

IPCC Cross-Cutting Themes, Organizational Learning and the Resilience of the Climate Regime

Stephen Healy

School of History and Philosophy of Science, University of New South Wales, Sydney, NSW
2052, Australia

Ph: +61(2) 9385 1597

Fax: +61(2) 9385 8003

[Email: s.healy@unsw.edu.au](mailto:s.healy@unsw.edu.au)

Abstract

This paper analyses the IPCC's deployment of Cross-Cutting Themes (CCTs) using work in organizational theory and epistemology that argue that knowledge is primarily a matter of practices rather than cognitive categories. The resultant emphasis on matters such as cross-organizational communication and the character, quality and contexts of the processes involved is examined for their relevance both for the climate regime and global environmental governance more generally.

First introduced in an attempt to better integrate the Third Assessment Report (TAR) CCTs now take a far higher profile in the preparation of the Fourth Assessment Report (AR4). The 'mixed response' the TAR exercise received 'with some authors objecting that..such concepts..involved value judgments' underlines how traditional cognitive conceptions of knowledge impede such integrative exercises. Nonetheless normative considerations remain a significant feature of the extended ensemble of AR4 CCTs and considerable effort and resources are currently being devoted to ensure that AR4 fully reflects them. This paper will argue that optimizing the CCT exercise requires organizational design focused upon building capacity across traditional cognitive boundaries rather than being guided by them. However this then becomes not only a matter of policy integration but also of organizational design with consequences for the effects and role of the IPCC.

Of particular concern is the intersection between the more nuanced conceptions of knowledge and epistemology they involve and the IPCC's 'policy relevant but not policy prescriptive' role. It is argued that this portrayal of the IPCC is both unrealistic and unreflective of the IPCC's output and primarily a reflection of traditional conceptions of knowledge and of the knowledge/policy relationship understood to result from them. In conclusion the ramifications of these matters for the IPCC's role, the Climate regime and global environmental governance more generally is discussed focusing on how these considerations might better deliver 'resilience'.

Introduction

The International Panel on Climate Change (IPCC) was established to assess the available information on climate change impacts and mitigation and adaptation options and was marked from the beginning by the way it combines scientific and political review. While IPCC assessment reports are expert written, government nominees decide on the structure and scope of the reports, review drafts, approve final reports and negotiate the Summary for Policy Makers. These assessment reports are regarded as an essential element of the intergovernmental response to climate change providing the basis of the scientific input into the Framework Convention on Climate Change (FCCC) negotiations. These processes and practices are strictly understood to provide 'policy relevant but not policy prescriptive' information¹ reflecting the long-established notion that 'science speaks truth to power'.² The distinction between 'relevant' and 'prescriptive' is arguably, however, more a matter of degree than type with both 'relevance' and 'prescription'

¹ In a speech to the 21st Session of the IPCC (Vienna, 3-7 November, 2003) Dr Pachauri, the IPCC Chair, warned "that at no stage must any part of AR4 cross the storm front that would inappropriately take us into policy prescriptive territory" (IPCC, 2004a: 3).

² Resting upon the traditional fact/value distinction this view holds that rational policy is grounded by scientific facts, whose veracity must therefore be ensured by ring-fencing the objective domain of science from the value-laden domain of policy. However the book entitled *Science Speaks Truth to Power* points out that:

"When research is directed from outside on problems where disciplinary distinctions are blurred, and where any proposed solution will have a high error cost, consensus is quite impossible. The price of a super-efficient normal science is the impossibility of scientific research exerting any significant influence on policy directions" (Collingridge and Reeve, 1986: 147).

Jasanoff and Wynne (1998) provide a relevant recent review of scholarship exploring the many complex interdependencies between science and policy in practice.

necessitating certain emphases and/or priorities rather than others.³ The explicit involvement of normative considerations in some CCTs further highlights such tensions, which provide a specific focus of the analysis below. This paper briefly outlines the introduction of CCTs during the preparation of the IPCC's Third Assessment Report (TAR), published in 2001, and explores the role of CCTs in the preparation of the Fourth Assessment Report (AR4), scheduled for publication in 2007.

In order to do this two correlating literatures are drawn upon.⁴ Firstly, work in epistemology that, in contradistinction to the dominant assumption that knowledge takes the form of cognitive representations, focuses rather upon the practices involved in the generation, deployment, reproduction and communication of knowledge. Secondly, a body of work that puts substance to these epistemological insights by exploring the implications of understanding organizational practices in these terms - that is as constitutive of the knowledge generated, deployed, reproduced and communicated in and by organizations. Key insights from these literatures are briefly outlined in the following section.

The 'taken for granted' representational character of knowledge is exemplified by how natural science is generally regarded as a repository of robust, unambiguous representations of an 'external' material world, commonly termed 'facts'. Analogously knowledge in the humanities and social sciences is taken to represent 'context', either in terms of an 'internal' human world (whether conceived as 'preferences', 'values', 'interests' etc), or a broader socio-cultural one (whether flagged by social structures such as economic class or patriarchy, or broader socio-cultural constructs such as 'discourses' etc). Curiously the production of 'facts' involves the rigorous elimination of 'context', which is then routinely treated as an inert 'backdrop' for them, while cultural/symbolic representations tend to be similarly emptied of non-human content, which, similarly routinely, becomes a static 'setting' for them. Consequently, matters involving

³ This assessment is reflected in the substantive detail of IPCC negotiations. It was, for example, particularly evident in the IPCC WGIII-8 discussion of the SPM (Summary for Policy Makers) of the CCS (Carbon Capture & Storage) Special Report with the tensions between the (at least partially) CCS underwritten US/Australian anti-Kyoto stance and that of other parties evident in the substance of negotiation. For example:

"France, Switzerland, Germany, Zambia, Austria and others supported stating that CCS "could be" a mitigation option, while Saudi Arabia, Australia, and the US expressed a preference for stating that CCS "is" a mitigation option".

Reinforcing this observation is how later in these negotiations the US achieved an amendment to the agreed text by "express[ing] concern about text being policy prescriptive" (IISD, 2005).

the intermeshing of 'fact' and 'context' remain poorly understood and our ability to respond to them severely circumscribed. So, while it is widely understood that responding to climate change involves engaging energy using and producing behaviours, political economy, institutional politics and equity, as much as it does technology and atmospheric and oceanic dynamics our ability to engage the many complex interdependencies between them is systematically hindered by how knowledge is conventionally conceived, structured and organised.⁵ While the IPCC CCT exercise is intended to promote the engagement of such interdependencies, and integrate the resulting insights into AR4 and thereby into policy, it is argued below that this intention is constrained by the way traditional conceptions of knowledge shape institutional processes and obscure the significance of how these generate, deploy, reproduce and communicate knowledge. In order to ground these arguments it is important to first briefly outline the conceptual literature they draw upon.

Knowledge as Practice

"Knowledge is established not only in relation to a field of statements but also of objects, instruments, practices, research programs, skills, social networks and institutions" (Rouse, 1994: 110)

Non-representational epistemologies are focused by the practices involved in the generation, deployment, reproduction and communication of knowledge rather than by the representational statements these practices generate or deploy. While implicit in the work of Science Studies scholars such as Latour (1993, 1999) such a perspective is articulated in more formal epistemological terms by some feminist epistemologists (see Tanesini, 1999) and philosophers of science (most notably Joseph Rouse, 1987; 1994; 1996; 1998; see also Barad, 1998). It's important to emphasise that the term 'practices' is not intended in the sense of regularised patterns of human activity but rather to convey the dynamic, situated, and spatially and temporally extended socio-material configurations of people and material objects making up the activity of concern.

⁴ To the best of the authors knowledge this correlation has not been noted elsewhere.

⁵ See Healy (in press) for further detail on these points and on non-representational epistemologies.

This perspective thus incorporates and integrates the many attributes and accomplishments of the participants involved whether those of people, such as the import of skills, social networks or institutional criteria, or those of the material world, such as the competencies of equipment or properties of materials (physical, chemical, biological and so on). Viewed this way practices are inherently socio-material simultaneously combining human meaning and intention with practical configurations of the material world. This approach argues that the significance of knowledge results from the dynamics of the practices constituting it rather than residing in the representational content of the statements these practices generate.⁶ It is the maintenance of these practices that validates and legitimates these statements, and it is therefore resistance to or changes in these practices that challenges the validity, reliability or legitimacy of the knowledge so constituted.

In this view scientific knowledge is constituted by a complex and heterogeneous field of socio-material practices shaped as much by skills, theories, ideas and interests as by equipment and other material constraints. While representational conceptions of knowledge concentrate upon matters of justification – that is the factors (see footnote 6) regarded as underpinning the efficacy of scientific knowledge – the emphasis on scientific practices rather highlights matters of significance such as "what is at issue and at stake...to whom and to what it matters, and hence with how..[it]..is *appropriately* or *perspicuously* described" (Rouse, 1998: 449). So in the non-representational perspective the settings and circumstances in which knowledge is generated, reproduced and deployed are of critical concern and thus require "dynamic accounts of language, knowledge and power" (Rouse, 1998: 449). From these insights Rouse (1996) derives a description of the 'narrative reconstruction' of science in which "[s]cientists make sense of what they are doing by understanding it as a response to the situation presented by past research and an anticipation of future developments" (27). However their actions "belong not to a single narrative but to a contested narrative field" (163) in which "[w]hat situation we are in and what it is we are doing are...not yet fully determined" (164). This notion is applied to interpret current IPCC developments below.

⁶ Traditional conceptions of knowledge are focused by the 'ontological status' of the content of representational statements whether this is conceived in terms of correlation to 'objects' or 'subjects'. The perspective outlined here rather argues that the significance of a particular statement is a function of the setting (and everything constituting that setting) in which it is generated or deployed.

This non-representational epistemological perspective is echoed, and corroborated, by work exploring the many ways in which organisational knowledge and learning can be understood through the lens of organisational practices, systems and activities. In this view organisations are interpreted as 'distributed knowledge' (Tsoukas, 1996) or 'socially distributed activity' systems (Blackler, 1038), with a key concern being 'the dynamics of the systems through which knowing is accomplished' (Blackler, 1039). While corporate activities focus much of this literature many significant insights were derived from empirical studies of broader activities such as medical practice (i.e. Engestrom, 1991). This concern with the 'dynamics of..knowing' complements the more traditional concern with the cognitive content of knowledge by stressing the critical role of broader organisational factors such as those of structure, process, procedure, culture and leadership.

Dusya and Crossan (2004: 226), for example, reproduce Mintzberg et al's (1998: 212) summary of organisational learning:

"Intuiting is a subconscious process that occurs at the level of the individual. It is the start of learning and must happen in a single mind. Interpreting then picks up on the conscious elements of this individual learning and shares it at the group level. Integrating follows to change collective understanding at the group level and bridges to the level of the whole organisation. Finally, institutionalising incorporates that learning across the organisation by embedding it in its systems, structures, routines and practices."

Dusya and Crossan (213) then use this to identify 'feed-forward' mechanisms, proceeding from 'intuiting' to 'institutionalising', with organisational innovation and renewal, and 'feedback' flows, running from 'institutionalising' to 'intuiting', with the reinforcement of existing organisational norms. The IPCC CCT case might, however, be understood to problematise these arguments because although involving a 'top-down' 'institutionalising' imperative to integrate are intended to innovatively effect practices across the IPCC, including at the individual (i.e. LA) level.

Among the primary insights delivered by this literature is the significance of, what I term, 'relational capacity', that is the ability of an organization to facilitate cross-organizational

relationships conducive to knowledge generation and flow. So, for example, Tsoukas (1996: 22) observes:

"..the key to achieving coordinated action does not so much depend on those 'higher up' collecting more and more knowledge, as those 'lower down' finding more and more ways of getting connected and interrelating the knowledge each one has".

This focus upon "getting connected and interrelating the knowledge each one has" resonates with the integrative intention of the IPCC's CCT exercise but according to Tsoukas requires an:

"appreciat[ion of] the character of a firm as a discursive practice: a form of life, a community, in which individuals come to share an unarticulated background of common understandings" (1996: 23).

This 'character' is perhaps best summarised in terms of the 'culture' of an organisation and of the 'community of practice' so constituted (Gherardi and Nicolini, 2000). From this perspective organisational learning, such as that intended by the IPCC's CCTs, requires: "bringing about significant and enduring changes in the culture and practices of a community"; "cannot be imposed from outside"; but must rather "be oriented from within communities of practice by actions that personally involve their members" if "customary practices" are to change (16). The relevance of these insights for the IPCC's CCT exercise is explored below.

CCTs in the TAR and AR4

In an analysis of the TAR Depledge (2002: 2) describes, in addition to several changes to the procedures followed in the Second Assessment Report' four 'guidance papers' that attempted to integrate the 'cross-cutting issues': 'development, sustainability and equity'; 'uncertainty'; 'costing methodologies' and 'decision analysis frameworks', into the work of all three IPCC Working Groups (Depledge, 2002: 2). Depledge reports (2) that the results of this attempt at integration were mixed with the paper on 'development, sustainability and equity' in particular reported to have "...triggered considerable controversy, with some authors objecting that the analysis of such concepts lacked scientific precision and involved value judgments". So this

attempt at integration was impeded by the traditional insistence that the objective domain of science must be scrupulously ring-fenced from 'value' or 'context', an insistence also reflected in the IPCC's deployment of the relevant/prescriptive distinction (see footnote 2).

However in AR4 what are now termed 'cross cutting themes' (CCTs) take a far higher profile than in the TAR. At the first AR4 scoping meeting the introductory remarks of the IPCC chair, Dr R.K. Pachauri, (IPCC, 2003a) devoted considerable attention to this "major feature that we must build into the AR4" (2). The aim, articulated at this meeting, was to "develop a mechanism, which would ensure a fuller and effective treatment of cross-cutting issues..[i]n order to facilitate and improve cross Working Group co-operation and...achieve better integration and consistent treatment of key issues through the AR4" (IPCC, 2003b: 2). CCTs were identified "as a management tool" for this purpose (IPCC, 2003b: 2) and in his introductory remarks Dr Pachauri outlined "the process" for this in which each CCT would be "housed in a specific working group" and involve "at least two Co-anchors" (IPCC, 2003a: 2). The Co-anchors responsibilities included drafting and disseminating CCT concept papers and acting as a resource for the development and deployment of the CCT for which they are responsible. In addition a committee chaired by the IPCC Vice-chair Mr. M. Munasinghe was established to oversee the overall process. The expected import and impact of the CCTs was further underlined at the first AR4 scoping meeting in many ways such as through statements that "[e]ach CCT would require in-depth study and reflection at the design stage..[and that]...[c]onsiderable follow-up and interaction with a range of actors will be essential during subsequent stages of the AR4 process" (IPCC, 2003b: 2). So from the beginning there was a detailed awareness that organisational factors were essential for the success of the AR4 CCT exercise (perhaps reflecting 'organisational learning' resulting from experience with 'cross-cutting issues' in the TAR).

For AR4 the areas of 'uncertainty and risk', 'Integration of Adaptation and Mitigation' (AM), 'Article 2 of the UNFCCC and key vulnerabilities', 'Sustainable Development' (SD), 'Regional Integration', 'Water' and 'Technology' were identified as CCT's. Many of these embody normative considerations and there are a variety of complex interdependencies between them. This is most marked with the CCTs of AM and SD, something emphasised in the initial concept paper for each and now reflected in what has, in essence, become a combined WGII & WGIII exercise focused upon these CCTs. This was initially the subject of a 'Planning Meeting' in

Amsterdam in September 2004 (IPCC, 2004b) to develop "Working Principles" and agree "organizational arrangements to ensure the proper integration of AM-SD ..into AR4" and a follow up 'Expert Meeting' at St Denis, Reunion Island, France in February, 2005 (IPCC, 2005). This 'Expert Meeting' was designed to "feed new views from outside the climate change literature into the assessment of WGII and WGIII" (2) and resulted in a 'virtual coordination group' (VCG) involving a "discussion platform/"chat room" facilities" to ensure "continued interaction between WGII and WGIII authors until completion of AR4" (16) in order "to dovetail zero-order draft texts of WGII and WGIII" (2).

Work on other CCTs does not appear to have been so dynamic.⁷ That on 'uncertainty and risk' proceeded from an initial concept paper, through an IPCC Workshop on Uncertainty and Risk, held at the at the National University of Ireland in May 2004, to the publication of a short, but accomplished, "Guidance Notes for Lead Authors of the IPCC Fourth Assessment Report on Addressing Uncertainties" in July 2005.⁸ The author also has a voluminous report on an "IPCC Expert Meeting on The Science to Address Article 2 including Key Vulnerabilities" held in Buenos Aires in May 2004⁹ but only concept papers for the other CCTs (although see footnote 7). It's tempting to speculate on reasons for the apparent dynamism with which AM-SD are being addressed, which with its strong organizational elements resonates with the insights of the organizational learning literature outlined above, in comparison with other CCTs.

Firstly, it can be observed that the initial concept papers for AM-SD were particularly explicit about their normative content, and the implications of this, in addition to emphasising AM-SD overlaps and interlinkages, as well as a variety of correlations with other CCTs. There was thus, at least, an implicit tendency to deny the traditional assumptions regarding the strict segregation of 'fact' from 'context' underpinning the 'relevance'/'prescriptive' distinction (see footnote 2). So,

⁷ These are incomplete observations derived from the authors reading of available IPCC written reports only.

⁸ It is important to underline that this is a very different CCT to AM-SD. Intended, essentially, to ensure the effective and consistent treatment of uncertainty across AR4 (an ongoing IPCC concern across all assessment reports) the resultant "Guidance Notes" are very much the targeted output of this CCT.

⁹ Perhaps the most challenging of the CCTs in that while predicated on science the focus of Article 2 on "prevent[ing] dangerous anthropogenic interference in the climate system" revolves around the implicitly value-laden term "dangerous". It is, perhaps, no wonder then that this report (IPCC, 2004a) starts with the IPCC chair's warning quoted in footnote 1 although this is contested at various points throughout the report. For example, the summary of a presentation given on page 18 states "Instead of focusing on the dangers to the IPCC's reputation of crossing the policy-prescriptive threshold, the IPCC should also consider the damage to the reputation of not

for example, the concept paper on SD (Srivastava and Heller, 2003) discusses ‘alternative development paths’ (5, 7), ‘positive political economy’ (5, 7), and matters of institutions and governance, while that on AM identifies ‘equity’, ‘social capital’ and ‘financial issues’ as common to AM and SD (Huq and Grubb, 2003: 15). Also, perhaps of relevance, is that WGIII, where AM-SD is housed, involves many social scientists some of whom would be very much at home, and perhaps sympathetic to, the perspectives informing this paper. However, it is clearly more complicated than this. WGIII, for example, also housed the Technology CCT, although this was a last minute addition to the AR4 CCT list, while AM-SD carries momentum over from the ‘development, sustainability and equity’ TAR ‘cross-cutting issue’ exercise. What can be said is that if the IPCC are serious about the CCTs being “a mechanism..ensur[ing] a fuller and effective treatment of cross-cutting issues..[i]n order to facilitate and improve cross Working Group co-operation and...achieve better integration and consistent treatment of key issues through the AR4” (IPCC, 2003b: 2) then the AM-SD exercise meets that objective better than other CCTs. Also, notably, this achievement is underwritten by innovative organisational arrangements effecting routines and practices such as the VCG (see above).

While it is still early days to judge the potential content of AR4 the AM-SD exercise currently appears likely to affect this content more significantly than other CCTs. If so this example of organisational learning would have, at least to some degree, to be ascribed to the changes in organisational structures, routines and practices involved while less influential CCTs will, I hypothesize, be marked by a degree of inertia in many of the same organisational factors.

Discussion

"In times of turbulent change, organisations (micro and macro, economic, political and civic) govern themselves by becoming capable of learning both what their goals are, and the means to reach them *as they proceed*" (Paquet, 2001: 187).

So, from an organisational learning perspective, the CCTs are best viewed in terms of how they modify and affect the IPCC's repertoire of processes and practices for producing policy-relevant

providing a conceptual framework and information the scientific community considers relevant for formal policy processes to determine Article 2 implications for comments for Partners".

knowledge. While, to some degree, these observations reflect previous accounts of institutional learning by the IPCC (e.g. Siebenhuner, 2002) these tend to be constrained by conventional representational conceptions of learning. Siebenhuner, for example, views this learning in terms of two different processes each centering upon 'substantive and procedural knowledge', for which reason, he finds it "necessary to concentrate on the category of procedural knowledge in order to generate...transferable and generaliseable conclusions" (2002: 3).¹⁰

However the approach described above illuminates the way changes in structures, routines and procedures facilitate substantive statements (i.e. 'substantive knowledge') significantly different to those generated by earlier configurations of structures, routines and procedures and, therefore, the artificiality of segregating 'substance' from 'procedure'. For example, while the legitimacy of the paper on 'development, sustainability and equity' put together for TAR was questioned realignments eventuating from the AR4 WGII & WGIII AM-SD exercise may ensure the application of different standards of legitimacy regarding such matters in future. This then would be a 'narrative reconstruction' (Rouse, 1996 - see above) of "a contested narrative field" (163) because "[w]hat situation we are in and what it is we are doing are...not yet fully determined" (164). Such a replacement of foundational reference points by others resonates with recent observations about analogous transformations in processes of governance more broadly, indicating the potential relevance of these matters for the broader climate regime.

In a recent discussion of contemporary 'distributed governance' Paquet¹¹ identifies the critical parameters of:

"...*resilience* (the capacity for the economy-polity-society nexus to spring back undamaged from pressure or shock through some slight rearrangements that do not modify the nature of the overall system), and *learning* (the capacity to transform in order to improve present performance through a redefinition of the organisation's objectives, and a modification of behaviour and structures)" (2001: 189).

¹⁰ Although later noting "[s]ince substantive knowledge cannot be clearly separated from procedural knowledge, some reference to this category will be made, but the main focus should be put on procedural insights, which are transferable to other assessment processes" (Siebenhuner, 2002: 3).

¹¹ Paquet earlier notes how 'distributed governance' involves 'mixed institutions' that cross and 'blend' conventional sectors (such as perhaps science/policy?) and how its emergence is marked by, among other things, "the meso-level units in polity, society and economy..becom[ing] prominent" (2001: 186-188).

Paquet points out that, while in tension, it is this balance between ‘coherence’ and ‘structural transformation’ that ‘underpin[s] sustainability’ but highlights the potential “for co-ordination failures that can slow down the process of learning” (2001: 189). “In the shorter run..[these]..may be eliminated through *process architecture*, i.e. eliminating obstacles to the collaboration of the different stakeholders within the learning cycle and developing the relationships, conventions or relational transactions required to define mutually coherent expectations and common guideposts” (2001: 190-191). Although “the longer run..[requires attention to]..*organisational architecture*, i.e. the transformation of the structural capital defining the capabilities of the learning economy” (2001: 191). Ultimately, however, Paquet argues that “social learning is unlikely to proceed apace (despite process and organisational repairs) unless the new dominant logic..generates a new public philosophy..capable of serving as a gyroscope in the learning process” (2001: 191), requiring a “rethinking [of] foundational values” (2001: 197).

In Paquet's terms the AR4 CCT exercise is, perhaps, best characterised as focused upon *process architecture* although with some, more notably in the WGII & WGIII AM-SD exercise, attention to *organisational architecture*. However, if the analysis above that this AM-SD exercise amounts to a ‘narrative reconstruction’ is robust, then we may also be witnessing the emergence of a ‘new dominant logic’. In simple terms the relevance of this for the climate regime is that such a ‘new dominant logic’ reflects the kinds of imperatives many see as emergent in the regime itself (that is addressing the way critical normative criteria such as equity are co-constitutive of matters of AM-SD as much as critical technical criteria are). Now whereas the traditional ‘dominant logic’, in which ‘concepts..involv[ing] value judgments’ are *a priori* ruled illegitimate, constrains how IPCC outputs might engage such elements of the broader regime a ‘new dominant logic’, as described above, suggests the potential for the IPCC to explicitly inform them. However currently the insistence upon the relevance/prescriptive distinction acts to block such changes (see footnote 9).¹² The emphasis of this analysis on organisational features, characteristics and processes also illuminates the way other, less high profile, matters may act as “co-ordination failures that..slow down the process of learning” (Paquet, 2001: 189). This

¹² Paquet describes various “different blockages through the social learning cycle” including: “cognitive dissonance”; “epistemic inhibitions of all sorts”; “property rights”; how “certain values or very strong dynamic conservatism..may generate a refusal to listen”; and “difficulties in finding ways to incorporate the new knowledge” (2001: 193).

discussion concludes with a brief outline of two potential such 'failures' that became apparent to the author during the writing of this paper.

Reflecting a long standing concern the IISD report on WGIII-8/IPCC-24 noted that "[t]he low participation of developing country experts in IPCC processes continues to be a problem, as noted by many observers both formally and informally during the meeting. All agree on the need to address this issue" (2005). However others have detected a deeper organisational malaise underpinning this problem, perhaps best addressed as a matter of organisational culture. Lahsen (2002), on the basis of an empirical study of Brazilian scientists and administrators concerned with climate change science and politics, finds that the developed country perspectives and interests dominating the framing of climate change science and politics both 'entrains' some Brazilian scientists/administrators while also generating distrust. If valid this would not only reinforce 'the low participation of developing country experts', noted above, but would also likely block learning (most critically with regard to engaging the complex multidimensional aspects of equity). This analysis suggests that if Lahsen's analysis were robust, and of broader validity, then critical to addressing these concerns would be the 'culture' of the 'community of practice' (Gherardi and Nicolini, 2000) that is the IPCC. Another matter of particular salience to AR4 is that of 'outreach'.

'Outreach' has become a particular focus of attention in the preparation of AR4. At IPCC-24 it was the subject of a 'Progress Report', a 'consultancy report' ('Framework Communications Strategy for Release and Dissemination of the IPCC Fourth Assessment Report'), and involved the establishment of an 'Outreach Task Group' and FT annual position (IISD, 2005). The potential problem is very straightforward. The conventional insistence on segregating 'fact' from 'value', reproduced in the 'relevant'/'prescriptive' distinction that the IPCC applies to the science/policy relationship, is also reproduced in what has been termed the 'deficit model' approach to science communication (Irwin, 1995; Irwin and Wynne, 1996; Irwin, 2001; Irwin & Michael, 2003). This is focused by the idea that the positive engagement of the wider community is simply a matter of effectively conveying the requisite information to them (i.e. thereby remedying their 'deficit' of knowledge). However experience shows that this may fail, or

even backfire,¹³ because it ignores how the wider community (reflecting the non-representational epistemological insights described above) is:

"..not concerned with exercising formal criteria by which to determine what is true and what is false..[but]..[r]ather..concerned with..a complex of judgments about trustworthiness, credibility, usefulness, power - judgments which reflect, for example, social identity, practical circumstance, personal responsibility and community autonomy" (Irwin and Michael, 2003: 28).

A key question here is whether an emergent 'new [IPCC] dominant logic' is able to inform this exercise because (with its implicit recognition of the interdependence of 'normative' and 'factual' criteria) it would likely be better placed to frame and design it than conventional perspectives.

Conclusions

"Since its origin, the IPCC has been characterized by a special blend of scientific and intergovernmental features, akin to the sand, gravel and cement used in concrete. The science, like sand and gravel, gives body and strength to the concrete. Intergovernmental approval, like cement, glues everything together, providing resistance and rendering the final product usable....it is unlikely that new construction materials will make concrete obsolete. However, they might cause it to be used in a different way." (IISD, 2005).

This paper suggests that this "different way" should include further specific consideration to the knowledge management aspects of the IPCC and, in particular, the way that these are reflected in its structures, processes and procedures. However they go further than this. They suggest that, particularly in light of current "times of turbulent change..[the IPCC needs to be]..capable of learning both..their goals..and the means to reach them *as they proceed*" (Paquet, 2001: 187). In other words such attention to structure, process and procedure must be dynamic and attentive to IPCC's changing external environment. They specifically suggest that addressing the tensions increasingly evident in the 'policy relevant but not policy prescriptive' stance is an essential

¹³ This is because 'top-down' deficit model framed exercises commonly reinforce the, now pervasive, distrust many in the broader community hold for dominant contemporary institutions (corporate, governmental, academic etc) by: (i) ignoring how their (often overwhelming) technical emphases implicitly addresses social behaviours (i.e. energy

element of such changes, and that this has implications for the broader climate regime. That such changes are 'in the wind' could be detected at IPCC-24. IISD noted that:

"[s]ome commentators have envisaged future roles for the IPCC other than "providing periodic assessments of the current scientific understanding of climate change"..However, this remains mere speculation. AR4 is currently drawing most of the energy of the IPCC Working Groups, and discussion on the future of the IPCC is in neutral until AR4 nears its end" (2005).

This analysis rather suggests that the IPCC is not currently 'in neutral' but that a 'narrative reconstruction' of the "contested narrative field" (Rouse, 1996: 163) that is its domain may be underway, in which case the 'new dominant logic' emergent from this is likely to be influential in whatever future role the IPCC might take.

Paquet's (2001) insights are further germane to current discussions regarding the future of global environmental governance more generally. They underline how the "collaborative governance capabilities" (200), imperative for managing contemporary challenges, rests upon the collaborative capabilities of 'relations, networks and regimes'. Suggesting that the emphasis should be on building and resourcing these networks with peer bodies, such as say might replace UNEP, focused by such a facilitative, rather than by a traditional hierarchical leadership, role. However, Paquet notes that while "[i]n the best of all worlds, learning relationships, networks and regimes would be in place" (201), and that "organisational culture" is the "bond that makes.. [them] ..operative and effective", "[u]fortunately, one does not live in the best of all worlds" (202). The advice he gives on how we might cope in this 'not...the best of worlds' emphasises: 'heterogeneity'; embodied learning in communities-of-practice; a sense of 'belonging' (202); and 'situated resolutions' to "pragmatically resolve the sort of reconciliation that is possible between different but somewhat compatible perspectives or frameworks" (203). The IPCC WGII & WGIII AM-SD exercise appears to meet these criteria well, in which case there may be lessons in it for the future of global environmental governance more generally.

References

consuming) as matters for control rather than dialogue while: (ii) at the same time, ignoring the broader

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