

Toward a processual understanding of policy integration

Jeroen J. L. Candel¹ · Robbert Biesbroek¹

Published online: 21 March 2016

© The Author(s) 2016. This article is published with open access at Springerlink.com

Abstract The role of policy integration in the governance of cross-cutting policy problems has attracted increasing scholarly attention in recent years. Nevertheless, the concept of policy (dis)integration is still under theorized, particularly regarding its inherent processual nature. The main argument of this paper is that policy integration should be understood as a process that entails various elements that do not necessarily move in a concerted manner but may develop at different paces or even in opposite directions. To study such dynamic integration pathways, the paper proposes a multi-dimensional framework. Drawing on existing literature, the framework distinguishes four dimensions of integration: (1) policy frame, (2), subsystem involvement, (3) policy goals, and (4) policy instruments. For each of these dimensions, we describe different manifestations that are associated with lesser or more advanced degrees of policy integration within a governance system. Apart from offering an innovative theoretical approach that does justice to the dynamic and oftentimes asynchronous nature of integration processes, the framework allows for holding decision-makers accountable for promises they make about enhancing policy integration. Simultaneously, it is argued that the merit of lower degrees of integration should not be underestimated, as these may sometimes be the most feasible or appropriate for the governance of a cross-cutting problem.

Keywords Policy integration · Policy coordination · Integrated strategies · Policy coherence · Cross-cutting policy problems

✉ Jeroen J. L. Candel
jeroen.candel@wur.nl

Robbert Biesbroek
robbert.biesbroek@wur.nl

¹ Public Administration and Policy Group, Wageningen University, Hollandseweg 1, 6706 KN Wageningen, The Netherlands

Introduction

Many of today's most pressing societal challenges including terrorism, food security, climate change, involuntary migration, or underemployment (WEF 2015) are crosscutting the boundaries of established jurisdictions, governance levels, and policy domains. While it is recognized that these problems require some level of policy integration, severe integration challenges to policymakers and their institutional surroundings continue to exist (Briassoulis 2004; Geerlings and Stead 2003; Hovik and Hanssen 2015; Jochim and May 2010; Jordan and Schout 2006; Kettl 2006; Tosun and Lang 2013). Examples in the literature are abundant, including the problems of compartmentalization, fragmentation, competing and incoherent objectives, policy under- and overreaction, competing issue-attention, and inconsistent instrument mixes. These integration challenges emerge particularly when complex societal issues are confronted with traditional forms of subsystem policymaking within hierarchic governance systems (Jochim and May 2010; May et al. 2006). In these governance systems (sub-)sectoral policy is made by relatively stable actor configurations, each of which is characterized by specific sets of associated interests, belief systems, and problem perceptions (Baumgartner and Jones 2009; Sabatier and Jenkins-Smith 1993). Differences between subsystems generally do not allow for the coherent or holistic approaches that are needed to satisfactorily deal with problems of a cross-cutting nature (Jochim and May 2010). Rhodes (1991: 212) therefore aptly characterized the governance of these 'cross-cutting problems' through sectoral subsystems as resulting in 'policy messes.' What makes the governance of cross-cutting problems even more messy is that many are 'wicked'; in addition to cross-scale dynamics, these problems involve high degrees of ambiguity, controversy, uncertainty, and deadlocked interaction patterns (Rittel and Webber 1973; Termeer et al. 2015).

To overcome these integration challenges, governments and international organizations have introduced various initiatives to stimulate cross-sectoral policy integration between subsystems. Many of these initiatives, such as joined-up-government and whole-of-government, were developed as an answer to New Public Management (NPM) principles that had further worsened governance systems' abilities to deal holistically with cross-cutting policy problems (Christensen and Lægreid 2007; Halligan et al. 2011). Various scholars argue that it is somewhat surprising that this range of governance initiatives has not yet led to a general theory of policy integration in the political sciences (Geerlings and Stead 2003; Lafferty and Hovden 2003; Tosun and Lang 2013). Instead, the governance of cross-cutting policy problems has been studied through a plethora of approaches and schools of thought, all of which have distinct backgrounds and foci but also share considerable overlap (for overviews, see: Geerlings and Stead 2003; Tosun and Lang 2013).

Our aim in this paper is to theorize and bring some conceptual convergence in the debate on policy integration for the governance of cross-cutting policy problems. The concept of 'policy integration' was first used by Arild Underdal (1980) in the context of integrated marine policy. He argues that an 'integrated policy' is one in which the 'constituent elements are brought together and made subject to a single, unifying conception' (ibid.: 159). After his publication, the notion has primarily been used in the context of sustainable development, where it is referred to as Environmental Policy Integration (EPI) (e.g., Jordan and Lenschow 2010; Lafferty and Hovden 2003; Runhaar et al. 2014), and, more recently, as Climate Policy Integration (CPI) (e.g., Adelle and Russel 2013; Dupont and Oberthür 2012; Nilsson and Nilsson 2005). The principle of policy integration, however, remains the same: The objective of EPI is to incorporate, and, arguably, to

prioritize, environmental concerns in non-environmental policy domains,¹ with the purpose of enhancing environmental policy outcomes.

Whereas much of the early EPI literature understands the concept as a governing ‘principle’ or desired policy outcome, more recently scholars have directed their attention toward the ways in, and extents to which, EPI has become adopted within various political systems and policy processes, and the factors that facilitate or hinder this adoption (for an overview of this literature, see: Jordan and Lenschow 2010). These recent studies mark the shift toward a more processual approach to policy integration, i.e., one that proceeds beyond studying whether EPI has been implemented or not toward the dynamics and reasons behind (dis)integration. However, as Adelle and Russel (2013) put it, existing typologies have been mainly used to evaluate progress *toward* EPI (for example in: EEA 2005; Jordan and Schout 2006; Mickwitz et al. 2009), rather than approaching integration as an inherently dynamic concept in itself (i.e., as a derivative of the verb ‘to integrate’). As a result, integration just comes in one flavor: It is a desired state that is reached, or else we do not speak of policy integration at all. In this paper, we aim to reconceptualize policy integration by adopting a processual understanding of integration. The shift from a relatively static (desired) outcome centered approach toward a differentiated processual understanding of integration raises interesting questions about when integration is fully realized, what elements constitute integration processes, and how these may develop over time, inter-alia. To address these questions coherently and to align integration studies with adjacent theories on policy dynamics, we propose a conceptual framework that unpacks the notion of policy integration (Hogan and Howlett 2015). We thereby view policy integration as a multi-dimensional and ‘ongoing process’ (EEA 2005; Jordan and Schout 2006; Keast et al. 2007). This differentiated view recognizes that policy integration ‘...potentially has many various aspects which may not always ‘move’ in parallel or at the same speed’ (cf. Bauer and Knill 2012: 31). Through this pursuit, the framework aims to contribute to the advancement of the study of policy integration beyond the dominant domains of environment and climate change toward more general theorization.

Shortcomings of existing processual conceptualizations of policy integration

In the introduction, we already touched upon the EPI and CPI literatures and concluded that these literatures do not elaborate on the inherently processual nature of policy integration as a concept. At the same time, we acknowledge that a focus on the processual nature of integration is not entirely new to the public policy literature. Here, we discuss two notable examples of frameworks that *have* provided processual conceptualizations of similar notions: Metcalfe’s (1994) coordination scale and the cooperation, coordination and collaboration hierarchy proposed by several authors, including Geerlings and Stead (2003), Keast et al. (2007) and McNamara (2012). However, as we will discuss, both approaches have their shortcomings.

¹ We use both the concepts of policy domains and subsystems in this paper. Here, a policy domain refers to a substantive field of policymaking within a broader governance system, for example agriculture, foreign trade, or health. We use the concept of subsystems to signify the associated, relatively stable configurations of actors and institutions that are involved in the policy process within these domains, whereby a domain may comprise one or more subsystems.

First, Metcalfe (1994) focuses on degrees of (organized) coordination ranging from independent decision-making by ministries to a shared government strategy, in between which seven other steps are distinguished (for a variation on this scale, see: Braun 2008). The scale is still popular, as is illustrated by its use in recent extensive studies of coordination between public organizations and organizational entities (Bouckaert et al. 2010; Jordan and Schout 2006). Its main merit lies in that it provides a logical order of how coordination may increase (or decrease) over time, and as such provides a tool for comparison. However, the scale presents integration scholars with conceptual and methodological challenges, because it does not provide clear criteria or elements on the basis of which degrees could be distinguished. As a result, it is impossible to apply the scale systematically (compare, for example, applications in: Bolleyer 2011; Pelkonen et al. 2008; World Bank 2006). Differences between studies that apply the scale make it difficult to identify and compare patterns and mechanisms of integration that occur across cases. This point of critique is not restricted to the Metcalfe scale; most of the literature on policy integration discusses the elements that constitute integration processes in isolation, providing limited basis for theory building. One of the goals of our approach is to bring some systematicity by synthesizing these isolated accounts. A second point of critique regarding the Metcalfe scale is that it suggests a consequential order of various elements of integration that do not necessarily follow upon each other. For example, various scholars of sustainable development policy have showed that overarching strategies are not always preceded by instruments that substantially increase coordination and convergence between policy domains (e.g., Jacob et al. 2008; Jordan and Lenschow 2010).

A second approach within the public policy and management literature covers a similar proposal for a hierarchy ranging from cooperation to coordination to collaboration or integration (e.g., Geerlings and Stead 2003; Keast et al. 2007; McNamara 2012). Although the basic outlines are similar, small differences exist between the hierarchies of these authors in this approach. We believe such a hierarchy to be a promising way of conceptualizing policy integration as a process. However, existing hierarchies do, as with Metcalfe's scale, not entail clear constituting elements. In addition, these frameworks are generally developed in the context of social services provision (e.g., Keast et al. 2007; McNamara 2012) rather than that of studying the policy process and therefore omit dimensions that are crucial within a public policy perspective, such as policy instruments or subsystems involved.

What is more, both the Metcalfe scale and the integration hierarchy lack a clear theorization of the nature of change over time. As a consequence, policy integration appears to advance or diminish in a linear manner. Recent empirical accounts of integration processes, however, show that this is hardly ever the case and that, instead, dimensions of policy integration move at different paces (Adelle et al. 2015; Howlett 2009; Jacob et al. 2008; Jordan and Halpin 2006).

Starting principles of a processual approach

We propose to address the shortcomings of existing processual approaches to policy integration by putting the multi-layered and asynchronous nature of integration processes at its conceptual core. To do so, our framework builds around four dimensions of integration: policy frame, subsystem involvement, policy goals, and policy instruments. These dimensions will be elaborated in “[Four dimensions of policy integration](#)” section. We first

elaborate our four theoretical starting principles that underlie the dynamics of the framework.

First, we pose that *dimensions of integration do not necessarily move in a concerted manner*. In fact, virtually all integration processes will show some differentiation in the advancing of dimensions, which may increase or decrease at various paces and even in opposite directions. As a consequence, policy integration configurations are generally characterized by discrepancies or time lags regarding the degree or phase in which the dimensions of integration are to be found. We cannot talk about degrees of policy integration without understanding and appreciating these dynamics. Moreover, dimensions of integration do not necessarily ‘catch up’ with each other. A well-documented example of non-linear integration is the approaches to sustainable development that many countries and international organizations have deployed after committing themselves to international agreements. Jacob et al. (2008) show that whereas many governance systems design sustainable development policy objectives and frameworks, most do not come up to the mark with developing supportive instrument mixes that could realize the initially defined sustainable policy outcomes. There are various reasons for the occurrence of such partial or nonlinear integration; we mention three main reasons. First, lock-in effects may occur resulting from path dependency (Pierson 2000) and consequential policy layering. Pre-existing elements, such as dominant subsystems or policy instruments, are often remarkably resilient (Mahoney and Thelen 2009; Streeck and Thelen 2005). Even though they are complex and their inconsistent nature makes them costly to administer, they often remain in place because they serve vested interests (Rayner and Howlett 2009). There needs to be a strong and convincing case to change such existing elements. Second, connected to the previous, it is well known that certain aspects of the policy process are easier and more likely to change than other parts. For example, it is easier to change policy instruments than to change policy paradigms or core belief systems (Hall 1993; Pierson 1993). Third, governments or organizations may lack the political will or resources to proceed beyond discursive or symbolic action (Jacob et al. 2008; Jordan and Lenschow 2010). Mickwitz and Kivimaa (2007) put this even stronger in arguing that integration strategies that are ‘...merely cosmetic or introduced in order to diffuse attention and resist change should be distinguished from genuine policy’. Howlett (2014) shows that for new cross-cutting policy issues, such as climate change, governments are often risk averse and use blame avoidance tactics, including reverting to discursive forms of integration, thereby seriously hampering policy success. In addition to willingness, both administrations and individual policy officers may lack the capacity and skills to work in an integrative manner, for example to facilitate linkages with new subsystems or to pursue overarching goals (Bardach 1998; Hoppe 2010; Jordan and Schout 2006). In sum, asynchrony between different dimensions of policy integration is the rule, rather than the exemption when we consider policy integration as a process.

A second principle of our framework is that *integration is as much about positive (i.e., more integration) as it is about disintegration*. So far, most of the existing conceptual frameworks have focused on accounting for increasing policy integration, or on capturing the reasons for the lack or failure thereof. However, the literature provides various empirical examples of regime configurations with relatively high degrees of policy integration that weakened or collapsed in the past, such as the regimes around community empowerment and pollution abatement in the USA (Jochim and May 2010), the discontinuation of EPI efforts in Norway, Sweden and the EU (Jordan and Lenschow 2010; Nilsson and Persson 2008; Pallemarts et al. 2006), or the dismantling of the intergovernmental Dutch Spatial Planning to Climate Change (ARK) program (Biesbroek et al.

2013). Even the most advanced regimes in terms of integration can go out of fashion (Jochim and May 2010), often because the issue has been pushed off the macropolitical agenda by other policy problems that are perceived as more pressing (cf. Downs 1972). Or simply because the integrative efforts have served their purpose and the policy problem is (sufficiently) addressed. Policy integration efforts may also fall apart as a result of internal processes, such as frictions between supporting actors and institutions, changing ideas, or when they become self-undermining for other reasons (Keast et al. 2007; Rayner and Howlett 2009). Furthermore, integrative governance arrangements may be scaled down intentionally (cf. Bauer and Knill 2012), for example as a result of a collaboration fatigue (Halligan et al. 2011) or because political actors replace existing paradigms, such as joined-up-government, by new ones (Wilson 2000), as has happened in the UK and the Netherlands (Karré et al. 2013). Jordan and Lenschow (2010) argue that the political color of governments can play a role in this by showing that well-developed environmental policy integration regimes were scaled down when a number of European left-wing governments were replaced by right-wing governments. Again, this disintegration process is not static and parts might disintegrate faster than others.

Our third starting principle is that *mutual dependencies exist and interactions take place* between dimensions. Advancing insights from public policy studies have made us learn us that different types and levels of policy elements and contextual conditions can affect each other in numerous ways (e.g., Hall 1993; Howlett 2009; March and Olsen 1989; Sabatier and Jenkins-Smith 1993). Studying these interdependencies and interactions in the context of policy integration is a crucial next step for integration research. Based on recent understandings in policy studies, we formulate two hypotheses regarding the relation between dimensions of integration. The first hypothesis relates to the idea that there is a hierarchic and consequential order between the advancement of dimensions related to the institutional variables of policy regimes, such as actor configurations and undergirding beliefs, and variables related to concrete sets of policies, e.g., goals and instruments (cf. Hall 1993). Changes of the former are then a precondition for changes of the latter (Baumgartner and Jones 2009; Howlett and Ramesh 2003), implying that they advance at an earlier stage within an integration process. In concrete, this would mean that the advancement of policy goals and policy instruments toward enhanced or weakened policy integration is informed by and follows on shifts in the configuration of subsystems and associated prevalent cognitive and normative beliefs about the nature of the problem and its governance (Howlett 2009). A second and partly competing hypothesis is that dimensions of integration have a dialectic interaction effect. For example, whereas a change of dominant societal and political frames provides the opportunity for new subsystems to get involved in the governance of a particular cross-cutting issue, the reversed logic may also apply in that the inclusion or exclusion of new actors within a governance process can result in a change or adoption of beliefs (e.g., Baumgartner and Jones 2009). Similarly, the success of a policy integration instrument may lead to fundamentally rethinking the dominant policy frame of (how to tackle) the cross-cutting issue (“Policy frame” section). For example, the introduction of the Open Method of Coordination in European Union employment policy led to a new view on possibilities for EU integration in policy domains for which the member states felt reluctant to transfer jurisdictions to the EU-level, such as for health policy (de la Porte 2002; Princen 2009).

The fourth and final starting principle is that *policy integration should be considered as a process of policy and institutional change and design in which actors play a pivotal role*. Although this principle applies to any policy change trajectory, it is radically different from the dominant view of policy integration as a desired policy outcome, which we have

criticized in the above. Moreover, we argue that policy integration goes beyond a ‘mere’ change in policy-level variables, in that it also requires a particular adjustment of institutional contextual conditions, such as subsystem jurisdictions and dominant policy belief systems (“[Starting principles of a processual approach](#)” section) (cf. Radaelli et al. 2012; Streeck and Thelen 2005). Agency-centered mechanisms help to explain why and how dimensions of integration change toward enhanced or weakened policy integration. The most notable agency-centered mechanisms of policy integration identified so far include well known mechanisms of social learning (Mickwitz et al. 2009; Nilsson and Nilsson 2005; Termeer 2009), coalition building (Jochim and May 2010) and policy entrepreneurship (Dowd et al. 2014; Mickwitz et al. 2009). These agency-centered mechanisms have mostly been discussed in relation to increasing policy integration. Mechanisms of disintegration have received hardly any consideration until now and require further research, whereby the same observation can be made for the collapse or scaling back of public policy in general (Bauer et al. 2012). It is well thinkable that the mechanisms pushing enhanced policy integration may also play a role in its demise, for example when coalitions fall apart, when negative feedback loops feed learning processes, or when policy entrepreneurs push for sectoral solutions (ibid.).

Having elaborated the four starting principles of our processual approach to policy integration, we can now define the concept. We define policy integration as *an agency-driven process of asynchronous and multi-dimensional policy and institutional change within an existing or newly formed governance system that shapes the system’s and its subsystems’ ability to address a cross-cutting policy problem in a more or less holistic manner*. Tracking such a process in a systematic manner requires a more concrete conceptualization of the various dimensions of integration. The goal of the remainder of the paper is to set out these dimensions.

Four dimensions of policy integration

We distinguish four dimensions that constitute policy integration: (1) policy frame, (2) subsystem involvement, (3) policy goals, and (4) policy instruments. These dimensions have been elaborated in one or multiple of the political science and public policy literatures upon which we base our processual understanding. For example, overarching policy frames, although called differently, are key in the work of Perri 6 (2004, 2005) and others on joined-up government (Bogdanor 2005). Subsystems play an important role in the writing of Jochim and May (2010) on boundary-spanning policy regimes. Policy instrument mixes and policy goals form the corner stone of the Integrated Policy Strategies and New Governance Arrangements described by Howlett and Rayner (2007) and Rayner and Howlett (2009). We discuss each of these four dimensions in relation to the key processual assumptions of policy integration as discussed in the previous section. It is hereby important to emphasize that each of the dimensions should be understood and studied in relation to a specific cross-cutting policy problem that a governance system seeks to address. For example, the dimension of policy goals refers to the inclusion of concerns *about a specific problem* within a governance system, its subsystems and associated policy goals. Thus, the dimensions do not necessarily describe the whole spectrum of more or less favorable institutional characteristics within a governance system.

Policy frame

The last remark is particularly relevant for the first dimension of *policy frame*, which has generally been used to refer to competing or dominant problem definitions of societal problems in public policy debates (Baumgartner and Jones 2009; Schön and Rein 1994). Policy frames have hereby been shown to have predictive value regarding public support for and decisions about policy alternatives (Lau and Schlesinger 2005; Roggeband and Verloo 2007). Here, we follow a narrower interpretation of policy frame and concentrate on how a particular problem is perceived within a given governance system. In particular, this dimension is about whether a *cross-cutting* problem is recognized as such and, if so, to what extent it is thought to be requiring a holistic governance approach (Peters 2005). Importantly, the policy frame here entails the problem definition and governance understanding that is dominant among the governance system's macropolitical venues and decision-makers. This dominant problem definition may deviate from whether and how the problem is perceived in individual policy subsystems (“**Subsystem involvement**” section). The absence of a policy frame that fosters a common governance approach can pose serious risks. Gieve and Provost (2012) for example show how the lack of awareness and promotion of the need to coordinate between monetary and regulatory policy subsystems resulted in the collapse of the U.S. subprime mortgage market and eventually in the 2007–2009 financial crises.

The more specific policy frame we discern, focusing on the elements of cross-cuttingness and holistic governance, is embedded within a broader frame. The sociopolitical mechanisms that influence the continuity and change of these broader policy frames have been studied extensively and include focusing events, policy entrepreneurship, and interest mobilizations (Baumgartner and Jones 2009; Zahariadis 2007). In addition, the policy frame is informed by the administrative culture of a governance system. Some administrative cultures have hereby been shown to be more open toward integration than others and this differs across countries and issues (Hoppe 2010). For example, Anglo-Saxon countries are more likely to adopt integrative approaches compared to Napoleonic countries (6 2004).

An important methodological side-note is that policy frames are generally not straightforward to observe. The cognitive and normative ideas that constitute frames are sometimes articulated in a foundational document or statement, but they eventually become taken-for-granted elements (Rayner and Howlett 2009) and, as a result, are not easily identifiable (for a discussion of methodologies, see: Verloo 2005).

We distinguish four manifestations of the policy frame in policy integration processes, which are presented in the following Table 1.

Subsystem involvement

The second dimension of policy integration is *subsystem involvement*. This dimension captures the range of actors and institutions involved in the governance of a particular cross-cutting policy problem. The rise of a cross-cutting problem on the political agenda is often followed by an increase in the number of subsystems that are formally or informally involved (cf. Peters and Hogwood 1985). This has been shown to be particularly the case when two or more subsystems share beliefs and functional overlap (Zafonte and Sabatier 1998). Actors within subsystems often play an active entrepreneurial role in involvement by trying to expand their subsystem's jurisdiction over such broad issues (Jones and

Table 1 Manifestations of policy frame

	←————→	
	Low amounts of policy integration	High amounts of policy integration
Policy frame	The problem is defined in narrow terms within the governance system; the cross-cutting nature of the problem is not recognized and the problem is considered to fall within the boundaries of a specific subsystem. Efforts of other subsystems are not understood to be part of the governance of the problem. There is no push for integration	There is awareness that the policy outputs of different subsystems shape policy outcomes as well as an emerging notion of externalities and do-no-harm. The problem is still predominantly perceived of as falling within the boundaries of a particular subsystem. There is no strong push for integration
		As a result of increasing awareness of the cross-cutting nature of the problem, an understanding that the governance of the problem should not be restricted to a single domain has emerged as well as associated notions of coordination and coherence
		General recognition that the problem is and should not solely be governed by subsystems, but by the governance system as a whole. Subsystems are desired to work according to a shared, ‘holistic’ approach, which is particularly recognized within procedural instruments that span subsystems (see “ Policy instruments ”)

Strahan 1985). These expansions of jurisdictions are not only relevant from the perspective of who decides what, they also affect the overarching policy frame that was discussed in “[Policy frame](#)” section (Baumgartner and Jones 2009).

It is hereby important to note that the exact boundaries of subsystems may be difficult to determine, because they are analytical constructs rather than firm demarcations (Nohrstedt and Weible 2010). However, it is generally possible to identify relatively stable groups of actors and institutions involved in making a specific policy (Koppenjan and Klijn 2004; Sabatier 1988). In addition, it is not necessarily entire subsystems that are raising or addressing an issue. Sometimes, individuals, or groups of actors within a subsystem may draw attention to a particular concern and as such come to function as policy entrepreneurs (Jochim and May 2010). By redefining a problem as a cross-cutting policy problem, these actors may realize the incorporation of the problem within a subsystem, resulting in a broadening of the subsystems involved in the governance of the problem.

We conceptualize subsystem involvement along two indicators. The first indicator consists of *which* subsystems are involved in the governance of the cross-cutting issue. Subsystems are considered to be involved when they explicitly address a particular problem within their policy process—thus when they label policy efforts, i.e., activities involving agenda-setting, preparatory debates, policy design, or internal and external communication, inter-alia, in terms of the problem—regardless from whether these efforts substantially contribute to addressing the problem or not (Dupuis and Biesbroek 2013). The engagement of subsystems is thus determined by the extent to which subsystems consider a particular issue to be of their concern as well as the recognition of the issue’s cross-cutting nature and governance implications thereof. A good illustration of how such beliefs within subsystems can change over time is the adoption of fisheries concerns within EU development cooperation policies. For a long time, the potential role of fisheries for improving livelihoods and food security had been overlooked, until some policy

entrepreneurs within the development cooperation and fisheries subsystems realized that mutual synergies could be realized (Candel et al. 2015).

Apart from those subsystems that *are* involved, it is important to account for those that are not yet but could be (Dupuis and Biesbroek 2013; Sabatier 1988). Drimie and Ruy-senaar (2010) for example show how the impact of South Africa's Integrated Food Security Strategy remained limited due to the failure to include subsystems other than the agricultural subsystem. As a result, the implementation of the strategy was dominated by agricultural policy efforts, while matters of health, nutrition, access, and social inequality remained largely unaddressed. Involvement of other subsystems could have led to new information, perspectives, and resources (cf. Jack 2005). The indicator can therefore best be assessed through a proximity-to-target measurement, determining how many of the potentially involved subsystems are involved.

The second indicator involves the density of interactions between subsystems in a network configuration. As not all subsystems are involved to the same extent, a distinction can be made between subsystems in which a problem is primarily embedded, and subsystems that are only indirectly involved in a problem's governance (cf. Orton and Weick 1990). For relatively higher amounts of policy integration we would, apart from a larger number of subsystems involved, expect a set of dominant subsystems, i.e., subsystems characterized by high intentionality, that engage in frequent interactions with each other, while maintaining less frequent interactions with a set of less engaged subsystems. A possible manner of measuring these interactions lies in determining how often subsystems, e.g., departments, have the lead in developing policy proposals regarding a particular problem and how often other subsystems have an input through procedural instruments such as impact assessments and inter-departmental taskforces and consultations (for example as in: Hartlapp et al. 2012).

Using these two indicators, we distinguish four possible manifestations of subsystem involvement within a policy integration process, ranging from low to high integration, see Table 2.

Policy goals

Each governance system and associated subsystems have several short-, medium-, and long-term policy goals to pursue, some of which are directly impacting, or are impacted by, the cross-cutting problem. A policy goal here refers to the explicit adoption of a specific concern within the policies and strategies of a governance system, including its subsystems, with the aim of addressing the concern. We recognize that policies can be rather abstract and set out strategic lines, or take the shape of concrete programs entailing specific interventions (Howlett and Ramesh 2003). The dimension of *policy goals*, here, focuses on two aspects: (1) the range of policies, both at system-level and within subsystems, in which (concerns about) a cross-cutting problem is adopted as a goal, and (2) the coherence between the consequential diversity of policy goals.

First, as higher degrees of integration involve a relatively high density of subsystems, they also encompass a broader range of policies. Ideally, concerns about a cross-cutting problem would be adopted as a goal in all these policies. However, our starting principle of asynchronous integration implies that this does not always happen in practice. Here too, a proximity-to-target measure could be used, assessing the number of potentially relevant policies in which these concerns are adopted. Whereas at low degrees of integration we would expect policy goals regarding a cross-cutting problem to be restricted to one or a few domains and associated policies, shifts toward enhanced policy integration are

Table 2 Manifestations of subsystem involvement

Low amounts of policy integration	←————→	High amounts of policy integration		
Subsystems involved	One dominant subsystem, which governs the issue independently (Metcalf 1994). Formally, no other subsystems are involved, although they may be in terms of substantial, non-intentional policymaking	Subsystems recognize the failure of the dominant subsystem to manage the problem and externalities (Bryson et al. 2006; Feiock 2013), which results in the emergence of concerns about the problem in one or more additional subsystems	Awareness of the problem’s cross-cutting nature spreads across subsystems, as a result of which two or more subsystems have formal responsibility for dealing with the problem	All possibly relevant subsystems have developed ideas about their role in the governance of the problem. The number of subsystems that are formally involved is equal to or higher than at previous manifestations, but complemented with a less engaged set of alternative subsystems
Density of interactions	No interactions	Infrequent information exchange with dominant subsystem (Geerlings and Stead 2003)	More regular and formal exchange of information and coordination, possibly through coordinative instruments at system-level	High level of interaction between formally involved subsystems, that maintain infrequent interactions with a less engaged set of subsystems

accompanied by a diversification of policy goals across domains (cf. Peters and Hogwood 1985). Stead (2008) provides an example of low integration in terms of policy goals by arguing that the integration of transport policy is hindered by the autonomous and sectoral goal-setting by other subsystems. An example of enhanced integration of policy goals is given by Hustedt and Seyfried (2015), who show how enhanced internal coordination of climate change policies within the European Commission resulted in the adoption of climate change mitigation and adaptation goals in the policies of a number of non-traditional domains, such as energy and maritime affairs.

One of the main integration challenges found in the literature is that there are often fundamental differences in the way in which various policy goals get framed and perceived, also in terms of temporality or geographical scale (Adelle et al. 2009). A second indicator therefore involves the degree of coherence within a governance system vis-à-vis a cross-cutting policy problem (Rayner and Howlett 2009). Coherence can be achieved and measured within a policy domain (May et al. 2006), but for cross-cutting policy problems it is particularly relevant how the goals of various domains and associated subsystems relate to each other. In other words, coherence relates to whether a governance system’s policies contribute jointly to—or at least do not undermine—specific objectives (e.g., food security, employment or sustainable development) (OECD 2013: 7). However, the operationalization and measurement of horizontal coherence within a governance system vis-à-vis cross-cutting issues is understudied at best and highly controversial at worst (Nilsson et al. 2012).

The progress of policy integration studies will largely depend on whether conceptual and methodological agreements for studying policy coherence can be found. Here, we confine ourselves to a simple binary distinction between strong and weak coherence. Weak coherence exists when attuning of policy goals between subsystems does not or hardly take place. Strong coherence exists when subsystems attune their policy goals to jointly address a cross-cutting problem, which they can do by mitigating externalities, searching for synergies, or even working toward a system-wide ‘integrated policy strategy’ (Rayner and Howlett 2009). Whereas the first is achieved by ‘negative coordination,’ i.e., one subsystem formally has the lead in drafting policy proposals and monitors other subsystems for possible negative effects by applying the ‘do-no-harm’ principle (OECD 2014), the latter two take the shape of ‘positive coordination,’ i.e., subsystems jointly work together toward a comprehensive approach (Scharpf 1994). A good example of an integrated policy strategy is the sustainable development strategies that many governments have adopted to integrate economic, social, and environmental development objectives (Meadowcroft 2007). Table 3 presents the four manifestations of policy goals associated with relatively stronger or weaker degrees of policy integration.

Policy instruments

The fourth dimension of policy integration consists of the substantive and/or procedural *policy instruments* within a governance system and associated subsystems. Substantive instruments allocate governing resources of nodality, authority, treasure and organization (Hood 1983) to directly affect the ‘nature, types, quantities and distribution of the goods and services provided in society.’ Procedural instruments are designed to ‘indirectly affect outcomes through the manipulation of policy processes’ (Howlett 2000: 413–415). Procedural instruments can also be deployed at a governance system-level, for example to facilitate the coordination between subsystems (Jordan and Schout 2006). Within a policy

Table 3 Manifestations of policy goals

Low amounts of policy integration	↔		High amounts of policy integration	
Range of policies in which problem is embedded	Concerns only embedded within the goals of a dominant subsystem	Concerns adopted in policy goals of one or more additional subsystems (Keast et al. 2007; McNamara 2012)	Possible further diversification across policy goals of additional subsystems	Concerns embedded within all potentially relevant policy goals
Policy coherence	Very low or no coherence. Occurs when cross-cutting nature is not recognized, or when subsystems are highly autonomous in setting (sectoral) goals	Because of rising awareness of externalities and mutual concerns subsystems may address these to some extent in their goals	Coordinated sectoral goals, which are judged in the light of coherence (Geerlings and Stead 2003). Subsystems attempt to develop synergies (Metcalf 1994)	Shared policy goals embedded within an overarching strategy (Geerlings and Stead 2003; Jochim and May 2010; Keast et al. 2007; McNamara 2012; Metcalfe 1994)

integration process, we distinguish three types of indicators related to policy instruments for policy integration: (1) subsystems' deployment of instruments, (2) procedural instruments at system-level, and (3) the consistency of substantive and procedural instruments.

First, as higher amounts of policy integration are characterized by a wider range of subsystems involved and of associated policies in which the problem is adopted as a goal, they ideally also include supportive instruments within subsystems' policies to pursue the more or less coherent sets of goals. In other words, we would expect a diversification of instruments addressing the problem across subsystems' policies. These instruments can be both substantive or procedural, depending on the nature of the problem and the governance philosophies within a subsystem (Howlett 2009).

Second, enhanced amounts of policy integration are characterized by the deployment of procedural instruments at governance system-level to coordinate subsystems' policy efforts and to enforce and safeguard the consistency of the instrument mix as a whole (Jordan and Lenschow 2010). Examples of such instruments include overarching plans and strategies, constitutional provisions, legislative standards setting, overarching funding programs and financial incentives, consultation mechanisms, impact assessments, interdepartmental working groups, and (green) cabinets, inter-alia (e.g., Adelle et al. 2009; EEA 2005; Feiock 2013; Jacob and Volkery 2004; Jacob et al. 2008; Karré et al. 2013; Ross and Dovers 2008). At the highest degree of integration, organizational procedural instruments will take the shape of a boundary-spanning structure or overarching authority that oversees, steers and coordinates the problem as a whole (Jochim and May 2010; Lafferty and Hovden 2003). Jochim and May (2010) provide the example of U.S. Community Empowerment regime in the 1960s and 1970s, in which subsystems of economic development, housing, education, employment, social welfare, and transportation worked together to realize urban renewal. This mutual effort was facilitated by the creation of overarching inter-agency review teams. Pelkonen et al. (2008) give another example of a boundary-spanning structure by showing how the Finnish Science and Technology Policy Council, a governmental advisory body, fosters the integration of science and technology policies between domains.

Third, higher amounts of integration are characterized by a stronger consistency of policy instrument mixes, i.e., the sets of instruments that subsystems have developed incrementally in an ad hoc fashion over a longer course of time (Gunningham and Sinclair 1999; Howlett and Rayner 2007). This consistency is relative to the (more or less) coherent goals that a set of instruments is meant to help procure (Howlett 2009; Howlett and Rayner 2007; Rayner and Howlett 2009). Thus, an appropriate instrument mix effectively realizes certain integration objectives (Adelle and Russel 2013). As with policy goals, the consistency of instrument mixes should, in case of a cross-cutting policy problem, be assessed for the governance system as a whole, thus between subsystems. It is hereby not only the types of instruments that matter, but also their magnitude and whether they are targeted to the appropriate audiences (EEA 2005). Although the public policy literature has provided various arguments for why inconsistencies may arise and how they could be overcome (on paper) (e.g., Gunningham et al. 1998; Rayner and Howlett 2009), as with coherence an univocal and agreed-on operationalization of the consistency of instrument mixes is lacking. For the sake of our theoretical argument, it suffices to distinguish between weak and strong consistency. Within strong consistency, a further distinction can be made between negative coordination of instruments, i.e., mitigating the externalities of subsystems' instruments, and positive coordination, i.e., seeking synergies between instruments or even developing a unified instrument mix at system level (cf. Scharpf 1994). The latter has also been referred to as a 'new governance arrangement' and involves the replacement of subsystems' existing instrument mixes that resulted from an incremental process of

policy layering with an entirely new and consistent instrument mix (Howlett and Rayner 2006, 2007).

Table 4 presents the four manifestations of policy instruments associated with relatively stronger or weaker degrees of policy integration.

Discussion

In the previous sections we have presented a new conceptual lens to study policy integration processes. It is important to note that our framework should first and foremost be seen as a heuristic that may serve as a starting point for more refined policy integration studies. We acknowledge that we have touched upon a broad range of concepts and scholarly debates within the public policy literature; all of which deserve, and fortunately receive, more lengthy elaborations in themselves. The primary goal of this paper has been to synthesize fragmented accounts of policy integration into a single, more refined framework. This inevitably has left open important questions about individual concepts

Table 4 Manifestations of policy instruments

Low amounts of policy integration	←————→		High amounts of policy integration	
Range of subsystems' policies that contain policy instruments	Problem only addressed by the substantive and/or procedural instruments of a dominant subsystem	As a result of increased awareness of externalities one or more additional subsystems (partially) adapt their instruments to mitigate negative effects	Possible further diversification of instruments addressing the problem across subsystems	Instruments embedded within all potentially relevant subsystems and associated policies
Procedural instruments at system-level	No relevant procedural instruments at system-level	Some procedural information sharing instruments at system-level (cf. Metcalfe 1994)	Increasing number of system-level procedural instruments that facilitate subsystems to jointly address the problem	Broad range of procedural instruments at system-level, including boundary-spanning structures that coordinate, steer and monitor subsystems' efforts
Consistency	No consistency. Sets of instruments are purely sectoral and result from processes of policy layering (Rayner and Howlett 2009)	Subsystems consider externalities of sectoral instrument mixes in light of internal and inter-sectoral consistency	Subsystems seek to jointly address the problem by adjusting and attuning their instruments. Consistency becomes an explicit aim	Full reconsideration of subsystem instrument mixes, resulting in a comprehensive, cross-subsystem instrument mix that is designed to meet a set of coherent goals

and ontologies, for example about how to study policy coherence (“[Policy goals](#)” section) and consistency (“[Policy instruments](#)”). We hope this paper will be an impetus to addressing such loose ends within the policy integration literature. In addition, the ambition of this paper has been to draw policy integration out of the domain of environment and to make it a subject of general theorizing in the political sciences as more and more problems are perceived as “wicked” and cross-cutting. Although debates on EPI in the early 2000s have certainly set the agenda and have provided a firm foundation for thinking about integration, expanding the integration debate and agenda to other domains and (associated) scholarly communities could provide new perspectives on mechanisms of stability and change, interactions and possible trade-offs between parallel integration processes, and normative implications of (the absence of) policy integration.

We realize that furthering policy integration studies also requires a further, more concrete operationalization of the various dimensions and indicators we proposed. At the same time, such operationalizations will need to be tailored to the specifics of the cross-cutting problem under study, thereby targeting relevant quantitative and qualitative data sources. We offer some suggestions for how this could be done in a separate paper where we apply the framework to a concrete case at the level of European Union (Candel and Biesbroek 2015). For example, we study subsystem involvement by determining which directorate generals are principally responsible for developing a specific policy proposal and which are providing input or opinions, for example through inter-service consultations. This allows for identifying both the network of subsystems involved in the governance of a particular cross-cutting problem as well as the interactions between these subsystems (for a similar approach, see: Hartlapp et al. 2012). Policy goals and instruments were studied by systematically searching and coding relevant legislation and preparatory acts. Interestingly, in our case study preparatory legislation proved to entail more integrative goals and instruments than final legislation, which suggests that policy integration remained largely discursive ([Starting principles of a processual approach](#) section).

In the remainder of this section, we will discuss three more loose ends: (1) the normativity of policy integration, (2) the inclusion of vertical policy integration and policy outcomes, and (3) the relevance of the framework to policymakers and political watchdogs. First, although policy integration seems to be the politically preferred option nowadays to solve pressing societal issues, various scholars have pointed out that (full) policy integration is no panacea for a more satisfactory governance of cross-cutting policy problems. Mickwitz et al. (2009), for example, argue that a focus on coherence and consistency of policy approaches with regard to climate change must not be at the expense of diminished attention for and devotion to ambitious climate change mitigation and adaptation programmes at subsystem level. This remark corresponds with the argument in the literature on boundary-spanning policy regimes that substantive policy efforts within subsystems should be coordinated, not replaced, by procedural instruments at a governance system level (Jochim and May 2010). This argument runs counter to the idea that the highest degree of policy integration is the creation of a new policy domain (Massey and Huitema 2013). We follow Adelle et al. (2009) in arguing that creating a new policy domain on a cross-cutting issue with tailor-made institutions, policy goals and instrument mixes, may seem to lead to improved coordination and coherence, but that this new regime could well be achieved at the cost of wider cross-sector coordination. In other words, it could result in the same silos, albeit on a different level, from which an integration process started. Furthermore, as a result of political and administrative realities, full policy integration may not always be feasible. Underdal (1980), for example, points out that enhancing integration around one issue often requires transferring resources from other areas, possibly resulting

in a loss of performance elsewhere. He also argues that an increase in coordination may conflict with other political values such as decentralization and broad participation. Jordan and Halpin (2006) arrived at similar conclusions in their study of attempts to develop a unified rural policy in Scotland. They suggest that as a result of competing priorities between sectors and stakeholders, imperfectly coordinated rural policy may be inevitable and, even stronger, that the ‘...project to rid policy practice of incoherence is too heroic’ (ibid.: 21). Therefore, they plead for a reevaluation of bargaining and incremental politics. We would add that proponents of enhanced integration should not oversee and underestimate the merits of relatively lower degrees of integration, such as policy cooperation and coordination. Referring to Metcalfe’s (1994: 288) comment that ‘the more basic but less glamorous aspects of the policy coordination process’ are vital, Jordan and Schout (2006: 43) phrase this as ‘the underlying capacities—the mechanisms to exchange information, consult, and arbitrate, etc.—need to be in place *before* [their accent] political energies are invested in setting strategic objectives and defining mission statements.’ Thus, it is not only the case that lower amounts of policy integration are sometimes the maximum of what is politically feasible, they are also an essential foundation for enhanced integration. Furthermore, the nature of a cross-cutting problem does not always require the most advanced form of integration to be addressed satisfactorily. Sometimes, all that is required is the sharing of information, or a once-only coordinated action (Keast et al. 2007). At the same time, situations in which the need for policy integration is not recognized can be dangerous when integration is required to deal with a pressing and potentially destructive problem. Gieve and Provost (2012) provide the example of the financial crisis of 2007–2009, which, they argue, at least partly resulted from the lack of coordination between bank regulation and monetary policy. This implies that although full policy integration may not always be feasible or needed, there is at least need for a reflection mechanism that signals gaps or tensions in the governance of cross-cutting problems and that informs decision-makers so that proactive adjustments can be made to avoid or anticipate to crises (Candel et al. 2015).

Second, two additional directions in which the framework could be furthered are by expanding it to studying vertical governance levels and to the integration of policy outcomes. Regarding the first, although the current policy integration body of literature primarily focuses on horizontal integration between domains or services (Tosun and Lang 2013), similar integration challenges arise in multi-level governance contexts (Briassoulis 2011). A promising way of expanding the framework in this respect is by linking it to the notion of ‘functional regulatory spaces,’ which span several policy sectors, governance levels, and institutional territories (Varone et al. 2013). Regarding the integration of policy outcomes, as Jordan and Lenschow (2010) observe, relatively little research has been conducted on the effects of better integrated policy approaches on actual practices on the ground. It is not straightforward that full policy integration at governance system-level results in more integrated outcomes compared to lesser degrees of integration. Specific challenges can occur in the implementation of integrated strategies, for example in the cooperation between public service agencies, which may prevent the realization of better outcomes. Furthermore, studying better outcomes or policy success is in itself conceptually and methodologically challenging, as different types of success exist, conceptions of success may vary, and agreed-on measurements of policy influence are lacking (McConnell 2010). Further research and conceptualizing is needed to address these challenges and gaps.

Third, the relevance of the framework to policymakers and political leaders lies in three contributions. First, the framework offers an assessment tool to evaluate current degrees of

policy integration in the governance of a particular cross-cutting problem. In addition, it can be used for comparing these degrees over time, between issues, or between governance systems to address the normative question whether integrative progress is enough. A second contribution is the above argument that these actors should not oversee the merits of lesser degrees of policy integration. Thirdly, the framework shows that actors should think about the four dimensions as conditions that they need to invest in simultaneously, if they want to realize a mutually supportive interplay across the four dimensions that enable full policy integration. The challenge then is to overcome the asynchronous nature of most integration processes by investing sufficient capacity and resources, including will, into synchronization efforts. For those out of government office, the framework may be a helpful tool to monitor whether political promises to invest in more integrative approaches are kept and, consequentially, to hold decision-makers accountable to the commitments they make. Such accountability measures may be the first step toward integration beyond mere discursive levels for a range of issues that lie waiting to be addressed.

Acknowledgments The authors would like to thank Jale Tosun, Katrien Termeer, three anonymous reviewers, and the editor for valuable comments on previous drafts of this paper.

Open Access This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

References

- 6, P. (2004). Joined-up government in the western world in comparative perspective: A preliminary literature review and exploration. *Journal of Public Administration Research and Theory*, 14(1), 103–138.
- 6, P. (2005). Joined-up government in the west beyond Britain: A provisional assessment. In V. Bogdanor (Ed.), *Joined-up government* (pp. 43–106). Oxford: Oxford University Press.
- Adelle, C., Jordan, A., & Benson, D. (2015). The role of policy networks in the coordination of the European Union's economic and environmental interests: The case of EU mercury policy. *Journal of European Integration*, 37(4), 471–489.
- Adelle, C., Pallemaerts, M., & Chiavari, J. (2009). *Climate change and energy security in Europe: Policy integration and its limits*. Stockholm: Swedish Institute for European Policy Studies.
- Adelle, C., & Russel, D. (2013). Climate policy integration: A case of Déjà Vu? *Environmental Policy and Governance*, 23(1), 1–12.
- Bardach, E. (1998). *Getting agencies to work together: The practice and theory of managerial craftsmanship*. Washington, D.C.: Brookings Institution Press.
- Bauer, M. W., Jordan, A., Green-Pedersen, C., & Héritier, A. (2012). *Dismantling public policy: Preferences, strategies, and effects*. Oxford: Oxford University Press.
- Bauer, M. W., & Knill, C. (2012). Understanding policy dismantling: An analytical framework. In M. W. Bauer, A. Jordan, C. Green-Pedersen, & A. Héritier (Eds.), *Dismantling public policy: Preferences, strategies, and effects* (pp. 30–51). Oxford: Oxford University Press.
- Baumgartner, F. R., & Jones, B. D. (2009). *Agendas and instability in American politics*. Chicago: University of Chicago Press.
- Biesbroek, G. R., Termeer, C. A. M., Klostermann, J. M., & Kabat, P. (2013). Analytical lenses on barriers in the governance of climate change adaptation. *Mitigation and Adaptation Strategies for Global Change*, 19(7), 1011–1032.
- Bogdanor, V. (2005). *Joined-up government*. Oxford: Oxford University Press.
- Bolleyer, N. (2011). The influence of political parties on policy coordination. *Governance*, 24(3), 469–494.
- Bouckaert, G., Peters, B. G., & Verhoest, K. (2010). *The coordination of public sector organizations: Shifting patterns of public management*. Basingstoke: Palgrave Macmillan.
- Braun, D. (2008). Organising the political coordination of knowledge and innovation policies. *Science and Public Policy*, 35(4), 227–239.

- Briassoulis, H. (2004). Policy integration for complex policy problems: What, why and how. In *Paper presented at the Berlin Conference on the Human Dimensions of Global Environmental Change: Greening of Policies - Interlinkages and Policy Integration, Berlin*.
- Briassoulis, H. (2011). Governing desertification in Mediterranean Europe: The challenge of environmental policy integration in multi-level governance contexts. *Land Degradation and Development*, 22(3), 313–325.
- Bryson, J. M., Crosby, B. C., & Stone, M. M. (2006). The design and implementation of cross-sector collaborations: Propositions from the literature. *Public Administration Review*, 66, 44–55.
- Candel, J. J. L., & Biesbroek, G. R. (2015). Policy integration in the EU governance of food security: do actions speak louder than words? In *Paper presented at the 2nd International Conference on Public Policy, 1–4 July 2015, Milan*.
- Candel, J. J. L., Breeman, G. E., & Termeer, C. J. A. M. (2015). The European Commission's ability to deal with wicked problems: an in-depth case study of the governance of food security. *Journal of European Public Policy*. doi:10.1080/13501763.2015.1068836.
- Christensen, T., & Lægread, P. (2007). The whole-of-government approach to public sector reform. *Public Administration Review*, 67(6), 1059–1066.
- de la Porte, C. (2002). Is the open method of coordination appropriate for organising activities at European level in sensitive policy areas? *European Law Journal*, 8, 38–58.
- Dowd, A.-M., et al. (2014). The role of networks in transforming Australian agriculture. *Nature Climate Change*, 4(7), 558–563.
- Downs, A. (1972). Up and down with ecology—the ‘issue-attention cycle’. *The Public Interest*, 28, 38–50.
- Drimie, S., & Ruysenaar, S. (2010). The integrated food security strategy of South Africa: An institutional analysis. *Agrekon*, 49(3), 316–337.
- Dupont, C., & Oberthür, S. (2012). Insufficient climate policy integration in EU energy policy: the importance of the long-term perspective. *Journal of Contemporary European Research*, 8(2), 228–247.
- Dupuis, J., & Biesbroek, R. (2013). Comparing apples and oranges: The dependent variable problem in comparing and evaluating climate change adaptation policies. *Global Environmental Change*, 23(6), 1476–1487.
- EEA. (2005). *Environmental policy integration in Europe: State of play and an evaluation framework-EEA Technical Report 2/2005*. Copenhagen: European Environment Agency.
- Feiock, R. C. (2013). The institutional collective action framework. *Policy Studies Journal*, 41(3), 397–425.
- Geerlings, H., & Stead, D. (2003). The integration of land use planning, transport and environment in European policy and research. *Transport Policy*, 10(3), 187–196.
- Gieve, J., & Provost, C. (2012). Ideas and coordination in policymaking: The financial crisis of 2007–2009. *Governance*, 25(1), 61–77.
- Gunningham, N., Grabovsky, P., & Sinclair, D. (1998). *Smart regulation: Designing environmental policy*. Oxford: Clarendon Press.
- Gunningham, N., & Sinclair, D. (1999). Regulatory pluralism: Designing policy mixes for environmental protection. *Law & Policy*, 21(1), 49–76.
- Hall, P. A. (1993). Policy paradigms, social learning, and the state: The case of economic policymaking in Britain. *Comparative Politics*, 25(3), 275–296.
- Halligan, J., Buick, F., & O’Flynn, J. (2011). Experiments with joined-up, horizontal and whole-of-government in Anglophone countries. In A. Massey (Ed.), *International handbook on civil service systems* (pp. 74–100). Cheltenham: Edward Elgar.
- Hartlapp, M., Metz, J., & Rauh, C. (2012). Linking agenda setting to coordination structures: Bureaucratic politics inside the European Commission. *Journal of European Integration*, 35(4), 425–441.
- Hogan, J., & Howlett, M. (2015). *Policy Paradigms in Theory and Practice: Discourses, Ideas and Anomalies in Public Policy Dynamics*. London: Palgrave Macmillan.
- Hood, C. (1983). *The tools of government*. Basingstoke: Macmillan.
- Hoppe, R. (2010). *The governance of problems: Puzzling, powering and participation*. Bristol: The Policy Press.
- Hovik, S., & Hanssen, G. S. (2015). The impact of network management and complexity on multi-level coordination. *Public Administration*, 93(2), 506–523.
- Howlett, M. (2000). Managing the “hollow state”: Procedural policy instruments and modern governance. *Canadian Public Administration*, 43(4), 412–431.
- Howlett, M. (2009). Governance modes, policy regimes and operational plans: A multi-level nested model of policy instrument choice and policy design. *Policy Sciences*, 42(1), 73–89.
- Howlett, M. (2014). Why are policy innovations rare and so often negative? Blame avoidance and problem denial in climate change policy-making. *Global Environmental Change*, 29, 395–403.

- Howlett, M., & Ramesh, M. (2003). *Studying public policy: Policy cycles and policy subsystems*. Don Mills: Oxford University Press.
- Howlett, M., & Rayner, J. (2006). Convergence and divergence in ‘New Governance’ arrangements: Evidence from European integrated natural resource strategies. *Journal of Public Policy*, 26(2), 167–189.
- Howlett, M., & Rayner, J. (2007). Design principles for policy mixes: Cohesion and coherence in ‘New Governance Arrangements’. *Policy and Society*, 26(4), 1–18.
- Hustedt, T., & Seyfried, M. (2015). Co-ordination across internal organizational boundaries: how the EU Commission co-ordinates climate policies. *Journal of European Public Policy*, doi:10.1080/13501763.2015.1074605:1-18.
- Jack, S. L. (2005). The role, use and activation of strong and weak network ties: A qualitative analysis*. *Journal of Management Studies*, 42(6), 1233–1259.
- Jacob, K., & Volkery, A. (2004). Institutions and instruments for government self-regulation: Environmental policy integration in a cross-country perspective. *Journal of Comparative Policy Analysis: Research and Practice*, 6(3), 291–309.
- Jacob, K., Volkery, A., & Lenschow, A. (2008). Instruments for environmental policy integration in 30 OECD countries. In A. Jordan & A. Lenschow (Eds.), *Innovation in environmental policy? Integrating the environment for sustainability* (pp. 24–48). Cheltenham: Edward Elgar.
- Jochim, A. E., & May, P. J. (2010). Beyond subsystems: Policy regimes and governance. *Policy Studies Journal*, 38(2), 303–327.
- Jones, C. O., & Strahan, R. (1985). The effect of energy politics on congressional and executive organization in the 1970s. *Legislative Studies Quarterly*, 10(2), 151–179.
- Jordan, G., & Halpin, D. (2006). The political costs of policy coherence: Constructing a rural policy for Scotland. *Journal of Public Policy*, 26(1), 21–41.
- Jordan, A., & Lenschow, A. (2010). Policy paper environmental policy integration: A state of the art review. *Environmental Policy and Governance*, 20(3), 147–158.
- Jordan, A., & Schout, A. (2006). *The coordination of the European Union: Exploring the capacities of networked governance*. Oxford: Oxford University Press.
- Karré, P. M., van der Steen, M., & van Twist, M. (2013). Joined-up government in The Netherlands: Experiences with program ministries. *International Journal of Public Administration*, 36(1), 63–73.
- Keast, R., Brown, K., & Mandell, M. (2007). Getting the right mix: Unpacking integration meanings and strategies. *International Public Management Journal*, 10(1), 9–33.
- Kettl, D. F. (2006). Managing boundaries in American administration: The collaboration imperative. *Public Administration Review*, 66, 10–19.
- Koppenjan, J., & Klijn, E.-H. (2004). *Managing uncertainties in networks: A network approach to problem solving and decision making*. London: Routledge.
- Lafferty, W., & Hovden, E. (2003). Environmental policy integration: towards an analytical framework. *Environmental Politics*, 12(3), 1–22.
- Lau, R. R., & Schlesinger, M. (2005). Policy frames, metaphorical reasoning, and support for public policies. *Political Psychology*, 26(1), 77–114.
- Mahoney, J., & Thelen, K. (2009). *Explaining institutional change: ambiguity, agency, and power*. Cambridge: Cambridge University Press.
- March, J. G., & Olsen, J. P. (1989). *Rediscovering institutions: the organizational basis of politics*. New York: The Free Press.
- Massey, E., & Huitema, D. (2013). The emergence of climate change adaptation as a policy field: The case of England. *Regional Environmental Change*, 13(2), 341–352.
- May, P. J., Sapotichne, J., & Workman, S. (2006). Policy coherence and policy domains. *Policy Studies Journal*, 34(3), 381–403.
- McConnell, A. (2010). *Understanding policy success: Rethinking public policy*. Basingstoke: Palgrave Macmillan.
- McNamara, M. (2012). Starting to untangle the web of cooperation, coordination, and collaboration: A framework for public managers. *International Journal of Public Administration*, 35(6), 389–401.
- Meadcroft, J. (2007). National sustainable development strategies: Features, challenges and reflexivity. *European Environment*, 17(3), 152–163.
- Metcalfe, L. (1994). International policy co-ordination and public management reform. *International Review of Administrative Sciences*, 60(2), 271–290.
- Mickwitz, P., & Kivimaa, P. (2007). Evaluating policy integration: The case of policies for environmentally friendlier technological innovations. *Evaluation*, 13(1), 68–86.
- Mickwitz, P., et al. (2009). *Climate policy integration, coherence and governance*. Helsinki: Partnership for European Environmental Research.

- Nilsson, M., & Nilsson, L. J. (2005). Towards climate policy integration in the EU: Evolving dilemmas and opportunities. *Climate Policy*, 5(3), 363–376.
- Nilsson, M., & Persson, A. (2008). Sweden. In A. Jordan & A. Lenschow (Eds.), *Innovation in environmental policy?* (pp. 24–46). Cheltenham: Elgar.
- Nilsson, M., et al. (2012). Understanding policy coherence: Analytical framework and examples of sector-environment policy interactions in the EU. *Environmental Policy and Governance*, 22(6), 395–423.
- Nohrstedt, D., & Weible, C. M. (2010). The logic of policy change after crisis: Proximity and subsystem interaction. *Risk, Hazards & Crisis in Public Policy*, 1(2), 1–32.
- OECD. (2013). *Better policies for development—In focus: Policy coherence for development and global food security*. Paris: OECD.
- OECD. (2014). *Better policies for development 2014: Policy coherence and illicit financial flows*. Paris: OECD.
- Orton, J. D., & Weick, K. E. (1990). Loosely coupled systems: A reconceptualization. *Academy of Management Review*, 15(2), 203–223.
- Pallemaerts, M., et al. (2006). Drowning in process? The implementation of the EU's 6th environmental action programme report for the European Environmental Bureau', London: IEEP. Available at <http://www.ieep.eu/assets/671/FinalReport6EAP.pdf>.
- Pelkonen, A., Teräväinen, T., & Waltari, S.-T. (2008). Assessing policy coordination capacity: Higher education, science, and technology policies in Finland. *Science and Public Policy*, 35(4), 241–252.
- Peters, B. G. (2005). Pittsburgh: Department of Political Science, University of Pittsburgh.
- Peters, B. G., & Hogwood, B. W. (1985). In search of the issue-attention cycle. *The Journal of Politics*, 47(1), 238–253.
- Pierson, P. (1993). When effect becomes cause: Policy feedback and political change. *World Politics*, 45(4), 595–628.
- Pierson, P. (2000). 'Increasing returns, path dependence, and the study of politics. *American Political Science Review*, 94(2), 251–267.
- Princen, S. (2009). *Agenda-setting in the European Union*. Basingstoke: Palgrave.
- Radaelli, C. M., Dente, B., & Dossi, S. (2012) Recasting institutionalism: Institutional analysis and public policy. *European Political Science*, 11(4), 537–550.
- Rayner, J., & Howlett, M. (2009). Introduction: Understanding integrated policy strategies and their evolution. *Policy and Society*, 28(2), 99–109.
- Rhodes, R. A. W. (1991). Policy networks and sub-central government. In G. Thompson, J. Frances, R. Levacic, & J. Mitchell (Eds.), *Markets, hierarchies and networks* (pp. 203–214). London: Sage.
- Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences*, 4(2), 155–169.
- Roggeband, C., & Verloo, M. (2007). Dutch women are liberated, migrant women are a problem: The evolution of policy frames on gender and migration in the Netherlands, 1995–2005. *Social Policy & Administration*, 41(3), 271–288.
- Ross, A., & Dovers, S. (2008). Making the harder yards: Environmental policy integration in Australia. *Australian Journal of Public Administration*, 67(3), 245–260.
- Runhaar, H., Driessen, P., & Uittenbroek, C. (2014). Towards a systematic framework for the analysis of environmental policy integration. *Environmental Policy and Governance*, 24(4), 233–246.
- Sabatier, P. A. (1988) An advocacy coalition framework of policy change and the role of policy-oriented learning therein. *Policy Sciences*, 21(2–3), 129–168.
- Sabatier, P. A., & Jenkins-Smith, H. S. (1993). *Policy change and learning: an advocacy coalition approach*. Boulder: Westview Press.
- Scharpf, F. W. (1994). Games real actors could play: Positive and negative coordination in embedded negotiations. *Journal of Theoretical Politics*, 6(1), 27–53.
- Schön, D. A., & Rein, M. (1994). *Frame reflection. Towards the resolution of intractable policy controversies*. New York: Basic Books.
- Stead, D. (2008). Institutional aspects of integrating transport, environment and health policies. *Transport Policy*, 15(3), 139–148.
- Streeck, W., & Thelen, K. (2005). *Beyond continuity: Institutional change in advanced political economies*. Oxford: Oxford University Press.
- Termeer, C. J. A. M. (2009). Barriers to new modes of horizontal governance. *Public Management Review*, 11(3), 299–316.
- Termeer, C. J. A. M., Dewulf, A. R. P. J., Breeman, G. E., & Stiller, S. J. (2015). Governance capabilities for dealing wisely with wicked problems. *Administration & Society*, 47(6), 680–710.
- Tosun, J., & Lang, A. (2013) Coordinating and integrating cross-sectoral policies: A theoretical approach. In *Paper presented at the 7th ECPR General Conference, Bordeaux*.

- Underdal, A. (1980). Integrated marine policy: What? Why? How? *Marine Policy*, 4(3), 159–169.
- Varone, F., Nahrath, S., Aubin, D., & Gerber, J.-D. (2013). Functional regulatory spaces. *Policy Sciences*, 46(4), 311–333.
- Verloo, M. (2005). Mainstreaming gender equality in Europe: A critical frame analysis approach. *Greek Review of Social Research*, 117, 11–34.
- WEF. (2015). *Global risks 2015, 10th Edition*. Geneva: World Economic Forum.
- Wilson, C. A. (2000). Policy regimes and policy change. *Journal of Public Policy*, 20(3), 247–274.
- World Bank. (2006). *EU-8 administrative capacity in the new member states: The limits of innovation?*. Washington, DC: World Bank.
- Zafonte, M., & Sabatier, P. (1998). Shared beliefs and imposed interdependencies as determinants of ally networks in overlapping subsystems. *Journal of Theoretical Politics*, 10(4), 473–505.
- Zahariadis, N. (2007). The multiple streams framework: Structure, limitations, prospects. In P. A. Sabatier (Ed.), *Theories of the policy process* (pp. 65–92). Boulder: Westview Press.