Environmental Information, Decision-Making and Communicating

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Abstract

Great claims are often made for environmental information, especially as a means of 'aiding decision-making'. With scant evidence, environmental information is assumed to be useful as a means of improving the state of the environment. In this paper we question this assumption and ask whether state of the environment reporting is useful, to whom, and in what context?

Drawing on sociology of scientific knowledge and communication theory and practice we have examined how *Australia: State of the Environment 1996* has been used by government bureaucrats and politicians. Our research found that *Australia: State of the Environment 1996* was used to legitimate existing policies, but was not used in government decision-making or in the creation of new environmental policy. Nevertheless, both those people involved in preparing the report and the broader policy community continue to regard state of the environment reports as an inherently valuable initiative. We weigh up the role of the report as a credible source against that of being a useful document and conclude that environmental information will only be useful in environmental matters when it is reconceived as part of a complex communication practice.

Environmental information & communication

In 1686, the Marquis de Vauban proposed an annual census to Louis XIV arguing that it would be "a useful and necessary pleasure for him to be able, in his own office, to review in an hour's time the present and past condition of a great realm of which he is head, and be able himself to know with certitude in what consists his grandeur, his wealth and his strengths" (Scott, 1998, p.11). Three centuries later we are hearing similar arguments for the collection of environmental data; arguments based on the desire to know with certitude the strengths, and in this case also weaknesses, of the state of the environment—if not the kingdom.

These arguments have led to environmental information becoming a significant response to the environment as an issue in numerous nations, non-government organisations and international organisations. Most notably, part of this response has been the production of state of the environment reports. These reports are the equivalent of any other census, only specifically concerned with the environment, and, as such, they often purport to represent the sum of all knowledge regarding the environment at a particular time.

Over the past 30 years state of the environment reporting has come to be regarded as an essential tool for sustainable development (Comolet, 1990; Parker & Hope, 1992). The first national state of the environment report was prepared in Japan in 1969 and environmental information has been supported as a means of improving the environment in international fora at least since the 1972 Stockholm declaration. Every major international environmental agreement since then has explicitly or implicitly emphasised the importance of information about the environment.

In 1979, the OECD recommended that all member countries prepare periodic national state of the environment reports on the grounds that environmental reporting "is a way of responding to public demands for environmental information, it assists in the definition, implementation and evaluation of environmental policies and it helps to incorporate environmental concerns in decision making" (Organisation for Economic Co-operation and Development, 1979, p. 9). Chapter 40 of Agenda 21, *Information for decision-making*, similarly recommends the provision of environmental information, including regular state of the environment reports (United Nations Conference on Environment and Development, 1992). And just recently, in September 2000, a United Nations Environment Program (UNEP) conference adopted the Dublin Declaration on Access to Environmental Information. Opening the conference, the Irish Environment Min-

ister, Noel Dempsey said, "Environmental information is an essential tool to assist in bringing about the changes in lifestyle necessary to achieve a more sustainable society in the 21ˢᵗ century" (United Nations Environment Program, 2000).

One of the curious things about claims such as those cited above is they have gone unquestioned and unchallenged. In some ways, this is to be expected as we have been hearing similar claims for the importance of census data/information for some centuries. Nevertheless, recent developments in the sociology of knowledge and in our understandings of information and communication provide a framework within which we can now recognise that such claims are based on assumptions that can and should be challenged. Most importantly, we need to challenge the assumption that state of the environment reporting is an unproblematic production and consumption process.

In the first instance, the very process of producing environmental information has gone unquestioned. Like the production of scientific knowledge before the advent of critical sociology of science, the production of environmental information has been ignored. It is assumed that only the outputs (i.e. the information) of the process of preparing environmental information are worth analysing. More importantly, it also is presumed that the process of preparing environmental information and the information itself is objective, value-free, and culturally neutral, as indeed many still believe of science in general. However, there is sufficient evidence (e.g. Irwin, 1995; Jasanoff & Society for Social Studies of Science, 1995; Mulkay, 1979) to raise doubts about the attainability of objective, neutral data and thus to question the possibility of such data in the environmental arena, especially given the political sensitivity of that arena. There are also well-grounded arguments from communication to question the possibility of any objective, value-free and culturally neutral information—scientific or otherwise (e.g. Penman, 2000).

The second set of assumptions concerns the use or consumption of environmental information. The use of environmental information is generally regarded as unproblematic as its production: it is assumed to be an automatic and simple process of absorption. The information is there, it is a simple matter of it being read and used and, as a consequence, of bringing about change (presumably for the better). By simply existing, environmental information is assumed to bring about change and is therefore regarded as valuable and socially significant. Jasanoff has already noted and investigated this belief with respect to scientific information in policy making. She notes how:

> [T]here is an unspoken presumption in many of the aforementioned works that better scientific characterisation of a problem will lead to better policy. The validity of this basic assumption, however, has also begun to be questioned. For instance, although political conflict may be promoted and sustained by scientific uncertainty, it is no means safe to assume that reducing un-

certainty automatically reduces conflict.
(Jasanoff, 1990, p. 7)

Nor, we would argue, is it safe to assume that environmental information leads to any decision-making at all, let alone to good decisions that presumably lead to environmental improvements. Scott (1998), in his discussion of scientific knowledge (in the Aristotelian sense; see e.g. Sensat, 1979) argues that certain forms of information and knowledge require a narrowing of vision, in order to make the phenomenon at the centre of the vision more legible and thus measurable. Certainly, state of the environment reporting has been subject to this narrowing of vision for that very purpose of measuring. Indeed, in some ways state of the environment reporting can be seen as an exemplar form of scientific knowledge developed for the process of rational decision-making. Nevertheless, this is no basis for assuming that the knowledge generated is of use; indeed the requisite narrowing of visic could implicate the reverse. So, the question still remains as to whether state of the environment reporting is useful, to whom and in what context? This is a genuine question when considered in the light of many recent advances in our understanding about communication: that the meaning is not inherent in the words (or the numbers) but in our constructed readings of it (e.g. see Penman, 2000).

These questions are not being raised merely as an 'intellectual exercise'. There are important practical issues at stake; not the least of which is the money and other resources put into the process of state of the environment reporting as well as the actual state of the environment itself. In the state of the environment report to be discussed at length in this paper, approximately $5 million was spent on writing and publishing the report. Later, a further $32 million dollars was allocated to a National Land and Water Audit. This is a significant national investment and that alone is sufficient ground to ask whether the returns are acceptable for the investment. Most importantly, there is the practical, political question of whethe state of the environment reporting improves the state of the environment. The need to improve the state of the environment is pressing. If state of the environment reports are not aiding that improvement, perhaps government resources and energies would be better focused on other actions.

Wynne and Waterton see the increase in calls for environmental information as a policy response as associated with the retreat from regulation in European environmental policy (Waterton & Wynne, 1996). As a consequence, they argue that the role and political significance of 'information' has changed. Wynne and Waterton speak of an "ideological commitment to information" (Wynne & Waterton, 1998). This ideological commitment raises questions about what the real use of state of the environment reports may be. Do state of the environment reports provide the appearance that progress is being made in protecting the environment to such an extent that nothing else is done? Do such reports in the end act to generate a discourse that in its very existence negates or offsets action? In other words, do state of the environment reports create "the very real danger of talk replacing or postponing

action" as Harré, Brockmeier & Mühlhäusler (1999, p. ix) have noted for other examples of 'greenspeak'?

In what follows we shall briefly describe how a major national state of the environment report *Australia: State of the Environment 1996* (State of the Environment Advisory council, 1996) was produced and then critically examine how it was used. The data consist of in-depth interviews with significant participants in the production and use processes, as well as public documents attesting to development. These data are part of a larger research project of the first author in which she has investigated both the production and use of an Australian and an English State of the Environment Report (Kuiper, 2001).

State of the environment reporting: the process

Following the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, the Australian Prime Minister issued a *Statement on the Environment* (Keating, 1992). Included in this statement was an announcement of funding for state of the environment reporting. The process of report preparation did not however get underway until 1994 and the full 544-page report and 44-page executive summary were produced approximately 18 months later. Significantly, the page proofs were signed off on the eve of the Federal government election on 1 March 1996.

The report production process was an intense, often chaotic, negotiation process amongst a large number of people and institutions, which involved a significant personal commitment in many cases. Throughout this process there were two major sets of issues that had important ramifications for the final product and its performance.

Expert science in a negotiated process

Australian state of the environment reporting was conceived as a science-based, descriptive, analytical process. The justification for, and aims of, *Australia: State of the Environment 1996* were expressed in numerous variations on this basic theme. 'Description' and 'picture' were key terms used in government documents and by participants, as were 'analysis' and 'evaluation', indicating that the report was seen as having both these roles. The 1994 Framework document stated under the heading "Purpose of state of the environment reporting":

> State of the environment reporting will enable compilation of scientifically credible, timely and consistent information about changes to and trends in Australia's environment. On the basis of rigorous analysis and assessment, an integrated, accessible national picture will be made available to the public, industry, non-government organisations and all levels of government. (Department of the Environment, Sport

and Territories, 1994, p. 12)

Australia: State of the Environment 1996 was produced by a process of negotiation between the scientists and other 'experts' and government bureaucrats. The process was overseen by a 13-member Advisory Council, which consisted of 'de facto' representatives of industry, science, unions, indigenous people, and environment/community groups. The seven key chapters of the report (on human settlements, biodiversity, the atmosphere, land resources, inland waters, estuaries and the sea, and natural and cultural heritage) were written by seven 'expert' reference groups. Each reference group had five to eight members from state and Commonwealth government departments and agencies, universities, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), industry and non-government organisations and one or two Department of the Environment, Sport and Territories facilitators per group.

Australia: State of the Environment 1996 was not the product of an objective, 'rational' process. As we would expect from the literature of sociology of scientific knowledge (see, for example, Irwin, 1995; Jasanoff & Society for Social Studies of Science, 1995; Mulkay, 1979), state of the environment reporting is a process of intense human negotiation within a particular social, political-economic, and legal context. While most reference groups worked relatively harmoniously together, one reference group member told us they *'almost killed each other in Tasmania'*. There were also intense discussions between the reference groups and the Advisory Council, and between the report authors and the government bureaucrats on issues such as the extent to which the report was able to comment on government policy and what environmental issues should be included in the report.

Contested audiences and uses

During the production process, both the audience for, and the purpose of, *Australia: State of the Environment 1996* were the subject of great discussion and confusion among participants. In the end they decided to cover all options and produced a report for 'everyone'. On the back cover it was stated that the report was for "the general public, government decision makers and policy analysts, industry groups, natural resource planners and managers, academics and scientists, community groups and environmentalists, students and educational institutions, international agencies, and the media" (State of the Environment Advisory Council, 1996). Communication theory and research however suggests that a single report is highly unlikely to meet the needs of such a diverse range of people (e.g. Penman & Sless, 1996).

The formal *National State of the Environment Reporting Communications Strategy* (Faull, 1994) recognised the need to prepare different products for different 'audiences'. However, the report producers imagined only two major audiences— government policy makers and school children. In interviews, the government bureaucrats generally stressed the importance

of the policy makers and the Minister, while the scientists and other experts focused on the 'education' users of the report.

Many of the other people involved saw *'the public'* as potentially more receptive than the government to the information in the State of the Environment Report:

> We were very conscious of the fact that change was far more likely to occur through the people of Australia being better informed about the environment and being concerned that the degradation not continue than through a government having a fall on the road to Damascus experience and saying, 'my god, how irresponsible we've been, we must change'. (Advisory Council member)

Nevertheless, there was an effort made to communicate with politicians after the launch of both the Executive Summary and the full report. A 'key findings' brochure was prepared and sent to every local, state and Commonwealth politician in the country in December 1996. Despite this, many of the authors were sceptical about the potential use of the report by politicians or policy makers. One reference group member said that, *(we were) told we were writing for decision-makers ... all knew that was patent rubbish'*.

There was a greater emphasis put on communicating to the public in the preparation of the report: thus orientating the report to education and the 'public understanding of the environment', following in the footsteps of the conventional 'public understanding of science' approach to communication. For example, a 'SoE Education Resource Package' was prepared, containing a Teacher's Study Guide, Executive Summary, CD Rom, video, posters and a discount voucher for the report, and was distributed to at least 3000 schools around Australia. Many of the report authors were familiar with 'science communication' as a practice and profession because it has a strong tradition in Australia. Therefore, in the end, school children were the default 'key audience' imagined by the report authors. As with 'public understanding of science', the emphasis was on educating 'the public' by educational (or at least textual) means rather than on having a dialogue with them about environmental issues (Irwin & Wynne, 1996).

This approach to environment/science communication exemplified in the state of the environment reporting process intimately reflects a science-centred worldview that accords with the expert approach discussed earlier. Alan Irwin characterises this world view as, "the notion of *public ignorance*, that science improves the *decision-making process*, that science is *a force for human improvement*, that it is *value-free*, that citizens are impoverished by their *exclusion*, and that *greater scientific understanding* amongst the public will lead to *greater acceptance and support* for science and technology" (Irwin, 1995, p. 26). But, whether this science-centred worldview actually leads to an improved understanding of science, or improved decision-making about science-based issues, is another matter entirely.

The process of producing the report was clearly difficult for the participants, not the least in terms of trying to decide who it was that they were writing the report for. While the writers and Advisory Council members largely constructed the report as an exercise in 'public understanding of the environment', the authority to produce the report was given in order to assist decision-making. So what did it actually achieve?

Performance of Australia: State of the Environment 1996

Evidence for the use of the report in the policy domain— i.e. by government politicians and public servants—was gathered through interviews with report users in the public service, searches of parliamentary debates, government documents and newspaper references and an examination of the two official evaluations conducted by the Advisory Council and by a market research group. Other, non-policy making, uses were also identified and some of these are mentio here, but they were not central to the question of this pap... concerning the interaction of scientific information, decision-making and policy making. In identifying and analysing report usage, focus was on the quality, rather than the quantity, of the report use and on evidence of actual or reported use, rather than on perceptions of the usefulness of the report or speculation as to changes brought about by the report.

Decision-making & related uses

No direct use in decision-making

The most significant finding was a negative one. There was no evidence that *Australia: State of the Environment 1996* had been used in government decision-making or in the creation of government policy, either by public servants or politicians. Nor was there any evidence that the report had changed budgetary allocations, inspired new policies or programs or caused any institutional changes.

In addition, the report had not been greatly used in othe... ways by Commonwealth government public servants. Many of the public servants interviewed, even those in the Department of the Environment and Heritage, sounded irritated at being questioned about a document they felt was irrelevant to their work. However, many of the public servants who had not used the report in their work also expressed the view that the report was valuable and that it must be of use to someone in government. Many respondents suggested other people to phone who they thought might be using the report in their work. They said, for example, *'people in ERIN [Environmental Resources Information Network section] might have used it ... no idea in what context they would have used it'* (Environment Australia bureaucrat), and *'No don't use it much around here ... try the fish policy section, environment section'* (Australian Bureau of Agriculture and Resource Economics (ABARE) bureaucrat). These other people, in turn, suggested others, and for the same reasons: they didn't use it, but surely someone did!

Use as a policy initiative in its own right

The Department of the Environment, the Minister for the Environment (Senator Hill), the Leader of the Opposition (Mr Beazley), other Commonwealth politicians and the OECD Environmental Performance Review Committee supported and emphasised the report as a policy response/initiative in its own right. Senator Hill, the Minister for the Environment, referred to it in this regard in his 1996-98 budget statements. Mr Beazley, Leader of the Opposition, mentioned the report in this respect in debate about Australia's oceans' policy. Waving the report in parliament, he said:

> If you want to look at the problems identified and what ought to be the approaches to them,... I would recommend to people ... that they pick up a copy of the State of the Environment: Australia—a report that was put in place by the previous government. (Australia, 1997a)

The report's physical form was central to this use. Mr Beazley's waving of the report in the House of Representatives was a symbolic act, illustrating the material form of the assessment of the environment, and therefore, the importance ('weight') with which his party regards the environment. As a policy initiative, the decorative material and symbolic nature o f *Australia: State of the Environment 1996* was also of use to one public servant who used it to make the shelves of a new centre *'look professional'*.

State of the environment reporting has been supported as a policy initiative by environmental NGOs (non-government organisations), particularly the Australian Conservation Foundation, which has argued that the reporting should be strengthened with a statutory base (Australian Conservation Foundation, 2000). The Australian Conservation Foundation also used the report as the basis for one of their extended reports on Australia's environment, drawing on the report's scientific 'authority' (Yencken & Wilkinson, 2000).

Another dimension of this use as a policy initiative is reflected in the view that state of the environment reports act s evaluation and/or accountability devices (as the above quote from Mr Beazley indicates). The Australian Conservation Foundation emphasised this role in their support for state of the environment reporting. They saw it as a means of measuring government progress on protecting the environment, as did the OECD. Senators Hill, Lees, and Allison also referred to the report in this sense; for example, Senator Allison asked of the Natural Heritage Trust programme, *'Will the objectives meet all of the problems identified by the state of the environment report?'* (Australia, 1998b).

Policy amnesia

The use of state of the environment reports as a policy initiative must be qualified with the knowledge that it was only used in this sense when it was expedient. In other cases, the use of the State of the Environment report as a device for measuring environmental progress was forgotten. Politicians

appear to have suffered 'policy amnesia' when they announced the National Land and Water Audit, a very similar program of environmental evaluation. One member of the Advisory Council said:

> I think that a very interesting thing is that then the government commissioned this land and water audit almost without seeming to understand that we had tried to do that, or maybe it was they did understand that we didn't have the data so they've gone off to get it but there seems to be a bit of reinventing wheels going on there.

Stephen Dovers argues that policy ad hocery and policy amnesia have been key features of the government environmental policy making in Australia (Dovers, 1994). It is not uncommon for policy programs to be revisited or reinvented under new titles as part of the 'new broom effect' of changes of governments or Ministers. In this case, State of the Environment reporting was a Labour government initiative while the Natural Heritage Trust and the National Land and Water Audit are initiatives of a Liberal-National government.

Other uses, non decision-making

Use for legitimation

Australia: State of the Environment 1996 has been useful in other ways not directly related to its information function. Most notably the report has been used as a source of credibility to legitimate political decisions. For example, the Minister for the Environment and his Parliamentary Secretary used the report to justify the sale of one third of Telstra (Australia's once-public telecommunications utility), arguing that the proceeds would be used to finance a $1.25 billion program of environmental initiatives under the banner of the *Natural Heritage Trust*. This was an existing Liberal and National party policy that had been announced prior to the election and the completion of *Australia: State of the Environment 1996*. In particular, the Minister launched the Executive Summary three months before the main report in order to increase pressure on the Democrats, who had threatened to block the part-sale of Telstra in the Senate. The use of the report as justification for the partial sale of Telstra and the Natural Heritage Trust is clear in the first media release accompanying the launch of the Executive Summary. It said:

> *Federal Environment Minister Robert Hill says the findings of the State of the Environment Report will give the Opposition and minor parties something to think about over the winter parliamentary break.* ... Many of the problems identified by the report are specifically targeted for action in the Coalition's $1 billion Natural Heritage Trust. ... Senator Hill says Australians can only hope that the report's findings will open the eyes of Labor and the minor parties to the extent of

the problems and the urgent need for action. (Hill, 1996, 27 June, p. 1, italics indicate italics in original).

This style of legitimation was used in numerous speeches and media releases, particularly in terms of the report's conclusion that a 'comprehensive and systematic' approach is needed to address environmental issues. In contrast, the main report was not used by the Minister and its release was a much smaller scale affair compared with that of the Executive Summary.

Other politicians used the report as legitimation both for and against the sale of Telstra and the establishment of the Natural Heritage Trust, indicating the ambiguous nature of the report's conclusions. Both Senator Hill and other politicians also used *Australia: State of the Environment 1996* as legitimation for other policy decisions or ammunition in other policy debates, such as support for the national wetlands program and the 'Clean the Air' program.

People outside the government also used the report to legitimate their views. In particular, Professor Ian Lowe used the report's findings and his status as chair of the State of the Environment Advisory Council to, for example, criticise the government's environmental performance and the Department of the Environment's approach to working in harmony with the government's economic goals (Woodford, 1997a; Woodford, 1997b).

Use as an encyclopedia/textbook

A major use of the report by the public servants interviewed was as a source of facts and/or for their own education. They saw it as being *'like a little encyclopedia'*. The 'facts'— statistics, maps, graphs, tables and quotes—were used for a variety of purposes, such as advice to ministers, speech writing and in brochures for the public. One researcher at the Parliamentary Library said they:

> will go to it if it has a map, table (that I need) ... very basic reference type document in librarian's terms ... useful for checking the name of strategy or some kind of document ... like a dictionary or encyclopedia.

Public servants also used it for their own education, to read up about topics that they were unfamiliar with, or when they wanted to *'remind myself of issues'* (Parliamentary Library researcher).

But in the main, the same public servants saw the educational focus for others as more important than for themselves. Even most of those public servants who had used the report regarded it more as a document for the public than for their own use. As one Environment Australia bureaucrat said:

> I'm not sure we are the only audience in mind that it was written for ... I believe that they've tried to make it palatable to a wider audience than just public servants or scientists ... I've found it useful but because (of its) general detailed style ... didn't contain anything we didn't know already ... (that)

wasn't its purpose when it was prepared ... I actually think it is a fairly important piece of work ... the language is very accessible.

Use as an organising framework

The report's structure was used as the basis for a new framework for the Commonwealth government's environment budget introduced in 1997. The Budget Statement was explicit about this structural imitation explicit, stating:

> This Statement shows how different programs relate to broader strategic objectives and how they fit together to provide a comprehensive response to the challenges identified in the authoritative assessment of the environmental challenges: the 1996 State of the Environment Report. To show the relationship between the programs and the problems they are designed to address this Statement has been structured in line with the State of the Environment Report. (Australia, 1997b, p. 133)

This use was significant because it indicated that the Minister's office was attempting to work across portfolios as a response to *Australia: State of the Environment 1996*'s criticism of the compartmentalised approach of Commonwealth environmental policy. This across-portfolios response supports Paul Rutherford's thesis that science provides the 'intellectual machinery' for government in the environmental arena (Rutherford, 1994). For Rutherford, the stuff of science (rather than its rhetorical form) is central to environmental discourse in government contexts. He claims that, "in advanced liberal societies, scientific expertise and ecological theories provide the intellectual machinery necessary to constitute 'the environment' as an object amenable to political calculation and management" (Rutherford, 1994, p. 40).

Despite providing 'budgetary structure' and perhaps fotering cross-portfolio activity, there is no evidence that the report actually changed budgetary allocations or the priority of the environment as a policy issue. In fact, in the 1997-8 budget, the budget of the Department of the Environment portfolio was cut by $20million over the four years (from 1997-98 to 2000-2001). However, the new budget structure (reporting on the Commonwealth's environmental activities across all portfolios) increased both the amount of funding being seen to be spent on the environment and the scope of activities undertaken by the Commonwealth government with respect to the environment (Australia, 1997b).

Comparison with the official 'evaluation research'

In contrast to our findings on the use of the report, the evaluation (market) research conducted by Bell Dignam for the Department of the Environment focused on attitudes towards, and perceptions of, the report (Bell Dignam Pty. Ltd., 1997). This evaluation was based on data from self comple-

tion surveys inserted into the report and Executive Summary, telephone interviews with the 'general public' and qualitative research (group discussions and personal interviews) with readers of the report.

Bell Dignam found that the report had not been used as much as had been hoped and that, "the needs, views and preferences of respondent groups were highly divergent: some want little more than statistical indicators, others want a document for use in lobbying with detailed policy implications, recommendations, and a social, cultural and political context" (Bell Dignam Pty. Ltd., 1997, p. 2). This finding is in keeping with those presented in this paper. However, rather than suggesting that different documents should be prepared for different users, or that the report should be written to meet the needs of a particular group of report users, Bell Dignam recommended that, "if we go beyond personal needs, then the positioning of the Report is appropriate; we warn against trying to meet the needs of all readers. Rather, the key objective is remaining credible and authoritative" (Bell Dignam Pty. Ltd., 1997, p. 2). It is evident from this conclusion, and that which follows, that Bell Dignam regarded the perceptions of the authoritative nature of the report as more important than meeting the needs of report users:

> Overall, our main recommendation is to continuously keep in mind the need for a **credible, authoritative and objective** report. Do not try to appease all parties and seek to include benchmarks and trend data wherever possible. The objective is for broad community acceptance of the Report, and that has largely though not entirely been achieved. (Bell Dignam Pty. Ltd., 1997, p. 5, bold indicate bold in original)

For Bell Dignam, it did not appear to be significant whether or not the report was used or how it was used, as long as it was considered authoritative. The symbolic nature of the report was therefore more important than its functionality for users.

A credible source or a useful document?

The Bell Dignam Pty. Ltd. report (1997) points to the critical issue: is the report a credible source or a useful document? And, even more importantly, which do we really want? Clearly the evaluation research told the public servants and external 'experts' involved in constructing the report what they wanted to hear—that *Australia: State of the Environment 1996* was a success and that only minor changes needed to be made in the preparation of the next report. The evaluation research acted as post-hoc justification for the report's production such that the central focus remains on producing the report, and how users then use the report becomes a secondary issue—and sometimes even a problem of the users themselves, rather than of the document. Such research does not

question the belief of unproblematic use we discussed at the beginning. In fact, it supports the assumption of inherent usefulness by not critically investigating the use of the report, and instead focusing on perceptions of the report in order to establish its role as a credible source.

This view that a document, such as a state of the environment report, needs to be seen as a credible source reflects a basic belief in the text as an entity in itself. In the very writing of environmental data in book form (or even on a web site) we have a curious separation between writers and readers. The text is invested with a life of its own and concomitantly with meanings independent of the writers or readers. While there is no doubt that such beliefs in the animated, autonomous text abound (e.g. see Goody, 1986), there is also no doubt that such beliefs do not generate a concern with the relationship between the user and the text or with its usefulness (Penman, 1993).

When we want to ask questions about usefulness we need to adopt another view of the relationship between users and texts and another view of the communication process entirely. This is a view in which texts are seen as being in a fundamental relation with users (writers and readers) and in which the meanings constructed emerge out of that relationship, not solely out of the words themselves. This view reorientates us to asking questions about how information can 'mean' in different contexts with different users and with different purposes of use. This alternative view was adopted for the inquiry reported on here and as a consequence we have been able to document a marked lack of use of the state of the environment report, especially as an aid to decision-making.

The report itself stated, "State of the Environment reporting is an important step in the essential process of refining the knowledge base on which decisions about the environment are made" (State of the Environment Advisory Council, 1996, p. ES-9). This case study illustrates that, at least in the case of *Australia: State of the Environment 1996*, environmental information is not automatically used as an 'aid to decision-making'. Despite this failure to influence decision-making, the authors of *Australia: State of the Environment 1996* (who were interviewed approximately 18 months after the publication of the report) continued to express great faith in state of the environment reporting. They often talked about how they thought it was an important and useful process and in broad terms about how they thought it would improve decision-making and the environment. At the same time, the report authors recognised that the report had not been used for government decision-making. One member of the Advisory Council said, *'I don't see it being carried around Parliament House an awful lot'.*

Not only did the report authors recognise the lack of use made of the report, but they were often candid about the report's limitations. For example, one of the authors said, *'I don't think anyone's going to use it for bedtime reading unless they've got sleep problems. I mean, no one is going to read it for enjoyment or whatever'.* The report authors were generally able to reconcile this lack of use with their faith in the value of the report at least in

part by emphasising other actual or potential uses, particularly in education.

These people believed in the report the way they believe in science, as an unquestionable force for human improvement. Absolutely no one involved in the process said it was a complete waste of time, no matter how difficult they found the process. Such beliefs were held not only by the report authors, but also by public servants and politicians, as the evaluation above illustrates. As another example, the House of Representatives Standing Committee on Environment and Heritage reviewed the Department of the Environment's annual report for 1997-98 and extolled the virtues of State of the Environment reporting including its potential to be used 'as a day-to-day tool for environment managers' (Australia, 1998a), for which there is no actual evidence of use. We might well ask, why are these beliefs about environmental information (of unproblematic preparation and automatic use) held so strongly?

The belief that environmental information is inherently valuable and automatically able to improve environmental decision-making is not supported by the case of *Australia: State of the Environment 1996.* Commenting on the Windscale Inquiry in Britain, Brian Wynne suggests that the partial self-delusion of the institutions involved was necessary and that decision-making institutions are intrinsically bound up in ritual to defend their own credibility (Wynne, 1982, p. 176). Such conclusions seem equally valid in this case. The faith of report authors, policy makers and politicians in the inherent usefulness of the State of the Environment Report was to some extent a 'necessary illusion'. Those involved needed to believe that the production of the report was worthwhile. What has been created here is the real danger we alluded to at the beginning: that the report provided an illusion of doing something and thus may have negated or offset action of real consequence.

Environmental communication practitioners and researchers need to regard environmental information with the same critical eye with which sociology of scientific knowledge has investigated science. This is not a matter of being anti-science or anti-information, but of being aware of the socially constructed nature of both science and environmental information and of investigating the actual use of both. Indeed, we recognise the potential of both science and envi-

ronmental information to be used to bring about environmental improvements.

As Mary Midgley suggests in regard to science, "Stored facts are like stored tools or musical instruments, valueless unless you know how to use them, how to connect them with other things, how to understand them" (Midgley, 1992, p. 6). As environmental communication practitioners therefore, rather than assuming that all environmental information is inherently useful, we need to ask how can we construct information that will be useful for people. We have to look beyond the assumption that environmental information is a 'good thing' and think strategically about the purposes for which the information is being prepared, and even more strategically, about how it can be used well for the state of the environment.

We also need to be alert to the real possibility that a different type of environmental information altogether is call' for. Scott (1998), in his absorbing analysis of why so man, schemes to improve the human condition have failed, points directly to this issue. He draws on the classic distinction between scientific and practical knowledge and makes a substantial argument in favour of metis, or practical knowledge—the skills and understandings needed to respond to constantly changing natural and human environments.

We conclude that at least two changes in approach are needed for environmental information to be able to aid decision-making. We need to move from a narrow science-centred construction to a broader construction of environmental issues and environmental knowledge, and to re-conceptualise environmental information as part of a complex context-dependent communication process, rather than an initiative in its own right. In this way, environmental information should be designed to meet the needs of its users—to enable them to make decisions and take action to improve the state of the environment.

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