

# **Pupils' perspectives on environmental education in geography: "I'm not looking at it from a tree's point of view"**

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## **Abstract**

My study of year 9 pupils' conceptions of geography reveals that individual pupils may express a diverse and complex range of ideas, beliefs, and opinions about the subject. In this paper I will draw out three themes relevant to environmental education: people-environment relationships, education for sustainable development, and futures.

## **Introduction**

This paper constitutes an early attempt to draw out environmental themes and develop analysis in a study of year 9 pupils' conceptions of geography. My broad aim was to explore the multi-dimensional and complex array of ideas that an individual pupil might have about school geography, making a distinct contribution within geography education research by elucidating diversity both *within* and *across* pupils, without attempting to identify commonly held beliefs or general trends (see Norman and Harrison 2004; Catling 2001; Lam and Lai 2003). Dowgill's (1998) thesis offered scope to consider conceptions at an individual level, but his analysis presented a finite series of conceptions in terms of singular labels which brought together related ideas (in accordance with the assumptions of phenomenography; Marton 1994).

My approach finds support from research on pupils' conceptions of the nature of science (NOS), although the different contexts present challenges as well as opportunities for cross-fertilisation of ideas. It is particularly important to stress that while in science 'naïve' conceptions are often compared to 'informed' views, and attempts made to help pupils or students arrive at the latter (Bell *et al* 1998; Khishfe and Abd-El-Khalick 2002), I did not assume that there is a particular way of conceiving geography that is more informed than another. This is in accordance with Morgan and Lambert (2005) who write of geographies, not geography, and bemoan the repeated and yet unsuccessful attempts to capture and define the essence of geography once and for all.

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However, two important arguments from NOS research did underpin the approach I adopted. Driver *et al* (1996) note that “bearing in mind the diversity of scientific activity, it is unlikely that young people will have coherent generalised views about the purposes of science. It is more likely that they will draw on a range of characterisations in different contexts, and these may or may not have common features” (p 73). This argument underlies my assumption that pupils’ conceptions of the nature and purpose of geography may not be coherent universal, but rather collections of ideas which may be brought to bear in relation to the diverse range of contexts associated with school geography.

Abd-El-Khalick and colleagues have, over a series of studies, worked with the notion that NOS conceptions are not static, unitary, pre-existing cognitive entities that can be tapped by research. Abd-El-Khalick and Akerson (2004) note mounting evidence that pupils’ NOS beliefs are “fluid, contextual, fragmented, and even outright inconsistent” (p 16). The argument is extended such that NOS conceptions are deemed to involve active reflection on the part of the conceiver not discovery by the researcher, and that in order to understand pupils’ NOS one needs to begin “engaging students in reflective discourse about their actions and conceptions of NOS” (*ibid.* p 16).

Subject conceptions (whether science, geography or any other discipline) can thus be understood as part tacit, often unarticulated, fragmented, and part reflective in nature. My study should not be viewed as an exercise in using research methods to tap into and reproduce pre-existing phenomena that have an automatic coherence or unitary nature, but rather as an attempt to interact with pupils so that their multi-faceted and perhaps loosely related ideas about geography may be elucidated through processes of talk about and reflection upon school geography. I defined pupils’ conceptions of geography as “those ideas, beliefs, and opinions that are brought to bear when pupils experience, talk about, and think about school geography”.

I adopted a multiple case study approach, studying two pupils (one male, one female) in each of three schools, the primary unit of analysis being the individual pupil. Geography lessons were observed in each school for a period of fourteen weeks, and case pupils interviewed individually about them afterwards. Thus a diverse range of classroom experiences was used as a context for talking to pupils about school geography. Complementing this grounding in classroom experience, four non classroom-based techniques were developed including photo elicitation interviews, self-directed photography, and concept mapping. These enabled more abstract discussion of and reflection upon geography as a subject, and complemented the more tightly focused post-lesson interviews.

The first step in analysis was to build up a picture of each pupil’s conceptions of geography, identifying different ideas, beliefs, and opinions evidenced in the data. From the outset I distinguished between pupils’ descriptions of geography (“I think geography is about people”) and their evaluative comments (“I think studying people is interesting/ important/ worthwhile/ useful”). In some senses all discussion of geography may involve the expression of opinions; what was important was to attend to the difference between descriptions (perhaps rooted in opinions) and value judgements. One outcome of this analysis was a second distinction, made between those ideas that relate directly to areas of content and those that are more generic, and which either

transcend diverse areas of content (“you can have different opinions in geography”) or which relate to processes (“geography involves debates”).

The next stage of analysis follows two different lines of enquiry. The first remains purely focused on the data, considering the extent to which the way the case pupils describe geography corresponds with aspects they evaluate. Initial signs indicate that while some pupils construe geography in terms of precisely those themes and aspects that they value, others do not (this is a crude summary: data suggest a much more complex picture). The final step in analysis involves iteration between data and literature, using concepts from literature to develop a more abstract reading of the data, and at the same time building on data-driven findings to comment on prominent issues in geography education.

I have identified seven themes which satisfy the criteria of both drawing out important threads from the pupils’ descriptions of geography, and relating closely to ongoing debates and developments in geography education. These are:

- 1) Notions of human and physical geography
- 2) People-environment relationships
- 3) Education for sustainable development (ESD)
- 4) Futures
- 5) Space/ place/ location
- 6) Opinions
- 7) Linking concepts.

Pupils’ evaluations of geography are currently being considered in terms of interest, relevance, and the value of geography to individual pupils and the wider world. This paper focuses on themes 2) – 4) in the list above, as it is these which have the strongest relevance to environmental education.

### **People-environment relationships**

‘People-environment relationships’ is one of several important strands in contemporary school geography in the UK. It tends to include aspects of more conventional physical geography (physical patterns and processes) and the study of interactions (in both directions) between people and the environment. Recent developments such as the new OCR Geography GCSE (Westaway and Rawling 2003) have attempted to capitalise on supposed pupil interest in people-environment interactions, although this theme has a long history in school geography, gaining prominence in the School’s Council *Geography 16-19* Project (Naish *et al* 1987).

That geography is about relationships between people and the environment is an uncontentious assertion. Exactly what geographical study of this theme involves is however contested. Geographers have been accused of ‘greenwashing’ pupils (Harrison 2002; Standish 2003), and indeed there have been studies of and interventions in classrooms aimed at promoting or engendering particular environmental values in pupils (Seke 2000). Environmental issues receive considerable attention in the ‘values debate’ in geography in which diverging views have been expressed, from geography as

promoting environmental values, to geography as helping pupils reach and justify their own views.

Morgan (2000) notes that 'the green belt' is not a straightforward issue for geographers, for while they may be concerned about urban sprawl and incursions on green spaces, they may also be concerned about the provision of accessible housing for low income groups. Morgan and Lambert (2005) join Proctor (2001) in denouncing as morally careless endeavours that indoctrinate students towards a particular environmental or indeed any other stance. I acknowledge that these issues have been explored in greater depth under the auspices of environmental education; my purpose here is to situate the discussion specifically within geography education.

Concerns have also been expressed that while distinctions between nature and society may be untenable at a conceptual level (see Castree 2001; Whatmore 1999, 2003), arguments that nature is essentially social might, with equal moral carelessness, lead to conclusions that polluting the atmosphere or killing whales is okay because there is no ultimate recourse to nature as something other than human (Morgan and Lambert 2005). Evidence relating to how the pupils involved in this study conceive geography in relation to these issues elucidates some thought-provoking aspects that warrant further attention.

Lisa took a series of photographs illustrating her view that geography is about "consequences of people on the earth", and this idea emerged repeatedly in her comments about different lessons and through more abstract exercises such as concept mapping. Lisa conceives geography as a 'green' subject which cares for the environment and encourages actions which help the environment. Norman and Harrison (2004) found similar views among a larger sample of year 9 pupils.

These ideas may be interpreted in terms of what Job (1996) refers to as an 'ecocentric' view of environmental education in geography which stresses the implicit rights of nature, species, landscapes and resources. Lisa's arguments that geography is about finding ways to stop human incursions in natural areas are also reminiscent of McEwen's (1986) views that geography should assert the sanctity of open space. Evidence demonstrates clearly how Lisa not only conceives geography as 'green', but also feels strongly about these issues herself; when asked about her Greenpeace pencil case, she commented "Well I'm an eco-friendly girl".

What is one to make of views such as Lisa's? It appears that both in terms of her own relationship with her environment, and in the way she construes studying people-environment relations in geography, Lisa perceives people and the natural environment as distinct and often opposed. While Whatmore (1999, 2003) and others in academic geography have argued strongly that nature and culture cannot be (usefully) conceived apart from each other, Lisa's views seem strikingly dichotomous and based on notions of 'otherness'. While she clearly has an appreciation for nature (as a 'farmy' girl who likes horse riding she values open green spaces), she also tends to refer to nature in the context of geography as something that people harm and which therefore needs protecting, again suggesting a 'nature v. people' conception.

It is not that Lisa sees people and the environment as unrelated – rather she sees them as all too related – people are causing too much environmental harm. However Lisa's

views are based on ideas of two separate systems interacting. It was not appropriate in this research to challenge pupils' views, but questions may be raised about Lisa's perception of fields as natural (rather than part-human constructions), and perhaps the extent to which she views her own house, school, and favourite shops as unjustified encroachments of people on the natural environment. Many geographers and geography educators would be concerned that the subject might be conceived as prioritising environmental over social concerns. I will explore these issues further in relation to ESD in the next section.

Aspects of Matt's conceptions that relate to this people-environment theme lead towards a different area of literature. Matt describes geography as about the environment and culture, and within this, interactions between people and the environment, principally in terms of how people are affected by natural phenomena. His interest in extremes was replicated in the views of many pupils studied by Norman and Harrison (2004), and the inclusion of a module in the pilot Geography GCSE (see Westaway and Rawling 2003) on 'an extreme environment' reflects assumptions that such interests are to be found more widely across the pupil population. To the extent that Matt finds natural hazards interesting because they affect people, (and there is some evidence that their violence, destructiveness, and severity are among what he finds appealing about studying them), this resonates with arguments made by Pepper (1985) that physical geography warrants attention because of and in terms of its relevance to society.

However evidence suggests equally if not more strongly that physical phenomena *per se* interest Matt, and his desire to study them reflects a fascination with the physical world and how it works rather than an ultimately social concern. People-environment relationships are part of geography according to Matt, but within a broader project to understand the how the (physical) world works. While for many social relevance is all-important, geography and environmental educators might do well to remember a far-from-novel view of geography as evoking and exploiting a sense of awe and wonder in the natural world (however flawed the concept may be). Are we in danger of losing sight of education *about* the environment?

I find it helpful to compare and contrast different pupil's views, as this brings similarities and differences between them into relief. In this case a simple but striking finding emerges: while for Lisa geography is about people harming the environment, for Matt geography is about how the environment affects people. There is common ground in the way both pupils tend to see people and the environment as essentially separate, although interacting, systems.

Although Matt describes natural and cultural processes as interacting in the world 'out there' and of certain issues being relevant to both aspects of study, he explicitly contrasts *the study of* the two dimensions. For example when discussing a task in which he wrote a report about hurricane Ivan he commented that pupils "should really know the facts like how it was formed and core stuff" but that on how the hurricane affected people "people have many opinions on that so you write whatever you really want to write on that". He describes 'being good' at this part of geography as requiring 'sensitivity', 'remorse and emotion' or being a 'decent person'. This contrasts with the factual understanding he sees as necessary to do well in aspects relating to physical processes.

For Matt, it seems a people-environment theme or focus is accompanied by a tension between different ways of studying different parts of the world. This might present problems when considering teaching and learning in environmental education or education for sustainable development. For example, what do the grounds for decision-making on environmental issues look like when there is recourse to ‘facts’ with respect to the physical world, and only an array of personally held opinions in reference to society? How will environmental and social aspects of sustainability be accorded status within a such a framework?

Sara conceives geography as about people and places, an important aspect of which relates to how people are affected by different physical phenomena in different places. It seems the people-environment theme has a similar surface manifestation to that conceived by Matt – natural hazards and other interactions in which people are at the receiving end of nature’s processes. However similar the notion may appear, it is conceived within a strikingly different context. For Sara, Pepper’s (1985) arguments could not be more apt: the physical world warrants our attention because it affects people, and the study of the environment is centred on these issues. Sara perceives no general remit in geography to understand the environment *per se*, only with respect to its potential consequences for people.

While Sara conceives geography as about people and places, Jenie describes geography as comprising distinct “people and physical sides”. However for both girls the most important thing about geography is people. Jenie “doesn’t give a damn” about physical geography, except in instances where physical phenomena affect things close to her or large numbers of people. Jenie’s and Sara’s ideas with respect to a people-environment theme may be interpreted as close to what Job (1996) characterises as an anthropocentric approach. For Sara, studying hurricanes is essentially studying culture, while for Jenie the physical world only deserves attention if it affects people. The priority placed by Jenie on people contrasts Lisa’s environmental focus, and these differences come into full relief when one considers issues of geography and education for sustainable development.

### **Education for sustainable development**

As with people-environment relationships, sustainable development (or education for sustainable development) is an important aspect of contemporary school geography in the UK. One of three areas of knowledge and understanding stipulated in the National Curriculum is ‘environmental change and sustainable development’ (DfEE/QCA 1999). In what I hope may be a refreshing manoeuvre, I am not going to start my discussion of education for sustainable development by trying to define it, or by charting the history of different definitions espoused by others. Nor am I going to self-flagellate over how impossible a concept sustainable development is to work with. Rather I will start from the views and insights young people have about the relationship between geography and sustainable development – after all it is in geography lessons where pupils experience much perhaps even most of what we call ‘ESD’ no matter what academics say it means.

‘Development’ for Lisa has strongly negative connotations. She describes development as an unstoppable, never-ending process of human destruction of nature: transformation of natural or green spaces into sites of human construction and consumption. The

'development' of a housing estate in a rural area where she used to go horse riding is indicative of this, and she discussed this with reference to her small town expanding ever more rapidly, arguing that any expansion prompts further expansion – a viscous circle of humans destroying nature. Development for Lisa is a *bad* thing.

Lisa sees geography, and within it the study of development, as primarily ensuring that human activities do not adversely impact the environment. Her views seem to reflect a fundamental 'nature has rights' position, and the overriding aim appears not to be to secure human progress (in whatever form) but to protect nature. Indeed what some might view as positive developments, or indicators of developments, such as the construction of new infrastructure and housing, are inherently construed by Lisa as bad things which should be prevented. While Rauch (2002) has criticised dominant views of sustainable development for their economic or market orientation, it seems Lisa's views lie at the other extreme: an unaccommodating prioritisation of environment over other issues.

Evidence relating to Lisa helps us reflect about these issues and the broader debate about values in geography. Is geography unique among the collection of school subjects in its concern for the environment, and should it therefore provide 'balance' in this broader context by focusing on environmental concerns? Or does a more 'morally careful' (Morgan and Lambert 2005) geography provide opportunities for pupils to make informed decisions and justified judgements attending to a range of social, environmental, economic (and perhaps cultural, political, religious) remits? Lisa's ideas certainly seem to fit National Curriculum requirements that pupils 'ensure that development can be justified', 'preserve balance and diversity in nature wherever possible', and 'preserve areas of beauty and interest for future generations'. This said, Lisa's sense of responsibility is not (according to the evidence) towards future generations, but to nature here and now.

Ryan's views of geography include more conventional notions of sustainable development, education for sustainable development, and of relationships between these and school geography. He said "geography is trying to work out how we can make development so it most of the time makes everyone happy and in a sustainable way". This comment is illustrative of ideas that permeate the data relating to him, aiming to secure both human progress and environmental sustainability. Ryan sees geography as both mitigating problems that adversely affect people (such as natural hazards and global warming) and actively 'improving' the world, by which he means "making the future for more people better rather than having a future that's not so fair". These ideas reflect PESD's (CEE 1998; QCA 2002) concepts of quality of life, equity, and justice.

Ryan not only describes geography as *studying* ways to make the world better, but as being actively involved in this process, for example by informing pupils about Fair Trade (not, note, instructing them to buy certain products), or by promoting mutual understanding between different cultures. These ideas might be interpreted in terms of the PESD concept of diversity which includes social and cultural dimensions. Ryan says geography helps the world by making pupils more able to "look at different lifestyles", "reuniting cultures and colours and race", arguing that "it's about culture and how we respect other countries", breaking down stereotypes and "looking out for people". In one lesson Ryan argued that eco-tourism leads to sustainable development

because it uses what tribe members have built, and that tourists “explore and learn” rather than “getting lashed and hammered and eating a cheeseburger every day”.

Ryan’s notions of reuniting cultures are reminiscent of Harvey’s (2001) arguments about geography more generally:

The construction of geographical knowledges in the spirit of liberty and respect for others opens up the possibility for the creation of alternative forms of geographical practice, tied to the principles of mutual respect and advantage rather than to the politics of exploitation. (p 9)

Ideas of geography as engendering mutual understanding, achieving equity and improving the world for future generations can be characterised in terms of different means and ends of school geography identified by Slater (1996). The focus on empathetic stances, insider/outsider positioning and personal reactions may be considered in tune with humanistic geography, while ideas of geography as prompting change and redressing inequalities might be considered more characteristic of a social welfare approach. Promoting awareness of different viewpoints might also be seen to fit elements of a postmodern approach insofar as it involves the ‘celebration of difference’ (see also Cloke *et al* 1991). Education as an agent for social change, a clear theme in Ryan’s conceptions of geography, has been considered by Rawling (2001) in terms of a reconstructionist or radical ideology, associated most recently with New Labour interest in sustainable development and citizenship.

It would be an injustice to Ryan not to highlight the environmental awareness and concern in his ideas about geography and sustainable development. In Ryan’s view a geographer is not just concerned about future generations but is also concerned about nature *per se*. For example, he argued (in a class debate) against deforestation of the Amazon in terms of threats to human futures and in terms of respect for nature in itself:

Millions of people being slaughtered and burned, mined and being transported across the world then the remains burned and built into houses. Imagine that. Being killed when you had a perfectly good life and you just get sold dead. This is happening to living things in the rainforest. Why should we stop this? Here are some reasons: Rainforests could be the answer to AIDS, HIV, cancer and loads of other illnesses that are wiping out our species...

The inclusion of social and environmental dimensions in Ryan’s thinking about sustainable development and in his perceptions of how geographers deal with issues of sustainability might reassure many educators. Certainly Ryan’s conceptions seem inclusive of many of the concepts identified by PESD, and perhaps even appear workable within the frameworks suggested by Bonnett (2002; Bonnett and Williams 1998) about human flourishing and developing a ‘right’ relationship with nature.

However others might ask critical questions about conceptions of geography as helping make the world better. Marsden (1989, 1997) is sceptical about geography as a subject with a mission to create a ‘better world’ because teaching for good causes, however meritable, may all too easily lead to indoctrination. Morgan and Lambert (2005) are cautious that geography-with-a-mission might be morally careless, suggesting that geography’s role should involve asking difficult questions about inequality and sustainability.



I am not suggesting that Ryan's teacher is morally careless, indeed 'difficult questions' formed the focus of many of the lessons I observed in his school. My point is to suggest that while 'geography as making the world better' might appeal to pupils and underpin the sense of value they attach to the subject, these issues are not straightforward, and there are questions of balance between ESD that is about and for action, and that which asks critical questions and addresses more fundamental issues. These arguments are well rehearsed in environmental education literature, where it has been noted that teaching for action often falls foul of addressing 'symptoms masquerading as causes' (Bonnett 2002).

Both Lisa and Ryan see geography to some extent as making the world better. However Ryan's views differ from Lisa's because he doesn't perceive geography as associated with a particular (environmental) stance. My aim in this analysis has been to show the markedly different forms such views can take and the broader contexts in which they can be situated.

It is worth spending some time now considering Jenie's views. As Ryan's classmate, Jenie holds strikingly different ideas about both the relationship between geography and ESD, and about the priorities associated with sustainable development. My purpose is not to merely demonstrate that pupils have different views about sustainable development, but rather than pupils may see their own views in different contexts i.e. in terms of different perceived relationships between ESD and geography as a subject.

In the rainforest debate, Jenie argued vehemently in favour of deforestation, because it could "help Brazil move closer to the MEDC category", concluding that "you may think saving acres of forest is more important than saving millions of living souls but we think not". Afterwards she commented "I'm not looking at it from a tree's point of view 'I'm a tree, I'm going to get cut down'. It's more about people, if it's going to affect people". Her standpoint is both similar and different to that of Ryan. While Ryan empathised with nature and imbued it with inherent value, Jenie focused on people; part of Ryan's argument also attended to people's needs, but in his case conservation rather than deforestation was seen as the best means to meet them. Recalling Lisa's ecocentric perspectives, Jenie's views appear starkly anthropocentric (Job 1996).

These differences are interesting in themselves, however it is on their situation in the broader context of school geography that I wish to focus more closely. While Jenie felt strongly that deforestation should be permitted in the Amazon, she also thought it was important that other people had different views, and that these views were listened to. She explained that geography involves studying different points of view either held by people in the wider world, or her peers. In reference to the debate, she said:

I think people have their own view and they don't look at anyone else's but when you do a debate it kind of makes you stop and think about other people as well... if people all had the same view then other things wouldn't get a look in. Like Saul is more bothered about trees and I'm more about people and other people are more about money and stuff.

I am arguing that not only do Lisa, Ryan and Jenie hold different views about sustainable development, but that they have different ideas about how geography and ESD relate to each other, and about the broader context in which their views are situated. While Jenie sees geography as a subject in which she can express and consider her own views, she also values the fact that geographers attend to multiple different viewpoints. Lisa conceives geography in terms of her own points of view: she is 'eco-friendly' and sees geography as a 'green' subject promoting environmental values. Ryan considers issues of sustainable development with reference to the environment, present and future generations of people, and believes that his own stance replicates that of geography more generally. He doesn't describe geography as directly telling pupils what to do and think, but he does describe the subject as attending to the various aspects of sustainable development he thinks are important.

All three pupils conceive geography in some way as about 'making the world better'. In Lisa's case this may be summarised as 'geography on an environmental mission', while for Jenie it is more 'geography as listening to different points of view'. For Ryan it is different again: 'geography as helping the world by considering multiple different issues with respect to development, and by actively promoting mutual understanding and respect for other cultures'.

## **Futures**

Notions of futures are integral to ideas about education for sustainable development, and have also featured strongly in recent developments in geography education. 'Futures' is one of five core concepts underpinning the new GCSE Geography (Westaway and Rawling 2003), and forms an important component of the Geographical Association's *Global Dimension* project (GA 2006): "only when we have a vision for the future can we act towards it". The GA website suggests that teachers use a 'futures frame' in which students envision possible, probable and alternative futures. Such a frame deals closely with issues of the needs and rights of future generations as well as uncertainty and precaution in action that are among the concepts of education for sustainable development identified by PESD (CEE 1998).

Slater (1996) identifies a different sort of relationship between geography and the future. She suggests one of five means-ends frameworks in geography is 'scientific' geography which seeks explanations by way of prediction, modelling and generalised law-seeking. This seems closer to what Morgan and Lambert (2005) argue is one of three distinct purposes of geography: "an ability to predict and manipulate the world" (p 43). These indicate a different sort of futures geography – one of prediction rather than one of exploring different possible future scenarios. What do pupils think about geography and the study of the future?

Bart expressed strong views that geography does not involve studying the future or making predictions. He said such activities were neither relevant to the subject nor worthwhile in general because the future is unpredictable and unknowable on concrete, certain terms. In his words "anything could happen, anything could change". His classmate Lisa has very different views. She describes geography as about what *might* happen – studying different future possibilities without necessarily predicting what *will* happen. For example Lisa said that studying migration in geography was all about understanding the different things that might happen to migrants – that for some "things might work out, but that for others it might not go so well". Bart said there was no point

trying to suggest what would happen to migrants because there is no way of knowing for certain.

Ryan's views are different again, resonating more specifically with notions of the needs and rights of future generations. Ryan's description of geography as about things that help or adversely affect people has a strong futures-oriented flavour: "I think [geography's] all about what it's going to be like in future centuries and decades and stuff". He spoke of geography as studying the issues that "our grandchildren might face in years and generations to come", and as trying to pre-empt these problems and find out ways to deal with them. Geography for him involves thinking about the long-term implications of present day activities – for example pollution might eventually "wipe out our entire species" while deforestation might deny medical capabilities to future generations.

Bart and Lisa both share a similar understanding of the future as unpredictable. While for Bart this renders futures study irrelevant to geography and not worthwhile, for Lisa geography is actually about this uncertainty – her ideas are much closer to those embodied in the *Global Dimension* project, new GCSE, and PESD notions of education for sustainable development. Evidence does not document the extent to which Ryan sees the future as predictable or knowable and thus claims in this respect would be unfounded. However a subtle difference can be identified between the views of Lisa and Ryan in terms of concepts suggested by Holloway *et al* (2003): Lisa tends to describe geography with reference to short-term within-a-lifetime scenarios, while Ryan's are strongly oriented towards long-term beyond-one-lifetimes eventualities. Ryan's sense of geography is also strongly associated with notions of responsibility to future generations – perhaps fitting the idea from sustainable development that we do not inherit the earth from our ancestors, but borrow it from our grandchildren.

## Conclusions

### *Issues and debates in geography: where are pupils?*

One way to consider my findings is in terms of the adult-centred nature of debates in geography education about environmental education and education for sustainability. Geography educators and geography education researchers have tended, implicitly or explicitly, to assume that it is for them and them alone to decide what the relationship between geography and environmental education or education for sustainable development is. My study suggests otherwise.

How green is geography? How green should it be? These are questions that academics have often posed and responded to themselves, but rarely have they paid attention to pupils' ideas about these issues. Accusations of geographers 'greenwashing' students seem to be based on a model of pupils as passive recipients of knowledge and values transmitted by the teacher. One only has to examine the case of Lisa to see that some pupils are perfectly capable of imbuing their geography classroom experiences with environmental meanings and values no matter what the intentions of the teacher. It seems likely that if a teacher *were* to promote the sort of geography conceived by Lisa, pupils might be equally capable of engaging with those experiences in their own personalised ways.

What meaning do debates between adults have in light of evidence that pupils themselves construct varied notions of these relationships? Jenie's geography experiences provide opportunities for her to express and develop her own anthropocentric views, situated within a broader sense of geography as studying lots of different views. Ryan conceives geography as actively contributing to sustainable development through considering a wide range of social, (inter-)cultural and environmental dimensions. If two pupils within the same class have such different and complex views, more abstract or theoretical discussions must surely attend to the pupil's role in actively determining the relationship between geography and environmental education.

#### *People-environment relations and their contextualisation in geography*

Another thread running through this discussion relates to the context in which the study of people-environment relationships is situated. For some pupils the somewhat unsurprising indication is that social relevance provides a key justification for studying the environment and a key focus of interest and perceived importance. However for others the natural environment itself retains intrinsic interest and these findings perhaps remind us not to neglect the potential for fascination and inspiration that the environment *per se* holds. An appreciation of nature and its spectacular and less spectacular phenomena constitutes a form of people-environment relationship as much as anything else.

#### *Pupils' views and possible implications for teachers and educators*

It should come as no surprise that pupils' views about sustainable development range from anthropocentric to ecocentric standpoints and also may incorporate quite complex multi-dimensional views more similar to those of PESD or WCED (1987). Is the purpose of geography to help pupils' examine and develop their own personal views? Is it to help pupils understand that their own views are part of a larger and diverse milieu? Jenie seems to think the answer to both of these is 'yes'. However some educators might find her anthropocentric stance problematic and prefer that her own views developed to encompass a sense of responsibility to both people and the environment (more like Ryan). This need not involve indoctrination, although one must be careful that it doesn't.

Fears of indoctrination may not simply be allayed by arguing that the role of geography is to help pupils understand their own views. Morgan and Lambert (2005) argue that the suggestion that because 'there are no right answers' in geography 'any answer will do' is as morally careless as deliberate indoctrination. They suggest that there are nearly always views which are demonstrably less tenable in light of evidence, contending that the very notion of teaching as if there are answers is problematic:

The challenge in teaching environmental issues in geography is to avoid dogmatic remedies. Careful teaching will concentrate on thinking strategies so that we can make worthwhile distinctions and decide how to align or attach ourselves to a healthy and sustainable position. (p 65)

What, then are we to make of Jenie's ideas – that geography is about expressing her own views within a wider context where differing views are accepted as the norm? Or Lisa's views that a 'right' answer in geography is the most environmentally friendly

one? Or Matt's ideas that there are facts in physical geography, but that in opinions-based human geography, anything goes?

Just as there may be no 'answers' in geography then perhaps there are no 'answers' as to the nature and purpose of geography. If geography educators and academics were to decide, say, that the purpose of geography is to help pupils clarify their own views, subject them to critique, and situate them in the context of alternative views, then this might be problematic on two grounds. First, evidence suggests that this is not an issue purely for adults to decide – pupils will have their own 'take' on their experiences whether consulted or not. Second, just as there are different opinions *in* geography, surely there is scope for different opinions *about* geography.

*Reflections on where this has taken me*

The upshot of this analysis seems to be that further consideration is required of the following question: Is it as problematic to assert that there is one conception of geography as it is to argue that all conceptions are equally valid or valuable?

If geography educators are not in unison about the nature and purpose of (school) geography, then it seems unlikely that any agreement might soon be reached about ways adults might want pupils to conceive geography. However there is a wider consensus that one of the purposes of many subjects is to help pupils learn how different disciplines work, the sorts of questions they ask and the ways they go about addressing them. More specifically in geography, Leat (2000) argues that school geography should help pupils to "think in the ways that the best geographers do" (p 139). On the basis of evidence from this study and current geography education literature, two assertions may be made: (i) Pupils seem to have diverse and complex ideas about the nature and purpose of geography, (ii) Geography educators are undecided on exactly what understanding geography as a discipline might involve, or exactly how the best geographers *do* think.

In reference to the question I posed above, it seems rather unsatisfactory to assume that all conceptions of geography are as useful, valid, or valuable as each other. Just as Morgan and Lambert (2005) warn that suggesting there are no right answers *within* geography might lead to the assumption that any answer will do, so I am concerned about assumptions that any conception *of* geography will do. Some conceptions are clearly more tenable than others – it would be hard to argue for example that geography does not attend to both human and physical dimensions, however they are conceived and related to each other.

Some conceptions may also be more powerful in assisting pupils' educational development. It seems that Sara's conceptions of geography as about people and place, centred on notions of spatial variation and ideas that place matters to people, present a potentially useful series of conceptual tools through which she might experience geography and make links between those experiences. Jenie's rather stark conception of geography as comprising distinct physical and human sides seems to offer less. Lisa's ideas of geography as about possible uncertain futures seem more helpful than Bart's dismissal of learning about the future as irrelevant to geography and a waste of time.

Are Matt's ideas that physical geography is about facts and human geography about opinions to be welcomed as an appreciation of different modes of enquiry about

different aspects of the world, or approached with caution as crude and potentially flawed, especially when it comes to his notion that anything goes in human geography?

It seems to me that we are unlikely to witness in the near future a sudden agreement about the essence of school geography, indeed this may be no bad thing. It is equally apparent that merely accepting pupils' conceptions of geography no matter what they are would be fraught with problems. The question then becomes this: Where should geography educators and teachers draw the line between helping pupils develop and articulate their own conceptions of geography, and promoting certain views which may have particular strengths and/or value?

I return now to the point made at the start of this paper: the notion, suggested by Morgan and Lambert (2005) of geographies, not geography. While debates continue in academic journals about the relationships between geography and environmental education, through which myriad possible geographies are apparent, I would argue that we must not neglect the geographies conceived by children. However researching pupils' conceptions of geography will not produce neat answers. Rather it will throw further into turmoil notions of what the nature and purpose of geography are, what its relationship to environmental education is, and what the role of geography educators with respect to teaching and learning about education for sustainable development should be.

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