

Interrogating Silence: Environmental Education Research as Postcolonialist Textwork



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In December 1997 I was privileged—and very pleasantly surprised—to receive the inaugural Allen Strom Eureka Prize for Environmental Education for ‘environmental education research of a substantive nature which contributes to professional thinking and practice’. According to the program for the prize-giving ceremony, I was awarded the prize ‘for research on recent cultural and philosophical movements, such as postmodernism, which has translated and applied complex social theories to theory and practice in environmental education’.

I want to take this opportunity to repeat my thanks to the New South Wales Environment Protection Authority for their generous sponsorship of this prize. I offer these thanks not only as an individual recipient but also on behalf of the wider Australian environmental education community. I see particular significance in the Allen Strom Eureka Prize for Environmental Education being awarded in a suite that includes separate prizes for environmental research and environmental journalism. This helps to distinguish our field from other disciplines with which it is sometimes confused. My own research emphasises that environmental education is not just another type of environmental study but more a form of cultural and media literacy.

Geoff Young and his colleagues at the NSW EPA must also be congratulated for seizing the opportunity to honor Allen Strom’s life and work by establishing a Eureka Prize in his name. I was fortunate enough to be at the ceremony at the University of Sydney in 1984 when Allen was made an Honorary Life Fellow of the Australian Association for Environmental Education and I also have good reason to recall his contributions to the earliest issues of AAEE’s Newsletter (indeed, my own first contribution to the Newsletter, in issue 3, October 1980, was a letter in which I emphatically disagreed with the views on whaling he expressed in issue 2, July 1980; we agreed on the value of healthy and vigorous debate).

The remainder of this essay serves two purposes. First, I provide a brief account of the research for which the 1997 Eureka Prize was awarded. I do this not as an exercise in self-advertising or self-aggrandisement but as one way of

demonstrating my accountability to the people and organisations that sponsor and support the prize. As Geoff Young writes in his introduction to this special section: ‘By holding the winning and commended instances of environmental education research and programs up for wide attention and public scrutiny, the Allen Strom Eureka Prize raises key questions of vital interest to all who have an interest in sustainable futures, not simply those futures that are explicitly environmental’.

My second purpose is to offer some end-of-millennium thoughts on prospects for environmental education (members of the editorial team and selected Life Fellows of AAEE were invited to contribute such thoughts to another special section of this issue). The Eureka Prize has provided opportunities for me to pursue some relatively new lines of inquiry and here I will focus in particular on the implications for environmental education of postcolonialist and antiracist approaches to research.

The Eureka research: Environmental education after poststructuralism

During the period specified in the criteria for awarding the 1997 Eureka Prize (that is, the three years prior to the prize’s announcement in mid-1997), my research included the following activities:

- describing and exemplifying ways in which environmental education research and curriculum design could be improved if environmental educators were informed by contemporary social, cultural and literary theorising and, in particular, by narrative theory and poststructuralism
- critically analysing postmodernist cultural practices and phenomena (with particular reference to converging information technologies and the globalisation of media and markets) in terms of their implications for environmental education research and curriculum design.

I disseminated the outcomes of this research through publications in international scholarly journals, presentations at academic and professional conferences in Australia, Canada

and the USA, and seminars and workshops at universities in Australia, Canada and the UK. In all of these activities, I sought to demonstrate the usefulness of thinking about environmental education as a story and/or a text and to provide arguments for reconceptualising environmental education research and teaching as postmodernist textual practices. I deliberately incorporated diverse theoretical perspectives and research practices into this work (for example, I drew on cultural, literary, and popular media studies, as well as educational philosophy and theory) and, equally deliberately, directed my publications and presentations to diverse audiences—not only to environmental educators but also to educational philosophers and researchers, literary scholars, social and political scientists, and school science educators.

Readers who would like to subject this research to their own scrutiny may wish to refer to the publications that best represent my work in environmental education during this period (see Gough 1994, 1996, 1997b, 1998b, 1999b; I have included here research published in 1998 and 1999 because that is the form in which it is now most easily accessed, although the Eureka judges based their decision on earlier versions that were disseminated via conference papers and workshops during 1996 and 1997).

A comparison of the articles published in 1994 and 1997 demonstrates one way in which I tried to advance my theoretical inquiries while also making explicit links to the practicalities and realities of everyday life in school and university classrooms (and other educational sites). On the one hand, 'Playing at catastrophe: ecopolitical education after poststructuralism' (1994), was written for an international journal of educational philosophy, *Educational Theory*, and is an attempt to explain *why* environmental education—and, indeed, all forms of ecopolitical education—should respond to the critical insights provided by narrative theory and poststructuralism. On the other hand, 'Weather™ Incorporated: environmental education, postmodern identities, and technocultural constructions of nature', was written for environmental education researchers and other practitioners and, quite deliberately, is not overly 'theoretical': rather, I try to demonstrate *how* critical reasoning informed by poststructuralism can be used to understand the educational implications of such commonplace phenomena as weather broadcasting in popular media and references to weather in popular songs (an earlier version of this paper, 'Everywhere you go, you always take the weather with you', took its title from a song by Crowded House).

Post-Eureka: Decolonising environmental education research

Since being awarded the Eureka Prize, my work in environmental education has been shaped by two key influences. First, during 1998 and 1999, I participated (with Annette Gough and Ian Robottom from Deakin University, and with John Fien, Jo Ferreira and Debbie Heck from Griffith University) in an institutional links project funded by the

Australian federal government to support environmental education in South African universities and colleges. Annette Gough and I were specifically involved in a series of activities intended to enhance research capacity in environmental education, with particular reference to appropriate methodologies and supervision practices (I should emphasise here that my occasional use of the first person plural in some of what follows refers only to Annette and me, and does not necessarily represent the views of other Australian or South African partners in the project). The second influence was the Eureka Prize itself, which provided some of the financial support I needed to pursue an emerging (but initially unfunded) research interest in the internationalisation and globalisation of curriculum work (particularly in science education and environmental education). The prize enabled me to undertake aspects of this research in several countries other than Australia and South Africa, including Canada, Japan, New Caledonia, the USA and Zimbabwe.

Working with historically disadvantaged people and institutions in South Africa and elsewhere has given me some new standpoints for understanding how the term 'research' is linked inextricably to European imperialism and colonialism. Indeed, 'research' is one of the dirtiest words in the vocabularies of people who have been on the suffering and subjugated side of history. As Linda Tuhiwai Smith (1999, p. 1) writes:

When mentioned in many indigenous contexts, [the word 'research'] stirs up silence, it conjures bad memories, it raises a smile that is knowing and distrustful... The ways in which scientific research is implicated in the worst excesses of colonialism remains a powerful remembered history for many of the world's colonized peoples. It is a history that still offends our deepest sense of our humanity. Just knowing that someone measured our 'faculties' by filling the skulls of our ancestors with millet seeds and compared the amount of millet seed to the capacity for mental thought offends our sense of who and what we are. It galls us that Western researchers and intellectuals can assume to know all that it is possible to know of us, on the basis of their brief encounters with some of us. It appalls us that the West can desire, extract and claim ownership of our ways of knowing, our imagery, the things we create and produce, and then simultaneously reject the people who created and developed those ideas and seek to deny them further opportunities to be creators of their own culture and own nations.

Research practices in South Africa were for many years used to support the racist policies of the apartheid state. For example, as Anil Kanjee (1999, p. 289) points out, the results of psychological testing, specifically IQ tests, were used as evidence of the superiority of whites over blacks, to deny blacks access to education and economic resources, and to justify the exploitation of black labour. Thus, postcolonialist thinking informed our work in South Africa in two ways: first,

we wanted to work with our South African colleagues to 'decolonise' the dominant research practices and educational discourses that were sedimented in the nation's history of colonisation and institutionalised racism and, secondly, we wanted to subvert the possibility that we might ourselves be complicit in a neocolonialist project. In regard to the second purpose, we intentionally refused the roles of 'helpers' to which the project implicitly assigned us. Instead, we tried to heed the advice of Lila Watson, an Australian Aboriginal educator and activist, who is reported as saying, 'If you've come to help me you're wasting your time. But if you've come because your liberation is bound up with mine, then let's work together' (quoted in Wadsworth 1991, p. 11). We hoped that the need to decolonise our respective local discourses of environmental education would be a shared emancipatory project that would allow Australians and South Africans to work together in mutually supportive and rewarding ways, rather than positioning one party as 'helping' the other.

Following John Van Maanen's (1995, p. 4) suggestion that qualitative inquiry involves 'fieldwork, headwork, and textwork', I unabashedly position myself as a textworker (and more recently, with tongue only slightly in cheek and with thanks to the Eureka Prize, a *travelling* textworker) because I privilege narrative and textuality in the ways I represent and perform curriculum inquiry and environmental education research. My methodological disposition is to assume, as Peter Stoicheff (1991, p. 95) puts it, that 'the world is a text that is read, and our interpretation of our world is a function of our reading of texts'. I am thus interested in what we can learn by generating our own stories of educational experience, by thinking about educational problems and issues as stories and texts, and by subjecting all the stories and texts we encounter in our work to various forms of narrative and textual analysis, critique and deconstruction. I should emphasise here that there is nothing mysterious about the term 'deconstruction' and that it does not signify an excessively critical stance. As Jacques Derrida (1972, p. 231) writes, deconstruction 'has nothing to do with destruction' but, rather, involves 'being alert to the implications, to the historical sedimentation of the language we use'. Deconstruction is about exposing the structure of a discourse—showing how a discourse works and what it includes and excludes. What this means in my own practice is that I am disposed to pay close attention to gaps and silences in the stories I read and hear, and to identify what each story disregards, marginalises, suppresses and/or treats as unimportant.

A narrative perspective on research draws attention to the embodied and socially embedded character of knowledge construction. Stories are fashioned by *somebody*, *somewhere*. This is particularly significant for a travelling textworker, because stories may be told and received differently when they are dislocated from the places in which their meanings are initially shaped. Until relatively recently in human history, the social activities through which distinctive forms of knowledge are produced have been localised. The knowledges generated by these activities have thus borne what Sandra

Harding (1994, p. 304) calls the idiosyncratic 'cultural fingerprints' of the times and places in which they were constructed. For example, the knowledge that the English word 'science' usually signifies was uniquely coproduced with industrial capitalism in seventeenth century northwestern Europe. The internationalisation of what we now call 'modern Western science' was enabled by the colonisation of other places in which the conditions of its formation could be reproduced.

The global reach of US and European imperialism has given Western modes of knowledge production the *appearance* of universal truth and rationality, and they often are assumed to lack the cultural fingerprints that seem much more conspicuous in 'indigenous' knowledge systems that have retained their ties to specific localities. But, as Vandana Shiva (1993, p. 10) writes, the universal/local dichotomy is misplaced when applied to Western and indigenous knowledge systems, 'because the western is a local tradition which has been spread world wide through intellectual colonisation'. One sign of intellectual colonisation is what Susan Hawthorne (1999, p. 121) calls the 'unmarked category'. For example, in the informational domains of the Internet, US addresses are unmarked but every other country is identified by the final term: au for Australia, sg for Singapore, za for South Africa, and so on. Unmarked cultural categories, such as whiteness in most Western countries, are especially troublesome for those of us who reside within them because they designate power and privilege.

The invisibility of whiteness to those of us who are white is currently at the heart of a lively debate about racism in educational research (see, for example, Scheurich & Young 1997, 1998, Miller 1998, Tyson 1998). Scheurich and Young (1997) outline four levels of racism: individual, institutional, societal, and civilisational. Racism in countries like the US (and, by implication, Australia) is primarily seen as an individual phenomenon. That is, when my colleagues and I deny that we are racist we mean that we, as individuals, do not consciously have a negative judgment of another person based on their membership of a particular race. Scheurich and Young (1997, p. 5) argue that 'this individualized, conscious, moral or ethical commitment to antiracism is a significant and meaningful individual and historical accomplishment', but that it 'restricts our understanding of racism to an individualized ethical arena' and is, therefore, 'a barrier to a broader, more comprehensive understanding of racism'. This is not, of course, news to our South African colleagues, all of whom have personally experienced in some way the effects of institutional and societal racism. But in the US and Australia, educational researchers have (and in some cases still do) use labels such as 'culturally deprived' or concepts such as 'at risk' or 'dysfunctional' to describe non-white students, reflecting an institutionalised racism through these entrenched (unmarked, invisible) organisational symbols and knowledges. On a broader social scale, entire societies may exhibit practices where one race is favoured or disadvantaged in relation to another, as in South Africa under apartheid.

Societal racism persists in more subtle ways in countries like the US and Australia, where the dominant culture's social and historical experiences (such as the white middle class view of 'success') are reproduced by the media, legal practices and government programs, through a selective privileging of particular meanings of, say, a 'good leader' or a 'functional family'.

Scheurich and Young (1997, pp. 7-8) argue that civilisational racism exists at the deepest (and least conscious) level because privileged attitudes towards and beliefs about the nature of reality and the construction of knowledge are naturalised to the extent that they become everyday practical realities for the entire population, even though these attitudes and beliefs have been constructed historically by the dominant societal group. Edward Said (1978) provides a compelling example of civilisational racism in his depiction of how 'the West' constructed and legitimated its ideas about 'the Orient' not only to Europeans but also to 'Orientals' themselves. Epistemological racism arises at this fourth level when the social history of a particular group is privileged over others and their epistemic view of the world becomes dominant. Scheurich and Young (1997, p. 8) argue that 'all of the epistemologies currently legitimated in [Euro-American] education arise exclusively out of the social history of the dominant White race' and, thus, that this unduly restricts the range of possible epistemologies available to us, and makes non-dominant constructions of knowledge suspect, pathological, sensational, or simply illegitimate.

The concept of epistemological racism raises very troublesome questions for an antiracist, anti-imperialist travelling textworker. My concern is not that I might unwittingly 'import' racist epistemologies into South Africa (there is ample evidence that nations in periods of postcolonial transition need no outside assistance or encouragement in taking up the epistemologies of their former oppressors, sometimes with great enthusiasm) but, rather, that the methodologies and critical strategies that I use to deconstruct the false claims of 'universal' knowledges in the more familiar settings of my work may produce further distortions when deployed in South Africa.

I have written elsewhere about the effects of globalisation and internationalisation on local knowledge production (see Gough 1997a, 1998a, 1999a, 2000) and it will suffice here to note that I follow David Turnbull (1997) in adopting a position that understands all knowledge traditions as being spatial in that they link people, sites and skills. Turnbull's approach is to recognise that all knowledge systems (including Western science) are sets of local practices so that it becomes possible to 'decentre' them and develop a framework within which different knowledge traditions can equitably be compared rather than absorbed into an imperialist archive.

Through a number of detailed case studies, Turnbull (1997) demonstrates that such achievements as gothic cathedral building, Polynesian navigation, modern cartography, and modern (Western) science are, in each case, better understood

performatively—as diverse combinations of social and technical practices—than as results of any internal epistemological features to which 'universal' validity can be ascribed. The purpose of Turnbull's emphasis on analysing knowledge systems comparatively in terms of spatiality and performance is to find ways in which diverse knowledge traditions can coexist rather than one displacing others. He argues that nourishing such diversity is dependent on the creation of an 'interstitial space' in which local knowledge traditions can be 'reframed, decentred and the social organisation of trust can be negotiated'. The production of such a space is, in Turnbull's (1997, pp. 560-1) view, 'crucially dependent' on 'the reinclusion of the performative side of knowledge':

Knowledge, in so far as it is portrayed as essentially a form of representation, will tend towards universal homogenous information at the expense of local knowledge traditions. If knowledge is recognised as both representational and performative it will be possible to create a space in which knowledge traditions can be performed together.

Turnbull is suspicious of importing and exporting representations that are disconnected from the performative work that was needed to generate them, and I share his suspicions. Thus, I prefer to think of my work in South Africa as *performing textwork* rather than *representing* (Australian, European, North American) research epistemologies and methodologies. That is, we have tried to find ways in which our different knowledge traditions can be performed together and coexist rather than one displacing the other. It may be too soon for any of us to judge how successful that strategy has been, but some small signs of success include the growing and shared commitment of the Australian and South African partners working on research methodologies and supervision to focus on 'learning from within', to base the text materials we are developing on local stories and instances of textwork rather than developing South African 'versions' of imported research paradigms.

These signs of success notwithstanding, I remain puzzled by a number of silences in the stories we are compiling. These silences not only impel me to trouble 'freedom' in post-apartheid environmental education (see Gough 1999c) but also to note that South Africa is not alone in being a site for such silences.

Post-apartheid environmental education as a site for postcolonialist textwork

I share with South African colleagues an emancipatory interest in exploring the possibilities and responsibilities that attend our freedom to make decisions and to take action in the particular circumstances of our work as educators. The recent history of South Africa has had a profound influence on the ways in which many people outside that country think about issues of freedom, justice, law and responsibility. Many people have read the cultural history of South Africa in the transition from apartheid to democracy as a rich example of the complex

interrelations of education, (eco)politics, and social justice. I thus welcomed the opportunity provided by the Australia-South Africa institutional links project to explore these relationships in the light of the nation's new freedom. However, I was also aware that the term 'New South Africa' was coined by F.W. de Klerk in his famous speech on 2 February 1990 (Saunders & Southey 1998, p. xxv) and that this 'new' entity was far too diverse and contradictory to be viewed as an unproblematic triumph of multiculturalism over racism.

For example, the erasure of the apartheid denominations of African, Indian, coloured and white means that multiculturalism is now being negotiated and contested both between and within these arbitrarily marked categories. As Nadine Dolby's (1999) ethnographic inquiries in newly multiracial schools in Durban demonstrate, 'whiteness' after apartheid is taking on different hues and is being remade in multiple forms. Also, with the collapse of the most visible forms of institutionalised racism, other forms of oppression can be seen more clearly, such as the extent of the discrimination against and hostility to women in South Africa that Elaine Unterhalter (1999) finds in the autobiographies of both black and white women. Thus, 'freedom' for many South Africans now refers to something much more complex and problematic than that which accompanied the constitutional abolition of apartheid. Rosemary Jolly and Derek Attridge (1998, p. 2) write of a 'predominantly potential' liberty beyond the world of legislative politics:

South Africans during the period [of transition] have been and are increasingly at liberty to identify and to reject not only the determinisms of apartheid, but also the determinisms of those systems which, in addition to racism, were implicated in and supported the ideological machinery of apartheid: patriarchy, sexism, homophobia, class and language bias, ethnic nationalism, and so on.

Jolly and Attridge (1998) could be naming silences in post-apartheid environmental education: 'patriarchy, sexism, homophobia, class and language bias, ethnic nationalism', to which we must still add racism, because dismantling one prominent edifice of societal racism has certainly not dismantled other structures of racism from the individual to the epistemic. Some of these silences may well be deliberate and maintained with good intentions. For example, silence about issues of race may be welcome to South Africans who have experienced the violent expression of racial difference that was endemic in the apartheid state. But I can see no good reason to maintain silence about other issues, such as sexism and what Unterhalter (1999, p. 63) calls 'the ways in which patriarchal relations persist so viciously in South Africa, despite the many decades of schooling for girls'. Silence about such issues cannot help us to develop ways of reading, representing and narrating difference without fearing or fetishising it, or to practice forms of inquiry that acknowledge and respond constructively to its effects in mediating educational change.

When I look through the recent and current literature on environmental education in southern Africa I find few direct or indirect references to *difference*—to the ways in which gender, sexuality, race, ethnicity, class, and even language constitutes curriculum, learning and teaching. Much of the current literature emphasises the programmatic and procedural aspects of environmental education that are familiar to anyone, anywhere, who works in an educational bureaucracy: curriculum development, curriculum frameworks, materials and texts, processes of deliberation, course structures, resource development, outcomes and competencies, assessment and so on. Clearly, this literature serves useful and necessary purposes but I worry that the laudable intentions of the people who produce it may be subverted by what they omit.

For example, *Developing Curriculum Frameworks Book 1: An Enabling Orientation*, is a sourcebook on environmental education for adult learners compiled by Heila Lotz (1999) from contributions and critiques provided by more than 70 participants in workshops conducted under the auspices of the Southern African Development Community (SADC) Regional Environmental Education Program. To the extent that this text explicitly promotes, exemplifies and problematises such orientations to curriculum work as 'participation', 'responsiveness' and 'informed critical action (praxis)', I believe that it could fairly claim to represent 'world's best practice' in environmental education curriculum development. But I also fear that this text lacks the courage of its compiling author's, editors' and contributors' convictions because it hesitates to identify and name the differential constraints on the processes they valorise that arise from the continuing effects of racism, patriarchy, sexism, class and language bias, and so on. For example, the section on participatory learning in environmental education raises some 'challenging questions about participation' in regard to 'issues of power which may arise in course and curriculum development' (p. 27). These questions are illustrated by reference to role differentiation: 'issues of power... tend to come to the forefront when the roles of course co-ordinators and course participants are seen to be "separate", each with their own function' (p. 27). However, the text has nothing to say about power differentials among participants that might arise from their marked identities as, say, male or female, black or white, Zulu or Xhosa, etc. Curriculum deliberation processes cannot 'enable' participation if some participants are *disabled* by overt or covert sexism, racism or 'othering' of any kind.

While I welcome the emphasis in *Developing Curriculum Frameworks Book 1* on 'responsiveness to circumstances and context' (p. 15), one of the specific illustrations of the need for responsiveness in this text provides a further example of the silences that trouble me. As a way of demonstrating 'the importance and the complexity of responding to participants in context' (p. 14), the text quotes from an account of developing training programs for the Karimojong communities of North East Uganda. Part of this account includes the observation that:

the Karimojong... exhibit a very patriarchal and dictatorial rule over the family, other warriors and neighbours. A Karimojong man will not tolerate democratic processes of decision making... [we needed to] gather experiences from the community to develop knowledge on how to work with people... (p. 15)

As far as I can tell, this is the only reference to patriarchy in *Developing Curriculum Frameworks Book 1*. Readers may thus infer that patriarchy is a 'problem' that might be encountered when working with traditional communities such as the Karimojong. But patriarchy in southern Africa is not confined to traditional communities. Rather, as Unterhalter (1999) demonstrates, patriarchal and sexist attitudes and practices are a running sore in contemporary South Africa. I have personally encountered environmental educators in southern Africa who openly and proudly defend patriarchy and who tolerate or encourage gender discrimination.

The account quoted above also troubles me because it invites equivocation on what might otherwise seem to be core values of the text. We are told that a 'Karimojong man will not tolerate democratic processes of decision making', but the text that immediately precedes and follows this account does not remind the reader that democracy and social justice are part of a 'broader view of environment/s' valorised elsewhere in the book (e.g. p. 50). I cannot accept that 'responsiveness to circumstances and context' means mere acquiescence to 'traditional' values. What are the options for environmental educators who find a Karimojong man's (or, indeed, a colleague's) 'patriarchal and dictatorial rule' intolerable?

The need for environmental educators to recognise and explicitly address issues of gender, race and class difference is emphasised by Louise Chawla's (1999) report of implementing the 'Growing Up in Cities' environmental education program with children in Johannesburg. The program 'involves children in drawing, talking and writing about how they use and perceive their environment, neighbourhood tours and other activities, and discussions about priorities for improving local environmental quality'. Chawla provides some results of activities with two groups of children, one of which came from a squatter area on the edge of the inner city. In the course of the project, the squatter families were evicted and resettled in an area of empty veldt 44 kilometres outside the city centre. Seven months after resettlement, seven children were asked to portray themselves in drawings as they saw themselves prior to and after working on 'Growing Up in Cities'. Chawla writes:

As had been expected, all of the children used the relocation of their settlement as the dividing line in their drawn representations of self. The two boys depicted better conditions at the new site (more room or less violence), and linked these new conditions to improvements brought about by the project on their behalf. The drawings of the five girls, however, depicted no personal capacities to explore and use the new environment, but in most cases contrasted positive images

of their previous home and activities with different levels of personal disruption at the new site.

Several interpretations of these findings are possible, but the evidence of gender differences in the children's readings of their environments seems very persuasive. Yet I have seen and heard little in the stories and texts of environmental education research in South Africa that attends to the implications of such differences. Chawla hints at other registers of difference but does not pursue them in the brief text from which I am quoting. For example, her report notes that discussions with the resettled children were in the language they preferred ('mostly English, but about 25% in Zulu') and that the project base for the squatter camp children had been an Islamic neighbourhood centre. Given that the purposes of the research were concerned with 'measurable beneficial psychological effects' in regard to 'self-esteem, locus of control and self-efficacy', I am a little surprised that aspects of culture that are clearly constitutive of personal identity (such as language) appear not to have been examined.

The South African novelist André Brink (1998, p. 14) suggests that 'the writer's primary engagement' is 'to *interrogate* silence', that 'all writing demonstrates the tension between the spoken and the unspoken, the sayable and the unsayable'. Brink argues that the idea of 'interrogating silence' suggests new possibilities for South African writers since the dismantling of apartheid, and emphasises that the kind of interrogation he has in mind 'is not a power-play but a dialogue'. I am concerned that we (and I deliberately include myself in this 'we') are leaving too much unspoken and unsaid in our stories and texts of environmental education research—in South Africa and elsewhere. Brink's (1998, p. 27) summation of the regenerative powers of South African literature thus provides a similar imperative for all textworkers in environmental education research:

not simply to escape from the inhibitions of apartheid but to construct and deconstruct new possibilities; to activate the imagination in its exploration of those silences previously inaccessible; to play with the future on that needlepoint where it meets past and present; and to be willing to risk everything in the leaping flame of the word as it turns into world.

What inhibitions of apartheid remain that prevent us from naming racism, sexism and class biases as continuing constituents of our work? And what inhibitions prevent environmental educators from interrogating these silences in sites where post-apartheid socio-economic and political imperatives cannot be offered as an excuse? What are the possibilities for constructing authentically antiracist and class- and gender-inclusive environmental education in South Africa? In Australia? Anywhere? What research do we need to undertake to inform such curricula? How should we conduct such research? These are difficult questions but, in most of the places to which my travels as a textworker take me, I cannot even hear them being asked. 🌀

References

- Brink, A. 1998, 'Interrogating Silence: New Possibilities Faced by South African Literature', in D. Attridge & R. Jolly (eds) *Writing South Africa: Literature, Apartheid, and Democracy, 1970-1995*, Cambridge University Press, Cambridge, pp. 14-28.
- Chawla, L. 1999, 'An Assessment of *Growing Up in Cities: An Environmental Education Program for Children in Johannesburg, South Africa*. Proposal for a paper accepted for presentation at the Annual Meeting of the American Educational Research Association, New Orleans, Louisiana, USA, 24-28 April 2000. <http://35.8.171.245/aera/index.wsf>
- Derrida, J. 1972, 'Discussion: Structure, Sign and Play in the Discourse of the Human Sciences', in R. Macksey & E. Donato (eds) *The Structuralist Controversy*, The Johns Hopkins University Press, Baltimore, pp. 230-241.
- Dolby, N. 1999, "'I'm not coming out until I paint my skin black": The Experiences of White Students in a Predominantly Black High School in South Africa', Paper presented at the Annual Conference of the Australian Association for Research in Education, Melbourne: 28 November-2 December.
- Gough, N. 1994, 'Playing at Catastrophe: Ecopolitical Education after Poststructuralism', *Educational Theory*, vol. 44, no. 2, pp. 189-210.
- Gough, N. 1996, 'Virtual Geography, Video Art and the Global Environment: Postmodernist Possibilities for Environmental Education Research', *Environmental Education Research*, vol. 2, no. 3, pp. 379-389.
- Gough, N. 1997a, 'Globalisation and Environmental Education: A View from the Wouth', *Southern African Journal of Environmental Education*, vol. 17, pp. 40-46.
- Gough, N. 1997b, 'Weather™ Incorporated: Environmental Education, Postmodern Identities, and Technocultural Constructions of Nature', *Canadian Journal of Environmental Education*, vol. 2, pp. 145-162.
- Gough, N. 1998a, 'All Around the World: Science Education, Constructivism, and Globalisation', *Educational Policy*, vol. 12, no. 5, pp. 507-524.
- Gough, N. 1998b, 'Playing with Wor(l)ds: Science Fiction as Environmental Literature', in P. D. Murphy (ed), *Literature of Nature: An International Sourcebook*, Fitzroy Dearborn, Chicago and London, pp. 409-414.
- Gough, N. 1999a, 'Globalisation and School Curriculum Change: Locating a Transnational Imaginary', *Journal of Education Policy*, vol. 14, no. 1, pp. 73-84.
- Gough, N. 1999b, 'Rethinking the Subject: (De)constructing Human Agency in Environmental Education Research', *Environmental Education Research*, vol. 5, no. 1, pp. 35-48.
- Gough, N. 1999c, 'Troubling "freedom": Silences in Post-Apartheid Environmental Education', *Southern African Journal of Environmental Education*, vol. 19.
- Gough, N. 2000, 'Locating Curriculum Studies in the Global Village', *Journal of Curriculum Studies*, vol. 32, no. 2, pp. 329-342.
- Harding, S. 1994, 'Is Science Multicultural? Challenges, Resources, Opportunities, Uncertainties', *Configurations: A Journal of Literature, Science, and Technology*, vol. 2, no. 2, pp. 301-330.
- Hawthorne, S. 1999, 'Connectivity: Cultural Practices of the Powerful or Subversion from the Margins?', in S. Hawthorne & R. Klein (eds), *CyberFeminism: Connectivity, Critique and Creativity*, Spinifex Press, North Melbourne, pp. 119-133.
- Jolly, R. & Attridge, D. 1998, 'Introduction', in D. Attridge & R. Jolly (eds), *Writing South Africa: Literature, Apartheid, and Democracy, 1970-1995*, Cambridge University Press, Cambridge, pp. 1-13.
- Kanjee, A. 1999, 'Assessment Research', in B. M. Terre & K. Durrheim (eds), *Research in Practice: Applied Methods for the Social Sciences*, University of Cape Town Press, Cape Town, pp. 287-306.
- Lotz, H. 1999, *Developing Curriculum Frameworks. Book 1: An Enabling Orientation Southern African Development Community Regional Environmental Education Programme*, Howick.
- Miller, S. I. 1998, 'Response: Coloring within and outside the Lines: Some Comments on Scheurich and Young's "Coloring epistemologies: are our research epistemologies racially biased?"', *Educational Researcher*, vol. 27, no. 9, pp. 23-26.
- Said, E. W. 1978, *Orientalism*, Routledge and Kegan Paul, London.
- Saunders, C. & Southey, N. 1998, *A Dictionary of South African History*, David Philip, Cape Town and Johannesburg.
- Scheurich, J. J. & Young, M. D. 1997, 'Coloring Epistemologies: Are our Research Epistemologies Racially Biased?', *Educational Researcher*, vol. 26, no. 4, pp. 4-16.
- Scheurich, J. J. & Young, M. D. 1998, 'Rejoinder: In the United States of America, in both our Souls and our Services, we are Avoiding White Racism', *Educational Researcher*, vol. 27, no. 9, pp. 27-32.
- Shiva, V. 1993, *Monocultures of the Mind*, Third World Network, Penang, Malaysia.
- Smith, L. T. 1999, *Decolonising Methodologies: Research and Indigenous Peoples*, Zed Books and Dunedin, University of Otago Press, London and New York.
- Stoicheff, P. 1991, 'The Chaos of Metafiction', in N. K. Hayles (ed), *Chaos and Order: Complex Dynamics in Literature and Science*, University of Chicago Press, Chicago, pp. 85-99.
- Turnbull, D. 1997, 'Reframing Science and other Local Knowledge Traditions', *Futures*, vol. 29, no. 6, pp. 551-562.

- Tyson, C. A. 1998, 'A Response to "Coloring epistemologies: Are our research epistemologies racially biased?"', *Educational Researcher*, vol. 27, no. 9, pp. 21-22.
- Unterhalter, E. 1999, 'The Schooling of South African Girls', in C. Heward, & S. Bunwaree (eds), *Gender, Education and Development: Beyond Access to Empowerment*, Zed Books, London and New York, pp. 49-64.
- Van Maanen, J. 1995, 'An End to Innocence: The Ethnography of Ethnography', in J. Van Maanen (ed), *Representation in Ethnography*, Sage Publications, Thousand Oaks CA, pp. 1-35.
- Wadsworth, Y. 1991, *Everyday Evaluation on the Run*, Action Research Issues Association, Melbourne.