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Environmental Policy Integration: a State of the Art Review

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ABSTRACT

The principle of environmental policy integration (EPI) attracts great scholarly interest as well as widespread political backing. Political support is particularly strong in the European Union, where it enjoys a prominent quasi-constitutional status. However, the practical fulfilment of EPI appears to lag well behind these aspirations, although the evidence base of this widely held view remains rather fragmented. This article aims to review the 'state of the art' in EPI research and practice from the perspective of its conceptual meaning, processes of implementation and outcomes 'on the ground'. It finds that the political commitment to EPI is indeed widespread, especially in industrialized states, but that deep disagreement surrounds its actual application. In terms of everyday practices, 'policy integration' is complex and contingent, and there are few 'best practices' that can be easily shared between jurisdictions. Finally, knowledge about policy outcomes is very sparse indeed, and policy-making systems seem very ill prepared to address this lacuna. Copyright © 2010 John Wiley & Sons, Ltd and ERP Environment.

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Introduction

IN THE LAST 20 YEARS OR SO THE PRINCIPLE OF ENVIRONMENTAL POLICY INTEGRATION (EPI) HAS ATTRACTED increasing scholarly interest (Jordan and Lenschow, 2008; von Homeyer *et al.*, 2010a, 2010b; Nilsson and Eckerberg 2007). It first emerged in the 1990s as a lagged policy response to the perceived need – forcefully expressed in the 1987 Brundtland Report (WCED, 1987) – to systematically connect the seemingly incompatible goals of economic competitiveness, social development and environmental protection, and hence to ensure sustainable development. EPI is intended to be an important first order principle to guide the transition to sustainability (Lenschow, 2002b). Since the 1980s, EPI has received widespread political backing at the international level, but especially in the European Union (EU), where it now enjoys a relatively prominent legal status.

Yet, more than 20 years after the publication of the Brundtland Report, the fulfilment of EPI seems as far away as ever. In 2003, the European Environment Agency (EEA) concluded that 'the implementation of more integrated approaches to policy making needs to be accelerated if Europe is . . . to meet its aspirations' (EEA, 2003, p. 7). In

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its second review of the EU sustainable development strategy, the European Commission conceded that ‘unsustainable trends persist and the EU still needs to intensify its efforts’ (COM (2009) 400 final). 2

Those looking for a detailed assessment of what has – or has not – been achieved with respect to EPI can now consult a growing corpus of academic papers and no less than three edited books (Lenschow, 2002a; Nilsson and Eckerberg, 2007; Jordan and Lenschow, 2008a), arising from international collaborations such as the EU funded EPIGOV project (for details, see <http://ecologic.eu/projekte/epigov/>). In the 2000s, these were supplemented with a series of policy reviews conducted by the Organisation for Economic Cooperation and Development (OECD, 2002) and the EEA (2005a, 2005b) (see also UNEP, 2007). Nonetheless, the evidence base underpinning both the concept and the everyday practice of EPI remains surprisingly fragmented given the maturity of the principle.

This article aims to review the state of the art in EPI research, particularly that conducted from a comparative (i.e. cross-national) perspective. The following section begins by briefly discussing the conceptual meaning of EPI. It reveals that it invites a great variety of interpretations and, consequently, instruments of implementation. We therefore adopt the famous distinction made by the economist Keynes between normative and positive definitions to systematize the existing literature and pick out the most salient points of agreement and disagreement. We do so by employing the well known distinction in policy sciences between policy as a process and policy as an outcome (Nilsson and Persson, 2003, p. 335).

The next section turns to explore EPI as a governing process. Here we suggest two basic perspectives to order the existing literature: a political systems approach and a policy analysis approach. The former focuses on insights that can be derived from comparative country studies; the latter highlights the scope and effectiveness of different implementing measures. The fourth section turns to what we term a policy outcome perspective and assesses the state of the art research on the effectiveness of EPI policies ‘on the ground’ in different jurisdictions. The final section distils some conclusions and looks forward to the next phase of research in this exciting and rapidly developing area of research.

EPI: different interpretations

Many academics and policy makers consider EPI to be a policy-making ‘principle’ without reflecting too much on its meaning. In the EU, the political and legal salience of the principle suggests that the perceived need for clarity is vital. If EPI is primarily a policy objective whose role is to inspire either concrete legal rules or political programmes and activities, it does not form a suitable foundation for legal decisions. If, however, EPI is deemed to have an autonomous meaning and is thus a ‘standard to be observed’, then a clear definition of the principle’s substantive meaning needs to be developed in order for it to be enforceable (Nollkaemper, 2002, pp. 25–29). But does such agreement actually exist?

On this matter, the literature is relatively well developed. Lafferty and his colleagues (Lafferty and Hovden, 2003; Lafferty, 2004; Lafferty and Knudsen, 2007) have done the most to pin down its meaning. Based on a close textual analysis of the Brundtland Report they argue that its ‘mother concept’ – sustainable development – attributed ‘principled priority’ to environmental objectives in the process of ‘balancing’ economic, social and environmental concerns (Lafferty and Hovden, 2003, p. 9). ‘The whole point of EPI’, they write, is ‘to avoid situations where environmental degradation becomes subsidiary and . . . to ensure that the long-term carrying capacity of nature becomes a *principal or overarching societal objective*’ (Lafferty and Hovden, 2003, p. 9, emphasis added). Later, Lafferty and Knudsen (2007, p. 25) argued that decisions (and their ensuing policies) should prioritize the environment by ensuring that ‘every effort is made to assess the impact of [sectoral] policy on the life-sustaining capacities of the affected ecosystem’.

This relatively *strong* (i.e. pro-environment) (Hill and Jordan, 1993) reading of the normative purpose of EPI can be contrasted with other, far *weaker* understandings that have appeared in the literature,¹ such as

¹ ‘Weak’ EPI implies that sectoral policy makers simply take environmental considerations ‘into account’ (Jordan and Schout, 2006, pp. 64–66). ‘Strong’ EPI, by contrast, corresponds to Lafferty’s (2004) reading of the normative import of the Brundtland Report, i.e. placing ‘environmental considerations at the heart of decision making in other sectoral policies’.

- coordination that emphasizes comprehensiveness, aggregation and especially consistency (Peters, 1998),
- the search for *synergy effects and 'win-win' solutions* in the making of sectoral policy choices (Collier, 1994, p. 36) and
- the notion of *reciprocity* (Liberatore, 1997, p. 119) between equally weighed parties or objectives.

Normative conceptions are one thing, but what does EPI add up to in practice – i.e. more *positive* meanings? In tracing the positive meaning of the EPI principle, it is necessary to search beyond the level of explicit pronouncements and also look at the day to day operation of EPI instruments in their political context (Jordan and Lenschow, 2008a). On this equally vital issue, the literature has made less progress. The first empirical assessments identified a normative–positive gap at the general level of policy pronouncements. For instance, at a global level, Agenda 21 (re)introduced some ambiguity with regards to the normative meaning of EPI. While ‘environment and development is to be put at the centre of economic and political decision-making’ (UNCED, 1992, Chapter 8.2), Agenda 21 repeatedly emphasizes the need to recognize that ‘countries will develop their own priorities in accordance with their prevailing conditions, needs, national plans, policies and programmes’ (UNCED, 1992, Chapters 8.3, 8.4, 8.5, 8.16, 8.31). Thus it directly contradicted Brundtland’s demands for new (or at least greatly altered) policies and institutions by claiming that it is entirely appropriate and legitimate for EPI to take on *different* (i.e. nationally framed) positive meanings. Just as importantly, Agenda 21 introduced a reciprocal interpretation by emphasizing the need to ‘improve the processes of decision making so as to achieve the progressive integration of economic, social and environmental issues in the pursuit of development that is economically efficient, socially equitable and responsible and environmentally sound’ (UNCED, 1992, Chapter 8.4). In other words, out went the ‘principled priority’ of EPI and in came a reading of sustainable development that emphasized the need to find a balance between a much wider set of principled priorities (note the plural) – i.e. social, economic and environmental.

In Europe, meanings have vacillated over time from sustainable development through to EPI and (more recently) back again (Adger and Jordan, 2009). In one sense, the EU did make a forceful move to implement EPI by enshrining a quasi-constitutional² commitment in its funding treaties in 1996. This, many environmentalists hoped, would achieve greater legal clarity and hence enforceability. Around this time many states and the EU adopted some of the policy instruments explicitly mentioned by Brundtland, namely green budgeting, integrated policy appraisal, impact assessment (Radaelli, 2005; Turnpenny *et al.*, 2009; Radaelli and de Francesco, 2010) and programmatic planning (the so-called Cardiff Process) (for a detailed assessment, see Jordan and Schout, 2006). Nonetheless, it failed to settle the matter: the tension between normative and positive meanings continued as the normative import of EPI came up against hard political realities in the sectors (Lenschow, 1997, 1999, 2002a; Hertin and Berkhout, 2003). Thus in the 2000s, the so-called Lisbon Process of economic renewal and the 2001 EU Sustainable Development Strategy diverted attention from EPI. In an attempt to marry the former with the latter, the European Council (2006) claimed that sustainable development was the ‘overarching objective’, but noted that Lisbon remained the ‘motor of a more dynamic economy’ – a fudge that nicely revealed the politically ambiguous relationship between EPI and sustainable development in the EU’s quest for a ‘new economy’. Three years later, the 2009 review of the Sustainable Development Strategy (COM (2009) 400, p. 14) acknowledged that there was ‘still room for further clarification’. Scholars of EPI, however, will have noted that it made no explicit mention of EPI and instead referred to the mainstreaming of sustainable development into sectoral policies. More recently still, a new phrase has started to appear in policy and scholarly discourse – *climate policy integration* (Urwin and Jordan, 2008; Mickwitz *et al.*, 2009) – which suggests yet another take on the integration *problematique*.

On the national level, only Norway has given EPI a constitutional status (Lafferty *et al.*, 2008). At the level of white papers (i.e. soft policy instruments), the reference to EPI was made more explicit. Since 1992, however, the prominence given to EPI in daily political and policy practice has faded, suggesting that the constitutional commitment failed to provide sufficient normative guidance to ensure enforceability. As at EU level, the notion of ‘prioritizing the environment’ was vague in the beginning and then gradually disappeared under mounting economic pressures.

EPI has not really emerged as a constitutional issue in other jurisdictions. Sweden and the UK do stand out, however, as jurisdictions that have strong traditions and structures of integrated policy making. The UK’s ‘Rolls Royce’ coordination system (see Russel and Jordan, 2009) commits all the constituent parts of the national

² In the sense that the EU is not a state and hence lacks a formal constitution. Its commitment is therefore treaty based.

government to meet commonly agreed objectives. In Sweden, 'sector responsibility' has been the central policy principle that, coupled with a public management style that prefers clearly specified objectives (at national and partly, sectoral level), facilitates EPI. While the British Rolls Royce is vulnerable to changing preferences at the apex of the political system, EPI in Sweden benefits from a long history of public support for strong environmental policy making.

Distinctly different positive meanings have also been observed at the sectoral level. While Germany generally has been bedevilled by poor policy coordination, periodic or sector-specific niches of high EPI commitment have emerged either due to perceived problem pressure (for example, linked to the issue of climate change or, earlier, acid rain) or due to coalition politics (for example, the greening of agricultural policy under the red-green coalition). While such periods may 'lock in' EPI (in the sense that environmental measures or regulations become embedded in the sector policy practice), the lack of an overall EPI framework makes the emergence of such niches vulnerable to policy reversal once the political attention subsides and the supportive political coalitions break down.

A good indicator of the unsettled position of EPI is to be found in the way in which new policies are screened for EPI, through instruments such as Strategic Environmental Assessment (SEA) and policy appraisal (Bina, 2008; Hertin *et al.*, 2008; Turnpenny *et al.*, 2008). Brundtland hoped these instruments would drive EPI into everyday decision making. Moreover, the everyday practice of SEA has not had very much impact on the strategic direction of most sectoral policies. Research reveals (for a summary, see Bina, 2008) that they tend to amount to a positive interpretation of EPI that is considerably weaker than some of the more environmentally oriented normative readings outlined above.

EPI as a Process of Governing

The observation that the strong normative interpretations of EPI have not been fully embedded into everyday political practices – not even in states that are considered environmental pioneers (Jordan and Lenschow, 2008a) – is rather sobering. In order to understand more fully the precise conditions under which EPI is given a 'strong' or a 'weak' positive meaning, analysts need to turn to the governing process that takes place inside political systems in which different actors interact and employ different combinations of policy instruments (see, e.g., Schout and Jordan, 2005; Jordan and Schout, 2006; Nilsson and Eckerberg, 2007, p. 3).

This process of pulling and hauling amongst the various sectoral actors can be studied from different analytical perspectives (Schout and Jordan, 2008). In the following we chose two points of departure: one that proceeds by comparing political systems, and another that is derived from a policy analysis approach and distinguishes between distinct phases (or stages) of the policy-making process and/or between the different manifestations of policy instruments. In what follows, we employ institutional, political (that is, actor-centred) and cognitive analytical approaches to understand these processes.

A Political Systems Perspective

There are numerous country studies of EPI 'in action'. Implicitly or explicitly, they view EPI as a process that is anchored in a political system. In this view, EPI needs to be decided by political majorities; must be organized and managed; and finally should be maintained (either through enforcement or through persuasion). The structure of the prevailing political system (*institutions*), the political context (*politics*) and the social, legal and administrative tradition of a polity (*cognitive predispositions*) 'in concert' may help to recognize the relevant dynamics for (effective) EPI. The remainder of this section looks at each one in turn.

From an *institutional* perspective, EPI is a multi-sectoral and multi-level coordination challenge (Jordan and Lenschow, 2000; Lenschow, 1999). It arises because contemporary – that is functionally differentiated – governments organize their governance activities into sectoral ministries and (increasingly) decentralized agencies. These structures lead to a demand for organizational structures and procedures that are capable of delivering more coordinated governance amongst the various parts (Adger and Jordan, 2009; Jordan, 2008). In practice, the existing literature identifies few jurisdictions in which policy integration has become an everyday organizational routine (as opposed to merely a political objective) throughout all levels of decision making. While most jurisdictions strive to deploy administrative instruments that link policy sectors at the mundane level of daily policy making

(for example, inter-ministerial working groups or liaison offices), there are far fewer – and typically only weakly active – examples of coordination structures at the strategic level (for example, the amalgamation of ministries or the creation of green cabinets and a powerful central ministry or council for sustainable development) (Schout and Jordan, 2008; EEA, 2005b).

From a comparative perspective, it is nevertheless possible to divide jurisdictions into groups that are prone to suffer from institutional fragmentation and those that are more immune. In focusing on horizontal fragmentation, the existing literature distinguishes between political systems that feature more or less ministerial independence. For instance, the high level of ministerial independence in Germany reinforces sectoral thinking whereas the system of ‘sector responsibility’ in Sweden (and, in a similar form, the UK) ensures that individual ministries or government agencies take responsibility for incorporating supposedly common objectives (such as EPI) into their operations (Jacob and Volkery, 2004). The German chancellor’s prerogative to define the guiding principles of governmental policy has not played an equally strong role in guiding and disciplining the sectoral ministries. Here, the prospects for ensuring EPI at the sectoral level have been heavily reliant upon the political composition of government (see below).

Approaching the issue of coordination from a vertical perspective, more federal systems – e.g. Germany, the USA and Australia (analysed by Wurzel (2008), Hoornbeek (2008) and Ross (2008)) – as well as the EU (Wilkinson, 2007; Jordan *et al.*, 2008) have encountered significant institutional obstacles to implementing EPI. On the other hand, in particular federations that leave the lower level some leeway in autonomously developing policy (that is, the EU, the USA and to some extent Australia) often feature innovative EPI instruments that were developed in a decentralized fashion (that is, at state or lower levels).

The jurisdiction that has been the most anxious to engage in internal institutional coordination is the UK. It benefits from a minimum number of veto points in its political system (centralized, parliamentarian with political fusion of government and legislature) and hence has a framework which is conducive to a decisive style of reform politics – including organizational innovation – and strong coordination mechanisms. Yet Russel and Jordan (2008, 2009) demonstrated that a favourable institutional framework is a necessary but insufficient condition for stronger EPI.

This leads us to the *political* perspective, which has tended to focus on the vexed role of political ‘will’ and ‘leadership’. These are recurring themes in the existing literature on EPI (OECD, 2001; EEA, 2005a; Persson, 2004; Jordan and Schout, 2006). They are undoubtedly important factors in the realization of EPI, but have tended to be rather poorly specified in the literature. More recent contributions, however, have tried to unpack and refine them (Schout and Jordan, 2008). They have shown, for example, that the political attention given to EPI (and the positive meaning attached to it) depends, first of all, on the political composition of the ruling party in government (i.e. leadership). Generally speaking, new centre-left governments have tended to push the hardest for EPI, whereas centre-right governments have held back or even dismantled EPI frameworks and instruments. To take one example, despite institutionally rather unfavourable framework conditions, Germany was a front-runner in the late 1960s and early 1970s under Brandt. In the period after 1998 (when a red–green coalition was in power), there was another, but more ‘reluctant conversion to EPI’ (Wurzel, 2008). Similarly, Blair’s ‘new’ Labour government, elected in 1997, revamped the means for delivering EPI in the UK. By contrast, the three systems that arguably have done the most to implement EPI – namely the EU, Norway and Sweden – witnessed a reversal of earlier commitments to EPI after the political leadership changed (cf. Jordan *et al.*, 2008; Lafferty *et al.*, 2008; Nilsson and Persson, 2008). In the EU, the political commitment to the Cardiff Process waned in the early 2000s when the majority in the Council and the Commission turned to the right (Pallemaerts *et al.*, 2006). Meanwhile, Norway witnessed the discontinuation of several EPI instruments after 2001, when a coalition of the Conservative, Liberal and Christian Democratic Parties was elected. Moreover, the record of the post-2006 conservative government in Sweden suggests that some of the innovations initiated by the previous government in 2004 (for example, the Ministry of Sustainable Development) have been reversed (in this case back to a ministry for the environment) (Nilsson and Persson, 2008).

Explanations of EPI that focus on political factors must also account for and explore the impacts of the behaviour of individual political leaders. *Our Common Future* (WCED, 1987) cannot be understood unless at least some reference is made to its lead author, Gro Harlem Brundtland. Similarly, in Germany, Sweden and the UK, the introduction of the most influential EPI instruments can be linked to the political visions and projects of particular

political leaders such as Willy Brandt (the ‘modern Germany’), Göran Persson (the ‘green people’s home’) and Tony Blair (‘greening government’), respectively.

However, these political activities are themselves rooted in particular *cognitive* frameworks (Lenschow, 2002a). A *cognitive* perspective assumes that policy interests are often embedded in a ‘frame of reference’ or set of ideas ‘which pre-structures the thinking within a policy sector’ (cf. Lenschow, 2002b, p. 17). Many analysts have adopted such an approach in order to understand the positive understanding of EPI (for example Hertin and Berkhout, 2003; Nilsson, 2005; Nilsson and Eckerberg, 2007). Sometimes these frames are seen as corresponding to particular national predilections, e.g. technological problem solving (in Germany), social responsibility (Sweden) or good governance and efficiency (UK). This cognitive context is more supportive of EPI in some jurisdictions than others. Thus, the consensual policy-making style of Scandinavian countries has been particularly supportive of coordinated policy making. The legalistic policy style in Germany and the USA, in turn, is less suitable to procedural notions of EPI that aim at the emergence of a common understanding of environmental priorities. Sometimes, the frames correspond to particular sectoral viewpoints or ‘departmental worldviews’ (Russel and Jordan, 2009) – transport ministries have tended to support the development of car based forms of transport over more public forms.

Either way, cognitive approaches have helped to draw attention to the importance of non-state actors – pressure groups, the media, scientists – in affecting the inter-relationship between particular frames and the institutional frameworks described above. They do so by analysing EPI as the result of either circumstances external to the policy process (sudden, unforeseen crises; exogenous shocks from outside the policy system; the gradual accumulation of worrying evidence) or the guided accumulation of relevant knowledge (‘learning’) amongst decision makers. We return to the role of learning below. Yet, while environmental pressure groups have pushed specific issues (such as climate change, water or air pollution) that span sectors (and arguably demand greater EPI for their resolution), the general norm of EPI (or sustainable development for that matter), has not attracted much sustained public attention or support. EPI is a rather abstract concept for the media to take on board and campaigners have tended to shy away from using it.³

A Policy Analysis Perspective

From this perspective, EPI consists of a set of measures that aim to change the process of sectoral policy making. Existing scholarship has tended to analyse the interactions between EPI measures and the pre-existing sectoral setting by focusing on particular *points* at which attempts are made to intervene in the standard policy cycle (i.e. agenda setting, problem perception, decision making etc.). Second, it has analysed the different *mechanisms* or instruments of policy integration (for many other perspectives, see Persson, 2004).

The Various Points of Intervention

Despite some very well known weaknesses (Sabatier, 2005), the stage based view of policy provides a ready made device to investigate the everyday processes of EPI. In particular, it allows us to distinguish between EPI instruments that (1) aim to influence the objectives of sectoral policy making *ex ante*, (2) target the allocation of resources in support of certain sectoral policy objectives, (3) focus on structuring the interaction of – or better still the coordination between – sectoral policy makers during policy formulation and decision making by changing the administrative system, and (4) monitor and evaluate the impacts of past instruments.

The existing literature on EPI in the OECD world reveals that the agenda for EPI has certainly been set, i.e. most jurisdictions have put in place some instruments (Jacob *et al.*, 2008), but they tend to be rather ‘soft’ in the sense that they carry no legal force or normatively influential obligation to give the environment ‘principled priority’. Furthermore, there are only a few jurisdictions that have really made their strategies and/or plans operational. Sweden stands out in this regard with its elaborate system of indicators and environmental quality objectives. Sustainable development strategies tend not to have had much effect on sectoral policy dynamics; environmental ministries and agencies remain their greatest (and in many respects, only) supporters (Steurer, 2008).

³Arguably, there are also other reasons why politicians find it easier to talk about sustainability rather than EPI. For example, the trade-off implications of EPI are more obvious (and hence more politically unattractive to politicians) than those associated with sustainable development (at least at the individual or small scale).

The tendency to employ soft rather than hard instruments continues as we move along the policy cycle to decision making. For example, is most commonly understood as ‘green housekeeping’ (for example, employing environmental criteria to allocate the budget for internal – administrative – spending) or ‘green revenue raising’ (for example, environmental taxation). However, nowhere has it amounted to what Brundtland originally demanded: a long-term, strategic process of reorienting the goals and procedures of public financing towards sustainability (Wilkinson *et al.*, 2008). With the exception of a very few cases (e.g. the EU and possibly also the UK), it is pursued as an ‘add on’ rather than as a process that challenges the underlying rationale for spending public money on unsustainable practices. Meanwhile, many of the organizational changes to facilitate EPI have tended to focus on the (lower level) administrative echelons; surprisingly few have been established at the higher strategic level of the finance ministry, the cabinet or the prime minister’s offices. The UK stands out in the sense that it has regularly reorganized government and has built a relatively elaborate (but by no means flawless – see Russel and Jordan, 2008) machinery of coordination. Finally, policy appraisal and assessment instruments could have been used to expose sectoral policies to critical scrutiny, but in the main have been used in a rather soft and unstrategic form (see Bina (2008) and Hertin *et al.* (2008) for details).

To summarize, while governments have undoubtedly extended their repertoire of instruments, they have done so in a largely piecemeal fashion. Curiously, many of the EPI instruments that were supposed to deliver more integration have themselves been poorly coordinated with one another (Schout and Jordan, 2008). As with the weak normative embeddedness of EPI (see above), researchers are, in other words, revealing that the normative principle of EPI has failed (in more positive philosophical terms) to permeate all the stages of the policy-making process, but especially the earliest ones.

The Various Logics of Intervention

EPI instruments may also be ordered according to the *logic* of intervention. Following the analytical perspectives introduced above, it is possible to distinguish between institutional, political and cognitive logics. From an *institutional* perspective, EPI is an exercise in coordination. Institutional (or ‘administrative’) change was a key element of Brundtland’s thesis (see Schout and Jordan, 2005) and very many EPI instruments could be placed under this heading. They can be associated with different levels or forms of coordination. They may focus on the high level (cabinet, prime ministerial office) or on the lower, street levels of governments; they may also have a more strategic or a more operational character (for a comprehensive listing, see Schout and Jordan, 2008).

While policy coordination via institutional means resonates well with the current preoccupation with ‘good governance’, the implementation of ‘rational’ structures and procedures can be a highly contentious matter, hence the importance of a more *political* perspective. At the administrative level, contention arises from distinct cultures and routines in the bureaucratic segments of an administration and from the ‘rational’ inclination of each part to protect its competences, resources and ways of doing things from the intervention of other parts.⁴ At the end of the day, greater policy integration does often require political leadership from above (hence the discussion about ‘political will’, ‘commitment’ and ‘vision’ – see above).

Finally, a *cognitive* perspective is concerned with the source of the actor interests that stimulate the political conflicts noted above. It argues that the route to greater EPI is via the minds of policy makers and other relevant stakeholders. Whether and how these views change is a matter of great debate (a sudden crisis? A steady accumulation of bad news?) (see Nilsson and Persson, 2008). Similarly, are changing ideas a cause or a symptom of policy change? Finally, what is the relationship between ideas and knowledge on the one hand and institutional and administrative structures on the other? These are of course deeply unresolved issues in social science, so their appearance in relation to the implementation of EPI is hardly surprising. Nonetheless, they serve to remind us that EPI is a much an academic challenge as it is a policy challenge.

Among the EPI instruments used, the institutional and cognitive ones are by far and away the most prominent; explicitly political measures – targeting particular constellations of power – are, by contrast, rarely found. Of the instruments following an institutional logic, network-building tends to be a popular mode of acting. The assumption seems to be that actors sitting around a table (in administrative coordination committees for example),

⁴As Allison (1971) was at great pains to point out, where you stand on an issue (e.g. coordination/policy integration) depends on where (i.e. in which sector) you sit.

developing common integration strategies (sustainable development strategies, for example) or reporting to one another (via systems of assessment and appraisal) will eventually develop mutual ideas that favour environmental protection, and then alter their institutional procedures and practices accordingly. Empirical evidence suggests, however, that unless there is a high-level political commitment to deliver greater EPI or a strong inducement, for example in the form of career enhancements, integration simply does not happen. Studies of EPI in the EU (Jordan and Schout, 2006) have emphasized that network building *per se* is incompatible with the rather unidirectional normative underpinning of something like EPI. Thus, following an initial period of intense network development and implementation in the late 1990s, the pursuit of EPI increasingly exposed environmental policy makers to demands for 'reverse integration' (that is, environmental policy taking on board the demands of the social and economic sectors), thus hinting that political power games were underestimated by those who initiated the network building. Hence, network building (at least for EPI) is not an administratively light or politically uncomplicated means of coordination (Schout *et al.*, 2010; Lenschow, 2010).

It is of course conceivable that governments may one day wish to adopt a different approach and institutionally empower environmental stakeholders in order to facilitate EPI, but in reality very little empowerment has taken place; central ministries or committees supporting EPI and sustainable development have tended to be short lived (depending on the presence of a favourable government or the absence of competing problems);⁵ the procedural power of ministries of the environment has not been strengthened (e.g. through veto powers over sectoral policy development or strong consultative rights in joint decisions). Consequently, the (mostly weak) positive meaning given to EPI has not generally been stabilized in many jurisdictions but instead has fluctuated in response to the vagaries of the issue attention cycle. This is deeply ironic given that Brundtland's underlying aim was to institutionalize environmental concern by making it more immune to short-term fluctuations in political support.

Be that as it may, the emerging literature tells us that procedural instruments that seek to target policy makers' cognitions are very popular (Nilsson, 2005). Evidence that they actually induce long lasting learning processes is rather weak, however. Looking at sectoral strategies or plans as well as assessment and/or appraisal instruments, their application seems to encounter great resistance. In Norway, which appeared to have introduced a 'model' approach, sectoral reporting is no longer conducted, a documentation system is 'on ice' and cross-sectoral analysis has been dropped altogether (see Lafferty *et al.*, 2008). The EU's Cardiff Process (established in 1998 with a great fanfare and huge expectations) quietly expired in the mid-2000s (Jordan and Schout, 2006; Wilkinson, 2007). The sobering truth is that 'learning' or a 'change of awareness' seems to take place in response to political crises (for example, accelerating climate change) rather than the combined impact of different EPI instruments.

EPI as a Policy Outcome

Many environmentalists might well argue that principles are only principles, and process is only process; policy outcomes (that is, the influence of any EPI related activity on the state of the environment) are what really matter. However, the measurement of outcome effectiveness is a very difficult task, and one that is not helped by the relative immaturity of this particular sub-field of evaluation research (but see Knaap and Kim, 1998; Birnbaum and Mickwitz, 2009). In the case of EPI, the main 'subject' – that is, the state of the environment now and in the long run – is a highly complex matter, affected by a multitude of factors. Good data is hard to come by. Moreover, there are many different instruments that have been applied to deliver EPI as well as background factors such as economic and technological development, basic features of democracy (for example, veto points, democratic style), the prevailing regulatory culture and levels of public opinion. From an analytical perspective, the existence of so many potential causal factors and implementing instruments implies that causality cannot easily be determined, despite many claims that integration is (or is not) working (compare COM (2009) 400 final with EEA (2007a, 2007b) and UNEP (2007) for example).

From an instrument perspective, most OECD jurisdictions have done something in the name of EPI, but the overall pattern of adoption remains relatively uneven. In general, soft communicative instruments have proven to

⁵For example, the UK environment ministry has incorporated and then lost the transport and agriculture portfolios several times since 1970 (Jordan, 2002; Russel and Jordan, 2008).

be far more popular than harder organizational or procedural ones. The overall pattern of deployment has left some of the most environmentally vital areas of state activity – namely planning and budgeting – mostly unaffected. The core policy planning activities in ‘driving force’ sectors such as industry, transport and agriculture remain mostly immune to scrutiny from policy appraisal and reporting activities.

Surprisingly little is known about the effectiveness of these EPI instruments. In fact, for many – but chiefly administrative mechanisms and green budgeting – the existing literature is still at the much more preliminary stage of defining terms, developing typologies and simply describing existing patterns of use. The same could be said of NSDSs: Steurer (2008) concluded that, while ‘virtually all’ jurisdictions that possess them measure sustainable development at an aggregate level using indicators, most fail to say much about their effectiveness. More is known about the performance of policy appraisals and SEAs, but not vastly more (Bina, 2008; Radaelli, 2005).

Where the existing literature has begun to grapple with the question of outcome effectiveness, it has been in relation to single instruments rather than packages of them (as they typically appear in the real world). Even the underlying purpose of the instruments being analysed has been called into question. For example, Bina (2008) suggests that assessment specialists are still debating whether the primary purpose of SEA is to strengthen environmental policies, integrate the environment into other sectors, promote public participation or deliver sustainable development.

That said, some of the more procedural EPI instruments (for example SEA, policy appraisal and NSDSs) have generated some ancillary benefits such as creating new administrative capacities (for example, committees and assessment bodies) that offer environmentalists new political opportunities to green the sectors, facilitate longer-term processes of policy learning and improve the legitimacy of policy interventions by increasing transparency and public participation. For example, several jurisdictions have established quasi-independent bodies to audit the quality of appraisals.⁶ In the UK, a national Sustainable Development Commission has been turned into a ‘watchdog’ charged with evaluating performance. Finding ways to analyse and quantify the importance of these ancillary benefits is a future research challenge.

From a jurisdictional perspective, while environmental policy pioneers have moved the furthest towards EPI, their overall performance is still rather patchy (Jordan and Lenschow, 2008a; von Homeyer *et al.*, 2010a). Adoption patterns appear to follow the attention cycle of environmental policy more generally. In the front-runner jurisdictions, the efforts made to implement EPI corresponded to a general up-swing in environmental (policy) activism, but as soon as this faded the flow of EPI initiatives slowed too. This pattern suggests that, contrary to Brundtland’s hopes, EPI remains anchored in traditional environmental policy dynamics and is thus heavily dependent on environmental actors.

With regard to assessing the effectiveness of the policies employed, at first sight most jurisdictions put a surfeit of evaluation infrastructure in place. Jacob *et al.* (2008) discovered that most OECD states possess an ‘external and independent review of environmental performance’. However, if we dig a little more deeply into the empirical detail, a slightly different picture emerges: many review authorities have very general mandates such as ‘overseeing sustainable development’ or ‘promoting’ EPI; many are too poorly resourced and politically weak to open up sectoral policy making to critical scrutiny; the majority simply do not have the time or the resources to dig into the everyday grind of policy making (Jordan and Lenschow, 2008b, pp. 335–337). The UK probably has the most sophisticated evaluation machinery (Russel and Jordan, 2008, 2009). However, aside from this, even the more environmentally progressive jurisdictions, namely Norway and Sweden, lack strong, independent and focused scrutiny bodies (Lafferty *et al.*, 2008; Nilsson and Persson, 2008).

Were other jurisdictions to create similar bodies, they would still need to confront another fundamental obstacle: the virtual absence of concrete yardsticks to measure the degree of EPI achieved. In the majority of jurisdictions (for example, Germany, the UK and Sweden), the existing performance indicators tend either to be very broadly framed (typically focused on sustainable development in the aggregate) or to have been produced by the sectors (for example, the Cardiff Process) in such a way as to be wholly unchallenging of the status quo. In the UK, interest in *ex post* evaluation has ebbed and flowed. The Nation Audit Office and the parliamentary audit committee have produced probing assessments of individual instruments such as green budgeting, appraisal and the green cabinet, but there has been no overall assessment of the entire ‘greening government’ initiative (Russel and Jordan, 2009).

⁶ In 2006, the EU established an Impact Assessment Board with a mandate to scrutinize and offer formal opinions on the quality of individual appraisals. However, it cannot stop a ‘poorly’ appraised proposal from being adopted.

Conclusions and Some New directions

In many ways, EPI constitutes one of *the* guiding axioms of green thinking and practice. Therefore, whether or not policy systems faithfully put it into practice is a matter of enormous importance to not only students of green politics but also policy practitioners too. Its aims are certainly nothing less than radical – to turn the policy status quo on its head, such that environmental protection involves a much more holistic and, above all, proactive search early on in the policy process for opportunities to prevent environmental damage from occurring (Lafferty and Hovden, 2003, p. 2). However, academic research on EPI only really began to take off in the late 1990s. In this article we have sought to review the state of the art and identify key trends in both academic thinking and policy practice.

In terms of its core meaning, the existing literature points to widespread political commitment at a general discursive level in most industrialized states, but disagreement around its positive meaning in day-to-day decision making. This disconnect between policy and practice (as well as normative and positive interpretations) calls into question the legal forcefulness of the EPI principle. The emerging finding from most of the literature surveyed above is that the main point of contention in the political sphere is precisely *what* level of attention (or ‘principled priority’) to give to environmental protection in the sectors. The definition of integration (in the sense of what in practice to prioritize and to what extent) is, in other words, being continually questioned and thus the debate about its normative meaning continually reopened. EPI, in short, seems to take on a ‘positive’ meaning that is situational, i.e. different across jurisdictions, sectors and points in time. This suggests that the research on the normative underpinnings of EPI should continue to be supplemented with more research on its positive (re) interpretation(s).

As far as the process of governing is concerned, the existing literature has started to approach EPI from both a political system and a policy analysis perspective. This multidimensional perspective has helped to reveal the highly contingent and complex nature of ‘policy integration’. Considering that EPI requires the ‘penetration’ of large parts of the political machinery throughout the entire policy cycle with a fundamental and yet unspecific norm, it is hardly a surprise that there appears to be no ‘best practice’ in relation to the delivery of greater EPI. The latest research is now beginning to take this basic finding and test it out at higher (e.g. international) (see the contributions to Nilsson *et al.* (2010) and von Homeyer *et al.* (2010b) for example) and lower (i.e. more local) (von Homeyer *et al.*, 2010a, 2010b) levels of governance. The next research challenge is to put all this material together and identify what facilitates and what impedes EPI within and across different levels of governance, given the well known tendency for policy at one level to interact with policy decisions taken at cognate levels (Jordan, 1999; Jordan and Lenschow, 2000). Work that examines EPI outside European settings would be particularly welcome in this respect.

Finally, we have reviewed the rather more sparse literature on the outcomes of EPI processes ‘on the ground’. If policy outcomes are, as is often claimed, what really count in political life, then unfortunately the existing literature has amazingly little to say in this regard. More is known about some instruments (e.g. appraisal) (Turnpenny *et al.*, 2009) than others (e.g. administrative systems) (Schout and Jordan, 2008), but overall the evidence base is extremely sparse and policy-making systems themselves seem equally ill prepared to address this. Why has this situation come about? One explanation might be that many of the instruments used have simply not been around long enough to permit definitive assessments. For some instruments (for example, green budgeting), we simply do not have enough ‘cases’ to draw robust conclusions. Second, there are very significant conceptual and methodological obstacles to measuring the outcome of procedural and organizational instruments such as appraisal and green budgeting. Finally, the lack of solid research and evaluation machinery may well also be symptomatic of some of the political dynamics noted above, namely the symbolic nature of many of the policy interventions and the relatively low profile of EPI in the wider body politic. Much has been learnt about the policy and politics of EPI in the last decade or so, but much more is still needed not least to inform the transition to more sustainable forms of human development.

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