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Is Integrated Planning Any More Than the Sum of Its Parts? Considerations for Planning Sustainable Cities

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Abstract

Policy integration is currently cresting a wave of interest, with new legal frameworks, programs, and processes emerging. Does integrated sustainability planning, to take one key motivator of this interest in integration, offer more than environmental planning, climate change planning, or other sectoral moves? This article reviews planning research and practice in integration in the context of diverse aspirations for sustainability. Normative claims, central to environmental policy integration, are seldom distinguished in theory or tested in practice. Applying a normative framework to sustainability policy integration in current practice, we find evidence of risks to applying each and contradictions within the set.

Keywords

comprehensive planning, environmental policy, policy integration, spatial planning, sustainable cities

Introduction

Consider integration, generally, as a conceptual as well as a functional activity of bringing together multiple elements such that the resulting assemblage has some value that did not exist before. Adherents to systems theory are familiar with the pursuit of synergies through the practice of integration; rationalists prefer the metaphor of overcoming the "zero-sum game." The root drive is the same. In fact, from a pragmatic perspective, the act of integration is fundamental to the human practice of making sense of experience, restoring quality to troubled, ambiguous, disturbed parts (Dewey 1981, 227-28). The promise of integration has long pervaded planning theory, from the "valley sections" of Patrick Geddes, to comprehensive and master plans of Olmstead and Howard, to the spatial planning introduced in the last decade in Europe (Allmendinger and Haughton 2009). Integrated planning efforts often take city-specific forms and titles, like Future Melbourne, Chicago Metropolis 2020, and Imagine Calgary; they also include growth management plans, long-term spatial plans, and regional plans. They express visions that match different conceptions of the pinnacle of integration in community life: health, well-being, vitality, happiness, livability, and so on. In this article, we focus on one of these labels with a particular integrative thrust: sustainability. The rise of sustainability as a framing concept for urban planning can be viewed as both a motivator and accelerator of the expectations of integration, toward new levels of holism in planning and policy for sustainable cities of the future.[1]

Despite the enduring moral and normative appeal of integration as a keystone concept in planning, relatively little attention is given in planning theory to the variety and diversity of normative stances on integration, and less to their risks. Without more definitional resolution, harkening to notions of integration amounts to little more than the embedding of one vaguely desirable, all-encompassing black box (e.g., planning for sustainability) within another (e.g., planning for integration for sustainability).

This article makes the case for caution and comparison in the commitments expressed by both planners and sustainability advocates toward integration by, first, providing a systematic investigation of the expectations underlying the push for integration in planning and environmental politics literatures. Second, it offers a framework of five distinct flavors of integration that appear within these literatures, distinguishable by the normative argument advanced in each case and the integrative goal espoused. This framework permits a critical view of the potential values as well as the potential limitations of integration attempts when pursued toward different specific ends. It is one thing to admit the failures of

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"solitudes, silos and stovepipes" (Dale 2001, 95) in local government planning, quite another to chart a pragmatic path forward for integration in place. Are ever-increasing levels of integration the only responsible and aspirational path for sustainability planning? And is integration a useful way to approach sustainability in our cities? And do the answers to these two questions intersect at any point? In this article, we investigate the bounds of integrative modes and models for planning theory and practice in sustainability, both as these have been proposed in different contexts and in so far as lessons from planning and sustainability research can help us to assess their potential.

We begin with a brief overview of the understanding of integration within planning and policy and then introduce the more explicit normative dimensions to this understanding that have accompanied the rise of environmental policy integration (EPI) specifically. We present and distinguish the case made for EPI and for sustainable development more broadly and establish an absence of means to understand the specific normative claims embedded within these ideals, let alone a coherent body of research on the value and achievements of practice in this field. Within research and practice of sustainable development in planning over the past 20 years, we can identify five integrative urges, each of which is oriented around a normative principle of integration considered capable of fixing a particular policy failure. This forms our normative framework of integration for sustainable development, which we then illustrate, component by component. Prominent cases and arguments about the results of integration attempts in each of these dimensions cast doubt not only on progress to date in achieving plan and policy integration of different orders but also on the scale of commitment to specific forms of integration among planning and policy practitioners.

Integration as an Organizational and Normative Concept

The most common understanding of policy integration refers to the management of cross-cutting issues that transcend the boundaries of established policy fields and that do not correspond to the institutional responsibilities of individual government departments. This understanding compels institutional reorganization and willingness among formal policy actors, in particular, to facilitate, support, and reward "processes that cross, expand, or otherwise link policy sector boundaries" (Shannon and Schmidt 2002, 17). As an organizational concept, two dimensions of integration are typically recognized: horizontal policy integration (across policy domains, within organizations) and vertical policy integration (between policy actors, organizations, and scales of governance) (Stead and Meijers 2009, 317).

This understanding of integration relates to the efficiency-based idea of "holistic government," founded on the notion that multiple, concurrent problems in place cannot be solved in isolation and that a coordinated response from a variety

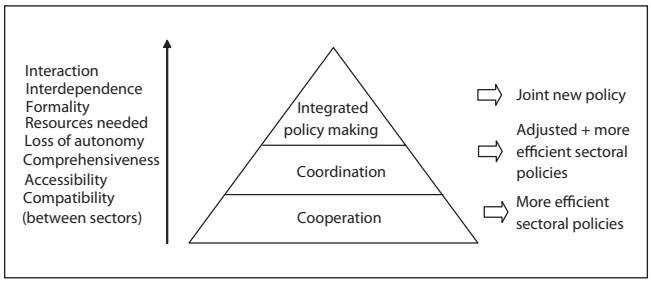

Figure 1. Integrated policy making, policy coordination, and cooperation (Stead and Meijers 2009, 323)

of organizations is necessary for incremental progress (OECD 1996, 29; Persson 2007). Building on Peters (1998), Figure 1 from Stead and Meijers (2009) unites ideas of horizontal and vertical integration into a hierarchy of integration. At the lowest level is simple cooperation, a kind of functional relationship among organizations in which cognizance of other actors' activities facilitates efforts to avoid duplicating policy work. At the middle level, coordination, organizations are additionally taking steps to adjust their policies in order not to overlap with the work of other organizations nor leave gaps in service provision. At the top of the pyramid, integrated policy making, organizations are joining efforts to create policy that is formally owned together by multiple units, which must interact in order to implement and maintain the policy. This is shown on the right of Figure 1 in terms of the outcomes achieved at the different levels, from sectoral policies at the bottom that are efficiently aligned to avoid duplication, to sectoral policies whose content is adjusted to reflect better understanding of the work of other sectors, to true joint policy at the top. Achieving the pinnacle in this conception involves at least three basic criteria, according to Underdal (1980) and reinforced by Lafferty (2004): comprehensiveness (recognizing a broader scope of policy consequences in terms of time, space, actors, and issues); aggregation (evaluating policy alternatives from an "overall" perspective); and consistency (penetrating all policy levels and government agencies in policy execution). Key words describing the quality of the relationship between sectors at the different levels appear on the left of the pyramid.

While this schema offers the means to organize the policy craft in order to achieve progressive levels of integration, it fails to reveal the value offered by such attempts in terms of overall success in policy implementation (Peters 1998). What is missing for this to happen is a normative component to policy integration. As a key axis of the normative agenda of governance, integration can be considered to undergird comprehensive governance ideals, according to which "governance is basically understood as the regulation of and decision making on publicly relevant affairs at the interface between the state, the private sector, and civil society" (Nuissl and Heinrichs 2011, 52).

As distinct from policy integration in broad swath, environmental policy integration (EPI) has a more explicit normative vein. While a case for policy integration has been made from many other starting points, the normative argument underlying other efforts is not specific to the policy area in question but oriented around a neoliberal agenda of modernizing government: by fighting fragmentation, bringing certain policy areas in from the margins, and managing complexity (Slocombe 2003). Whereas no one who advocates housing policy integration, for instance, is arguing for the treatment of housing issues across *all* policy sectors, this is precisely the case being made for EPI: "the environment must be an integral factor of other policy areas" (Jordan 1998, 12). Collier's (1997, 36) three-point definition of the objective of EPI begins with a normative imperative, distinguishing it from the types of objectives for policy integration in general, and then returns to the organizational efficiency arguments of policy implementation more generally: "(a) achieve sustainable development and prevent environmental damage; (b) remove contradictions between policies as well as within policies; and (c) realize mutual benefits and the goal of making policies mutually supportive." In this way, the EPI agenda advances the argument that the multifaceted, historically undervalued, and sometimes critical nature of environmental problems such as climate change, biodiversity loss, and land and water resource degradation demand integrated treatment or "principled priority" (Lenschow 2002; Hertin and Berkhout 2001).

EPI has been pursued using techniques such as reporting and impact assessment, reorganization of organizational bodies and responsibilities, training and staff awareness programs. As a normative idea, EPI is advanced as a means to advocate for high-level commitment to the environment and new formal policy frameworks that redefine problems across groups and issues, casting causal narratives and policy goals in environmental terms. Treatment of the normative dimensions and normative background of EPI is rare in the environmental policy literature (Swartling et al. 2007). It is EPI as a normative principle (Lafferty 2002; Lundqvist 2004) that drives our interest here.

Emphasizing the normative component of EPI brings the concept in proximity with that of sustainable development policy. Referring to the Venn diagram model of sustainable development, commonly employed in planning, we expect sustainable development to be achieved at the central nexus point of overlapping environmental, economic, and social initiatives. Sustainable development policy is thus tantamount to integration of environmental policy with a full spectrum of other policy issues, from problem identification through to implementation and evaluation (Saha and Paterson 2008).

A renewed interest in integration is reflected in the comprehensive planning tradition as well as the turn toward "spatial planning" that began in Europe (now found in the United Kingdom, Austria, Denmark, Germany, the Netherlands, and the Nordic countries) (Stead and Meijers 2009, 317; Nadin 2007). An explicit move away from land use planning toward a "comprehensive integrated approach" coordinating work across government departments, spatial planning was proposed as a means to address the challenges of fragmentation of governance and economic globalization as well as the need for sustainable development. As Allmendinger and Haughton (2009, 2546) explain, the entry of sustainable development into the planning mandate brought about an integrative approach that aligned with ecological modernization ideals[2]:

> With sustainable development scripted as one of the distinguishing characteristics of spatial planning, there was a process of mutual reinforcement around a belief that growth would underpin the achievement of broader social and environmental goals in relatively uncontroversial ways. The wider context of this was that, in a period of sustained growth, the government wished to push through a major programme of infrastructure and housing investment . . . the land-use regulatory function needed to be brought into line, allowing quicker decision making on development but without losing the legitimacy of local planning with its links to the democratic process.

This connection between comprehensive planning and sustainable development is common in the policy literature, although disputes exist over the success so far in integrating sustainability goals and approaches. In Canada, the Integrated Community Sustainability Plan (ICSP) framework emerged in 2005 as a key component of the Liberal government's New Deal for Cities and Communities. Upon launching the New Deal, Prime Minister Paul Martin announced: "Guided by a new vision, and supported with new investments, the New Deal is re-imagining and re-inventing how governments work together for the social, cultural, economic and environmental sustainability of cities and communities across Canada" (quoted in Bradford 2007a, 8). Touching many of the same points as spatial planning, and in a similar language of ecological modernization, an ICSP is defined as

> a strategic business plan for the community that identifies short- medium- and long-term actions for implementation, tracks and monitors progress, [which] is reviewed on an annual basis. An ICSP is a big picture, holistic plan that provides guidance for the development or alignment of all municipal plans, policies and decisions (i.e. municipal development plan, transportation plan, energy plan, purchasing policy, capital planning, etc.), under one integrated decision-making framework. (Baxter and Purcell 2007, 35)

ICSPs do not replace community plans although some communities have developed their ICSP in concert with a new sustainable official community plan (e.g., City of Prince

George 2011; City of Campbell River 2011). Also, while ICSPs were intended to run the gamut of social and physical planning at the municipal scale, federal gas tax monies were only earmarked for spending on the urban physical infrastructure of transportation, water, and waste management, not social infrastructure such as schools, hospitals, settlement, and family services (Bradford 2007a). This is to suggest that despite the enthusiasm for these and similar integrated planning initiatives, there remain conceptual, ideological, and jurisdictional barriers to integrating the full spectrum of possible dimensions of planning processes toward a sustainable city (Bradford 2007a; Cameron, Odendaal, and Tones 2004).

Sustainability as Integration

Integration is considered one of the first order principles to implement and institutionalize sustainable development (along with system integrity, intergenerational equity, livelihood sufficiency opportunity, precaution, adaptation, and long-term planning; Bomberg 2004; Gibson 2005). It is the primary policy legacy of sustainable development institutionalization internationally in the 1980s and 1990s. The challenges of sustainable cities only increase concern for integration in planning by extending our sense of planning responsibility for nonhuman species, unborn generations, and geographically distant links in our cities' production and consumption chains. At the same time, the complicated nature of sustainability, rife with uncertainties and up- and downstream effects, makes integration particularly difficult. Added to the historical reality that sustainable development portfolios within government typically lack a strong policy constituency or legal ground, it is not surprising that success in meaningful integration toward sustainable development is rare.

The impetus for an integrative approach toward sustainable development, and the changes implied for environmental policy also, have been summarized by Liberatore (1997, 107) as follows:

> The relevance of integration for moving towards sustainable development is straightforward: if environmental factors are not taken into consideration in the formulation and implementation of the policies that regulate economic activities and other forms of social organization, a new model of development that can be environmentally and socially sustained in the long term cannot be achieved.

As is the case with integrated planning and policy generally, an integrated approach to sustainable urban development also has no fixed meaning. In fact, the commitments of the science-minded sustainabilists and the normatively minded sustainabilists to integration are increasingly heightening the expectations associated with this term (Holden 2008a).

Dale (2001) has referred to this shift in expectations as a shift from first- to second-generation sustainability thinking. First-generation sustainability thinking featured the notion of the triple bottom line (Elkington 1997), the three legged stool, the triangle or three interlocking circles (Campbell 1996), but this kind of integration tended to be framed as merely additive of components (the integration-as-stapler approach). By contrast, second-generation sustainability thinking focuses on process rather than targets set in advance, recognizing that human and natural systems are dynamic and constantly coevolving and uncertainty is endemic. From this second-generation conceptualization of urban sustainability, consensus is emerging that sustainable development implementation demands unprecedented levels of cooperation and collaboration since solutions are beyond any one sector, any one discipline, or any one government to solve, and process matters from the grand plan to the fine detail (Beatley and Manning 1997; Hempel 1999). Here, integration is an approach to problem definition and solving that is holistic, communicative, cooperative, complex, and multifaceted. From this sustainability standpoint, an integrated approach is necessary because of the dynamic interconnections, dependency, and coevolution of human and natural systems, coupled with the charge that existing systems of organizing, instilling, rewarding, and governing human behavior have netted serious harm to natural systems.

Integrating environmental concerns into all policy debates is not, of course, a question of value-neutral insertion; rather, the process involves "a fundamental revision of the traditional hierarchy of sector policy objectives" (Persson 2007, 32). Integration attempts can clash with existing power dynamics, which tend to marginalize environmental concerns, and with concerns about the irreversibility of some kinds of environmental damage. In response, Persson (2007, 26) and Lafferty (2004) have introduced the claim that environmental objectives should take a "principled priority" in policy design. As a principled priority, EPI entails:

> (a) The incorporation of environmental objectives into all stages of policymaking in non-environmental policy sectors, with a specific recognition of this goal as a guiding principle for the planning and execution of policy; and (b) An attempt to aggregate presumed environmental consequences into an overall evaluation of policy, and a commitment to minimize contradictions between environmental and sectoral policies by giving priority to the former over the latter. (Lafferty 2002, 13, in Persson 2007, 33)

Given the uncertainty regarding many environmental consequences, the notion of "principled priority" in EPI is

closely associated with the precautionary principle. As a standard of "environmental prudence," this interpretation of EPI can be read as a "bias in favour of life-support systems that is built into the very system of decision-making" (Lafferty and Hovden 2003, 11). Proponents Lafferty and Hovden are quick to point out that this does not amount to an automatic disqualification of alternative objectives, but does force any proposals that discount potential or real environmental damage into open and public debate. The notion of principled priority thus avoids the critique of democratic deficit to the extent that, from time to time, public debate may uncover particular contextual circumstances that make other principles more important. Recognizing that this kind of competition between alternative priorities is the most common likely outcome of an EPI process, and that "win–win" arrangements between competing environmental, social, and economic goals and risks will not always be found, discussions of EPI turn to questions of balance and coherence.

As a principle of balance and coherence, EPI can be interpreted as an operationalization principle for sustainable development, a process of identifying the activities and instances in which changes that combine some bundle of sectoral objectives can be brought to bear, "taking into account present economic and political constraints" (Liberatore 1997, 111). Without asserting that all disputes have a win–win solution in which environmental and other objectives coincide, a balanced approach can still seek out instances in which they do coincide for priority action. However, by contrast with application of the principled priority rule in EPI, balanced integration efforts may just as likely dilute as strengthen environmental (or any other specific) priorities.

Recognizing the Normative Dimensions of Integration

A number of authors have noted the definition and usage slippage in the discourse surrounding policy integration and EPI, and the need to clarify the debate and uptake of the concept in policy (Cowell and Martin 2003; Shannon 2003; Lenschow 2002; Lafferty and Hovden 2003). A means of recognizing the range of normative claims for EPI is necessary for more systematic investigation of the success or failure of EPI efforts in addressing particular policy failures. There are a number of reasons why we should be skeptical about the normative value of integration de facto, that is, without careful consideration of contextual and other specific factors. Perhaps the first is that little attention has been devoted to questioning integration within either policy or planning literatures (Persson 2007, 34) despite the lack of evidence of practical impact of integration efforts in place.

Various ways to divide and characterize scales and functional types of integration are available. Underdal (1980) identified four categories of integration: time (short- and long-term considerations); space (related to jurisdictional issues); actors (related to the intraorganizational dimension); and issues (the breadth of matters considered). Taking a different tack, Cowell and Martin (2003) classify policy integration attempts according to whether they occur at a strategic or operational level of the policy-making process. From a review of the discourse surrounding policy integration within formal policy in the United Kingdom, Healey (2006) provides four dimensions, recognized to be often overlapping: the (co)aligning of strategies and policy (a similar distinction to that made by Cowell and Martin 2003), cooperation among actors, connecting policy and action, and policy (re)framing. Each of these frameworks relies on conceptual distinctions, although Healey's final category, policy (re)framing, has a normative aspect as well.

Concerning policy integration for sustainability as integration, in its 2002 report, Improving Policy Coherence and Integration for Sustainable Development, the Organization for Economic Cooperation and Development recommends a series of themes to be integrated, including a common understanding of sustainable development, clear commitment and leadership, specific institutional mechanisms to steer integration, effective stakeholder involvement, and efficient knowledge management (summarized in Jordan 2008, 26). Inherent in this set of themes is a set of normative rather than conceptual principles; they are oriented toward a constellation of knowledge, skills, and relationships considered best suited to the attainment of a better society. This particular framework likely prematurely closes off consideration and testing the validity and importance of each of these values to the larger goal of sustainable development. We can instead devise a framework that opens up these assertions of value to questioning and assessment in different contexts.

In what follows, we will examine integration deriving from five different perspectives, embedded in each of which is a normative stance, framed around a desire to fix a targeted policy failure. Each has its own goal, rationale, and substantive priorities within the policy process: integration of visions and agendas; integration of governance institutions; integration of communities and voices; integration of policy sectors; and integration of knowledge types and learning processes. Each carries with it its own set of risks. The framework is summarized in Table 1 and each perspective will be discussed in turn.

Integrating Visions and Agendas

With the rise of interest in integrated planning and policy as a particular form of city branding and place marketing, new attention is being placed on the importance of achieving a common normative vision of a desirable place. In their study of policy integration initiatives in a Portuguese city, Breda-Vázquez, Conceição, and Móia (2010, 213), for example,

Table 1. Normative Dimensions of Policy Integration for Sustainable Development[3]

Integration of	Policy Failure Targeted	Normative Stance
Visions and agendas	Postecological condition, managing unwillingness to change toward sustainability	Place-based visions help capture local specificity and support, promote competitiveness
Governance institutions	Fragmented governance; jurisdiction and capacity limitations	Integration proceeds through partnership
Communities and voices	Failures of legitimacy; structural social exclusion	Diversity in interaction around policy builds governance capacity
Policy sectors	Implementation gap; diversity in urban policy	Working across policy sectors creates efficiencies
Knowledge types and learning processes	Hegemony of scientific rationality; scientific uncertainty; failure to learn	Valuing knowledge types builds capacity for continuous learning and use of best knowledge

note the key role of a place-based vision for successful policy integration, or "the importance of identifying and assessing spatial visions and the necessity of comprehending the relationship between that vision and the context in which an initiative is operating." A place-based vision is usually considered a goal statement with a longer time horizon, generally from twenty to a hundred years. Such visions are typically produced via some form of multistakeholder or participatory process and usually involve specific spatial articulations of land use, infrastructure, and other building blocks of place.

The sustainable development frame would appear to offer a foundation for a solid vision to guide integration attempts. Evidence of integration in this respect is sought in visions and principles articulated at the highest levels of plans and organizations, as opposed to a broad awareness of sustainable development concepts among rank and file staff. However, on closer inspection, a sustainability vision is likely to be embedded within a range of partially overlapping, partially conflicting visions, some of which take a principled priority view, and others that hypothesize balance or mutual gain. Moreover, plans with the clearest and strongest sustainability vision are not always those that do the most to promote sustainability practices (Saha and Paterson 2003). This process of a comprehensive frame inviting splintering forces has long been noted in the policy integration literature: "One would expect an inverse relationship between comprehensiveness on the one hand, and aggregation and consistency on the other; other things being equal, the more comprehensive a certain policy, the more centrifugal forces will be at work." (Underdal 1980, 161)

A kind of policy consensus may have formed around an ecological modernization agenda in which values, in theory, are not to be compromised and all sectors must "win." In this vein, the environmental politics literature offers an understanding of "the postecological condition" which asserts that existing policy and planning regimes, rather than achieving sustainability in any integrative or holistic sense, merely manage "the inability and unwillingness to become sustainable" among different groups in the city (Blühdorn and Welsh 2007, 172). The postecological condition, rather than constructing consensus, masks core differences in political, social, and cultural visions about desirable futures. Breda-Vázquez, Conceição, and Móia (2010, 232) found that in cases where strategic territorial visions had been developed, these were crafted by consultants external to government, and "people commented that a shared and strategic vision was not generated among the different agents involved, despite the existence of formal strategic documents." In other words, even locally developed territorial visions were neither embedded within the local governance institutions nor were they particularly integrative in the sense of being shared by all.

The principle at work here is that while integration efforts fail when strategic shared vision is lacking, work that does achieve a shared vision for planning may still fail to accomplish any further results. In research on spatial planning efforts in Scotland, Vigar (2009) found a trade-off between plans that were capable of garnering the support of diverse professionals and comprehensive plans. In particular, the most successful plans in this respect were selective in terms of strategy, taking "a visioning role rather than focusing on planning's regulatory function" (Vigar 2009, 1587). This result may be evidence of the importance of vision-seeking in integrative planning. In recognition of the postecological condition, however, it may equally be the case that plans focused on vision are viewed as successful to the extent that they do not ask policy actors to "walk the talk." The apparent consensus at the level of vision may disintegrate at the level of strategy, and this result may be directly related to shortcomings in the integration of visions and agendas in the planning process.

Another problem arises with regard to the simultaneous need for locally specific and responsive policies and policies that can be borrowed, tinkered with, and compared across cities competing internationally for sustainability "brand recognition." A focus on local needs and specificities, as well as conditions of policy diversity and institutional fragmentation, would seem to support attention to local needs over wider comparability, yet it is difficult to justify a preference for thinking integratively only within a given

metropolitan boundary, particularly in a context of the pursuit of sustainable development.

Integrating Governance Institutions

Core to the policy integration literature is the notion of integration as an antidote to the negative consequences of fragmentation within governance institutions. In this dimension, vertical integration efforts harken to the distinction between the role of governance "to steer and guide" rather than "to command and use its authority" (Stoker 1998, 18). Developing habits of interaction and coordination within government is further hypothesized to bring about lasting institutional change as well as greater agency among individuals working in government, or "transformative institutional dynamics and collective actor capacity" (Breda-Vázquez, Conceição, and Móia 2010, 211). Thus, integration efforts in this domain might aim to regulate interaction between agencies, or, using a softer approach, encourage collaborative networks, and/or build capacity among diverse actors. Legislative requirements, local sustainability forums, interagency working groups, and strategic partnerships are some of the forms that such groups take, with aims to coordinate and synchronize efforts but also to bridge gaps in professional cultures, ways of defining and approaching problems. Researchers of policy integration efforts in practice note that government employees are often receptive to legal and regulatory obligations to coordinate strategies and actions but note that "legal provision would do little but force people to pay attention to each other's strategy without real integrative effort" (Vigar 2009, 1587).

In an environment of fragmented governance, generating the capacity to interact collaboratively is key. While recent case studies suggest promise in terms of informal collaboration in certain instances, Healey (2006) makes the point that in common practice, the governance landscape for formalized collaboration among institutions does not yet exist, at least not in the United Kingdom. In Canada, the 2008 *Sustainable Development Act* and *Strategy* attempt to formalize such integration but without designating specific powers to ensure that this actually occurs. In the list of items (below) considered essential by the Government of Canada to the attainment of sustainable development, "which is a continually evolving concept based on the integration of social, economic and environmental concerns," collaborative governance institutions does not appear. Instead, the only point that refers specifically to the workings of government, (f), seems to promote an environment–economy trade-off approach that is difficult to envision as entailing anything but an oppositional battle between environmentally and economically focused agencies.

(a) the integration of the environment and the economy;
(b) protecting the health of Canadians;
(c) protecting ecosystems;
(d) meeting international obligations;
(e) promoting equity;
(f) an integrated approach to planning and making decisions that takes into account the environmental and natural resource costs of different economic options and the economic costs of different environmental and natural resource options;
(g) preventing pollution; and
(h) respect for nature and the needs of future generations. (Dowdeswell, Mitchell, and Ogilvie 2008)[4]

Within attempts to encourage particular modes and habits of interaction and strategic coordination among governance institutions, vertical tensions up and down the power hierarchy rise to the surface. The assumption is often that local government is better able to provide flexible, coordinated, integrated solutions, because of tighter, more personal relationships of accountability among local agencies and their publics, a more manageable and action-oriented scope of activities, and a more place-based understanding of effectiveness and implementation success (While, Littlewood, and Whitney 2000). However, a theme emerges in a considerable portion of current research that this is not necessarily a correct assumption. When considering the sustainability efforts of six large Canadian cities, Robinson (2008) found that far from sharing and moving in concert toward a strategically coordinated vision of sustainability, some local governments lacked even the capacity to differentiate between environmental and sustainable development initiatives. In contrast with the view of local-scale collaborations as a productive hive of innovation for sustainability, Allmendinger and Haughton (2009, 2548) refer to the informal plans, processes, and strategies put in place by flexible groups of actors at the local scale of governance as not only a "glue to a fragmented governance system" but also "a congestant." In the process of answering the call for a more visible, rapid, locally strategic implementation of spatial plans, local "soft spaces" of discretionary planning exacerbate urban policy diversity and the fragmentation of groups on the ground doing the work of governance.

Integrating Communities and Voices

Part and parcel of the demand for more effective, integrated governance institutions discussed above is the need for more effective engagement of different voices and actors in the policy process (Denters and Rose 2005; Hambleton, Savitch, and Stewart 2002; Andersen 2001; Governa and Salone 2004; Keil 2006). The key drivers of this perceived need are challenges to the legitimacy of local decisions and plans from different groups, demands from the public for higher quality, meaningful public participation in decision making at all levels, and related demands for socially inclusive

approaches to planning and policy that work to reintegrate structurally excluded racial, cultural, and other identity groups from public debate.[5] Effective use of the energy, resources, and information of different publics is also considered key to overcoming the implementation gap, that is, the failures to put new policies and plans into practice. Within the sustainable cities literature in particular is the notion that cities already serve as the meeting place for key minds, ideas, and necessary participants from all points of the spectrum of action needed to implement necessary changes, and processes to coordinate and facilitate this action are thus the surest and most obvious path to beneficial change toward sustainability (Wälti and Kübler 2003). Creating networks that maintain themselves because of recognized common interest, drawing on strong interpersonal and networking skills, is seen as key to creating, transferring, and using knowledge across the spectrum of actors needed to build a sustainable city (Seymoar, Mullard, and Winstanley 2009).

It is clear from a number of angles that some form of stakeholder and/or citizen orientation of plans is key to success in integration. However, efforts in this vein do not necessarily hope to alleviate challenges at the level of vision and may in fact exacerbate these. For instance, in their analysis of the Federation of Canadian Municipalities' first annual Sustainable Community Competition in 2000, Parkinson and Roseland (2002, 411) found that stakeholder participation was an important contributing factor in the success of local government projects but many entrants to the competition lacked a "clear, holistic vision." Sapountzaki and Wassenhoven (2005) found in their case study in Greece that the public failed to grasp the breadth of the concept of sustainable development and that local officials, for their part, failed to understand public perceptions and views. While the gains are clear for this form of integration in terms of the match between policy priorities and provisions and citizen expectations and capacities, and thus reductions in opposition to plans after-the-fact, Nuissl and Heinrichs (2011, 51) warn that "negotiation and participation do not automatically lead to more efficient modes of decision making but can, on the other hand, increase costs."[6]

Nor is effective public participation a certain means to support implementation. Instead, public receptiveness to participate in integrative sustainability planning may sometimes accompany strong political resistance to implementation of the results (Holden 2006). In line with the argument already presented regarding vision, Allmendinger and Haughton (2009, 2548) make the general case that public engagement and support in charting the vision may fall flat when plans turn toward implementation. Here, goodwill in producing win–win collaborative dialogue may evaporate as negatively affected actors retreat to the certainty of the "win–lose" regulatory and legal system: "For instance, some developers may well engage with the collaborative process of strategy making, but others will not, and both may ultimately seek to advance their cause through the formal adversarial processes of planning appeals and court decisions" (Allmendinger and Haughton 2009, 2548). Alternatively, the expectation that agencies must come together to work collaboratively may cause some agencies to refuse to participate because of a perceived loss of autonomy and even risk of loss of funding because agencies competing for government grants may end up being asked to share the work (Innes and Booher 2010).

The expectation of participation at all or many stages of an integrative policy process can become exceedingly demanding, particularly for small organizations (Asthana, Richardson, and Halliday 2002). All potential partners may find themselves in a conflict over whether or not to participate depending on things like a limited interest in the issue or lack of jurisdiction (even *perceived* lack of jurisdiction) over the issue. Integration of new voices and decision-making rules can deny existing and entrenched power disparities that continue to impact the direction that decisions take, with the result that integrative efforts can perpetuate discriminatory decisions and effects. Furthermore, a consensus-based model of decision making can lead to radical voices being lost or coopted (Asthana, Richardson, and Halliday 2002). However, a process informed by an integrative view of actors and their institutional and interpersonal relations can also reveal hidden power dynamics, potentially opening these up for realignment (at least in theory) (Nuissl and Heinrichs 2011).

Serious democratic concerns can be raised about integration efforts of this sort, and the transfer of societal decision competence that they entail, from specific actors in specific domains into the public participatory domain. What is citizen empowerment from one point of view constitutes offloading of democratically guaranteed government activities onto citizens, from another point of view. Accountability, representation, legitimacy, and reliability may be lost in the process (Nuissl and Heinrichs 2011; Healey et al. 2002). To the extent that the inclusion of new actors in decision-making processes lessens the inclusion of the state through redistribution of powers, the state is left relatively disempowered to make informed decisions and take appropriate interests on behalf of the public, although this may be the only actor group qualified and entitled to act on behalf of the public interest.

Questions of democratic legitimacy are also reflected in terms of policy substance. If a primary goal of public involvement in the planning process is to achieve distributive justice, it remains uncertain whether this is commensurate with environmental sustainability objectives, particularly to the extent that the environment is treated as a "principled priority." In this instance, the proof of integration potential demands practical evidence: "the question of whether distributive justice is functional for environmental sustainability can only be answered empirically" (Dobson 1998, 4-5).

Integrating Policy Sectors

Integration across policy sectors, horizontal integration, refers to the need "to take account of the consequences of policy outside of a specific policy sector" (Stead and Meijers 2009, 319). The broader reflection of this issue is in terms of ensuring corrective feedback loops and eliminating contradictory or non-constructive relationships between different actions. In this construction of integration, we can recall from Pressman and Wildavsky (1984, 133) that "no suggestion for reform is more common than 'what we need is more coordination.'"

In their cases, Breda-Vázquez, Conceição, and Móia (2010, 229) found that interactions among policy actors in different sectors failed to address potential complementarities in objectives they were jointly aiming to meet. Instead, they characterized the interactions as inflexible, unstable, and consisting of "functional relations, derived simply from the common presence of those agents across various initiatives." The sectorally based way in which policy problems are usually defined, failures to pay adequate attention or give adequate resources to knowledge building, through monitoring and evaluation, for example, and staggered and mismatched timing of policies, all bode poorly for sectoral integration.

Stronger coordination can result in a weakening of environmental considerations as well as strengthening, and in aggregate it is very difficult to assess the impact of administrative coordination on policy integration. While integrating environmental and economic policy proceeds on the hunch that win–win solutions can be found, based on an ecological modernization paradigm, this is not always the case in practice: "integrating an environmental dimension into energy policy can expose, rather than reconcile, fundamental conflicts of interest and value" (Owens 2007, xviii). Additional specific concerns that deserve to be raised include a concern with the combination of the narrow attention spans of policy makers and the uncertainty embedded in most environmental outcomes, resulting in a situation in which environmental policy effectiveness may be "higher when attention is concentrated on a limited set of problems where technical solutions are known or can be anticipated" (Weale 2005, 106). Inclusion of new and broader, vaguer concepts of policy and planning can happen at the expense of the more traditional segments and silos within state policy and planning, such that tested modes of action are forfeited in the name of less tested modes, with predictable results for the pace of action in general.

Integrating Knowledge Types and Learning Processes

Probably least well treated in either policy or planning literatures related to integration is the integration of knowledge and learning. Nevertheless, environmental policy integration can be defined as policy learning in terms of sustainability, that is: "a policy-learning process in which perspectives evolve and sectoral actors reframe their objectives, strategies and decisionmaking processes towards sustainable development" (Nilsson 2005, 207). Incorporating new environmental values into policy design and considering the interplay of these with existing values entails creating new knowledge and understanding and ultimately, new policy frames (Swartling et al. 2007). The learning process goes two ways: "integrating environmental considerations into all sectors of policy-making involves changes in these sectors, but also in the way environmental goals and instruments are set and implemented" (Liberatore 1997, 124).

When formalized as a process of knowledge integration, social learning focuses on interlocution and building capacity to move between knowledge types and make the best use of different knowledge types for different purposes. The key goal of this form of integration is to open people's minds to the different ways of understanding the nature of knowledge, sources, and best uses of knowledge and information and to break down people's core resistance to understanding and relating to other people's perceptions and epistemologies. Questions of truth, validity and verification of information, understanding "what works" and "what counts" underlie all public decision-making processes. Integrating knowledge to respond to these questions facilitates social learning among participants in a process and, if it is conserved and institutionalized, also among those who learn about or experience the results of the process in the future.

Conditions of diversity and fragmentation motivate the recognition of learning capacity as important, and new ambitious visions and place-based development goals motivate the need for new knowledge in particular. Specific knowledge about place, and new knowledge about organizations, individuals, and groups and their capacities and interests are some forms of knowledge often singled out for their value. In their review of community plans in the United States, Berke and Conroy (2000) found that in order for sustainable development goals and principles to be fully operationalized, staff needed to possess a deep understanding of the concept and its implementation. Without this knowledge, integration in sustainability plans did not result.

While specific learning occurs, without a doubt, for individual actors in any policy integration process, learning that does not conform with the rational scientific model often goes unrecognized, unfacilitated, uncontextualized, and uncollected. As a result, social learning, or interpersonal learning that challenges people to change preconceived ideas based on knowledge that is new to them, and understand potential value in other ways of knowing about specific people, places, and situations, is often discouraged through avoidance (Holden 2008b). This has predictable results across cultures: scientific knowledge forms retain their dominance,

regardless of the suitability of this type of expertise to the particular question at hand, other forms of knowledge are mostly considered "folk" knowledge that may spark new scientific studies, but not be treated as valid to inform decisions in and of themselves. The knowledge forms of those in power retain their power, those of the disempowered are not permitted to compete, and epistemological pluralism, which would permit meaningful contributions of different knowledge types depending on context and question, is not considered an option.

The generation and maintenance of learning capacity within local governance does occur and a number of models exist. Core among them is the use of ongoing monitoring and benchmarking processes suitable for the generation of a full spectrum of information related to local sustainability. While continuous evaluation, monitoring, and indicator systems are consistently undervalued, certain city governments are beginning to connect to their local learning institutions with various models of the embedding of scholars and scholarship in flagship sustainability initiatives (Savan 2004; Stephens et al. 2008). More important than the existence of such monitoring programs is their integration of diverse knowledge types and their use in evaluation procedures and other learning processes. Social learning is dependent to a large extent on the nature and mobilization of existing social networks, which may themselves be knitted together by new knowledge, new processes, and new situations in place (Kasperson, in Nilsson and Eckerberg 2007, xvi).

Steps in a process of effective knowledge integration include identifying knowledge types, opening a dialogue among participants regarding their personal and group affinities to different knowledge types in different circumstances, framing the question at hand from within these identified knowledge types and holders, designing context-specific means of translating different types of knowledge for different groups, cross-interrogating and incorporating these cross-translated knowledges into a format to inform decision making, and institutionalizing the result for the future. Increasingly, authors within both planning and policy literatures refer to the importance of storytelling, in a range of forms including narratives, maps, the built form, and other types of installations, as key means of translating knowledge across expertise and epistemological perspectives (Sandercock 1998; Forester 1999).

Picking Apart the Bones: Challenges to Integration as a Means to Sustainability in Planning

What would successful integrated sustainability planning look like? The five normative dimensions of integration discussed here represent both preconditions for integration in the broadest sense and particular formulations of integration that are argued and evidenced differently in specific policy processes. In general and in specific, therefore, we have raised a number of important risks involved in the move toward integration of various sorts in contemporary planning and policy toward sustainable cities. At the level of vision, an articulated high-level commitment to integration does not always translate into action; effective visions may be unrelated to effective strategic actions. Efforts to integrate governance institutions, both formally and informally, may raise awareness of work in other agencies but not create a common channel for this work. The integration of new voices in planning efforts may detract from the clarity and aspirations of high-level visions, raise difficult questions for the democratic process, and unavoidably exclude certain hard-to-access values and voices. In the domain of integrating policy sectors, we echo the warning of Slocombe, studying policy integration in the housing sector in the United Kingdom: "the housing sector is weak because it 'speaks with many voices.' It is difficult for a sector which is not itself integrated, to achieve integration with other sectors" (Slocombe 2003, 240). Regarding learning, the importance of social and context-specific learning remains typically unaddressed and unsupported, efforts to measure and evaluate are rare, and even rarer is the effective use of these efforts where they exist.

This review also raises important questions for further planning research. The first such question surrounds the interactions among diversity, fragmentation, and integration. Integrated policy and planning have been cast as both dependent on fragmentation in governance and as responses to governance challenges caused by fragmentation. Based on the logic offered in many integration efforts, if local governance were not fragmented, there would be no need for novel integration efforts. Changeability in governance institutions and actors, along with limited relational capacity among individuals and institutions, are cited as challenges to integration, but new institutions and actors are also part of the integration agenda. A tension thus exists between conditions of diversity and fragmentation and integration efforts, raising the question of whether a threshold level of integration may exist, beyond which investment in further integration does not pay off. This threshold level and new focused policy assemblages may be situated differently based on the different normative dimensions of integration in play. More pessimistically, failed integration attempts may have consequences for fragmentation and policy diversity as a kind of transaction cost. Any further investigation of this relationship would need to take into account the range of arguments and rationalities for integration presented here.

Second, and related, are questions of scale and comparability in integration efforts. Seizing the value of integration presupposes independently operating local governance systems. That is, the ability of local places to set and move toward their own development visions is vital to success in

sustainability integration efforts that aspire to break free of the postecological condition. It is unclear, from the research at hand, whether the governance hierarchy works against integration by imposing excessively structured and functional relationships that adhere to existing sectoral definitions, process and actor possibilities, and knowledge types and limiting local innovation. Alternatively, a multilevel governance approach may also facilitate action that is amenable to integration across scales and jurisdictions.

Third are questions about the central role of the city in moves toward integration. A clear commonality among the multiplicity of arguments in favor of integration is a revived interest in the city and developing a metropolitan-specific agenda (Vigar 2009). Division of labor and specialization are understood as features of cities, but paradoxically, with this luxury of tunnel vision may come the polar opposite compulsion to integrate. At one level, this is argued as "getting back" to a lifestyle more in tune with human and nonhuman history, in which segregation of different elements of life's demands was not possible in the way it is in the modern city. When taken together, however, the goals of integration of all perspectives considered here set more integrated aspirations than we have precedent to expect in human or nonhuman communities, as far as we are able to ascertain.

Fourth and finally is a set of questions related to the dimensions of rationality embedded within the integration project. Planning theory offers some directions for understanding the possibilities, particularly in the realm of the ongoing struggle and debate over the role and position of rationality in planning (Verma 1996). Within these debates, integration efforts can be seen as a humanistic push-back against the dominance of scientific rationality. This effort can only pose an effective counterweight if it is able to communicate a plausible alternative view of rationality. That is, a normative understanding of what is driving and what is inhibiting EPI initiatives reveals that these initiatives often require different criteria and conditions of success than standard evaluation protocols are fit to handle. We need to develop the means not only to facilitate the development of place-based visions and goals but also to articulate and publicize the means by which we have arrived at these visions, and how we know which actions fall within and outside its scope. We need to know what the lines are that we will not cross in moving toward any sustainable city vision. From an ecological modernization perspective, the core argument of integrative planning practice is that planners must present solutions that do more than compromise one set of values for another but achieve win–win status, or satisfy democratic demands for justification of some kind of principled priority perspective. Are expectations of going beyond the zero-sum game in political compromise without betraying democratic principles borne out in practice, following integrated process protocol?

The flip side of all of this is the reaction against integration that is also evident in sustainability planning domains today. Without exactly crying "back to the silos!" tough-minded sustainability advocates and planners alike have, in some cases, abandoned the quest for comprehensive integration. In its place, we see easily articulated, measurable commitments to reductions in greenhouse gas emissions, or less frequently, reductions in waste generation, energy or water use, or ecological footprint. A focus on reducing greenhouse gas emissions in particular and a mitigation-based approach to climate change generally, in some cases, is taking over where an urban sustainability focus once held.[7] The distance between these two approaches may be sustainability planning's embodiment of what Bruno Latour has described as the two great narratives within the history of modernism: emancipation or attachment. Whereas the narrow approach suggests a faith in the eventual triumph of science over human bias and subjectivities, and the emancipation of humanity, long associated with modernism, the integration impulse falls in line with the narrative of attachment, in which:

> We constantly move from a superficial to a deeper interpretation of what it is to be entangled. What, in the first narrative, was taken as the proof of an increasing human mastery and an advance toward greater emancipation, could also be redescribed . . . [as] continuous movement toward a greater and greater level of attachments of things and people at an ever expanding scale and at an ever increasing degree of intimacy. (Latour 2008, 5)

The pursuit of integration is in this way perhaps no less foolhardy than the pursuit of the other modernist vision of emancipation. However, it is perhaps more in keeping with how planners have always hoped to contribute, helping communities to "brace . . . for a future in which there will be always more of these imbroglios, mixing many more heterogeneous actors, at a greater and greater scale and at an ever tinier level of intimacy requiring even more detailed care" (Latour 2008, 6).

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Notes

1. The perception of a general tendency toward increasing expectations of integration in urban planning can be considered to stand in contrast to the perception of a general tendency toward "splintering urbanism" articulated by Graham and Marvin (2001). The splintering urbanism thesis constrains itself to patterns of urban infrastructure, but corresponds in a broader sense to writings on postmodern cities and urbanization (e.g., Dear 2000). The splintering urbanism thesis has been challenged forcibly by Coutard (2008) among others.
2. Ecological modernization is a theory and set of policy practices, generally oriented around finding a point of intersection between capitalist development goals, objectives and technical means, and environmental critiques and values. It is often defined around the notion of creating "win–win" or "win–win–win" solutions to particular problems that unite environmental, social, and economic development goals (Keil and Desfor 2003).
3. The first four of these categories correspond broadly to four of the dimensions of integration identified by Liberatore (1997, 113): issue dimension, organizational dimension, distributive and ethical dimension, and sectoral dimension. Liberatore additionally identifies a "toolkit" dimension encompassing the instruments to be developed to achieve integration and a spatial and temporal dimension, reflecting that some sectors and issues are more diffused or are economically and socially more important than others at particular times and in particular places. This notion has a role to play in the fifth dimension I identify here, knowledge integration, but does not encompass the extent of my meaning in terms of knowledge integration.
4. It is important to note that in the Canadian context, municipalities are "creatures of the provinces" (Sancton 2011) and neither do they have standing within the federal government nor do they have a federal agent or entity responsible for them. Experiences of integration of federal, provincial, and local government in Canada are few, and in recent years have taken the form of a short-lived Cities Secretariat, a small number of urban development agreements, and the federal gas tax initiative, mentioned earlier (Bradford 2007b).
5. In the context of the United States, the notion of integration is tied tightly to racial integration, meaning in particular the opening up of housing, educational, employment, and other civic opportunities to historically segregated "black" and poor populations (Wilson 1987; Massey and Denton 1993). While not excluding arguments about the need for voice and adequate representation for segregated communities of color, racial integration in this sense provides its own particular normative stance. Given the extensive debate on the character, conditions, and outcomes of racial integration in U.S. urban policy and planning literatures, this specific issue will not be discussed here.
6. Particularly challenging here is the effective incorporation of voices that defy translation to common policy parlance: those of future generations, those of people affected by community decisions but living elsewhere, and those of nonhuman residents. Including these groups' values in deliberations is, nonetheless, essential for legitimate integrated sustainability planning (with regard to integrating the concerns of future generations, some innovative proposals are discussed in Göpel 2011).
7. These and other more specific frames for responding to the policy challenges of sustainable development may, alternatively, be viewed as efforts to ground and concretely move toward solutions that construct a persuasive, limited, normative case for EPI in particular local contexts (e.g., Hull 2008). I am grateful to an anonymous reviewer for suggesting this interpretation.

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Bio

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