and processes of horizontal and vertical multilevel coordination, jointly creating a high level of complexity (Benz, 2019a). This is particularly the case in federal states, but of increasing relevance also in regionalized and unitary states. *How can cross-sectoral policy coordination in multilevel structures be achieved?* This is probably one of the most pressing governance problems of modern states (for many see: Peters, 2015, p. 1). Complexity theory suggests that complex problems can best be dealt with in loosely coupled systems. Additionally, policy integration and multilevel governance (MLG) scholarship have recently begun to adopt this notion. Building on the core assumption of a loosely coupled system and joining it with insights from policy integration and MLG scholarship, we derive an analytical framework for empirically investigating how coordination along all three dimensions—sector, unit, and level spanning—can be facilitated.

Energy transition is one of the most pressing policy challenges requiring coordination along all dimensions. The notion of energy transition was coined in the late 1970s by German researchers (Krause et al., 1980). It denotes an encompassing policy program amounting to no less than a fundamental reconstruction of energy supply from nuclear and fossil toward renewable energy production, a substantive reduction of greenhouse gas (GHG) emissions, an upgrade of the electricity grid infrastructure, as well as the development of new technologies for energy efficiency and storage (Schreurs & Steuwer, 2017, p. 116). Also, it reaches into many neighboring sectors as it requires far-reaching transformations in the system of energy production, in production technologies and processes, as well as in traffic, urban planning, construction and agriculture, economy and labor market, and even in the realm of lifestyle. Such complex policy challenges are oftentimes called “wicked problems,” as they have no definitive boundaries, involve many actors, and are tightly connected with other problems; they require holistic strategies, as due to their complexity piecemeal solutions do not work; they are marked by nonlinear cause–effect relationships that are difficult to determine; and, most importantly, they lack ultimately “right” answers and cannot be solved conclusively (Danken et al., 2016; Waddell, 2016). In this complex situation, the key question is how energy transition can be coordinated simultaneously across policy sectors, territorial units, and levels of government.

German energy transition is a particularly illustrative case to study cross-sectoral coordination in multilevel settings (Ohlhorst et al., 2014; Rave et al., 2013; Schreurs & Steuwer, 2017). Climate agreements and energy policies aiming to reduce GHG emissions and to enhance the share of renewables in the energy mix are being pursued in most Western democracies. But Germany was the first country in Europe, beginning in the 1960s, to produce a distinct renewable energy policy as part of the environmental protection policy at regional and local levels (Eppler, 2009, p. 323f.). In 2011, carried by an overwhelming societal consensus in reaction to the Fukushima disaster, the

federal government declared energy transition as one of its prime goals and invested considerable effort in coordinating this huge project with the German substates (called *Länder*) and across policy sectors (Kemmerzell 2022; Ohlhorst, 2015; Stefes, 2014). What is more, Germany is a good case to study MLG, as the federal architecture provides multiple arenas of tightly coupled, loosely coupled, and decoupled decision making (Benz, 2019b), and the cooperative federal culture endows policy makers with routines and templates in multilevel negotiations. In this system of cooperative federalism, the Bundesrat has a core position and a long tradition of making coordination work (Hegele, 2018; Scharpf, 1989). Indeed, it may be a unique institution in systematically enabling cross-sectoral as well as multilevel coordination due to its constitutional role, its internal structure, and its working procedures. We thus take the coordination of German energy transition in the Bundesrat as a case for empirically testing the expectations derived from our analytic framework. We argue that the Bundesrat is a good example of a system of loosely coupled institutions, where coordination actors represent various dimensions over time, such as *Länder* and their interests, party ideologies, or arguments and perspectives pertinent to specific policy sectors. During the “Bundesrat process”, they interact in distinct yet responsive institutions such as *Länder* cabinets, Bundesrat committees, or party meetings, thereby putting complex coordination into practice.

STATE OF RESEARCH AND ANALYTICAL FRAMEWORK

Most policy problems, but complex or wicked problems in particular, cannot be solved by designing policies with a purely sectoral perspective. By neglecting externalities, sectoral policies are often incoherent, overlap or are in conflict with each other (Briassoulis, 2004, p. 2). Policy integration theory aims at conceptually grasping those complexities. To achieve policy integration, “measures from adjacent policy areas [must be taken] into account” (Tosun & Lang, 2017, p. 553) and be compatible to each other. In other words, sector-spanning coordination is necessary.

The problem of how to achieve coordination has been a puzzle not only for policy integration literature, but also for MLG theory (Howlett et al., 2017). MLG goes beyond the policy integration paradigm, as it systematically takes into account also problems of territorial unit- and level-spanning coordination by emphasizing governance under conditions of institutional complexity due to the vertically layered structure of government (Bache & Flinders, 2004; Hooghe & Marks, 2001). From this complexity follow interdependencies between actors which need to be accounted for in coordinative processes (Benz, 2020, p. 16).

Both policy integration and MLG theory are still ambiguous as regards their core concepts (Tosun & Lang, 2017; Trein et al., 2019). Most importantly, the concept of coordination, or integration alike, can denote the *result* of coordination attempts, that is, a policy *outcome* can be coordinated (or not); or it can denote a *process* aimed at solving coordination problems irrespective of the quality of the outcome (Peters, 1998, p. 296; Schnabel & Hegele, 2021). Similarly, Maggetti and Trein (2019) distinguished a processual and a results oriented aspect of problem solving. The dual connotation is also explicitly acknowledged in MLG, which is understood as a configuration, providing a framework for structures as well as processes (Behnke et al., 2019, p. 3). In line with the structural perspective, Piattoni interpreted MLG as a form of “polity structuring” (Piattoni, 2010, p. 21ff.), that is, as institutional arrangements that link or separate powers across levels of government in order to create the institutional interdependence necessary for matching the complexity of policy problems. The processual perspective, on the other hand, interprets multilevel institutions as an incentive structure for governmental actors to coordinate their actions while strategically pursuing their interests (Marks, 1996). In those strategic interactions,

processes of internal position formation of corporate actors (Scharpf, 2000, pp. 101–107) need to be taken into account (e.g., between parties in coalition governments or between government and parliament to form a territorial unit's external position) to understand intergovernmental negotiations (Hegele, 2018).

So, while the fundamental puzzle is how to achieve coordinated policy making in complex policies (a) across the traditional boundaries of policy sectors with their respective institutional arrangements, (b) across territorial units in a compound polity, and (c) across levels of government, both theories mainly limit their ambition to the question how to organize the process of coordination such as to *improve chances for achieving* a coordinated outcome. The final causal link from process to outcome is by necessity fallible and empirically hardly traceable. We follow this line of research in that we do not investigate empirically whether or to what degree coordination processes result in coordinated outcomes. Rather, we focus on the process, and assume that there is a positive connection between the two.

Policy integration theory offers several suggestions how coordination processes need to be organized to achieve an integrated or coordinated outcome. The first suggestion takes an organizational (or meso-level) perspective. As policy sectors are typically organized in sectorally distinct institutions (government departments, parliamentary committees, and the like), it is necessary to identify and *remove organizational–structural obstacles* to coordination (Bach & Wegrich, 2019; Hustedt & Danken, 2017; Peters, 2015). Organizational–structural obstacles can be not only formal unit boundaries and distinct bodies of personnel (Koop & Lodge, 2014), but also turf protecting (Bardach, 1996) or budget enhancing motivations (Niskanen, 1968) of individual organizational units.

The second suggestion takes a psychological (or microlevel) perspective, and has been formulated, for example, in the subfield of environmental policy integration (EPI). EPI suggests to organize policy making such that policies “talk to one another” (Briassoulis, 2004, p. 13). In a similar way, raising awareness among actors for the integrated nature of a policy and *developing shared goals* are regarded as conditions for policy integration (Briassoulis, 2004, p. 9; Trein et al., 2019, p. 333), a mechanism which has also been identified as an important factor in collaborative governance processes (Ansell & Gash, 2008) and which has commonly been denoted as “mainstreaming” (Runhaar et al., 2018).

The third suggestion to be found in the policy integration literature recommends to *acknowledge the dynamic and processual nature* of policy integration (Candel & Biesbroek, 2016) and concomitantly to take the mechanistic and processual aspects of policy integration more systematically into account (Trein et al., 2020). In a similar way, procedural policy tools are understood as mechanisms that “affect the behaviour of actors involved in policy [-making and] implementation” (Howlett, 2023, p. 8).

How can those rather abstract suggestions—removing organizational–structural obstacles among institutions, developing shared goals among actors, and mirroring the dynamic nature of the coordination process—be put into practice? Here, relying on MLG is helpful: It emphasizes a systematic linkage between the institutional setting and strategic actors in negotiations as key to the potential of multilevel arrangements for enabling policy coordination. This linkage needs, however, to be loosely coupled in specific coordination arenas (Benz, 2015). Loosely coupled arenas allow actors to pick different venues and strategies for coordination in a flexible manner, thereby enabling them to cope with the real complexity of the problem at hand. In this sense, loose coupling has been identified to promote coordination across policy sectors, territorial units, and levels of government, respectively (Benz, 2019a; Trein, 2017).

While loose coupling is a very intuitive notion, it is not immediately obvious what it means specifically, and why and how loose coupling presumably holds this superior coordinative potential.

Coupling describes the relationship between different parts of an organization or of a system along the dimensions of distinctiveness and responsiveness (Orton & Weick, 1990, p. 219). If parts are clearly distinct from each other, but react responsively to each other, then the system is loosely coupled. If, on the other hand, they are not distinct, then it is tightly coupled; and if they are not responsive, then it is decoupled (Orton & Weick, 1990, p. 205; see also Trein, 2017, p. 423). Loose coupling, according to the definition by Orton and Weick (1990), is thus a structural as well as a processual property of parts of an organization or of a system such that those parts interact to keep the organization functioning, but at the same time they are different enough to ensure adaptability and flexibility. The effect of loose coupling—in contrast to tightly coupled or decoupled instances—is to secure some degree of coordination, while keeping interactions sufficiently open and flexible to avoid deadlocks. Conflicting views and interests are reconciled on a temporary basis, thereby “resolving” problems without necessarily “solving” them once and for all (Briassoulis, 2004, p. 7).

The superior coordinative potential of loose coupling can be illustrated by comparing it with centralized decision making. As the discussion of “Joined-up government (JUG)” (6, 2004) and “Whole of government (WOG)” (Christensen & Laegreid, 2007) illustrates, bundling decision powers hierarchically is often proposed as an appropriate solution for complex coordination problems in governments. The idea that centralization solves coordination problems rests, however, on the (questionable) assumption that an objectively given best solution exists which only needs to be uncovered and enacted. If such a solution exists, central coordination can indeed bring about smooth and efficient implementation, keeping resistance and frictions low. Yet, it is unclear whether the best solution, if it exists, is indeed found by one central actor alone. What is more, complexity theory argues that for complex or wicked problems it is far from obvious what the best solutions are (Duit & Galaz, 2008). Wicked problems have unclear boundaries, shifting groups of agents, nonlinear dynamics, and involve conflicting goals (Briassoulis, 2004, p. 6; Loorbach, 2010, p. 164). Centralized organizations are inherently unapt to process such problems, because the strict organizational structures cannot appropriately mirror the complexity of the problem (Boin et al., 2016, p. 50).

Rather, to successfully deal with complex problems, a system of governance must reflect the diversity of functions of its various parts and establish processes and structures that deal with the interdependencies between them (Benz, 2019a, p. 390). In such a loosely coupled system of decision making, coordination does not primarily serve the purpose of finding and enacting the “one” right solution; rather it acts as a “learning system” and organizes a process of information gathering, interest formation, opinion formulation, and consensus building, thereby improving the quality of the final decision. Most importantly, perhaps, in the light of diverging points of view and interest, it keeps a dialog alive and helps avoiding deadlock in negotiations (Behnke, 2018, p. 40; Hueglin, 2013, p. 190f.). The analytical framework underlying our investigation can thus be summarized by Figure 1.

While we cannot empirically test the link between process and outcome, we analyze in which way the Bundesrat as a loosely coupled arena enables mechanisms that promote policy integration.

COORDINATION OF ENERGY POLICY IN GERMAN FEDERALISM

The nature of energy transition as a wicked policy problem calls for intense sector-, unit-, and level-spanning coordination. In addition, the institutional set up of energy policy making and

| problem | requires | arena | enables | process | results | outcome |
|--|----------|---|---------|---|------------|---|
| wicked problem: sector-, unit-, and level- spanning | → | loosely coupled arena linking institutions and actor strategies in multiple dimensions | → | 3 mechanisms: • removing obstacles • developing shared goals • incorporating dynamics | → | coordinated policymaking (all dimensions - policy integration and MLG) |
| energy transition as a wicked policy problem | → | Institution of the Bundesrat | → | Bundesrat process | → | energy transition as coordinated policy outcome |
| empirical description | | empirical investigation | | | assumption | |

FIGURE 1 Analytical framework and structure of the argument. *Source:* Own depiction.

implementation in German federalism enhances the complexity and creates multiple interdependencies that need to be integrated in coordinative processes. As a background for the analysis, we first describe the *problem* and its associated complexities and institutional interdependencies, in the multilevel and in the cross-sectoral dimensions (section “The complex problem of energy transition”). Next, we explain how the Bundesrat works as an *arena* of loosely coupled institutions (section “The Bundesrat as an arena of loosely coupled institutions”). Then, we develop expectations on how those interdependencies can successfully be dealt within the loosely coupled arenas of the Bundesrat *process* (section “Coordination mechanisms in the Bundesrat”).

The complex problem of energy transition

Energy transition as a multilevel problem

Energy transition as a multilevel problem has two dimensions: a vertical, level-spanning dimension in which complexity follows from the power distribution between levels of government; and a horizontal, unit-spanning dimension in which individual substates act with their diverse interests and preferences.

Energy production, transport, storage, and transformation are tightly linked to territorial and geographical conditions and require spatial coordination. Most obviously, renewables cannot be generated everywhere. For example, wind energy is produced along the shores, while other renewables are mainly produced in rural as opposed to urban areas (Gailing et al., 2013, p. 32). Also, energy consumption varies among regions (Gailing et al., 2013, p. 18). Thus, selecting sites for the facilities to generate renewable energy, planning and building routes for high-voltage grids, or drafting a scheme to fairly split costs among producers and users are all tasks requiring integrated planning.

Those complexities are processed in Germany's federal power distribution. The federal level is responsible for legislation. The Länder have limited autonomous legislative powers in matters related to energy transition, but they can influence federal legislation with their codecision rights in the Bundesrat. Policy implementation, on the other hand, is administered by the Länder and local governments (Kemmerzell, 2022, p. 679), in line with Germany's general architecture of “administrative federalism” (Behnke & Kropp, 2021; for a comprehensive list of Länder activities and powers see Ohlhorst, 2015, p. 308). Thus, the federal government depends crucially on

Länder cooperation to willingly implement federal decisions and to enable coordination across units and levels of government (Reimer, 2015; Schreurs & Steuwer, 2017). The Länder, on their part, communicate their policy position to the federal institutions, provide input on legislative proposals, and feedback on implementation problems.

The formal power to direct and coordinate energy transition lies with the federal department of economy and energy.¹ To this aim, it established five platforms for discussion to meet on defined topics with various stakeholders on a regular basis (BMW, Bundesministerium für Wirtschaft und Energie, 2014, p. 8f.; Kemmerzell, 2022, p. 679). Among those stakeholders are also the ministers of the Länder's energy departments. In this broad network of stakeholders, coordinated centrally by the federal government, the Länder are but one group of lobbyists among others. Also, as explained earlier, centralized decision making is rather unsuited to coordinate complex problems. In the Bundesrat, in contrast, unit- and level-spanning coordination in policy making as well as in policy implementation occurs between the federal level and the 16 Länder as equal partners inserting their individual interests in the negotiation process.

Energy transition as a sector-spanning problem

Energy transition spans various policy sectors, most prominently economy and environment. The imperatives of economic competitiveness on the one hand and environmental sustainability on the other are often incompatible (Selianko & Lenschow, 2015, p. 3). But even without outright policy conflict, the multiplicity of aspects that need to be jointly considered presents a major coordination challenge. Problems of coordination occur due to the tendency of each organizational unit to “protect its turf,” that is, to protect its jurisdictional autonomy and responsibility (Bardach, 1996; Wilson, 1989, p. 179ff.). Turf protecting behavior has been proven empirically to hamper cooperation between rivaling organizations (Hustedt, 2014), because such cooperation, while it may be necessary, bears the risk of having to accept shared leadership or even subordination under the leadership of another organization, compromises on substantial policies and shared responsibilities toward political principals.

Institutionally, energy policy in Germany is not clearly assigned to or established as one policy sector. As policies are typically institutionalized along policy boundaries, energy transition as a cross-sectoral problem is persistently dispersed among the policy-specific administrative organizations—ministerial departments at federal and Länder levels, sectoral ministerial councils, and parliamentary committees—of economy and environment, respectively. This is the case also in the Bundesrat. It has no separate energy committee, rather energy issues are discussed in other sectoral committees, mainly in economics and environment.

The Bundesrat as an arena of loosely coupled institutions

As the preceding description of the institutional locus of energy transition in the German federal system suggests, we argue that its composition and internal structure endow the German Bundesrat to serve as an arena in which actor strategies are institutionally coupled such that they can successfully deal not only with level- and unit-spanning, but also with cross-sectoral complexity of energy transition.

The Bundesrat provides a link for *level-spanning coordination* in that it institutionalizes Länder codecision rights in federal legislation (Brunner & Debus, 2008; Scharpf, 1989).

Bundesrat members are members of the Länder governments (not nominated by parliamentarians or popularly elected), thereby injecting the executive and implementation perspective in the federal legislative process. Votes are attributed to the Länder roughly according to their number of inhabitants, ranging from three to six votes per Land. Votes are cast “en block,” meaning that a Land cannot divide its votes between “yes” and “no.” While all federal legislation is discussed in the Bundesrat, only so-called “consent bills” require a positive majority of votes and thus give the Bundesrat as a whole the power to veto federal laws. “Objection” bills can be passed by the first legislative chamber, the Bundestag, without a consenting majority of Bundesrat votes.

The Bundesrat is also an arena for *sector-spanning coordination*. Like in any other working parliament, the main work of preparing legislation occurs in committees. To date, sixteen Bundesrat committees exist which mainly mirror the jurisdictions of the respective federal departments. The Länder send one or several coordination officials to the committees who come either from the Land’s respective sectoral department, from the head of government’s executive office (“state chancellery”), or from the Land representations in Berlin (Finke et al., 2020; Miller & Stecker, 2008; Schrenk, 2010). The committees’ main purpose is to exchange information and to coordinate positions concerning “their” sectoral agenda items for the next Bundesrat plenary, resulting in recommendations to the Bundesrat plenary from the sectoral point of view. After all involved committees have issued recommendations to the plenary, the Bundesrat secretariat combines those sectoral recommendations into one document recording not only consensus, but also disagreements between the committees. Sector-spanning coordination occurs furthermore during agenda discussions in the Land cabinets. As votes for each agenda item must be cast “en bloc” in the plenary, conflicts between sectoral departments which may pursue different lines in the Bundesrat committees need to be bridged in the Länder to formulate a unified position.

Finally, the Bundesrat is also an arena for *unit-spanning coordination*. In order to reach majority requirements both in committee and plenary votes, intense coordination between the Länder is necessary. In committees, recommendations are taken by majority rule (one Land, one vote principle). In the plenary, given the majority requirement for consent bills, the Länder as a group can only veto or propose amendments to federal legislation with a majority of votes. Prior to plenary meetings, the Länder therefore meet in party groups according to the party affiliation of their head of government to coordinate their votes and to broker majorities.

At first glance, scholars of German federalism might argue that the Bundesrat is an instance of tight rather than of loose coupling, as it is an arena for (compulsory) joint decision making between levels of government. Indeed, in its role as second chamber endowed with veto rights, it is tightly coupled to the Bundestag in federal legislation. But the Bundesrat is also an institution in which Länder delegates prepare a plenary vote (Hegele, 2018). In this role, negotiations and decisions in committees, cabinet meetings, and party meetings are loosely coupled across various dimensions and over time. The loosely coupled aspect of the Bundesrat is well exemplified by its committees: formally, they are distinct institutions, represent different policy sectors, are staffed by different persons, and decide (in part) on different topics. Factually, on the other hand, committees are not as homogenous as implied. Members come from institutions that potentially represent different combinations of policy sectors depending on the portfolio allocation in the various Länder governments, which has important implications on position formation and coordination (Hegele, 2021). As most governments at federal and Länder levels are coalition governments, the departmental allocation is also linked to different party ideological affiliations. Hence, committees form arenas providing

incentives to bridge institutional boundaries along various dimensions. Furthermore, mutual responsiveness between committees is procedurally required since each Land strives to achieve a coherent Land position across committees and, ultimately, the Bundesrat secretariat compiles a joint recommendation from the various committees.

Coordination mechanisms in the Bundesrat

As was demonstrated, the Bundesrat can plausibly be interpreted as a loosely coupled arena linking institutions and actor strategies flexibly across multiple dimensions. What remains to be seen is whether and how the mechanisms identified above that supposedly promote policy integration are indeed at work. More specifically, we link institutional and procedural aspects of negotiation and decision making in the Bundesrat as explained in section “Coordination of energy policy in German federalism” to the mechanisms identified in section “State of research and analytical framework” and derive empirical expectations.

Removing organizational–structural obstacles

As explained in section “Energy transition as a sector-spanning problem”, in the Bundesrat committee structure, there is no separate committee for energy. Energy items are regularly discussed both in the economics and in the environmental committee (or even in a number of other committees), thereby creating organizational–structural obstacles to forming an energy subsystem. Instead, energy experts are dispersed across various committees in which they discuss energy-related matters with a focus on their original departmental denomination. They thus belong in part to their committee's policy sector (either economy or environment), yet at the same time they share a common expertise and interest in energy matters. To the degree that energy experts are dispersed across different sectoral committees, they are more likely to transcend the boundaries of policy sectors and establish bonds with their counterparts in neighboring committees. In this sense, cross-cutting affiliations lower structural obstacles (Behnke, 2019). As the committee composition is a direct result of sectoral and party political affiliation of the respective Länder departments, committee members have also heterogeneous party political backgrounds and may potentially represent cross-cutting cleavages. When party affiliations cross cut sectoral boundaries, they offer additional venues for building co-operative networks.

From those considerations follows our first expectation:

E1: Cross-cutting affiliations of coordination actors lower organizational–structural obstacles.

Cross-cutting affiliations among committee members exist if departments responsible for energy in the Länder display different denominations and/or are led by different parties. If all energy departments are linked to the same policy sector and are headed by ministers from the same political party, then no cross-cutting affiliations exist. If committee members form coherent subgroups that are not detached from each other but are interconnected, this is taken as an indicator for low organizational-structural obstacles.

Developing shared goals

While it may be a necessary condition for policy integration to remove organizational–structural obstacles, it is not sufficient. In addition, various aspects of the Bundesrat process contribute to developing shared goals. Most important is the assignment of items to committees. In line with the federal department of economy’s lead role in coordinating energy transition, often the economics committee is given the role of lead committee in discussing energy items and developing a recommendation for the Bundesrat plenary. If, however, other committees claim to be involved, they can discuss the same item in parallel committees (Alter, 2002). Each committee formulates a recommendation for the Bundesrat plenary. When items are discussed in several committees, they may yield contradictory recommendations. Those recommendations are compiled by the secretariat of the Bundesrat into one joint recommendation and sent to the plenary as a basis for the final vote. The lead committee routine, and in particular the necessity to compile joint recommendations, encourage committee members to consider the discussions in the neighboring committees, thereby contributing to forming shared goals.

Another relevant aspect is (again) the cross-cutting affiliations of committee members. To the degree that preference formation of committee members is mainly focused on their home department, they are likely to be motivated by sector-specific interests and/or turf protection considerations, thereby hampering policy integration (Hegele, 2021). Being delegates of their Land governments, committee members also need to take the position of other sectoral and party ideological positions in their Land government into account. As Land votes in the Bundesrat plenary cannot be split, they must by necessity transcend sectoral boundaries to form a shared position in government.

From those considerations follows our next expectation:

E2: The simultaneous evocation of several coordination dimensions contributes to developing shared goals among coordination actors.

The discussion of one bill in at least two committees is used as an indicator for simultaneous evocation of several coordination dimensions. Then, committees may potentially form divergent (sectoral) positions, necessitating coordination within one Land between the involved departments and also across Länder between departments led by the same party to ease this conflict. If, on the other hand, a bill is discussed only in one committee, recommendations by necessity mirror solely a sectoral perspective.

We assess the existence of shared goals as a result of the coordination process by analyzing the final recommendation as it is sent to the Bundesrat plenary. This document, compiled by the Bundesrat secretariat, reports the committees’ general assessment of the bill (consent, reject, change) as well as suggestions for reformulation by one or several committees. If committees agree in their assessment, this is an indicator that shared goals exist across committees.

Incorporating dynamics in the coordination process

Probably the most demanding assumption is to take the procedural aspects of policy integration more systematically into account. The process of preparing the Bundesrat plenary is sequenced in 3 weeks—the “committee week,” “the coordination week,” and the “plenary week.” In every week, different constellations of actors meet to negotiate and decide on the agenda items

presented for the plenary session. Initially, technical details are discussed among experts. In the end, political considerations prevail and compromises are found among political generalists in an effort to manufacture majorities for policy outcomes close to a Land's ideal position. This sequenced process allows actors to flexibly shift their focus between sector-, unit-, and party-specific coordination dimensions.

From those considerations follows our third expectation:

E3: A shift in focus on coordination dimensions leads to a dynamic coordination process over time.

A shift in focus on coordination dimensions will be empirically substantiated if actors involved and relevant negotiation dimensions indeed vary in a systematic way during the Bundesrat coordination process prior to the plenary. We assess this by deriving the logic of the situation of each week's setting for the actors in a detailed narrative description of the Bundesrat process.

A dynamic in the coordination process is indicated by an observable change in actor coordination behavior. We hence assess empirically who the actors coordinate with and whether groups of actors form subgroups during the process. Dynamics will be assumed if the coordination partners and subgroups change over time.

METHOD AND DATA

Based on MLG and policy integration theory, we deduced expectations on the mechanisms through which loose coupling facilitates the coordination process. In our empirical investigation, we confront these theoretically deduced expectations with the empirical reality of the coordination of energy policy in the German Bundesrat.

We selected the coordination mechanism of energy transition in the German Bundesrat as a crucial case in the weak sense that Gerring (2007, p. 232) specified, as the Bundesrat per design integrates elements of level-, unit-, and sector-spanning coordination. If the mechanisms of policy integration cannot be observed in the loosely coupled arena of the Bundesrat, then there is strong reason to suspect that the theoretical assumption on which this argument rests—that loose coupling enables coordination of wicked problems—does not hold.

We test our expectations with three original datasets. First, to illustrate the cross-cutting affiliation of committee members in energy matters (E1), we collected a data set on the departmental denomination of energy at Länder level and the party affiliation of energy ministers in the respective Bundesrat committees in 2015. Second, to analyze joint involvement of committees in energy-related legislative processes as well as shared goals among committees in those processes (E2), we coded and analyzed Bundesrat committee recommendations from 2014 to 2018. Committee recommendations were retrieved using the Bundesrat printing matters online research tool,² searching for matters containing catchwords such as “energy policy” or “energy transition.”³ The research yielded 215 printed matters related to energy issues for the 4-year period. They were coded according to the committees to which they were assigned and according to the recommendations made by the different committees. The frequency of coassignment of agenda items to both the environment and economics committees indicates the intensity of joint involvement, while contradictory recommendations were coded as instances of cross-sectoral conflict, that is, the absence of shared goals.

TABLE 1 Cross-sectoral assignment of energy matters and party affiliation in the respective Länder departments (2015).

| Land | Departmental denomination for energy policy | Party affiliation of the minister | Party affiliation in the committee of economic affairs | Party affiliation in the committee of environment |
|-------------------------------|---|-----------------------------------|--|---|
| Baden-Württemberg | Environment, climate, energy | Green | SPD | Green (energy) |
| Bavaria | Economy and media, energy and technology | CSU | CSU (energy) | CSU |
| Berlin | Urban development and environment | SPD | CDU | SPD (energy) |
| Brandenburg | Economy, energy | SPD | SPD (energy) | SPD |
| Bremen | Senator for environment, housing and transport | Green | SPD | Green (energy) |
| Hamburg | Environment and energy | Green | No affiliation | Green (energy) |
| Hesse | Economy, energy, transport, spatial development | Green | Green (energy) | Green |
| Mecklenburg-Western Pomerania | Economy, energy, housing, tourism | CDU | CDU/SPD (energy) | SPD/CDU |
| Lower saxony | Environment, energy, climate | Green | SPD | Green (energy) |
| North Rhine-Westphalia | Economy, energy, industry, craft | SPD | SPD (energy) | Green |
| Rheinland-Palatinate | Economy, climate, energy, spatial development | Green | Green (energy) | Green |
| Saarland | Economy, labor, energy, transport | SPD | SPD (energy) | SPD |
| Saxony | Economy, labor and transport | SPD | SPD (energy) | CDU |
| Saxony-Anhalt | Environment, agriculture and energy | CDU | CDU | CDU (energy) |
| Schleswig-Holstein | Energy, agriculture, environment, rural areas | Green | SPD/Green | Green (energy) |
| Thuringia | Environment, energy, ecology | Green | SPD/Green | Green (energy) |

Source: Own depiction.

Third, to analyze the effects of organizational–structural boundaries on actor coordination behavior (E1) and the dynamics of the coordination process (E3), we used data from a standardized online network survey that we conducted between August and November 2015. The survey was not focused on any specific legislative process, but aimed at capturing the coordination process of the Bundesrat as a whole. The sample for the network survey comprised ministerial officials responsible for multilevel coordination in the government chancelleries (coordination section), in all Länder ministries, as well as the Land representations (Bundesrat and mirror section) of all 16 German Länder. Of the 171 respondents whom we had identified based on a position analysis as being part of the network, 112 answered the questionnaire, yielding a response rate of 65%. Respondents were asked to identify their own institutional affiliation, institution(s) they were attending in coordination processes, the policy field they were belonging to, and the persons with whom they had contact during the coordination processes of the Bundesrat.⁴ Based on these responses, we asked each respondent to identify the point of time of the contact (week 1, 2, or 3 in the Bundesrat process). The relations between the actors can thus be interpreted as subjectively reported typical coordination contacts over the last year. We did not display frequencies of contacts, but used binary codes whether or not a contact had been reported. If respondents indicated no coordination contact with another actor, this either means that no coordination took place or that it is not relevant to the actor. The network dataset thus contains information about the actors according to their position (i.e., coordination official in the ministry A of Land X) which represent the nodes of the network; and the contact relations identified by each actor to other actors as well as the time point during the Bundesrat process as network ties (Hegele, 2018).

ANALYSIS: CONDITIONS FOR PROCESSING COMPLEX COORDINATION

Removing organizational–structural obstacles

In E1, we argued that the actors negotiating energy issues in the Bundesrat committees are more likely to establish links across institutional boundaries if they expose cross-cutting affiliations. Such cross-cutting affiliations result from the denomination and party affiliation of energy in Länder departments and the ensuing composition of the economics and environmental committees in the Bundesrat.

As Table 1 displays, in exactly half of all Länder (8 of 16), energy matters were assigned to departments of environment, and in the other half to departments of economy. In six cases, Green ministers head environmental departments with a denomination in energy, in one case the minister is a member of a conservative party (CDU/CSU), and in one case of the social democratic party (SPD). Economics departments with an energy denomination are headed by four SPD ministers, two CDU/CSU ministers, and two Green ministers. We can see that environmental departments are more often headed by Green ministers, whereas there is no clear tendency in economics departments.

The economics and environmental departments of the Länder send their representatives to the economics and environmental committees in the Bundesrat. The ensuing committee composition clearly exposes a pattern of cross-cutting affiliations in terms of policy sector and party identity: In the economics committee, the CDU and CSU have three to four votes, the SPD has eight to eleven votes, and the Green party has two to four votes. Split votes indicate that the

committee is staffed by either of two or more ministries depending on the issue of debate. This is particularly relevant for energy issues, depending on whether they are in the jurisdiction of the ministry of economy or some other ministry. In the committee of environment, the Green party holds a majority of nine votes, the conservative parties and the social democratic party both have four to five votes. Regarding policy sectors, again we can observe an even split. Half of the representatives in the economics committee come from a department with an energy denomination. The same is true for the environmental committee. Obviously, affiliations in the committees strongly crosscut along multiple dimensions.

This cross-cutting pattern of party and policy sector affiliation suggests that the officials with an “energy” denomination will interact across committee boundaries in energy matters. Network analysis of interaction patterns between officials in the respective committees confirms this pattern, as assumed in E1. We used the survey data to reconstruct a general network of coordination among officials during the coordination process of Bundesrat decisions for all sectors. Furthermore, we extracted three sectoral networks consisting of the coordination actors responsible for of economy, environment, and energy, respectively. Each sectoral network consists of 16 coordination actors, one from each Land, where the energy network is constituted by officials from the Länder ministries with an energy denomination. To compare the networks, we used a density measure of social network analysis. Network density expresses the percentage of realized contacts in relation to all possible contacts among the actors in the network. The more contacts exist in the network, the denser it is, reaching a maximum density of 1 if every person in the network has contact with every other person (Hanneman & Riddle, 2005, ch. 8).

Table 2 shows that the density of the energy network is higher than that of the overall network, thus indicating a higher coordination intensity and routine among the energy actors. It is, however, less dense than the “pure” sectoral networks of economics and environment. The comparison of densities illustrates that the coordination of energy transition during the Bundesrat process is distinct from other environmental or economic issues. The existence of these denser sectoral networks shows that there indeed are organizational–structural obstacles which need to be overcome by the actors responsible for energy coordination.

The challenges of sector-spanning coordination in the energy network are clearly discernible in Figure 2: within the overall network of energy departments, the subgroups of the ministries of environment and energy (green) on the one hand and of the ministries of economy and energy (blue) on the other form tighter clusters. Yet, the coordination behavior is not completely impeded by the organizational–structural boundary of policy sectors. There exists coordination across the policy subgroups indicating that actors are able to lower the organizational–structural boundary between the sectors of economy and environment, thus empirically supporting E1.

TABLE 2 Densities of the bureaucratic networks.

| Network | Number of actors | Density |
|---------------------------|------------------|---------|
| All ministries | 171 | 0.08 |
| Ministries of economy | 16 | 0.33 |
| Ministries of environment | 16 | 0.40 |
| Ministries of energy | 16 | 0.29 |

Source: Own depiction.

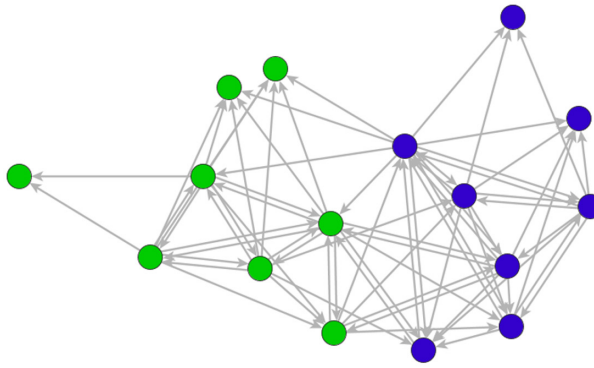


FIGURE 2 Coordination network of the bureaucrats from the Länder energy ministries. *Source:* Own depiction. Green nodes representing ministries of environment and energy, blue nodes ministries of economy and energy using Visone (Baur et al., 2002). Ties represent coordination contacts (see above).

TABLE 3 Involvement of Bundesrat committees in energy policy.

| Bundesrat committee | Lead | Involved (no lead) | Total |
|---------------------|------|--------------------|-------|
| EU | 84 | 6 | 90 |
| Economics | 68 | 100 | 168 |
| Environment | 20 | 122 | 142 |
| Others | 18 | 303 | 321 |
| Total | 190 | 531 | 721 |

Source: Own depiction, data from <http://www.bundesrat.de>.

Developing shared goals

In E2, we argued that several coordination dimensions are evoked simultaneously if more than one committee is involved in coordinating energy items. As a result, coordination actors are likely to develop shared goals. Of the 190 items in our sample that were assigned to a lead committee, meaning that more than one committee was involved, in 84 cases, the EU committee had the lead. This high number is mainly due to the European legislative process. Information from the EU commission is regularly taken notice of in the Bundesrat, but few of those issues trigger an immediate action. Of the remaining 106 items that are not related to European legislative activities, on 68 items (64%), the economics committee had the lead; on 20, the environmental committee (19%); and on 18, other committees (Table 3).

Joint involvement of committees in energy items is overall high. Up to nine committees were involved in energy items. Twenty-three items were assigned to one committee only, six among which to the economics committee, and two to the environmental committee. The economics committee was involved in 168 (88%) of 190 items and the environmental committee in 142 (75%) of 190 items. In 50 of the economics committee's 68 lead items, the environmental committee was involved (74%), and vice versa the economics committee was involved in 17 of the environmental committee's 20 lead items (85%). Those numbers illustrate the high mutual involvement of the two committees in energy matters, thus indicating that several coordination dimensions are being invoked simultaneously.

Second, we analyzed if this leads to the development of shared goals as documented in the committee recommendations. We coded the synthesized recommendations on an ordinal 3-point scale with “3” indicating high conflict (two committees issue contradicting recommendations on how to treat the motion—accept, reject, or amend); “2” indicating moderate conflict (the committees generally agree on whether the motion should be accepted or rejected but have different ideas of how to amend them); and “1” indicating no conflict (the committees back the same recommendation).

As is shown in [Figure 2](#), among the 107 motions that were voted on by both the economics and the environmental committee, 42 motions (~40%) did not display any conflict between the committees of economy and environment; 40 motions (~37%) showed a moderate level of conflict. In 25 motions (~23%), the two committees gave conflicting recommendations. The pattern of intercommittee coordination and conflict thus moderately underpins E2, yet the evidence is mixed. While a consensus rate of 40% of items discussed in two or more committees proves that coordination can work fairly well, in 60% of the items, the votes display a moderate or high conflict which needs to be resolved in the Bundesrat plenary.

Incorporating dynamics in the coordination process

In expectation 3, we assumed that a shift in focus on coordination dimensions leads to a dynamic coordination process over time.

The process of preparing the plenary sessions is organized as a highly ritualized 3 weeks' sequence of negotiations and discussions during which actors from various governmental institutions of the Länder repeatedly interact. The process begins with the “committee” week during which the committees discuss the agenda items from a policy sector perspective. Coordination in the first week hence is mainly intrasectoral, but unit spanning; the main actors are the departments. During the second week, the “coordination” week, committee recommendations are discussed not in Berlin, but in the Länder state chancelleries and cabinets with the aim to reach coordinated Länder positions. Thus, this week emphasizes intraunit but sector-spanning coordination. In this step of the coordination process, potentially contradictory sectoral perspectives are balanced among coalition partners. Main actors during this week are the government chancelleries. In the third week, the “plenary” week, when actors are back in Berlin, parties play a crucial role. As almost all Länder governments are coalition governments, party organizations form an additional layer of coordination which cross-cuts the Länder and also policy boundaries, thus is unit and sector spanning. In preparatory party meetings during the third week, (so-called A, B, and G rounds), flexible adjustments of the Länder positions are negotiated taking into account the vertical conflict dimension with the federal level, sectoral conflict dimensions between institutionalized policy sectors, and horizontal conflicts among the Länder (Finke et al., 2020; Leunig, 2006). Because these negotiations take place on site in Berlin, the Land representations are the main actors. Within this institutionalized rhythm, we find that several shifts in focus are built in along the 3 weeks' sequence. Actors can shift the focus of coordination efforts over time according to strategic considerations—from sector-specific negotiations in committees balancing Länder and party conflicts in the first week; over sector-spanning routines in the discussion of committee recommendations in Länder cabinets balancing conflicts between departments in the second week; to multidimensional negotiations, channeled along party lines and balancing Länder and sectoral conflicts in the third week. Thereby they can exploit the flexibility built in the institutional framework of loose coupling.

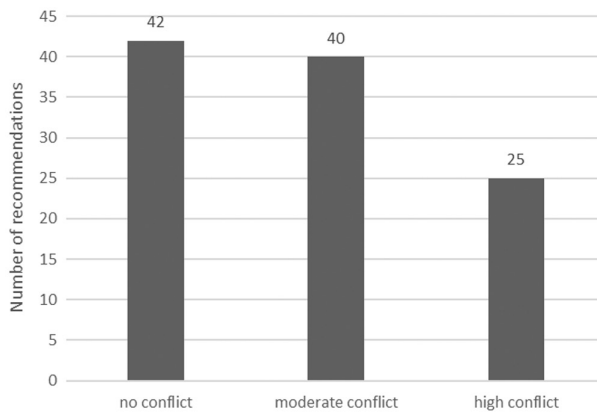


FIGURE 3 Level of conflict between Bundesrat committee of economy and environment in energy policy.
Source: Own depiction.

To assess the dynamic of the process, we further disaggregated the sectoral networks (see [Table 2](#) and [Figure 3](#) in section “Removing organizational–structural obstacles”) according to this 3 weeks sequence of the Bundesrat process. Indeed, we find distinctive differences between the weeks, as is shown in [Figures 4–6](#). In the *first* week ([Figure 4](#)), coordination is dense among the *sectoral departments* across all Länder. The departments form a cluster clearly distinct from the coordination cluster of the Land representations (pink nodes), but expose distinct subclusters of the departments of economics (blue) and environment (green), with the government chancelleries being located at the edges of the network (red). This shows that the focus of coordination in the first week is on the sectoral departments, which aim at formulating a sectoral position. The Land representations, even though they are in contact to each other, have mainly bilateral contacts to the sectoral departments.

In the *second* week ([Figure 5](#)), coordination between the sectoral departments is more dispersed, whereas *government chancelleries* and especially the *Land representations* form tight clusters across all Länder. The clusters mirror the primary aim of balancing sectoral positions within and across the territorial units.

In the *third* week ([Figure 6](#)), the *Land representations* form a dense cluster of coordination contacts at the center of the network, illustrating the intensity of last minute negotiations across policy sectors and territorial units. Actors still have bilateral contacts with sectoral departments and state chancelleries, but the other actors form no clustered networks. Overall, the sequence of networks mirrors the dynamic shift of coordination focus in the Bundesrat process over the 3 weeks, thereby confirming our third expectation.

CONCLUSION

The analysis in this article was driven by the overarching question how wicked policy problems that require simultaneously sector-, unit-, and level-spanning coordination can best be (re-)solved. Policy integration, MLG, and complexity theory provided the first (abstract) part of the answer: institutions, structures, and processes in a multilevel state architecture must be interdependent to mirror the complexity of the policy problem. Furthermore, they must be linked in a loosely coupled way that balances distinctiveness of institutions with their mutual responsiveness. Such

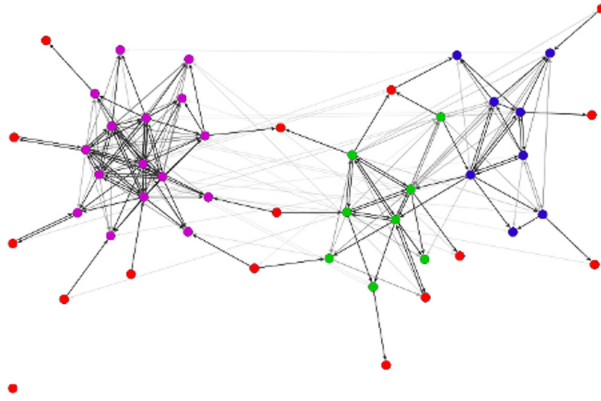


FIGURE 4 Coordination network of bureaucrats from government chancelleries and energy ministries: first week. *Source:* Own depiction. Green nodes representing ministries of environment and energy, blue ministries of economy and energy, red the government chancelleries, and pink the Länder representations in Berlin. Ties represent coordination contacts (see above).

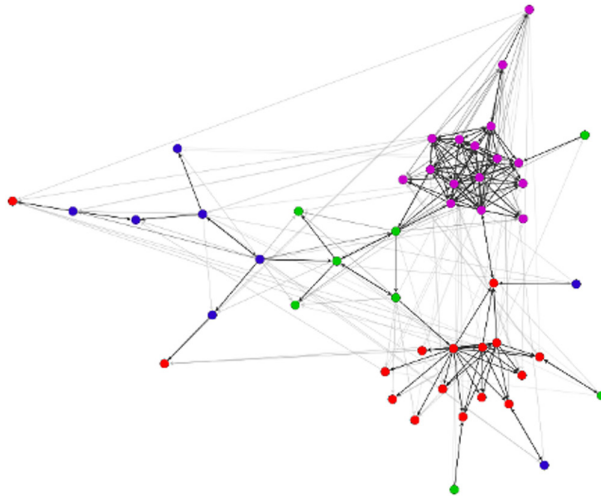


FIGURE 5 Coordination network of bureaucrats from government chancelleries and energy ministries: second week. *Source:* Own depiction. Green nodes representing ministries of environment and energy, blue ministries of economy and energy, red the government chancelleries, and pink the Länder representations in Berlin. Ties represent coordination contacts (see above).

a structure provides the conditions necessary for enacting those mechanisms that are likely to promote policy integration: removing institutional obstacles, developing shared goals, and incorporating dynamics the coordination process.

An empirical analysis of coordination processes in the German Bundesrat in the field of energy transition provided insights into how those mechanisms can be put into practice in an arena of loosely coupled institutions. Regarding the removal of organizational–structural obstacles (E1), it could be shown that the affiliation of coordination actors in the Bundesrat committees cross-cuts sectoral and party ideological dimensions. They form an energy network, yet remain connected to other actors from their policy subfield and their home government. The network

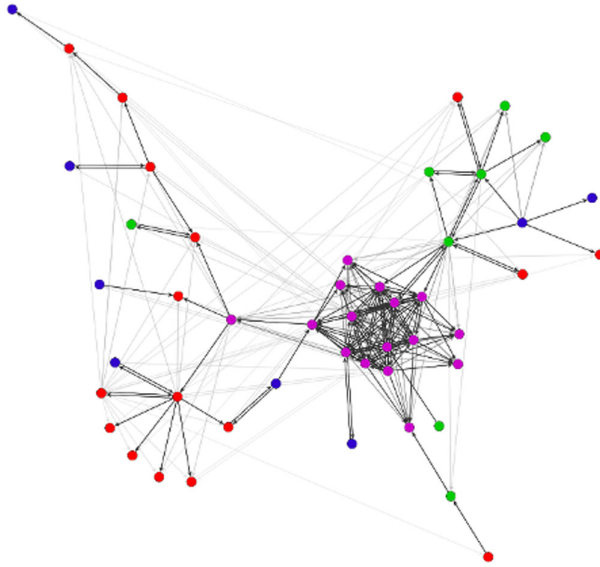


FIGURE 6 Coordination network of bureaucrats from government chancelleries and energy ministries: third week. *Source:* Own depiction. Green nodes representing ministries of environment and energy, blue ministries of economy and energy, red the government chancelleries, and pink the Länder representations in Berlin. Ties represent coordination contacts (see above).

structure thus exposes exactly the combination of responsiveness and distinctiveness that is the essence of loose coupling. If, on the other hand, energy evolved as a separate policy field with its own institutionalization, actors there would be even more tightly connected, but potentially lose their links to the neighboring policy fields of economy and environment.

Regarding the development of shared goals (E2), the practice of designating one committee as lead committee, yet allowing others to negotiate the same item is a practical device for institutionalizing loose coupling. Energy issues are typically discussed in multiple committees, mirroring various sector-specific perspectives. Yet committee recommendations are compiled into one joint recommendation for the plenary, thereby providing an appropriate mix of distinctiveness and responsiveness. However, in spite of cross-cutting affiliations with their home government, turf considerations provide a persistent obstacle, as 60% of all recommendations expose intermediate or high conflict.

Regarding the incorporation of dynamics in the coordination process (E3), a sequenced decision process allows actors to strategically shift their coordination orientations along various dimensions. The 3 weeks Bundesrat process manages the complexity of the multidimensional coordination challenge by providing an arena for changing actor constellations and coordination dimensions, allowing actors to find compromises at increasing levels of inclusiveness. A detailed description of the logic of the situation in each week highlights the shifts of coordination dimensions and centrality of actors involved. This finding is underpinned by an optical inspection of timely disaggregated network structures. It can clearly be seen that the involvement of different groups of actors varies along the coordination weeks. The sequenced process thus allows actors to strategically shift the focus of coordination between coordination dimensions over time, thereby mirroring the complexity of the policy in a dynamic processual way.

Empirically, we could thus show that the Bundesrat provides a loosely coupled coordination arena which enables mechanisms that are supposedly conducive to policy integration. From those

results, we can carefully generalize on how to institutionalize loose coupling. Loosely coupled institutions in multilevel structures can work by not separating powers, but linking them across multiple dimensions, by creating soft incentives for cross-sectoral communication, by taking into account the bridging potential of persons in negotiation arenas due to their multiple affiliations, and by sequencing the decision process to enable strategic shifts between coordination dimensions. By their capacity to use dispersed information, to avoid deadlock and to keep a dialog alive, the example of coordination mechanisms in the German Bundesrat shows that seemingly slow and complicated procedures can yet be the appropriate way to cope with wicked problems.

We argued that the Bundesrat is a crucial case for analyzing the effects of loose coupling. However, the combination of distinctiveness and responsiveness can also be strengthened in other existing settings. While most multilevel structures consist of distinct institutions, one explanation why policy integration often is not achieved might lie in the lack of responsiveness between those distinct institutions. Thus, policy makers in these systems might want to think about how to establish responsiveness if they aim at policy integration.

AUTHOR CONTRIBUTIONS

All authors contributed to the study conception and design. Material preparation and data collection and analysis were performed mainly by Yvonne Hegele, and in minor parts by Nathalie Behnke. The first draft of the manuscript was written by Nathalie Behnke and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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CODE AVAILABILITY STATEMENT

The codes used to analyze the data in the current study are available from the corresponding author upon reasonable request.

CONFLICT OF INTEREST STATEMENT

The authors have no relevant financial or nonfinancial interests to disclose.

CONSENT TO PARTICIPATE AND FOR PUBLICATION

Respondents in the survey participated voluntarily. They were fully informed on the purpose and conditions of the research. Confidentiality of respondents was guaranteed and strictly respected.

DATA AVAILABILITY STATEMENT

The datasets generated during and/or analyzed during the current study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

Research involved no animals.

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ENDNOTES

- ¹ Energy was prominently added to the portfolio of the ministry by organizational decree of the federal chancellor in December 2013 (see Federal law gazette vol. 2013, Part I, no. 75 of December 20, 2013, p. 4310).
- ² <http://www.bundesrat.de/DE/service/archiv/bv-archiv/bv-archiv-node.html>, last accessed December 20, 2022.
- ³ As the documents are written in German, in fact we used the German catchwords “Energie,” “Energiewende,” “Energieversorgung,” and “Energiepolitik.”
- ⁴ Respondents thereby were presented with a list of possible contact partners by position (not by name), and were asked “Please indicate with whom of the following actors you have contact during the preparation of the Bundesrat.” To further a joint understanding of coordination, we stated that: “By coordination contacts, we mean communication very broadly which (a) takes place in the preparation of the Bundesrat meetings, (b) consists of routinized multiactor or bilateral communication, and (c) can take several forms such as personal meetings, the exchange of calls, text messages, social media, or e-mails.” Furthermore, we acknowledged that “With whom you coordinate of course depends on the current agenda. For this reason, please try to indicate the relevant contacts which you had during the last year.”

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