

# How does a Geography Teacher Contribute to Pupils' Environmental Education? Unweaving the Web Between Theorising and Data

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## Abstract

This paper discusses the analytical processes and outcomes of a recently completed doctoral study in environmental education. The project investigated teachers' thinking and practice regarding the contributions of geography teaching to pupils' environmental education. The research techniques were primarily qualitative in orientation, involving a series of interviews and tasks to elicit accounts of thinking and practice from secondary school geography teachers in England. Three categories from the analysis are discussed—*pluralist*, *exclusivist*, and *inclusivist*—based on accounts of how geography teachers contribute less or more to pupils' environmental education, and how they might develop their contributions. I also employ the metaphor of “unweaving the web” between theorising and data to reflect on issues raised by the outcomes of the analysis, and the categorisation process itself.

## Résumé

Cet article traite des issues et des approches analytiques adoptées dans une récente recherche doctorale sur l'éducation relative à l'environnement. L'auteur se penche sur la réflexion et la pratique des enseignants au regard de la contribution de l'enseignement de la géographie à l'éducation relative à l'environnement. D'approche principalement qualitative, la méthodologie consistait en des entrevues et en une série de tâches, auxquelles participaient des enseignants de géographie du niveau secondaire (en Angleterre), pour les inciter à s'exprimer sur leur réflexion et leur pratique. À la lumière de la façon dont les professeurs de géographie contribuent plus ou moins à l'éducation relative à l'environnement de leurs élèves, et de la façon dont ils pourraient développer ces contributions, l'auteur présente trois catégories de démarches : *pluraliste*, *exclusiviste* et *inclusiviste*. Il emploie la métaphore « détisser la

toile » entre la théorisation et l'information pour réfléchir sur les questions soulevées par les résultats de l'analyse et par le processus de catégorisation lui-même.

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### Background

Between 1994 and 1998 I completed a doctoral study at the Centre for Research in Education and the Environment at the University of Bath (Reid, 1998). The project used a variety of theoretical frameworks to investigate environmental education within comprehensive secondary schools in England, including the theoretical, ideological and practical factors which influence the final provision of environmental education by geography teachers. Themes within the study included:

- geography teachers' conceptualisations of environmental education;
- how environmental education provision is affected by the disposition of schools and the practices found within them; and
- the dynamics of improving the contribution of geography teaching to pupils' environmental education when pupils study local issues.

This paper will introduce the broad features of the study, discuss some of the analytical outcomes, and demonstrate the "unweaving" of my thinking about the "findings" by reconsidering the "web" they represent between theorising and data.

### Study Overview

There are many ways to explore how geography teachers make sense of their professional world, the knowledge and beliefs they bring with them to the task of contributing to pupils' environmental education, and how teachers' understanding of learning and the subject matter informs their practice when contributing to pupils' environmental education, particularly through the study of local issues (Calderhead, 1996). In this project, three broad themes that were presented, evaluated, and re-conceptualised during the processes of analysis were: environmental education, environmental education within school geography, and the study of local issues. Each theme was explored in relation to my primary research question, *how does the geography teacher contribute to pupils' environmental education through the study of local issues?*

The project drew upon a variety of traditions in educational research to focus the research questions as they “unfolded,” combining distinctive research methodologies for the collection of qualitative and quantitative data through a multi-methods approach. This included research about teachers’ thinking, particularly that on teachers’ beliefs and knowledge about their practice (see Clandinin, 1986; Hart, 1996; Reid, Scott, & Oulton, 1997; and Reid, 1998, for further examples). While recognising that interpretive studies of teachers’ thinking and practice are not limited solely to the use of qualitative methods, such methods are typically used in environmental education research (Mrazek, 1993) and were adopted throughout the greater part of this study. I argue that qualitative data are particularly suited to exploring and understanding participants’ meanings, attributions of cause and consequence, and the “local groundings” for the phenomena under investigation, each with the participant’s—and not just the analyst’s or the-  
orist’s—perspective on the data and analysis to hand.

Qualitative data were used as a basis for furthering the theorising and discussion of themes in the environmental education research literature (Reid, Scott, & Oulton, 1997; Reid, 1998). The process involved three distinct, but related, phases that progressively directed and developed the data collection and analysis.

The initial literature review was followed by a survey using a Likert-type questionnaire with a convenience sample of 80 secondary school geography teachers on the same themes, and dimensional and opportunistic sampling to generate a cohort of 10 cases illustrating differing local issues and teacher practices.

The second phase began with a semi-structured interview with the teachers, *Ann, Barry, Chris, Dave, Emma, Frank, Gill, Harriet, Imogen, and Jim*. An initial interview used a variety of tasks (Reid, Scott, & Oulton, 1997) to elicit teachers’ thinking about:

- purposes and practices in environmental and geographical education,
- the relationship between geography and environmental education, and
- how a variety of scenarios from geography teaching might contribute more or less to pupils’ environmental education.

Another semi-structured interview with each teacher, one school term later, centred on a discussion of the teacher’s autobiographical account of the contexts for their geography teaching; such that the two interviews, the written autobiographies and supporting documentation, constituted the second data collection phase.

The third phase involved detailed investigations of how three of these teachers espoused and practised improving the contribution of their geography teaching to pupils' environmental education through the study of local issues. In contrast to the earlier phases, I applied problem-based methodology (Robinson, 1993) to structure the scope and depth of the data collection (mainly interviews, observations, and document analysis), and to assist the final analysis across each of the phases.

Adopting this multi-methods approach reflected a pragmatic rather than a purist view of research design. The selection of methods was guided by the need to secure an understanding of the problem rather than being rigorously determined by a choice of paradigm (Robinson, 1993; Walker, 1997), piecing together those techniques that seemed to enable me, the researcher, to better tackle the specific research problem (Shulman, 1981). This can be likened to an "honest eclecticism," that is, I deliberately and openly borrowed certain aspects of other theories and approaches and adapted them for my own purposes. Epistemological, methodological, and ontological differences were not taken to be intractable (Robottom & Hart, 1993). This was because, first, the orientations had not been drawn upon in an arbitrary, haphazard, or opportunistic way, but reflected rigorous and reasoned choices. And second, the orientations were not conceived as representing mutually antagonistic ideal types of research traditions involved in a "paradigm war," rather, they were treated as ingredients of a co-operative and critical dialogue in empirical research design and analysis, although, it is acknowledged, between sometimes apparently antithetical strands of thought (Layder, 1994).

### *Seeking Explanations*

The analytical outcomes of each phase centred on teachers' accounts of the contribution that their geography teaching made to pupils' environmental education, as well as how they might improve the contribution of geography teaching to pupils' environmental education. Illustrative foci include:

- teaching and learning strategies appropriate for environmental education when studying local issues,
- the relationship between geography and environmental education, and
- the constraining and enabling factors which determine whether a contribution to pupils' environmental education takes place.

These and the case studies are exemplified and discussed at length in Reid (1998). Overall, the examples were characterised by sporadic contributions to pupils' environmental education, a lack of overall coherence, and little by way of subsequent elaboration (features the teachers freely acknowledged and didn't disown). In the context of this study, they were agreed, by the participants and myself, to represent both:

- alternatives to "dominant" practices and objectives within geography teaching, that is those typically associated with a highly centralised, assessment- and examination-focused system of education (Scott & Reid, 1998), and
- the "domestication," or taming, of the more unfamiliar and perhaps more challenging aims and practices associated with environmental education, many of which fall beyond the common pedagogical experiences and expectations of the role of teachers of geography (and in such a way that they may be viewed as having been changed, subverted or adapted by them [Roberts, 1998]).

This state of affairs is perhaps unsurprising considering the difficulties associated with contributing to pupils' environmental education in school geography in England at the time (Corney & Middleton, 1996). In comparing and explaining such "findings" in terms of environmental education research, how these data are "framed" presents an interesting issue for the analyst, participant, and reader. Environmental education researchers have employed discursive strategies predicated on notions of "failure" and "inadequacy" (wittingly or not) to account for the data that have been produced (see Walker, 1997). However, to address the gaps between "rhetoric" and "reality" that these discourses imply, recommendations and solutions to the apparent problems of those practising "failing" or "inadequate" forms of environmental education have not necessarily been grounded in either the specific contexts for, or thinking and practices of, the teachers who are required to make the "necessary" changes. Thus one dimension to the value of this study lay in its exploration of particular instances of, rather than broad generalisations about, the contributions geography teachers might and do make to pupils' environmental education. Another dimension, again widely felt by the teachers in the study, was the degree to which changes the teachers then made to their thinking and practice were informed by their own and others' reasoning and explorations of accounts of thinking and practice in geography education, a process which involved negotiating, discussing, and evaluating assumptions about teaching and

learning in geographical and environmental education, and education more widely.

A further observation that was not challenged by the teachers during our discussions of the preliminary analysis was the impression that environmental education initiatives had not yet gained the sufficient and necessary profile within these schools to be both responded to and acted upon in more than the piecemeal fashion previously identified. In response, the focus of my analysis shifted to account for “data-led” (in preference to “theory-led”) perspectives on analysing contributions to pupils’ environmental education. The cases illustrated many differing approaches which could be categorised in a variety of ways. I proposed three types of approach within the geography teachers’ accounts, based on this next stage of data analysis, using QSR’s NUD\*IST 4 software (Qualitative Solutions and Research, 1997) to assist an iterative comparative methodology. The following sections introduce, then problematise, my theorising of these categories, illustrating the “unweaving of the web” between theorising and data.

### **Theorising *about* and *with* Data**

As Coffey and Atkinson (1996) suggest, qualitative data are not just a fixed corpus of materials on which procedures of analysis are performed, but rather might be “thought about and thought with” (p. 191). My main “findings” related to the ways that the cohort of ten geography teachers contributed less or more to pupils’ environmental education, and how they might develop these contributions. They were illustrated by:

- an analysis of the disjunctures identified between “official rhetorics” of environmental education and the thinking and practice of geography teachers, based on accounts of studying local issues,
- a discussion of the strengths and weaknesses of three ways of categorising contributions to pupils’ environmental education through geography teaching, and
- a commentary on a variety of issues identified in the discussions of their contribution to pupils’ environmental education, focusing on provision and policies for environmental education within a subject-based curriculum and as a cross-curricular theme.

Illustrating the second of the above points forms the rest of this paper. In brief, I concluded my study by reflecting on the nature and practice of environmental education at a more general level than recounted in the case studies through a re-evaluation of the themes addressed in the literature review. This particular instance of "theorising" transformed the data and interpretations by attempting to account both comprehensively and systematically for how particular aspects of contributions to pupils' environmental education might be re-conceptualised. In so doing, the case studies also became a supporting archive of instances, vignettes, and scenarios.

As mentioned previously, across the teachers' case data there were instances of many different approaches to contributing to pupils' environmental education. I deliberated about three "types" of approach evident within the geography teachers' accounts, what I termed *pluralist*, *exclusivist*, and *inclusivist*. The categories represent idealised approaches drawn from across the particular instances of lessons that contribute to pupils' environmental education. Through foregrounding their explanatory value, they were developed to function as "builders of discourse" for teachers and researchers alike. In common though, unifying each category was the nature of the response to the analytical question, *What is distinctive about geography's contribution to this aspect of pupil learning, that is, "environmental education"?*

The broad family resemblances ascribed to the data were interpreted initially by myself and then validated by the teachers as instances of one of the three categories that might typify distinct modes of teachers' thinking about practice. Thus the accounts of contributing to pupils' environmental education, and how they might change their contributions, were linked to approaches that were either, in distinction or combination:

*Pluralist.* All educational activities, whether they be formalised as subjects or not, are equal and valid paths to the goals of environmental education, and geography is but one configuration of a "vehicle" amongst many equally important "vehicles" that are capable of contributing to pupils' environmental education;

*Exclusivist.* Only geography, or a select few other subjects such as biology and environmental science, contribute to pupils' environmental education, often through specific means (like subject-based topic areas), and with limited goals (for example, developing pupils' environmental knowledge about places rather than, say, facilitating pupil involvement in the resolution of local issues); or

*Inclusivist.* Geography is of paramount importance in contributing to pupils' environmental education, although contributions, whether geographical or not, may be derived from other educational activities or subjects, including whether they are primarily "about," "in," or "for" the environment in focus, theory and/or practice.

Clearly various presuppositions undergird each category. They revolve around attributed emphases in subject definitions and curriculum organisation, and in this study, also related to environmental ideologies, geographical traditions, and perspectives. In what follows, I illustrate the reasoning of the categories of approach, and then focus on issues relating to the analytical task itself.

### *Pluralist Approaches*

Following Goodson (1993, 1996), it can be recognised that pluralist approaches to geography and environmental education, as in other subject areas, are relatively recurrent phenomena within geography's history as a school subject. In England, this kind of approach has had many supporters within the "humanities" approach to teaching, which although gaining prominence in educational circles prior to the advent of a national curriculum, has waned in influence as the emphasis on *subject content*, rather than a *theme-* or *experience-*based curriculum, became the norm (Roberts, 1998). As is shown below, the various routes to which examples are attributed to this category of approach, like the other categories, may be incompatible.

First, many of the teachers' accounts can be read as supporting the view that all subjects have a common core or essence that can be historically and pedagogically identified, as in drawing on the cross-curricular imperatives of recent curriculum theory. A contrast will illustrate this. *Frank* focused his comments on opportunities for environmental education through geography as contributing to part of the general, formalised social objectives of teaching in his school, thus emphasising the transcendent unity to learning. Whereas *Dave* defined environmental education in terms of geographical themes and topics, accentuating requirements in a "knowledge base" for geography via comparison with biology subject matter as a means to highlighting the distinctiveness of particular subjects and their unique contributions to pupils' environmental education. In response to this latter approach, a pluralist view may suggest that to rely on geography lessons as the sole contributor to pupils' environmental education can be—at worst—misguided, inaccurate, unbalanced, and unnecessary. The biases of geography and geography teachers are more likely to be reproduced, while a fuller diversity in the



forms of knowledge and learning experience vital to environmental education is likely to be excluded from provision for pupils' learning.

A second pluralist approach emerges when considering the "pedagogical contingencies" of subject matter and method, in the sense that all subject formations are provisional and relative owing to their socio-historical origins. Hence, as *Jim* argued, one subject cannot be treated as superior to other equally temporary and related ways of learning which, if events had turned out differently, might have also contributed to pupils' environmental education in commensurate ways. To illustrate, *Emma* suggested that with inquiry-based learning, it might be argued that there need be no essential and irrevocable differences between lessons about local issues in areas such as people-environment geography, the study of society and environment in social studies, or environmental studies (Gilbert, 1996). Besides, said *Chris*, teachers in different subjects contributing to pupils' environmental education should be willing to learn from each other in their provision of environmental education—a position that says as much about professional values as it does about pedagogical ones.

Conversely other pluralist approaches imply that all subjects have important and substantial historical and pedagogical differences. Notions of "a common core" and "interdisciplinarity" may compromise the integrity of each particular subject by placing emphasis on only specific aspects of that subject. For example, Naish, Rawling, and Hart (1987) rehearse a variety of arguments about the costs and benefits to issues-based enquiry within geography and environmental education in terms of their mutual commitment to values education. Although both teaching this type of syllabus, for *Barry* (a colleague of *Dave*), the real unity of different ways of learning is found not in subject matter or teaching approach for particular lessons but in the common experience of this form of learning. This is exemplified in *Barry's* favourable comparison of the contributions to pupils' environmental education from geography and biology. For *Imogen*, gaining more experience both within and outside geography teaching in her teaching career shifted her conceptions of contributing to pupils' environmental education away from subject-based notions towards her more "general and mainstream" theories about pupil learning. Returning to the data, such emphases were often associated with descriptions of what might be described as "modernist theories" of education through geography, as in the privileging of progression, development, meaningfulness, structure and depth (Naish, Rawling & Hart, 1987).

Upon reflection, a further approach which is arguably both more pragmatic and yet more radical was not actually related by the teachers but

might be conceived as more generally extant within the broader environmental education literature. In short, it is that some of the pedagogical issues associated with these different approaches can be avoided by taking the *environmentally transformative power* of learning through environmental education as the criterion for authenticity in lessons that contribute to pupils' environmental education. Thus, in effect, teachers who "renounce" claims for their subject's uniqueness, and reject subject-based, examination-orientated curricula as the most appropriate model for schools, may be more likely and more able to work together in educating pupils for "a more sustainable future." Following on from this approach, the de-schooling of environmental education may be deemed to be an appropriate way forward, or less radically, closer school-community links in the construction of the curriculum. It is no surprise then that these and other possibilities for changing the structures of environmental education through geography, ones which are frequently argued to be more conducive to contributing to pupils' (critical) environmental education (Huckle, 1996; Sterling, 1996), differ quite markedly from those that are associated with exclusivist approaches and a subject-based curriculum in general.

#### *Exclusivist Approaches*

According to Goodson (1996), the "subjugation" of environmental studies and the "marginalisation" of rural studies during the 1970s and early 1980s were events which led to the development and establishment of geography in England as: (i) a school subject, and (ii) the primary vehicle for contributing to pupils' environmental education (Corney & Middleton, 1996). The second outcome, predicated on the first, is tantamount to an exclusivist approach in teaching regarding school geography's relationship to environmental education. Similar responses to perceived threats to geography's integrity as a school subject can be inferred in debates about school geography in the mid-1980s (see Bailey & Binns, 1987; Binns, 1996). For example, the geography teachers' subject association, the Geographical Association, and senior members of the UK government at that time, clashed repeatedly over issues surrounding the inclusion, formalisation and promotion of geography as a national curriculum subject in the late 1980s and into the 1990s. Within subject discourses, the tenor of the language amounted to an exclusivist approach to geography, other subjects and contributions to pupils' environmental education, a situation that was also apparent in subjects other than school geography.

Nevertheless, a number of persuasive arguments propose that much curriculum development in geography was not pursued at the expense of

subjects like environmental studies, or to dimensions to learning like environmental interpretation. Perhaps paradoxically, their exclusion from the broader curriculum through their incorporation into geography actually prevented this. Furthermore, environmental educators defend the rich contributions made by geography teachers through their geography teaching by highlighting commonly-held aims and objectives for geography and environmental education, and criticising the lack of alternatives to a subject-based mentality dominating many educational systems in contributing to pupils' environmental education (Fien, 1991). Hence a distinct possibility for further analysis was to re-investigate instances of the ways in which the attitudes of professional educators and teachers might relate to distinctive forms of school geography (Naish, Rawling & Hart, 1987).

This is not to ignore the serious pedagogical issues underlying an exclusivist approach. No major geography educationalist holds a rigorous exclusivism where by *only* geography lessons can contribute to pupils' environmental education. Nor did I find many geography teachers doing so in this study. In my research an exclusivist approach tended to be associated with:

- much of what can be recognised as the teaching of "regional geographies of place," and
- the affirming of three central and related insights in the teaching of geography which contribute to pupils' environmental education.

The first of these insights relates to the *uniqueness of places*, whether inhabited by people or not, and the importance of learning about places for developing environmental understandings about them, and their environmental sustainability. For example, since "places are environments," knowledge about places can be used constructively in learning about environmental issues. This is closely associated with a second point, that is, the importance attributed to learning about the variety in, and impacts of, *people-environment relationships* and *human interventions in natural systems*, as in the teachers' issues-based geographical enquiries. The third relates to the geography teacher's enthusiasm for taking account of different *geographical scales, contexts and their interactions*, whether they be personal, local, regional or global. Without an appreciation of these three insights exclusively derived from the teaching of geography the teachers would often argue that their practice would be contributing significantly *less* to pupils' environmental education.

For teachers sustaining this approach it seems such insights are critical to the maintenance of geography's existence as *the* subject within the curriculum

that contributes to pupils' environmental education. Anything less compromises the distinctiveness of the insights, as well as the integrity of both geography as a subject base and its contributions to pupils' environmental education. Yet I noted that few of these geography teachers wished that others in their schools did not contribute to pupils' environmental education, or that they would be the only ones who did so, despite emphasising the necessity of geography's place within the pupils' (subject-based) environmental education. Rather, as some argued at length, it is inappropriate to waste time and energy on developing less worthwhile contributions to pupils' environmental education (like those not grounded in a "school subject"), when geography lessons are already recognised as vital to this process, and are most effectively taught by "subject specialists" like geography teachers.

Others, like *Gill*, refused to speculate on the contributions of other subjects, for a variety of reasons. Teachers do not necessarily know either the range or depth of contributions of other teachers' teaching. In some instances this was taken to imply that geography teachers simply get on with their own contributions in an already overcrowded curriculum, rather than being concerned about whether other subject teachers are making them or not, or what sort of contributions they might be. On the other hand, exclusivist approaches can illustrate a willingness to acknowledge that contributions may be made, but in refusing to speculate further about how this might happen, teachers show little support for working more closely with those other teachers.

Again, reviewing the limitations of my categorisations it might also be argued that some may see contributing to pupils' environmental education as involving instances of cultural-linguistic practice. That is, as a form of pedagogical discourse that has to be learned by teachers, it follows that unless teachers know a "language of environmental education," whether formal or informal, they may not know if they are contributing to pupils' environmental education or not, propitiously or not. In contrast to the frequent invoking of established pedagogical discourses for geography teaching, very few of the teachers in the study employed the "official language" of environmental education during the interviews (see Palmer, 1998; Greenall Gough, 1993; Gough, 1997). Furthermore, geography teachers may not feel that they need to enter into dialogue with others about their lessons' contributions to pupils' environmental education. Existing pedagogical commitments may mean that teachers do not wish to engage in or devote time to environmental education and its promulgation, or feel the need to confirm that contributions to pupils' environmental education are being made elsewhere in the curriculum (and in a form that is recognised

by them as “environmental education”). All the same, it was evident from the teachers’ reactions to this category that the boundaries between looser forms of an exclusivist approach and some forms of an inclusivist approach were quite hazy and permeable.

### *Inclusivist Approaches*

Inclusivist approaches have a lineage in geography teaching in that its subject matter and associated pedagogies are frequently brought in from, and are acknowledged to operate outside, the confines of the curricular subject of geography (Binns, 1996). The majority of examples proffered in this study can be aligned with this view of many geography educationalists in England, although they did exhibit differences. Two key issues were: first, the question as to what degree geography lessons should be regarded as the sole curricular vehicle for operationalising contributions to pupils’ environmental education (*Chris and Ann*); and second, whether worthwhile contributions to pupils’ environmental education can be made outside geography lessons (*Harriet and Barry*).

The first issue reinscribes the unclear line between inclusivist and exclusivist approaches. In the data, inclusivist approaches tended to coalesce around the point that whenever and wherever contributions to pupils’ environmental education are made, they are worthwhile contributions. This does not obviate the importance of geography as a primary mediator of a school’s contribution to pupils’ environmental education. What distinguishes the types is that the precondition of identifying a “satisfactory” categorical contribution from the “fields of knowledge” is not paramount. That is, the contribution doesn’t have to be “in geography” to be a geographical contribution to pupils’ environmental education, and, school geography has no monopoly on contributions, geographical or not. (For example, the teaching of geography will only explicitly contribute to particular aspects of pupils’ environmental education, while the mediation of additional contributions to pupils’ environmental education may occur [whether implicitly or explicitly] through the provision of other subjects or educational activities. Even within geography lessons [*Frank and Imogen*], teachers’ contributions to pupils’ environmental education will be [existentially] experienced in a variety of ways, and may not be received in as worthwhile a way as, say, with other teachers, or in other school subjects.)

Furthermore, contributions to pupils’ environmental education must actually take the form of practice and not be left to the realms of theory. They must be operationalised within a curriculum, and given both the socio-historical nature of learning and of teachers’ and pupils’ lives, environmental

education too must be “a lived experience”—however “perfect” or “imperfect”—whether it is through a “preferred route,” such as the teaching of geography, or through other subjects or educational activities. Thus in a similar way to exclusivist approaches, it may also be argued that as contributions to pupils’ environmental education occur within other subjects, these geography teachers should have been more open to learning about their own and others’ thinking and practice in contributing to pupils’ environmental education from teachers who don’t teach geography. Furthermore, as *Harriet* raised when discussing her collaboration with staff from the music department on a “Rainforest musical,” the geography teacher is often well-placed to engage in active cross-curricular co-operation. Here the inclusivist type of approach appears to have a firm basis for a fruitful pedagogical dialogue; whilst geography is a primary vehicle for contributions to pupils’ environmental education, other subjects can make other worthwhile (and even geographical) contributions.

Having discussed the three categories, the concluding section introduces issues raised by the categorisation process.

### Issues in Categorising

As with any categorisation, further approaches might be advanced, existing ones refined, or the features of the categorisation extended. These are distinct possibilities for “unweaving” the theory and data for this particular study, and have been discussed at length elsewhere (Reid, 1998). Alternatively, readers might find this categorisation unhelpful, question its scope and grounds, or even question the categorical project altogether. It is to such issues that I focus the following examples of “unweaving.”

Two particular challenges to the whole enterprise of the ways theory and data are linked can be advanced via critiques from poststructuralist and postmodernist perspectives (Stronach & MacLure, 1997). As will be seen, such critiques might react to the intersections at the pluralist category, but they might also find problems with the purposes and practices of categorisation itself, particularly when seen to be associated with “absolutist,” “totalising,” and “exclusionary” intentions.

A poststructuralist critique, after Foucault, may criticise the categorisation both politically and genealogically (Garratt & Hodkinson, 1998). It could be argued that rather than producing theories about contributions to pupils’ environmental education in an abstract, a-historical and a-political fashion, more attention should be paid to the social, the political, and to power (as in the discourses and relationships between teachers, subjects, and

pupils, and their particular localities). Thus an investigation such as this might better be used to “validate” local knowledge about local circumstances via the case examples, removing “blindness” to both particular and attributed characteristics, and the asymmetries of power. Besides, environmental education research has often served to obscure rather than identify the “real terrain” of research, where the key to understanding contributions to pupils’ environmental education is exploring the exercise of pedagogical power in socio-cultural particularities, as constituted by teaching and learning in school geography. Thus it might be argued that pluralist approaches in environmental education and school geography (which appear to be associated with a “liberal agenda” for education) perpetuate the existing status quo by distracting attention away from those issues identified by a poststructuralist agenda. Conflict rather than consensus should be more visible, and the workings of power and privilege not ignored in the case studies and categorisation.

Despite the apparent force and incisiveness of this critique, there is a danger that some poststructuralist insights redescribe the study’s territory so radically that there are no longer any other “valid” environmental education research questions left. While such a critique may be seen as powerful in identifying “spurious categorisations,” it may be argued that it can lead to the limiting of questions about geography teaching. In focusing on social and political theorising, questions of pedagogy may be “reduced” to a much less differentiated set of questions about power, pedagogy, and knowledge (resistance, contestation, subversion, etc.), and genealogical origins for environmental education and geography. Of course, a lamentable series of consequences would be that the enactive, differentiated, and relational aspects of these teachers’ “living theories” about environmental education (as exemplified in the case examples) become increasingly marginalised to the priorities of another body of (in this case, criticalist, rather than behaviouristic) theory in environmental education research.

An alternative critique, while sharing much in common with poststructuralist concerns, proposes quite a different role for education. We might be deeply suspicious of the notion of “contributing to pupils” environmental education in the first place, as well as the proposition that teaching, and geography teaching in particular, can provide a basis for achieving “a more sustainable future.” Although the pedagogical discourses are “genetically” linked at a variety of levels, they should be recognised as standing as contradictions to each other. For example, despite the persuasiveness of discourses on “education for sustainability” in environmental education, they are at root based in an oxymoron, the

construction of which is embedded in particular and contesting cultural-linguistic practices. Of course, these arguments might also be applied to school geography. In light of this, such a critique can be read as suggesting that "geography teachers" must simply teach "geography" through their own particular forms of practice within the school curriculum, and that they need neither accommodate nor adapt to the demands of other pedagogical discourses like "environmental education," "education for sustainability" or some other construction, particularly those imposed from the centre on the periphery as has been the case with a national curriculum. Although this may be seen as ignoring the history of much geography education, as well as its possible futures, a corollary to deconstructing one's own particular pedagogical discourses is, as we might expect within any postmodern sensibility, both comforting and unsettling. Geography teachers are required to do no other than teach the particular subject which constitutes them and they constitute, nor ought they to try.

A Nietzschean twist to this form of postmodernist critique might rearrange the argument to introduce considerations of the basis of pedagogical discourses and how they conceal an important myth: the masking of a "will-to-power." In so doing the critique reveals the purported necessity, as well as the ungrounded character, of the meta-narrative articulated by much contemporary environmental education (see Bowers, 1993 and Payne, 1997). For instance, it might be argued that sustainability remains privileged even when it comes disguised as the legitimate reconstructivist goal of the educational process, as evidenced in some recent deliberations on "education for sustainability" (Huckle & Sterling, 1996). Thus in taking account of the constitutive and constituted nature of pedagogical discourse, it might be important to ask why geography teachers and their pupils should heed the rhetoric of environmental education, while also questioning whether it really is the business of geography teachers to be contributing to pupils' environmental education at all.

Again, such critique may be powerful in beginning to unweave the links between theorising and data, particularly by highlighting issues related to reflexivity and subject identity. Yet it would appear that it might also introduce nostalgic, nihilistic and retrogressive discourses into environmental education research. The concern is that this may, perhaps inadvertently, "paralyse" teaching and learning through a deconstructive process that excludes aspects of the teleological, exploratory, and experimental dimensions of environmental education and geographical education, as articulated by the teachers through their case examples. This is clearly a widespread dilemma for researching and teaching in "postmodern times"



(Stronach & MacLure, 1997). Nevertheless despite such limitations, the critiques alert researchers, practitioners, and readers to the notion that geography teaching and contributions to pupils' environmental education are inextricably tied to a socio-political nexus, matters not always addressed in the wider environmental education research literature.

### Note

An earlier version of this paper was presented at the London Conference (11-13 April 1999) of the International Geographical Union Commission on Geographical Education, International Perspectives on Geographical and Environmental Education.

### Notes on Contributor

**Alan Reid** is a member of the Centre for Research in Education and the Environment at the University of Bath and chairs the Environmental and Sustainable Development Education Working Group of the Geographical Association, UK.

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