

Narrative and nature: unsustainable fictions in environmental education

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We live... lives based on selected fictions. Our view of reality is conditioned by our position in space and time—not by our personalities as we like to think. Thus every interpretation of reality is based on a unique position. Two paces east or west and the whole picture is changed. (Durrell 1963)

Environmental education owes its very existence to a particular interpretation of reality. My purpose here is to examine critically the ‘selected fictions’ on which that view of reality is based—to examine the ways in which our perceptions of environmental problems and issues are ‘conditioned by our position in space and time’. I will argue that some of these perceptions constitute *unsustainable* fictions and will consider some ways in which we might work towards living lives based on more sustainable constructions of human interrelationships with their environments. I will begin with an illustration of how an interpretation of reality can be changed by taking (to use Durrell’s metaphor) two paces east or west—by glimpsing something familiar from an unusual vantage point.

Grammar and environmental interpretation

Helen Watson (1989: 14) describes the responses of two Australian girls to a photograph selected from an illustrated book about Africa. Two beached canoes occupy the foreground of this photograph; a placid lake or inlet lies behind them, stretching towards distant mountains in the background. Both girls are asked to ‘describe what you see here’. Ruth, a native speaker of English, predictably replies: ‘Canoes are lying on a beach’. Binmila, a native speaker of the language of the Yolngu people of north-east Arnhemland, says: ‘*Rangi-ngura nyeka lipalipa*’. A close English translation of Binmila’s statement would be something like ‘Beach-on staying canoe’.

In the English sentence, ‘Canoes’ is the subject and ‘are lying on a beach’ is the predicate. Subjects, for English speakers, are often *objects* which are characterised as being separate in space. In the Yolngu statement, the type of elements are indicated by *rangi* and *lipalipa* (beach-type and canoe-type elements respectively). The suffix *-ngura* is one of many suffixes in Yolngu which, when joined to another term, names the relation between elements in a scene. The subject of the sentence is the suffixed term *rangi-ngura*—a spatial relation (‘beach-on’) between elements of the world. Thus, ‘beach-on-ness’ is the subject of the sentence. The term *nyeka* implies ‘sitting at or staying at a place’ and, in a sense, it tells us something about the nature of the *-ngura* (the ‘on-ness’ or ‘at-ness’).

Clearly Yolngu speakers and English speakers refer to the world using different types of categories. Each language emphasises, or foregrounds, different aspects of the world. In English, we start with separate things in nature which often may have a separate focus as subjects of sentences. References to spatial location and relatedness to the world are confined to the predicate. In Yolngu, the subject of each sentence both names the thing and points to its relatedness. That is, the Yolngu people start with the view that the world is a related whole and, when constructing sentences, they focus on particular relationships. Because they use different grammatical conventions, English and Yolngu speakers construct very different stories of their experience and understanding of their environments. These stories are the ‘selected fictions’ which form the substance of cultural transmission—the narratives, myths and rituals that are passed from one generation to the next and that we call, in English, ‘education’.

Approaches to narrative inquiry in environmental education

The above example illustrates that environmental education is a rich subject for narrative inquiry, a form of scholarship which has a long history in education and other disciplines. A concise rationale for narrative inquiry in education is that

humans are storytelling organisms who, individually and socially, lead storied lives. The study of narrative, therefore, is the study of the ways humans experience the world. This general notion translates into the view that education is the construction and reconstruction of personal and social stories; teachers and learners are storytellers and characters in their own and other's stories (Connelly and Clandinin 1990: 2).

Put another way, most of what we (collectively and individually) claim to 'know' in (or of) environmental education comes from telling each other stories of educational experience. The stories we tell include both the informal (anecdotes, gossip) and formalised discourses of our work (textbook entries, journal articles, research papers, conference presentations by authority figures and opinion leaders). These stories, together with the myths and metaphors they employ and the texts (oral and inscribed) in which they are embedded, merit close and critical examination. To look more closely at narratives of environmental education (and what they might 'tell' us) we need to understand them as *constructions*—stories created by particular writers or speakers that are interpreted by particular readers or listeners (all of whom act within a social context) for purposes which may or may not be similar.

The terms 'structuralism' and 'poststructuralism' are sometimes used to identify two schools of thought that are concerned with revealing the constructedness of stories. Structuralists and poststructuralists share the view that the objects, elements and meanings that constitute our 'existential reality' are social constructions—they cannot be presumed to exist independently of human perception and activity. For example, semiotics (which is usually considered to be a structuralist discipline) is concerned to identify and describe the codes and systems of signification with which we articulate experience and produce meaning. Poststructural inquiries are concerned, in part, with a refinement and critique of the kinds of stories that semioticians (and other structuralists) construct—stories which purport to describe and explain the structures of other stories (any study of a narrative construction is itself a narrative construction; narrative is thus both phenomenon and method in narrative inquiry). To paraphrase Jonathan Culler (1990: 4), poststructural criticism is concerned with the extent to which analyses of narrative constructions are caught up in the processes and mechanisms they are analysing. Poststructuralism is thus critical of the view that anyone can get 'outside' a cultural discourse or practice to describe its rules and norms. For example:

any analysis of, say, the political forces in a society cannot situate itself outside of the realm of political forces; it is necessarily caught up in the processes, affected by the forces it is describing, and itself involves a political move or stance. So that one way to study the political forces at work would be to analyze the analyst's own stance and investigate how his or her analytical discourse is worked by the forces it is analyzing. That is the post-structuralist move.

The analytic posture, then, is not one of scientific detachment but of intractable involvement. The problem that emerges here... is thus the problem of *metalanguage* [which, according to *The Concise Oxford Dictionary* is language 'of a higher or second-order kind']: that the analytical system or set of categories does not offer a grounded perspective on the phenomena from the outside, but proves rather to be problematically caught up in the processes and functions of the phenomena that it is studying... Any metalanguage turns out to be more language, subject to the forces it claims to be analyzing (paradoxically this statement is a metalinguistic one, which is part of the point). (Culler 1990: 4)

Another way of putting it is that structural thought seeks 'rationality, linearity, progress and control by discovering, developing, and inventing metanarratives,...that define rationality, linearity, progress and control' whereas poststructural thought is 'skeptical and incredulous about the possibility of such metanarratives' (Cherryholmes 1988: 11). Thus, for example, positivist science can be regarded as an attempt to write a metanarrative of science—a story or set of rules characterising positive knowledge. The positivist story attempted to make rules

for other stories out of its categorical distinctions between analytic and synthetic, linguistic and empirical, observation and theory, and so on. Poststructural thought questions whether *any* stories can (or should) be legitimated by reference to (or grounded in) other stories which are regarded to be ‘foundations’ or ‘first principles’. The poststructural position is that metanarratives are simply another kind of ‘selected fiction’.

The narrative construction of detached instrumentalism

Many of the formalised narratives of environmental education (such as conservation strategies, curriculum policies, textbooks and the like) have been constructed as a response to some of the perceived structural dysfunctions of Western societies (such as the forms of economic production and development which have resulted in land degradation and air pollution) but they are also embodiments of these same dysfunctions. Most significantly, perhaps, stories of environmental education produce and reproduce the kinds of metaphors and myths that support the positivist ‘scientific detachment’ from nature rather than ‘intractable involvement’ in it. There is nothing particularly surprising about this: the cultural successes of modern Western science are founded on the heuristic value of separating matters of ‘objective’ fact from matters of ‘subjective’ value. In poststructural terms, the narratives of environmental education are legitimated by reference to the positivist metanarrative of modern Western science. But we can no longer take it for granted that what was once good for modern science is necessarily good for the postmodern planet.

Many stories of environmental education embody a conception of the earth as an object of instrumental value. The metaphorical language of texts dealing with such subject matters as environmental management and resources conservation constructs an image of the earth as a silo of resources, an archive of our heritage, a laboratory in which to make discoveries, a gymnasium in which to exercise, a recreational amenity, and so on. Much environmental education in Australia is now concerned with protecting the land's instrumental value through promoting the recycling of resources, reversing arable land degradation and the like, often by reference to the instrumentalist slogan of ‘conservation for sustainable [economic] development’.

The global environmental crisis is in large part a direct consequence of the cultivation in Western industrialised societies of stories in which the earth (or ‘nature’) is conceived, and thus exploited, as an object of instrumental value. Criticism of these stories by educators is essential because they also include myths about how a person becomes ‘cultivated’ and the power arrangements through which some people assume cultural leadership and become, as it were, ‘cultivators’.

The cultivator, as artist or critic, like the scientist, has so often regarded nature as low, as threat, as transcended origin and therefore in need of conquest and domination. The cultivated subject is seen to be the mind grown above nature and in command of it, totally separate from the baseness of body.

This discourse has self-evidently failed. Humanity has damaged its own ecosystem, its collective and interdependent body, through the alienation of self from a nature that is external, other. An ecology of survival extols neither a rationalist command of nature nor a romantic return to it—nature never went away—but a major reassessment of social and economic actions according to their effects on wellbeing within the biological and social ecology. If humanity is to survive, we must recognise that there is no ‘outside’ from which to speak or act; we must gain a new normative matrix for the conception and production of the world. Survival is the one universal value that transcends the proclamation of difference. (Fry and Willis 1989: 230-1)

Modern Western science has provided many solutions to technical problems of human survival—we have abundant technical knowledge (‘know-how’) of the ways in which we can sustain a functional and adaptive relationship with the earth. But the stories which tell us *how* to survive rarely address questions of *why* we should survive—they seem to lack the conceptual systems and signifiers from which we might be able to construct meanings, purposes and values for survival. This may be because we have allowed our linguistic tools to

limit our creative and critical imaginations. It is alleged that Abraham Maslow once said: 'If the only tool you have is a hammer, you tend to treat everything as if it were a nail.' Stories which cultivate 'the mind grown above nature' are constructed very easily using the grammar of Indo-European languages which disposes us to isolate subject (which usually is a bounded and spatially separate object) from predicate, actor from action, or things from relations among things:

By these more or less distinct terms we ascribe a semifictitious isolation to parts of experience. English terms, like 'sky, hill, swamp,' persuade us to regard some elusive aspect of nature's endless variety as a distinct *thing*, almost like a table or chair. Thus, English and similar tongues lead us to think of the universe as a collection of rather distinct objects and events corresponding to words ... The real question is: What do different languages do, not with these artificially isolated objects but with the flowing face of nature in its motion, color, and changing form; with clouds, beaches, and yonder flight of birds? For, as goes our segmentation of the face of nature, so goes our physics of the Cosmos. (Whorf 1956: 240-1)

European languages are thus very hospitable to the physics and mathematics of Newton and Descartes which portray the universe as a collection of 'artificially isolated objects' and dualisms. They are similarly hospitable to narrative constructions which liken nature to a mechanical or cybernetic system.

Systems theory as an example of an unsustainable fiction

Systems theory is one of the ways in which narratives of environmental education 'segment the face of nature'. For example, as modelled in the Victorian Certificate of Education course in Environmental Studies, systems theory objectifies environmental qualities, gives them names (e.g., 'solar energy', 'biogeochemical cycles', 'erosion'), measures them where possible, and classifies them as 'inputs', 'processes' or 'outputs' (Victorian Curriculum and Assessment Board 1990: 3-6). This theory encourages us to think of environments as systems of 'artificially isolated objects' and phenomena. The difficulty is that we no longer seem to be aware of the artifice: we talk and write as though names, categories and numbers represent and signify the world 'as it is'.

Systems theory has arisen from good intentions: its supporters believe that it contributes to 'the holistic approach of Environmental Studies [which] develops the view that life on Earth must be investigated in terms of the linkages between the atmosphere, ocean, soils and biota' (Victorian Curriculum and Assessment Board 1990: 5). Systems theory clearly is intended to draw attention to interrelationships between elements of environments and to holistic tendencies in nature – the tendency to form wholes that are more than the sum of their parts. Systems theory also seems to be intended to counteract the atomistic tendency to see things principally in terms of their parts. Unfortunately, systems theory in practice works against its own good intentions by using an atomistic scheme of classification and categorisation to name, describe and characterise environmental qualities. This is because systems theory reproduces a metaphorical treatment of nature that was initiated in the seventeenth century and reinforced by modern science and industrialisation.

Prior to the modern era, humans acknowledged their interdependence with the earth through ancient metaphors of kinship ('Mother Nature') or, in the Christian Middle Ages, through the metaphorical construction of nature as a text in which to read God's purposes. As Shakespeare put it (*As You Like It*, II, 1: 12), there were 'books in the running brooks, sermons in stones' and meditation on nature was recognised as an act of devotion. As late as the nineteenth century, art critics admonished their readers 'to experience nature fully, since only the man [sic] practiced in reading nature's text [can] appreciate paintings dealing with that experience' (Novak 1980). The interpretation of 'nature's text' by the great landscape painters and pastoral poets of the eighteenth and nineteenth centuries enshrined places like the English Lakes District as sacred sites in British culture. It can be argued that the popularity and powers of these painters and poets did not simply arise from their technical talents but

that they were reinforced by a social agreement about the meanings of art and landscape in a time when there still seemed to be a seamless, didactic relationship between nature and people. But in the language of modern science nature had no powers to instruct because nature was no longer constructed metaphorically as either mother or text but, rather, as a machine.

Recent feminist analyses of the founding texts of modern science demonstrate that the empiricism of Francis Bacon and other members of The Royal Society was secured by metaphors and myths that were designed to ‘denude the mystique of mother earth in order to open up her orifices to exploitation by commerce’ (Curry Jansen 1990: 237). For example, Carolyn Merchant (1980) demonstrates that people do not treat a ‘mother’ in the same way that they treat a ‘bride,’ ‘mistress,’ or ‘common harlot’—which were terms used by Bacon to describe nature. ‘Entering a mother's womb and robbing it of its hidden treasures of gold, silver, iron, and coal is a very different act [from] seducing or even ravaging a sexual consort or 'object.' The two acts carry different cultural connotations and value orientations, and are accompanied by different social rituals and interdictions’ (Curry Jansen 1990: 239). Other men of The Royal Society rendered nature lifeless: nature was ‘a great pregnant automaton’ to Robert Boyle and a ‘world machine’ to Isaac Newton. This change in signs—the renaming of nature—had revolutionary consequences; it supplanted a humanistic natural philosophy with the mechanistic worldview of detached scientific reasoning and, ultimately, facilitated the development of capitalism. As Curry Jansen (1990: 9) says, ‘how we name nature affects the way we treat it (or her): how we organize our adaptive efforts, how we use resources, how we intervene in and transform natural processes, and how we relate to other species, races, and genders.’

The names we assign to environmental qualities are not inherent in nature; they are an imposition of human minds. Naming an object or an event is not just a matter of labelling distinctions that ‘really’ exist. Assigning a name to something constructs the illusion that what has been named is genuinely distinguishable from all else. In creating these distinctions, we can all too easily lose sight of the seamlessness of that which is signified by our words and abstractions. To think of ‘forests,’ ‘scrub’ and ‘grasslands’ as bounded and spatially separate objects leads many well-intentioned people to the naïve belief that a rainforest can be conserved by putting a fence around some trees. We thus need to attend more closely to the meanings that are constructed by the names we assign to elements of our world (and the elements of the world to which we choose to assign names). For example, the common names of many animals and plants signify only their instrumental value to us rather than their relatedness to the world(s) they inhabit. There is a vast difference between naming a bird of the Bass Strait islands an ‘ocean going petrel’ or a ‘shearwater’ and naming it a ‘mutton bird’. Only one of these names identifies a living thing in terms of its worth to us as dead meat (see also Gough 1990ab).

Our increasing reliance on machine languages (as in computer analyses of environmental data) amplifies the detachments and dualisms inherent in European languages by further eliminating (or, rather, attempting to eliminate) ambiguities, category errors and imprecisions. The world that modern science has constructed from these objects and dualisms presents itself as a machine of structures and systems, with sharp lines drawn around detachable parts with distinct names. Systems theory does exactly the same thing: it codifies environments in terms of oppositional elements such as biotic versus abiotic, inputs versus outputs, and positive feedback versus negative feedback. This is the language of machines and cybernetics. The systems model perpetuates Newton’s ‘world machine’ by reinforcing the view that environmental systems are metaphorically equivalent to mechanical or cybernetic systems.

There are two difficulties here. First, systems theory systematically distorts ‘the face of nature’ by leading us to think of environments as collections of distinct objects or object-like phenomena. When modelled as a system, an ‘environmental problem’ (such as land degradation in a given locality) is represented as a machine that has broken down—with the

implication that it can be fixed by a bit of tinkering with the parts. But nature is not an object and it certainly is not a machine. The second, and perhaps more serious, difficulty is that systems theory distorts the idea of human rationality. For example, the systems model is the *only* ‘tool of [environmental] analysis’ that is legitimated by the Victorian Certificate of Education study design for Environmental Studies. There is a strong implicit message that systems theory is not only the preferred way of organising and analysing data but that it is also the preferred way of thinking rationally about environments. Rationality itself is thus identified with the kind of logic that we build into mechanical or cybernetic systems. The philosophical contradiction inherent in so doing is neatly summarised by Harold Brown (1979: 148): ‘The attempt by logical empiricists to identify rationality with algorithmic computability is somewhat strange, since it deems rational only those human acts which could, in principle, be carried out without the presence of a human being’. In short, looked at in these ways, systems theory is an unsustainable fiction.

Towards sustainable fictions

We may be able to learn how to encourage the kinds of rationality and narrative which ‘transcend the proclamation of difference’ between ourselves and the earth, by studying stories from other cultures. Perceptions of universal wholeness and the identification of human existence with all existence are common in many premodern and non-Western cultures, as the stories of Aboriginal Australians demonstrate. For example, as Watson et al (1989: 6) report, among the Yolngu people,

the cosmos is acknowledged as one whose meanings have been created and have a history embedded in the lives and social actions of ‘Ancestral Beings’ in the ‘Dreamtime’. This meaning and history is sometimes referred to as ‘song’. The explanation that Ancestral Beings created meaning in this world in their actions of social living is a necessary and inevitable component of every aspect of ordinary Yolngu life. Yolngu people continue to sing the world into existence as an everyday activity.

Poststructuralist thinking may help us to pay more attention to questions of how meaning has been created and to see such questions as related to our daily lives. The majority of people in modern Western societies have abrogated their responsibility for ‘singing the world into existence’. Instead, they accept uncritically the world that Bacon, Descartes, Newton and others ‘sang’ into existence—the world that presents itself as a machine of structures and systems, with sharp lines drawn around detachable parts called ‘forests’ and ‘grasslands’—the world that is constructed as a story that obeys the rules of the positivist metanarrative of knowledge.

It is ironic that the positivist story has for the most part been recognised as an unsustainable fiction and abandoned by scientists (though not by science educators). The postmodern skepticism towards *all* metanarratives, and especially the positivist story, is very largely a product of progress in the physical sciences that began in the late nineteenth century. Postmodern science embraces the relatedness of the observer and the observed, the inseparability of organism and environment, and the ambiguities of a non-realistic, chaotic, quantum universe. Environmental educators may thus be wise to adopt the incredulity towards metanarratives that characterises postmodern science. As Jean-Francois Lyotard (1984: xxiv) puts it: ‘the society of the future falls less within the province of a Newtonian anthropology (such as structuralism or systems theory) than a pragmatics of language particles’. In other words, as a poster I once saw in an English (language) classroom put it, ‘the universe is not made of atoms—it is made of stories’. Environmental educators have a clear responsibility to identify stories that are sustainable and promulgate them.

I will conclude by outlining three constructive approaches to environmental education that follow from poststructural thinking.

First, we need to deconstruct the conventional wisdom of the founding texts of environmental education. For example, *Our Common Future* (World Commission on

Environment and Development 1987) has attained almost biblical status among many environmental educators but, in many ways, it is yet another unsustainable fiction. The language of *Our Common Future* is riddled with structuralist assumptions emphasising order, accountability, systematisation, rationalisation, expertise, specialisation, linear development and control. *Our Common Future* takes ideological positions (such as commitments to efficiency, control, manipulation, instrumentalism and utilitarianism) while tacitly denying ideology in its bland surface rhetoric. It offers advice about correcting practice that reinforces present practice (such as the application of systems theory to environmental research and management). It largely ignores the effects of power in shaping the discourses of environmental practice. Pedagogically, the appropriate approach to *Our Common Future* is not to ask learners to accept its recommendations but to (i) structurally analyse the meanings of its words and discourses, (ii) locate its meanings from historical, political, economic, cultural and linguistic perspectives and (iii) illuminate, explore, analyse and criticise the categories of discourse, modes of expression, metaphors, argumentative styles, rules of evidence and literary allusions that, as a text, it values and celebrates.

Secondly, we need to become—and to encourage learners to become—historians of ideas and self-reflective social critics capable of deconstructing the myths and meanings that dominate our own culture. For example, the last century has seen the cultivation of a myth that equates Australia's national identity with its unique landscape. There is some irony in such a highly urbanised nation cultivating this myth, but many white Australians now have a very romantic view of the Australian landscape. There are at least two critical questions for environmental educators to ask about the *meaning* of this myth. First, why do urban Australians seek to identify their nation with plants and animals and landscapes that are quite remote from their everyday experiences? Culture does not arise from dehumanised landscapes and, as Fry and Willis (1989: 227) write, 'Landscape as a myth of nation has an alarming emptiness about it because it is based upon the notion that identity will arise out of something that is 'fact', is 'out there' and only needs to be discovered'. A second question concerns the extent to which the mystique of the landscape distracts urban Australians from matters that may deserve their more urgent attention. An analogy can be made with the words of a former Apollo astronaut who, when asked how he would sum up what the US space program was all about, said 'It's about leaving.' In a similar way, urban Australians' imaginative obsession with landscape may be little more than a kind of escapism—an excuse for ignoring or retreating from urban and suburban discontents. In *Myths of Oz*, Fiske et al (1987: 129-30) put it this way:

The limitations of white urban society, symbolically as well as geographically on the fringe of the nation, underlie the awe at the vastness and emptiness of Australia's centre. The more crowded and confining our cities appear, the greater the significance of the empty interior. The more static and settled they appear, the less they are able to bear meanings of development and freedom. ... It is a common dream of many working couples to celebrate their retirement, their release from work, by a caravan trip around the continent. In exploring the nation, we are exploring ourselves.... it is in travelling the land that the Australian is most 'Australian'.

In such ways, the meaning of the landscape is invested with the modern Western myth of progress—another unsustainable fiction. The landscape then becomes one more cultural space to be colonised by the relentless consumerism that characterises urban lifestyles (the recent wave of environmental awareness in Western countries has similarly been accompanied by various fads and fashions and attempts to turn it into yet another profitable, consumable, exhaustible and ultimately disposable item). The above quotation also demonstrates that our everyday language still bears the cultural imprint of the first settlers' perceptions of the continent's 'emptiness'. Australia's colonists ignored the 500,000 original inhabitants who had a 40,000 year history of developing a spiritually and aesthetically rich culture supported by an efficient, successful and sustainable hunter-gatherer economy. The Australian Aborigines had none of the material culture that the British associated with progress and

civilisation and the land was therefore perceived as empty and culturally worthless in the myths that created the nation. Initially the landmass only had instrumental value, such as providing an environment in which one could farm the kind of sheep whose wool best served Britain's textiles mills (indeed, sheep and cattle grazing became known in Australia as 'the pastoral industry', perhaps implying that it was seen as some sort of cure for the continent's empty soul). The 'real' Australia that is envisaged in much contemporary landscape art (and other visual popularisations of Australian culture, from *Crocodile Dundee* to *The Bush Tucker Man*) is still a space in which figures move through unpopulated panoramas; it is rarely visualised as an urban space dominated by human populations, their technologies and their artefacts.

The third constructive way to seek sustainable fictions is to invent them ourselves—to participate in the creative reconstruction of a language which foregrounds our kinship with nature. We need myths and metaphors that 'sing' the earth into existence *in the conditions of urban and late industrial lifestyles*. Clues to such constructions can be found in the symbolic languages of Aboriginal societies but we cannot, and should not, attempt to appropriate the metanarratives of another culture to replace our own. But we can learn, for example, that there are alternatives to European sentence construction, such as in the language of the Yolngu people which foregrounds the relatedness of the elements they identify in their world rather than their separateness. We can also learn that words are not the only symbols that can be used in the metaphorical construction and reconstruction of our relationships with the earth. For example, many stories of the Alyawarre and Anmatyerre Aboriginal people use *awelye*, clan symbols that tell, as mere words cannot, how these people are part of the land. Stories of their Dreaming are told in images of lush wild oranges and honey, the magic of sacred grass and rainbows, the rituals of gathering food and the campfire intimacy of head lice. In these images, the land that visiting Europeans and Americans still see as 'empty' desert is shown to be brimming with life, with food for all who care to look for it.

In some ways *awelye* are analogous to the props and gimmicks that are used in Earth Education programs to enhance students' sensory perception of the natural world. In *Earth Magic* (Hoessle and Van Matre 1980), for example, a student using a 'subscope' (a dental mirror) to investigate the 'underworld' (the otherwise easily overlooked undersides of low lying leaves, hollow logs, mushrooms etc.) may have a subtly revelatory experience of the richness and diversity of the natural world. There is, however, an important difference between Earth Education props and *awelye*. A dental mirror, as a tool assisting human perception in a limited range of circumstances, is culturally meaningless outside of the specific contexts in which it is used. On the other hand, *awelye* are meaningful in and of themselves as integral and enduring forms of symbolic communication in Aboriginal culture. Cultivating some postmodern equivalents of *awelye* may give us new ways of imagining and imaging the subject matters of environmental education. These may be new or renewed symbols, images and metaphors drawn from the postmodern discourses of, say, cybernetics, chaos theory, biotechnology, the global communications web, 'New Age' spirituality and aesthetics, the fashion industry or popular culture. For example, the computer virus may be a generative metaphor for the analysis and critique of some aspects of the production and institutionalisation of school knowledge, helping us to identify concepts and generalisations that, once introduced into a 'system', are thoughtlessly reproduced through textbooks and test papers but have no useful function and, if benign, merely occupy space in the system (e.g., the naming of phases in cell reproduction is a benign virus in school biology).

Aboriginal Dreamings cannot displace the 'selected fictions' of Western rationality. But the Dreaming is a paradigm of living in 'intractable involvement' with nature in a culture which celebrates the metaphoric construction of that involvement in its narratives, myths and rituals. It may be that within our own subjective dreamings, and the urge to transcend them, we will find or invent sustainable fictions on which to base our lives.

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