Integrating Exterior and Interior Knowledge in Sustainable Development Policy

This paper was accepted to the refereed stream of the conference, and refereed to meet academic standards as prescribed by DEST. For further details of this refereeing process, please see the statement contained in this proceedings volume.

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Refereed paper presented to the
Ecopolitics XVI Conference
Griffith University
4-6 July 2005

Abstract

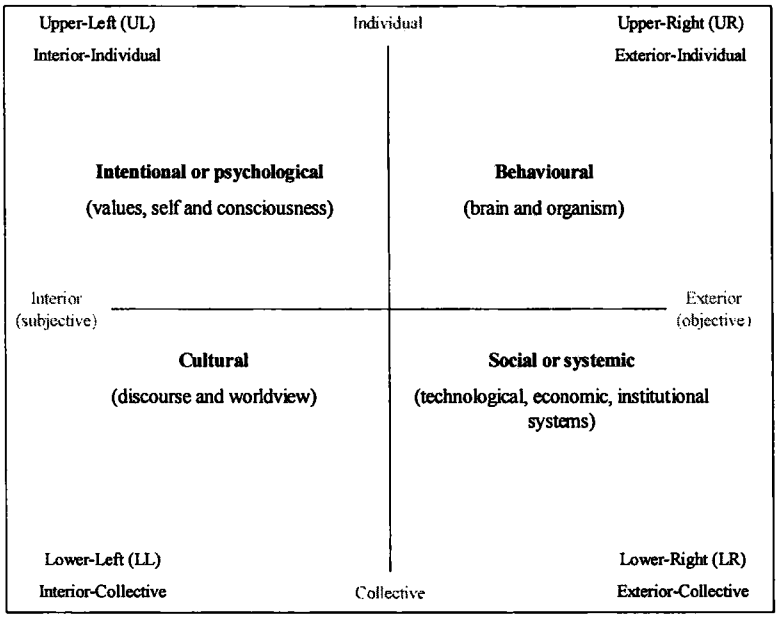
A critical challenge for policy makers in government, business and civil society is integration of exterior and interior forms of knowledge in sustainable development policy processes. In this paper, I propose a theoretical participatory model that attempts this type of integration, building on the cooperative discourse model for public participation proposed by Renn et al (1993). The cooperative discourse model draws on the particular skills of interest groups, experts and citizens to integrate exterior scientific knowledge with interior values expressed through deliberative forums. The modified version of the cooperative discourse model I propose here combines normative futures work, participatory integrated assessment, citizen deliberation and social learning. It uses discursive contestation to draw out multiple values and worldviews and integral facilitation to combine these plural perspectives.

Introduction

Sustainable development is a policy challenge that is growing in urgency. Globally, deforestation, desertification, biodiversity loss, land degradation and climate change are accelerating (see, for example, IPCC 2001; UNEP 2002; World Resources Institute 2002; Worldwatch Institute 2002). At the same time, conflict, poverty, inequity and injustice remain widespread (UNDP 2003). The challenge for policy makers is to identify policies that achieve economic and social development without compromising ecological integrity and social justice.

In an earlier paper, I applied **integral theory** to develop a deeper and wider understanding of sustainable development (Riedy 2003). Integral theory is an epistemological and ontological framework introduced by the American philosopher Ken Wilber (e.g. Wilber 2000a, 2000b; Wilber 2000c, 2001). In brief, integral theory contends that reality is composed of structures that exist as both wholes and parts, and have both an exterior and interior. These twin distinctions give rise to four distinct ways of generating knowledge about any entity, represented by the four quadrants shown in Figure 1.

Figure 1: The four quadrants in integral theory



Of particular interest for this paper is the distinction between exterior and interior, or objective and subjective forms of knowledge. It is possible to observe the exterior of an entity and its relationships with other entities using empirical methods and systems science. From this exterior perspective, reality is composed of interacting ecological, technological, economic and institutional systems. In part, sustainable development requires changes to technology, infrastructure, economic structures and social and political institutions in order to reduce the environmental impact of human civilisation and support social justice (Robèrt et al 2002). These systemic changes can be understood as changes to the visible landscape of exterior structures.

An alternative perspective focuses on the interior or subjective world of an entity. This interior world cannot be directly observed – it must be interpreted using psychological and cultural methods. It is the realm of values, worldviews, perspectives and discourses. Within this realm, individuals and groups occupy very different perspectives on what aspects of human society should be sustained. Any proposed sustainable development policy can be more or less inclusive of these different perspectives. The degree of inclusion will influence the degree to which a particular sustainable development policy is accepted or resisted and thus its

likelihood of success or failure. Consequently, sustainable development is as much about negotiation of this invisible landscape of interior structures as it is about achieving the exterior systemic changes noted above. This interior landscape can only be understood by finding ways to include interior knowledge in policy processes.

In this paper, I propose a theoretical participatory model for integrating exterior and interior forms of knowledge in sustainable development policy processes. I will start with some reflections on the normative, deliberative and discursive nature of policy development before turning to a specific participatory model for policy development – the cooperative discourse model. I propose a modified version of this model as the basis for an integral policy process to address sustainable development issues.

Policy development as a normative process

One of the roles of a policy development process is to draw together knowledge about a particular policy problem as a resource for decision making. In the context of sustainable development, relevant knowledge spans disciplines and systems. To assist policy makers in making sense of diverse, cross-disciplinary knowledge, various methods have emerged that integrate knowledge and present it in a policy-relevant form. For example, cost benefit analysis reduces the various impacts of different policy decisions to economic values, which policy makers can readily compare. Another example is the use of integrated assessment (IA) modelling to develop exploratory scenarios capturing the future impacts of different policy options. Although these methods are very different, they both have the objective of mapping out the future impacts of a policy decision as a resource for decision makers. The role of the decision maker is then to navigate a desirable path through that future territory. Thus, policy development is a normative process – it seeks to create a desirable future.

The question that immediately arises is "a desirable future for whom?" A policy process may seek to create the desired future of a single authoritarian decision maker, a small group, the citizens of a particular nation, all people living at present or all people including future generations, with many possibilities in between. Thus, the futures created by a particular policy process may be more or less inclusive. The degree of inclusion of plural perspectives will influence the degree of resistance to a policy decision and its chances of successful implementation. Consequently, there are sound reasons for designing policy development processes so that they identify and include multiple interior perspectives.

Normative methods – methods that ask participants in a policy process to express their preferred futures – can help to draw out plural interior perspectives. Normative methods emerged in energy sector planning and have since been widely

applied to other aspects of sustainable development. In 1982, Robinson introduced a normative method called **backcasting** for exploring energy futures (Robinson 1982). Lovins (1977) and the Swedish Secretariat for Futures Studies (Johansson & Steen 1978; Lonnroth, Johansson & Steen 1980) applied similar energy futures methods earlier but did not use the term backcasting. Backcasting starts by defining a desirable future and then works backwards to develop an action plan for achieving that future. It has been developed in some detail as a method for identifying pathways to desirable futures, including sustainable futures (e.g. Anderson 2002; Dreborg 1996; Geurs & van Wee 2000; Robert et al 2002; Robinson 1990, 2003).

In policy applications, backcasting promotes creativity 'by shifting the focus from present conditions to a situation sufficiently far off in the future to permit radical change' (Dreborg 1996, 819). This shift in focus provides space for the subjective commitments of participants in the backcasting process to emerge. That is, the imagining of different desirable futures allows participants to express their plural interior perspectives on the policy problem at hand.

In recent work, Robinson (2003) has developed a participatory form of backcasting that involves stakeholders or citizens in selection of desirable futures. In the context of a participatory IA project called the Georgia Basin Futures Project, Robinson describes the use of computer simulations and workshops to guide participants through an iterative process of scenario generation until they reach their preferred future. Scenarios provide focus and rigour for the normative process, acting as a vehicle for drawing out, grouping and expressing plural interior perspectives. As Ney and Thompson (2000, 77) put it, this type of scenario planning 'deliberately seeks out stories that are mutually irreducible, and...then aims to learn from all the incompatibilities that those stories give rise to'. The intent is not to build consensus but to draw out a manageable number of different scenarios corresponding to different interior perspectives.

While Robinson's approach employs computer simulation to generate scenarios, an integral policy process could also ask participants to express normative futures through discussion, artistic expression and storytelling. In addition, exterior elements of the different scenarios could be modelled to improve understanding of their implications. In this way, individual subjectivity is integrated with objective modelling of desirable futures, offering a promising pathway to integration of exterior and interior knowledge in a policy process. I will return to the role of normative methods in an integral policy process in later sections.

Policy development as a deliberative and discursive process

Another way of conceiving the scenario building process described above is through the lens of discourse. According to Dryzek (1997, 8):

> A discourse is a shared way of apprehending the world. Embedded in language, it enables those who subscribe to it to interpret bits of information and put them together into coherent stories or accounts. Each discourse rests on assumptions, judgments, and contentions that provide the basic terms for analysis, debates, agreements, and disagreements.

From this perspective, it is different discourses that give rise to the different interior perspectives, desirable futures and scenarios discussed above.

Dryzek's (1990; 1997; 2000) examines the interplay of discourse in political processes and argues for a discursive form of democracy that seeks to engage multiple discourses in contestation and deliberation, thereby drawing out interior values and encouraging reflection. While discursive democracy is a normative ideal, it has definite applications for the practical design of participatory processes that have been explored in some detail through trials and empirical evaluations. Given that discursive democracy focuses explicitly on interior perspectives and processes of meaning creation, it is worth considering the elements of discursive democracy in more detail to identify those that might contribute to inclusion of interior knowledge in policy processes.

Discursive democracy, like other types of deliberative democratic theory, seeks to promote deliberation. Dryzek (2000, 1) defines deliberation as a non-coercive, reflective and pluralistic process, allowing 'argument, rhetoric, humour, emotion, testimony or storytelling, and gossip', through which people arrive at a particular judgement, preference or view. It is an active process though which unconsidered beliefs and values are challenged, encouraging participants to arrive at a defensible position on an issue (Gundersen 1995, 11-16). The process of deliberation requires individuals to express their values and preferences and to defend those values and preferences through argument and contestation within a group setting. Thus, an authentic deliberative process draws out both individual interior perspectives and collective discourse commitments. This means that a policy process can potentially access interior knowledge by promoting deliberation. When that deliberation reflects on exterior technological, ecological, economic and institutional systems, as is the case in most policy processes, it provides a way to integrate the exterior and interior in decision-making.

Deliberative democratic theory defines deliberation, rather than voting or representation, as the essence of democracy. Deliberative democrats seek to promote deliberation in various locations, either within the state[i] or in civil society. Deliberation can occur without citizen or stakeholder participation, for example within a Cabinet meeting. Alternatively, it can occur within participatory processes that are open to citizen or interest group participation. Given the far reaching impacts of sustainable development policy, I would argue that citizen and/or interest group participation is critical to ensure adequate representation of relevant discourse

perspectives. Further, I am not convinced that interest groups can be relied upon to accurately represent citizen interests. Certainly, there is no guarantee that interest group representation will capture the plural discourse commitments of citizens. I therefore advocate direct citizen participation as crucial to an integral policy process.

How can an integral policy process, involving citizens, promote authentic deliberation and discursive contestation? There are several issues to consider here. The first issue is deliberative competence – the capacity of participants to engage in effective deliberation (Dryzek 2000; Renn 1999). Dryzek (2000) argues that deliberation must be non-coercive, and therefore requires equality of deliberative competence across participants. Unequal power relations and material resources, uneven access to information, differences in communicative abilities and personal characteristics can all contribute to inequalities in deliberative competence. If an integral policy process is to promote authentic deliberation, it needs strategies to improve equality of deliberative competence.

The first strategy I would suggest is to equalise the knowledge base of citizen and stakeholder participants by providing them with accessible information and education on the policy issue under consideration. Renn (1999, 3050) notes that 'public perceptions are at least partially driven by biases, anecdotal evidence, false assumptions about dose-effect relationships, and sensation'. While biases and false assumptions can reveal discourse commitments, good policy decisions are not served by reliance on inaccurate information. However, it is unreasonable to expect all participants to master complex sustainable development issues. Expert involvement in the policy process is therefore necessary to translate complex scientific and policy issues for other participants. Of course, as Renn (1999) points out, experts have their own interior values and positions, which will also need to be resolved through a process of deliberation. The cooperative discourse model, which I will introduce below, offers a way to involve experts and the public in deliberation and discursive dialogue.

A second strategy to improve deliberative competence, suggested by Dryzek (2000), is to allow multiple forms of communication. For example, participants that are uncomfortable with the demands of argumentative communication could employ storytelling to express their preferences. Similarly, participants uncomfortable with verbal communication in a group setting could employ written communication. Dryzek (2000, 68) discusses two tests that should be applied before admitting any particular form of communication to a discursive democratic forum: 'First, any communication that involves coercion or the threat of coercion should be excluded. Second, any communication that cannot connect the particular to the general should be excluded'. On this basis, Dryzek conditionally accepts storytelling, testimony, greeting, rhetoric and argument as admissible forms of communication, while stressing that each of these has coercive and specific forms that should be excluded.

Other strategies to improve equality of deliberative competence might establish process rules to govern interaction between participants. This provides a

link to the second issue I want to consider, which is whether rules of engagement are required to facilitate deliberation. It is one thing to ensure that voices representing plural discourses are present, quite another to ensure constructive engagement, dialogue and mutual understanding. Good facilitation, defusing unproductive conflicts and providing equal opportunities for expression to participants, would seem to be critical to support constructive engagement. I will return to this facilitation role in a later section. Beyond a need for facilitation, I do not believe that general rules of engagement are required for deliberation. As Dryzek (2000, 47) points out: 'Political equality, human integrity, reciprocity, publicity, and accountability are undeniably important values, but the best way for people to learn these values is through the practice of deliberation, rather than through being told'. I concur, although I would also argue that context-specific rules of engagement might be an appropriate response to situations where engagement is not initially constructive.

The third issue is selection of one or more participatory models that seek to promote deliberation for inclusion in an integral policy process. Candidate participatory designs intended to promote deliberation include deliberative polls (e.g. Fishkin 1995), citizens' juries (e.g. Carson et al 2002), consensus conferences (e.g. Einsiedel, Jelsoe & Breck 2001), cooperative discourse approaches (e.g. Renn 1999; Renn et al 1993) and various methods applied in the context of participatory IA, including focus groups, participatory scenario analysis, participatory simulation or gaming, participatory modelling, participatory planning and scientist-stakeholder workshops (van Asselt Marjolein & Rijkens-Klomp 2002). With appropriate implementation, any of these models has the potential to promote deliberation and discursive contestation, thereby introducing plural subjectivity to policy processes. I have chosen one model – the cooperative discourse model – to consider in more detail in the next section. The cooperative discourse model establishes an analytic-deliberative process that explicitly seeks to integrate exterior analytical knowledge with interior discursive values. It is therefore an ideal candidate for an integral policy process.

The cooperative discourse model

The cooperative discourse model is an example of an analytic-deliberative process. Analytic-deliberative processes 'encompass procedures that are constructed to provide a synthesis of scientific expertise and value orientations' (Klinke & Renn 2002, 1075). In other words, processes of this type seek to integrate exterior and interior knowledge within a policy and decision-making context.

More specifically, the cooperative discourse model is designed to address policy issues characterised by complexity, uncertainty and ambiguity by drawing on appropriate types of expertise (Klinke & Renn 2002). I will illustrate this using the example of climate change, which is complex, uncertain and ambiguous. First, the

natural and social systems involved in climate change are complex systems. Complex issues demand multidisciplinary deliberation among **experts** to resolve or map cognitive and epistemological conflicts. Second, the future impacts of climate change are uncertain. Uncertain issues require resilient strategies and identification of 'an adequate and fair balance between assumed over- and underprotection' (Klinke & Renn 2002, 1087). **Stakeholders** and affected groups have a role in determining this balance. Finally, climate change is an ambiguous issue because it is characterised by value conflicts, for example between those who prioritise the national interest and those who prioritise global interests. Ambiguous issues demand **citizen** participation to reconcile value conflicts (Klinke & Renn 2002).

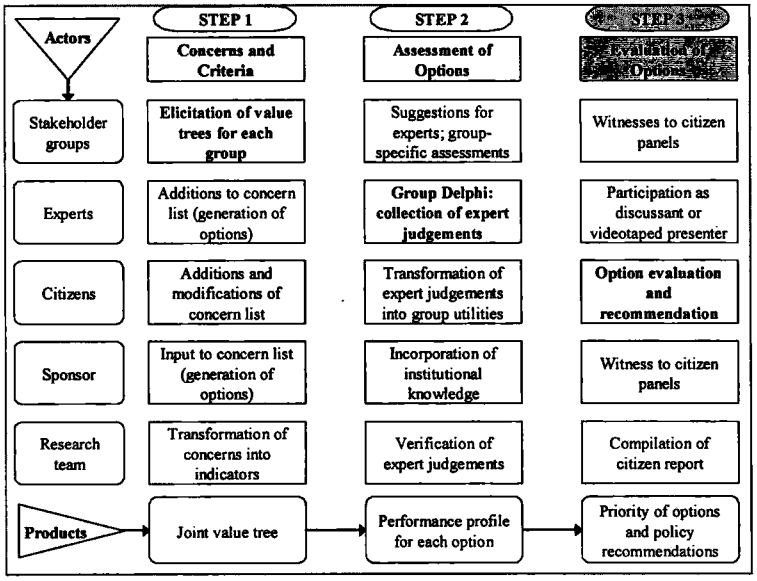
Other authors also support explicit inclusion of experts, stakeholders and citizens in policy processes. Robinson (2003, 854) identifies a need to 'combine expert understanding with the knowledge, values, and preferences of citizens and stakeholders'. Swart, Raskin & Robinson (2004, 144) argue, in the context of scenario planning, that: 'Scientists bring knowledge of relevant processes and their linkages to the discourse and stakeholders enrich scenarios by bringing the perspectives of the human participants in the story of the future'. I outlined my own arguments in favour of inclusion of each of these groups in the earlier discussion of discursive democracy. The cooperative discourse model includes each of these different groups and also specifies their appropriate roles.

Figure 2 summarises the basic concept of the cooperative discourse model, as outlined by Renn et al (1993) and Renn (1999). There are three main steps:

1. Elicitation of values and criteria (primarily by stakeholders).
2. Assessment of the impacts of different policy options (primarily by experts).
3. Evaluation and design of policies (primarily by randomly selected citizens).

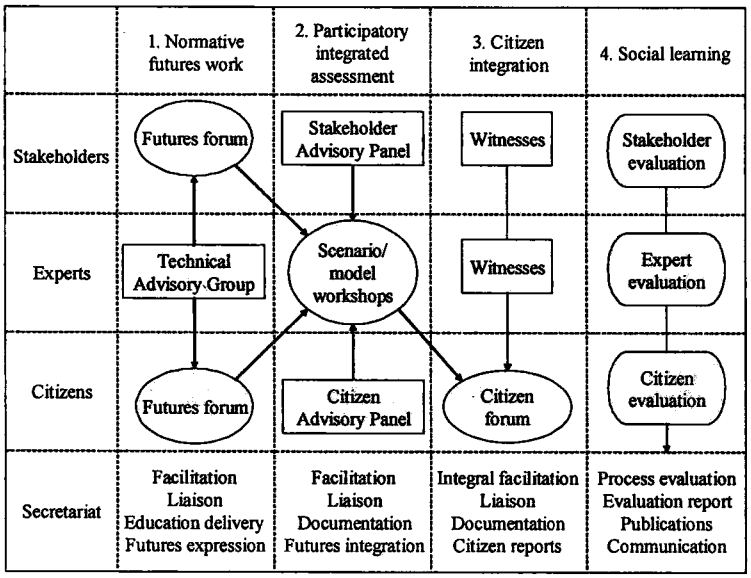
At each step, there is scope for participation by stakeholder groups, experts, citizens, the sponsor of the policy process and a research team. Figure 2 defines the roles of each group, as proposed by Renn et al (1993) and Renn (1999). Carson (1999) adds a fourth step to the cooperative discourse model, focused on accountability and education, in which feedback is provided to the wider community and the entire process is evaluated. Carson (1999) also proposes some modifications to the earlier steps, particularly provision for involving randomly-selected citizens in the selection of values and criteria during Step 1. Carson and Gelber (2001) further modify the model, adding a visioning component to the first step and allowing for a return to Step 1 if citizens are not satisfied with the options available at Step 3.

Figure 2: Basic concept of the cooperative discourse model.
Source: After Renn (1993, 3051).



In the sections below, I will build on the original cooperative discourse model and the modified version proposed by Carson and Gelber (2001) to propose a version of the cooperative discourse model that seeks to integrate exterior and interior knowledge in the context of sustainable development policy. My modified version of the cooperative discourse model is summarised schematically in Figure 3. Although I present each of the steps in the modified model sequentially and allocate specific roles to experts, stakeholders, citizens and the research team (or secretariat) throughout, I envisage the policy process as flexible and context-dependent. In practice, the four steps may not have clear boundaries or may occur simultaneously. Further, the formal process described here would be appropriate for developing a comprehensive policy on a sectoral issue, such as energy policy or climate change response. For more specific policy decisions, a more informal process, omitting or condensing certain steps would be appropriate. Indeed, a condensed version of this process could act as the agenda for a brief policy workshop on a specific issue.

Figure 3: A modified version of the cooperative discourse model for an integral policy process.



Step 1: Normative futures work

For Renn (1999), the first step is to identify and select concerns, objectives and evaluative criteria. Renn argues that stakeholder groups have the most appropriate expertise to undertake this step. Stakeholders are 'socially organized groups that are or perceive themselves as being affected by the decision' (Renn 1999, 3049). They 'are valuable resources for eliciting concerns and developing evaluative criteria since their interests are at stake and they have already made attempts to structure and approach the issue' (Renn et al 1993, 189). Carson and Gelber (2001) agree that the first step should establish values, goals and criteria for measuring success. However, they also emphasise the role of this step in providing a vision for the process. Further, they propose that randomly selected citizens, rather than stakeholders, should conduct this first step.

I agree with Carson and Gelber (2001) that greater emphasis on visioning is appropriate at this step. Earlier, I discussed policy development as a normative process and proposed normative futures work as a way of drawing out the subjective values and discourse commitments of participants. Normative futures work is particularly important for a long-term problem like sustainable development that engenders markedly different value responses; it becomes the first step in my

proposed participatory model. Through the process of expressing desirable futures, participants will necessarily reveal their interior values, goals and criteria for assessing policy outcomes. As discussed previously, normative futures work can draw on numerous specific methods, from interactive computer simulation to storytelling to artistic expression. Initially, the normative process should not seek to develop a single, desirable, consensus future but to draw out the smallest number of alternative futures that capture group values and discourse commitments. Allowing multiple futures to coexist allows plural subjectivity to emerge.

On the question of whether stakeholders or citizens should be involved in this normative futures process, I agree with both Renn et al (1993) and Carson and Gelber (2001). Stakeholders that have already engaged with an issue are well placed to express a desirable future to which they have given considerable thought. Thus, stakeholders are likely to express considered futures that are the product of previous deliberation. On the other hand, as stated previously, I am not convinced that stakeholder groups will reliably represent wider public interests. Randomly selected citizens are more likely to express desirable futures that are representative of public opinion. Therefore, I propose that both stakeholders and citizens would be involved in normative futures work, in separate processes or roles to avoid problems of unequal deliberative competence.

Both groups would require access to expertise in specific areas to assist their expression of normative futures. The citizen group, in particular, would need to participate in an education program to provide members with a suitable knowledge base on the relevant sustainable development issues. Thus, experts would need to be convened as an advisory group in the first step. This advisory group would have an initial role in contributing to information and educational materials and providing advice on any questions that arise.

A research team or secretariat would be responsible for process facilitation and liaison between groups. The secretariat would also need to express each of the normative futures that emerge in a format suitable for use in the remainder of the process. This might include a narrative description of the future and the interior values associated with that future, objectives embodied in that future and evaluative criteria for determining consistency of a specific policy proposal with that future. The main objective of this first step is to draw out different discourse commitments, without necessarily promoting significant engagement across discourses.

Step 2: Participatory integrated assessment

For Renn (1999), the purpose of the second step is to identify and measure impacts and consequences related to different policy options. Renn et al (1993, 189) argue that this is the role of experts: 'Experts are necessary to provide the data base and the functional relationships between options and impacts'. Renn et al (1993) discuss the

use of a Group Delphi exercise at this step, in which a representative group of experts from the field engages in dialogue and confrontation to arrive at a consensus performance profile for each policy option. The performance profile 'specifies the range of scientifically legitimate and defensible expert judgments' for each option, allowing diverging opinions to be captured (Renn et al 1993, 191). Carson and Gelber (2001) do not modify this step substantially. They emphasise the need to develop an action plan or an evaluated list of options consistent with the knowledge generated in Step 1, but leave the methods used by the expert panel open.

In my model, this step becomes participatory integrated assessment. Integrated assessment attempts to draw together and coherently synthesise information from a wide range of disciplines to meet the needs of policy and decision makers and provide insights that would not be apparent from any single disciplinary perspective. Given the complexity of ecological and social systems, IA typically relies on 'modern information technology, especially computer modelling' to provide meaningful feedback for policy development (Kasemir et al 2003b, xxiii). However, IA can also involve exploratory scenario building and qualitative approaches that are less reliant on computer models. Integrated assessment models analyse physical, ecological, technological, economic and social systems (including demographic, political and behavioural scenarios). The appropriate group to conduct an IA is an interdisciplinary team with expertise spanning the quadrants and relevant developmental lines. However, although the complexity of IA requires expert involvement, I do not believe that this step should be solely expert-driven. Rather, I propose a participatory form of IA that involves stakeholders and citizens in modelling processes and decisions.

One of the key reasons for adopting a participatory form of IA is the inability to model human 'intentionality and freedom of will' (Kasemir et al 2003b, xxiii). The only way to bring these elements into IA is to develop models in dialogue with citizens and stakeholders (Kasemir et al 2003b). Whereas in Step 1 experts acted as advisors to citizen and stakeholder deliberations, in Step 2 citizens and stakeholders act as advisors to expert deliberations. For example, modellers could convene a citizens' panel or citizens' jury to deliberate on specific modelling issues that have important implications for scenario outcomes. This approach is termed **participatory modelling** (van Asselt Marjolein & Rijkens-Klomp 2002). Similarly, economists could convene a citizens' panel to deliberate on appropriate values for non-market costs and benefits associated with sustainable development policies. This approach is termed **deliberative valuation** or deliberative non-market valuation (e.g. Jacobs 1997; Söderholm 2001). Where other non-market valuation methods, like contingent valuation or choice modelling, ask individuals to report their private preferences for environmental goods (as willingness to pay), deliberative valuation asks groups of citizens to deliberate on the public value of an environmental good. The intent is that deliberation will provide a better approximation of the public interest than the elicitation and aggregation of private preferences. These are just two examples of how participatory IA might work in practice; specific participatory IA projects have

experimented with a range of other methods that could be drawn on as appropriate (e.g. Kasemir et al 2003b; van Asselt Marjolein & Rijkens-Klomp 2002).

The participatory IA step proposed here has four objectives. The first is to develop exploratory scenarios mapping out the relevant future territory as a resource for the policy process. I leave the development of exploratory scenarios to Step 2 to avoid prejudicing the range of desirable futures to emerge from Step 1. The second objective is to evaluate each of the normative futures from Step 1 against the exploratory scenarios and determine their feasibility. The third objective is to develop policy options for achieving each of the feasible futures and evaluate their economic, ecological and social impacts. For futures that are not feasible, the objective is to provide explanations of why the future is not feasible and how it could be modified to make it feasible. The final objective is to develop integrative scenarios that attempt to combine positive features and exclude negative features from the various futures.

Step 3: Citizen integration

For Renn et al (1993), the third step draws together randomly selected citizens to evaluate policy options based on the performance profiles prepared by experts. Some of the specific formats that have been trialled include citizen advisory panels, citizen juries and lay-person's consensus conferences (Klinke & Renn 2002). Citizen involvement is required because: 'Citizens are the potential victims and benefactors [sic] of proposed planning measures; they are the best judges to evaluate the different options available on the basis of the concerns and impacts revealed through the other two groups' (Renn et al 1993, 189). Stakeholders and experts participate in citizen decision-making by presenting their assessments to the citizen panel, either in person or using communications and information technology. This role is analogous to that of a witness in a trial; citizens can question the witnesses and seek clarification of particular issues. The citizens develop policy recommendations that are captured in a citizen report, prepared by the research team.

Carson and Gelber (2001) refer to this step as 'testing' but adopt a similar procedure in which randomly selected citizens meet and test the acceptability of policy options against the values and criteria established in Step 1. The most significant change proposed by Carson and Gelber is in the output from the testing step; the authors leave open the possibility that citizens may reject the policy options on offer as unacceptable. In this case, the process begins again from Step 1.

In my proposed model, this step is called citizen integration. The process is much the same as described above. A citizen forum is convened from randomly selected citizens to deliberate on the exploratory and normative scenarios that are the output of participatory IA. Preferably, the citizens participating in the forum would be the same citizens that developed the normative futures in Step 1. These citizens

would then deliberate on the impacts of their desirable futures, providing them with an opportunity to change preferences. Stakeholders and experts would be available to act as witnesses and advisors to the deliberations, as required. The objective would be to select one or more desirable futures and identify the most robust policy strategy for achieving those futures. Ideally, citizens will be able to agree on a single desirable future and an associated action plan. However, where there is clear divergence within the group, the objective should be to identify an action plan that is consistent with multiple futures. For example, citizens might recommend further research on the desirable futures and an interim policy strategy that leaves pathways to each future open.

The deliberative process itself should be open to multiple forms of communication. Discussion and argument over scenarios is not the only possible approach. For example, Kasemir et al (2003a) describe a focus group process in which participants used collages to express their associations with different scenarios. Such approaches are entirely appropriate for an integral policy process.

To aid the citizens in their task of integration, the facilitation role will be crucial. Facilitators will need to draw out and express conflicts between discourses and suggest resolutions that attempt to satisfy both discourses. I will return to this facilitation role in a later section.

Finally, I agree with Carson and Gelber (2001) that the citizen participants should have the option to recommend a return to earlier steps in the process if they feel that they are unable to make policy recommendations that are consistent with the interior values expressed in the initial normative futures work. This revisiting may occur within the citizen forum, as a reassessment of values by the participants or as a request for further modelling or assessment work by experts. Alternatively, it may be necessary to convene a new process with modified objectives. I would argue that flexibility to revisit unresolved issues should be a feature of the entire process, not only the citizen forum.

Step 4: Social learning

As discussed above, Carson (1999) added a fourth step to the cooperative discourse model focused on accountability and education. In Carson and Gelber (2001), this step is labelled 'evaluation'. The purpose of the fourth step is to communicate the results to the entire affected community and to evaluate the policy process itself. I have called this step social learning, as communication of results to the wider public provides an educational opportunity for the public, and evaluation of the policy process provides learning opportunities for process participants and other practitioners.

Integral facilitation

Earlier, I mentioned the important role of facilitation in the modified cooperative discourse model. In this section, I want briefly to consider the role of integral facilitation in a participatory policy process. Without integral facilitation, there is a risk that drawing out plural discourses through normative futures work and deliberation will lead to polarisation rather than integration.

One of the key roles of an integral facilitator is to identify policies that appeal to multiple discourses. In some cases, this may mean developing a policy package with components designed to appeal to different discourses. For example, regulatory approaches will appeal to some discourses and market approaches to others. There is potential to employ these different approaches simultaneously. In other cases, there may be specific policies that are robust across discourses. That is, some policies may be supported for different reasons by different discourses. Thompson (2000, 105) gives the example of 'eating lower on the food chain', which some discourses support for ethical reasons and some support 'in the pursuit of healthy living and personal success'.

Integral theory suggests other attributes required of integral facilitators. According to integral theory, interior structures (such as values and morals), can develop over time to become more inclusive. Thus, while integral theory argues that all perspectives are important, it also holds that some perspectives are more inclusive than others. The role of the integral facilitator is to encourage 'decisions, practices, and outlooks that are consistent with the most comprehensive and compassionate possible approaches in any given instance' (Zimmerman 2003, 5). This means assisting groups that have been framing a problem in exclusionary terms to frame the problem in more inclusive or more sensitive terms. The role of the integral facilitator is both to value all perspectives and to provide opportunities for interior development towards more inclusive perspectives.

I believe that an integral facilitator needs to be more actively involved in the policy process than is typical of current facilitation roles. Their role is not just to keep discussion going according to an agenda. They should be willing to intervene, make judgements and arbitrate where necessary. In making these interventions, guiding principles are required, including sustainable development principles and the principles of integral theory. Participants need to be made aware when a proposal would be detrimental to sustainability or would result in exclusion of valid perspectives or harm to people that are not recognised in a particular discourse.

The importance of the integral facilitation role and the demands it places on the individual indicate that proven facilitators with demonstrated skills and ability should be preferred. These skills will be crucial in the transition to a sustainable future and should be valued by a society that is serious about sustainable development. I envisage the role as similar to that of a respected judge.

Locating the participatory model

The final issue I want to consider in this paper is the relationship between the modified cooperative discourse model, the state and civil society. This relationship is important in determining the quality of participation and the fate of policy recommendations. Implementation within the state, or with state support, lends the participatory process credibility, which assists to attract suitable participants and increases the likelihood that policy recommendations will be acted on. Independent implementation, within civil society, would offer greater freedom to explore alternatives that may conflict with state imperatives. However, an independent process risks irrelevance if it is too far removed from the state.

Dryzek (2000, 83) argues that inclusion of a movement or group in the state is appropriate when its defining concern is, or can be, aligned with a state imperative. The question is whether sustainable development can, or should, become a state imperative. Given the ubiquity of unsustainable practices and lifestyles, I would argue that sustainable development is only possible if it becomes a core state imperative. The technological, economic and institutional changes required are too substantial and far-reaching to occur on the periphery. The most likely path by which sustainable development could become a core state imperative at present would be to align it with existing economic imperatives, by establishing a strong business case demonstrating that sustainable development is in Australia's economic interests. Alternatively, sustainable development could become a state imperative on the basis of its own ethical merits; however, this prospect appears remote in the current political climate.

The role of those in civil society that are committed to sustainable development is to continue to make economic and ethical arguments for sustainable development in an attempt to influence interpretation of state imperatives. Dryzek (2000, 87) argues that 'pressures for greater democracy almost always emanate from insurgency in oppositional civil society, rarely or never from the state itself'. Thus, if state imperatives are to develop, oppositional civil society must continue to publicly question those imperatives, creating a kind of cognitive dissonance between the state and civil society.

This discussion suggests that the modified cooperative discourse model should initially be applied in civil society. For example, it could be trialled as an academic research project or sponsored by a public interest group. However, the ultimate aim is adoption of the modified cooperative discourse model, or some other integral policy process, by the state. An interim stage would be adoption of an integral policy process by an independent inquiry able to make recommendations to the state but not ultimately responsible for decision-making. While it did not pursue an integral policy process, the Royal Commission on Environmental Pollution in the

UK recently conducted an independent inquiry into energy and climate change policy that is similar to what might occur in this interim stage (UK RCEP 2000).

Australia has no analogous source of independent policy advice on environmental issues. The Productivity Commission, an Australian Government advisory body with commissioners appointed by the Governor-General, often deals with environmental issues. However, its primary responsibility is advice on microeconomic policy and regulation. A Sustainability Commission organised in a similar fashion, but with a mandate to consider the sustainability implications of policy, would be an ideal location to apply the modified cooperative discourse model. A Sustainability Commission would be consistent with the principle, proposed by Connor and Dovers (2004, 206), that sustainable development can only take place if there is explicit institutional accommodation of a sustainability discourse. Their proposed National Council for Sustainable Development is another possible location for a participatory process of the type proposed here.

Wherever the process is applied, the fate of policy recommendations must be transparent from the outset. If the process is conducted in civil society, participants must be informed that policy recommendations will be used to advocate policy changes but there is no guarantee that policy will change. In processes closer to the state, it must be made clear whether policy recommendations will be binding on the state or considered as one input to a broader policy process. This type of transparency is crucial if trust is to be established between citizens and policy makers. Without such trust, ongoing participation by citizens in deliberative processes is unlikely. One way to make these issues clear at the outset of a participatory process is to establish a participation contract that outlines the roles and responsibilities of each of the parties involved.

Conclusions

The integral policy process proposed in this paper seeks to integrate exterior and interior forms of knowledge to promote more inclusive and successful policies for sustainable development. It is a theoretical policy process that has not yet been refined through empirical testing, although most of the elements of the process have been tested in diverse applications. The process involves citizens, stakeholders, experts and an integral secretariat, drawing on the relevant expertise of each group. It comprises four steps:

1. Normative futures work to draw out and group desirable futures from citizens and stakeholders.

2. Participatory integrated assessment to assemble relevant objective knowledge, develop exploratory scenarios and assess the implications of the desirable futures identified in the first step.

3. Citizen integration of the results of the first two steps in a deliberative forum, with access to stakeholder and expert input, leading to citizen policy recommendations.

4. Social learning through communication of citizen recommendations and evaluation of the policy process.

Given the existing political economy in Australia, the short-term prospects for full implementation of the proposed policy process on a major policy issue appear poor. However, it may be possible to introduce some of the elements of the process in a real situation, perhaps by focusing on small-scale policy processes initially. Whatever the success of this specific model, it is clear that real progress on sustainable development will be difficult without ways of routinely including and integrating exterior knowledge with multiple interior perspectives in policy development.

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[1] I follow Dryzek's (2000, p.82) definition of the state as 'the set of individuals and organizations legally authorised to make binding decisions for a society'.