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A critical account of what ‘geography’ means to primary trainee teachers in England

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Research on trainee teachers' conceptions of geography has criticised their views for being limited, and failing to appreciate the breadth or depth of geography. A body of research in this area has developed over the past two decades, producing well-established classifications through which to analyse conceptions of geography. This contribution breaks from these classifications by offering a critical review of the existing literature and then, drawing on critical theory, distinguishing between geography as knowing, understanding, and acting. Findings from a survey of first year undergraduate primary trainee teachers (n=42) are analysed through this critical framework, and it is argued that there is a distinct Cartesian duality in the way that respondents see the world as an object of study for learners as cognizing subjects. This is argued to be problematic and, in response, a moral vision for school geography is outlined that re-presents geography in terms of a critical praxis.

Keywords: primary geography; primary teachers; conceptions; initial teacher education

Introduction

This paper contributes to the growing literature on teachers' conceptions of geography by offering a critical review of research to date, and presenting findings from a survey of first year undergraduate primary trainee teachers (n=42). Following others, including Walford (1996), Catling (2004, 2013), and Morley (2012), the trainee teachers were asked to provide written responses to the question 'What is geography?' We present the findings from this data in relation to existing accounts, and argue that the 'limited' view of geography suggested to be held by trainee teachers by existing studies finds further support here. Geography is seen to include study on a global scale, but a sense of process, interconnections, multiple scales, and future orientation or sustainability is limited. These findings are of particular note because of the quite different – and more ambitious – ways in which younger children describe geography:

[Children] said that school should engage them with real-life issues and not limit itself to inward-looking agendas. They welcomed a broad curriculum... They wanted to learn how to manage money and how to manage life, to learn about other societies and other languages; and to engage with macro-problems such as global-warming, sustainability and pollution. They also wanted to know about economic and political matters, such as war, terrorism, famine and poverty in other countries. We note here a strong argument in favour of upgrading the status of geography in primary schools... (Alexander, 2010, p. 65)

Our findings are also interesting because of the reasonable period of time over which studies have now been asking a similar question of trainee teachers. There are 20 years between Walford's study and the current research, and during this time the geography national curriculum has undergone substantial changes. In Morley's (2012, p.135) terms, the "geographical diet" to which pupils are being introduced is – at least intended to be – very different. Therefore, similarities between teachers' conceptions of the subject across this period of time have implications for our understandings of the role that formal representations of a school subject, or the curriculum as intention - including a National Curriculum and examination specifications – play, and the extent and nature of their influence on the curriculum as reality (Stenhouse, 1975).

Our contribution to the literature also extends beyond this addition to existing categories by responding to Firth and Morgan's (2010) call for geographical research to be informed by critical theory. Drawing on Carr and Kemmis' (1986) interpretation of Habermas' knowledge constitutive interests, we utilise an alternative analytical framework through which conceptions of geography might be analysed critically. As a result of our analysis we note that there is a distinct Cartesian duality in the way that our respondents see the world as an object of study for learners as cognizing subjects. This, for reasons we discuss later, is problematic. Consequently, therefore, we argue the need for a moral vision for school geography that re-presents geography in terms of a critical

praxis. Such a praxis, we go on to argue, is needed in order to re-connect whatever geography is with a sense of purpose that goes beyond the ‘good-in-itself’ belief that geographical knowledge is indicative of an individual’s culture and refinement.

Literature review

A body of studies has developed around the notion of students’ and teachers’ conceptions of geography, initiated by the question Walford (1996) asked his trainee teachers: what is geography? His analysis of their responses has stimulated research on the conceptions of the subject held by: school students (Hopwood, Courtley-Green, & Chambers, 2005; Hopwood, 2008, 2009); undergraduates (Bradbeer, Healey, & Kneale, 2004); primary trainee teachers (Catling, 2004, 2013; Martin, 2000; Morley, 2012); secondary trainee teachers (Barrett Hacking, 1996); and other teachers, including those with more experience (Alexandre, 2009; 2016; Alkis, 2009; Brooks, 2006, 2010, Puttick, 2016).

These studies can be divided into those asking participants, fairly directly, what geography is, and those that have explored perceptions of geography indirectly and through a wider range of data generation methods. Examples of the former include Walford (1996), Alexandre (2009), Alkis (2009), Catling (2004, 2013) and Morley (2012); examples of the latter include Hopwood (2008, 2009), Barrett Hacking (1996), Brooks (2006, 2007) and Puttick (2016). Walshe’s (2007) case study of two secondary school geography teachers is a further example of the latter. She concludes that there was an “apparent relationship between a teacher’s understanding of geography and their professional training, academic background and personal values” (p.97). Ethnographic research on geography departments has extended this conclusion to argue that geography teachers’ perceptions of the subject are often described in relation to longer-

term narratives extending back through formal education to childhood experiences of geography (Puttick, 2016).

Walford’s (1996) research on teachers’ conceptions of geography provides the model on which the research described above as asking participants ‘directly’ involved, over a five-year period, asking 105 of his PGCE (Post Graduate Certificate in Education) geography students one open question: what is geography? He describes his search for classifications through which to analyse their responses, which included the ten “conversations” discussed by Livingstone (1992), and a range of educational philosophies which, in line with Firth and Morgan’s (2010) critique of the field, omits any critical approaches. Having explored these other options, Walford (1996) was “eventually led to derive a new classification which took elements of the others noted above, but which seemed easier to apply” (p.73). He suggests his responses may be grouped into four main conceptions of geography: interactionist; synthesising; spatialist; and placeist. These classifications have been influential, and similar categories have subsequently been used by others (Catling 2004, 2013; Morley 2012; Alexandre 2009; Alkis 2009). Catling’s development of the categories is shown in Table 1.

Geographical perspective	Geography as the study...
Globalists	...that develops an informed knowledge and understanding of the world, its human and physical features and environments and the countries of the world.
Earthists	...of the Earth, its physical and human features and environments and of the forces and processes that shape them.

Interactionists	...of the interactions between and interdependence of people and their natural and social environments, of the processes that sustain these interrelationships and of their effects and influences as outcomes.
Placeists	...of people's lives and activities in places, communities and cultures to understand what they are like, why they are as they are, what this means for them and how they relate to others.
Environmentalists	...of environmental concerns and issues, locally and globally and about sustainability.

Table 1. Catling's (2004) Categories of postgraduate primary trainee teachers' conceptions of geography (Morley 2012, p.126)

One obvious critique of the methodological approach of these 'direct' studies is the disconnect between what is acknowledged to be a complex and highly contested issue (what *is* geography?) and the restricted format in which participants must respond. Participants are asked to define the term geography, often in less than 30 words. With limited time to prepare, and limited time and space to construct an answer, it seems unsurprising that studies often conclude that teachers' perceptions of geography are limited. For example, Morley (2012) argues that the trainees in her sample (n=211) "had an information- orientated perception of geography and did not appear to fully appreciate the breadth of the subject" (p.123). Both Alexandre (2009) and Alkis (2009) similarly argue that the findings from their large scale questionnaires are limited by their methodology; their survey approach did not allow them to explore teachers' conceptions in the detail they believe is necessary. This critique is revisited below

(Methodology), because we chose – in spite of the limitations - to follow the direct approach, primarily because this would allow us to present a contrast to existing studies by analysing the data through a critical account of knowledge.

Critical theory and teachers' perceptions

Our critique of extant research findings is inspired by the critical (Firth and Morgan, 2010) lens through which we have undertaken our analysis and subsequent discussion. The critique is focused on questions about the purpose of research on perceptions of the subject, and the related question about the purpose of the subject itself. Our contention is that research in this area has served to largely reproduce understandings: for example, the findings of Morley (2012, p.132) “appear to support those of previous researchers” (including: Bradbeer et al., 2004; Catling, 2004; Martin, 2000; Walford, 1996).

We believe there is scope for a more critical and forward-looking account. In particular, questions about why the research was carried out, including the motivation and values of the researcher have been underexplored: what are we ultimately trying to achieve? One response to this question is given by Catling (2013), whose aim is to “engage prospective teachers in understanding their own view of *geography* so that they might teach the subject more effectively” (p.157). However, the notion of ‘effectiveness’ is contested, and is often associated with a ‘what works’ view of educational research that has been critiqued for neglecting important questions about aims and purposes (Biesta, 2007; Pring, 2004). In order to avoid misinterpretation, it is important to note that Catling’s wider body of work clearly has raised and contributed significantly to the addressing of these kinds of questions (Catling, 2010; Catling & Martin, 2012; Lee & Catling, 2016): our critique is limited to this rationale within the

study on teachers' perceptions of geography. Nevertheless, others have gone further to make similar criticisms of the whole field of geography education research, suggesting that researchers and teachers have prioritised practical concerns about what works (Rawling, 2003). Morgan and Firth (2010) argue that

the specific pressures placed on geographical education researchers in the UK have tended to lead to “problem-solving” approaches to research. There is a focus on providing knowledge “useful” to teachers in schools. The prospects for a renewal of debate about the aims and purposes of geographical education, based on an engagement with a wider set of theoretical resources, seems remote... (p.90)

In their second article in the same special issue of IRGEE, Firth and Morgan (2010) argue that theory in general, and critical theory in particular, have been engaged with in only limited ways - even “disregarded” (p.111) - by geography education research. They argue that “one of the major contributions of critical theory is the way in which it problematizes the constitution and production of knowledge” (p.111). There is something particularly interesting about the persistence of dominant ways of conceptualising geography by teachers, in spite of the significant changes to the (formal representations of the) school subject. This literature is summarised well by Morley (2012):

One very dominant group of ideas about geography emerged: the global fact-finder perspective. The distinction between this group of statements and that of the global processor perspective is so subtle that it would appear that these two categories could justifiably be considered to represent one perspective – that of the student who appears to perceive geography purely as the study of the world in which we live. These findings are therefore similar to those of Walford (1996), Martin (2000), Catling (2004) and Alkis (2009) all of whom found that the majority of students see geography as concerned with the physical–human dimensions of the environment (p.131)

What has received less attention from the research is a development of the Geographical Association's (2009) position, that:

Designing a curriculum is not just a technical matter, specifying objectives and a course of study to meet them. It is a moral concern, and should reflect what we think we should be teaching. (p. 27)

Although this has received less attention, Morgan (2012; 2011, 2003) has argued for a radical moral agenda based in critical pedagogy. He suggests that the moral purpose of such geography is to identify the evils of social reproduction that are reinforced through geography curricula, enabling students to identify and resist such forces through their own lives and living.

Methodology

The empirical aspect of our study follows the work of others (in particular, Walford 1996; Catling 2013, Martin 2008, Morley 2012) in asking participants to answer the question what is geography? Responses to this question were written, and we did not to impose a word or time limit. Walford (1996) and Morley (2012) restricted participants to a maximum of 30 words in which to respond, and, interestingly, we did not receive any responses longer than 30 words. Our sample of participants (n=42) was drawn from an undergraduate primary teacher education course. The data were generated during their first year of undergraduate study, and at the start of the geography subject aspect of the course. The participants had not had any geography subject input on their undergraduate course, and they knew when completing the task that they were about to begin their first geography session (with a researcher on the current study). Critical theory highlights issues around positionality and power relations, and for the purposes of the current research the most notable issues are raised

by our relation to the participants and researchers' formal relationships. In response to this, we emphasised the voluntary nature of participation, and assured participants of their anonymity. We did not seek to elicit additional information about the participants, such as their previous geographical education or qualifications. Written responses were not identifiable to any individual, and not even simple categories such as gender and age were used. This level of anonymity meant that it would not be possible for individuals to be identified by the researchers. While this further limits the data, and may not be appropriate for other studies, the written responses with no additional information were sufficient for our study.

The method of asking participants the direct question what is geography? may be critiqued for being simplistic: the 'limited' responses of participants may better describe the method than it does the participants' conceptions of geography. The method is limited because of the way in which it does not allow for any prompts; a semi-structured interview exploring the same question may generate a far richer conception of the subject by seeking clarifications and posing alternatives. A further, more substantive critique of the method is that we are really asking what is your conception of geography based upon your school experience? Thus, it is backward looking, and further research in the area might ask what could geography be? Nevertheless, we chose to use it because it allows for comparative discussion across the now twenty-year period over which studies have been conducted.

One distinctive aspect of our study is the collaboration between multiple researchers. In itself this is clearly not novel. However, it is uncommon in research on perceptions of geography, and the particular approach we take contrasts against much other previous research between multiple researchers. The dominant way in which

multiple researchers work is in order to produce greater standardisation of data analysis and reliability of findings. The argument is that where a lone researcher might be subject to unseen biases, having blind-spots that result in invalid or distorted conclusions, multiple researchers can work to counteract these problems. Shenton (2004) describes this process through the use of “peer scrutiny”, and Brooks and Hopwood (2006) offer an example of an external researcher and participants being used in a similar way. Brooks and Hopwood then go further by suggesting ways of using disagreements to deepen the discussion, in which tensions in data are reconstituted “as productive rather than problematic, constructive rather than threatening, and requiring exploration as well as resolution” (p.70). The aim of our collaboration is not to provide a greater level of standardisation or validity, particularly in terms of technical coding or analysis. Instead, the purpose of involving multiple researchers is to stimulate debate: here, leading to an alternative, critical framework.

Findings

We begin by presenting our findings in relation to the existing literature, making comparisons across the established categorisations and arguing that there are striking similarities between the findings of these different studies. We then draw on a critical framework to explore the ways in which primary trainee teachers’ conceptions of geography might be understood in Carr and Kemmis’ (1986) terms.

Upon initial analysis, the statements of our students’ responses to the question what is geography? can be organised into the categories identified by Catling (2004) and, subsequently, modified by others (including Morley 2012).

Geographical Perspective	Morley (2012) % of statements	% of statements
Global 'fact finder'	65	51
Global 'processor'	10	16
Interactionists	7	13
Facilitators	5	5
Placeists	4	13
Synthesisers	3	2

Table 2. Data comparison against Morley's (2012) survey into conceptions of Geography.

Geographical Perspective	Catling (2004) % of sample	% of sample
Globalists	36.2	41.3

Earthists	30.3	25.4
Interactionists	14.7	14.3
Placeists	13.8	14.3
Environmentalists	4.1	3.2
No clear response	0.9	1.5

Table 3. Data comparison against Catling’s (2004) survey into conceptions of Geography.

We discovered globalist and earthist perspectives to be similarly dominant to Catling’s (2004) findings. Global fact finders and processors were also similarly highly represented to Morley’s (2012) findings. Also in line with these studies, there are relatively small number of those who connected geography with environmentalism and, implicitly or explicitly, with any form of practical action. The interactionist, placeist and environmentalist perspectives do acknowledge our interdependence but, at the very most, only *suggest* that we might ‘get our hands dirty’ and take geography beyond accredited academic study.

The similarity between our findings and those of similar studies suggests that these trainee teachers were taught a school subject – “curriculum as reality” (Stenhouse, 1975) – that was very similar to the school subject taught to these other trainee teachers,

despite being taught under times of very different *intended* curricula. However, as a result of replicating the exercise, apart from confirming the findings of others, the conclusion reached forces us to ask the question so what? Yes, we can identify strengths, weaknesses and ‘gaps’ in trainee teachers’ knowledge – but having such knowledge does not provide us with a framework for deciding what to do next. We, therefore, offer a different categorisation of students’ perceptions to existing studies, which might enable a more dynamic and transformatory view of geography. We have deployed a framework for analysis inspired by Carr and Kemmis’ (1986) interpretation of Habermas’s critical social science and his knowledge constitutive interests. For Habermas, “knowledge is the outcome of human activity that is motivated by... [interests]... which he labels the ‘technical’, the ‘practical’ and the ‘emancipatory’” (pp. 134-135). The study of geography, we argue, may also be motivated by these ‘interests’ or concerns. Table 4 presents illustrative examples of statements from our data in relation to each of these categories. Very broadly speaking the ‘technical’ category aligns with a globalist/earthist perspective, the ‘practical’ category with interactionist/placeist views and ‘emancipatory’ may or may not align with environmentalist concerns.

Categories	KNOWING (‘THAT’) LARGELY STATIC FACTS ABOUT AN APPARENTLY OBJECTIVE, VALUE FREE REALITY often open to control and manipulation	UNDERSTANDING Contingent DYNAMIC PROCESSES/CONNECTI ONS & RELATIONSHIPS – cause and effect	ACTING: SOLVING PROBLEMS THROUGH INFORMED PRACTICAL ACTION (PRAXIS)
or Possible knowledge interest equivalence	Technical – instrumental knowledge/scient ific explanations	Practical – interpretive understanding derived through communication & dialogue which can inform	Emancipatory – recognition of and reflection on alienating &

(Carr & Kemmis, 1986, after Habermas)	seeking, ultimately, to technical control over natural objects.	and guide practical judgement. Recognition of ‘difference’ and/or contingency of knowledge	distorting conditions which position us in certain ways.
‘Geography is...’ statements	Looking at rocks & stuff	Understanding how the world works. It is important that people understand why such things as earthquakes happen	Thinking about our place in the world
	It can be used to predict future events	Understanding the world	
	Information about the earth and how it is made up	Learning about the world and natural processes and understanding how these happen	
	Look at the places around the world and the climate	Learning about the world and...	...how to sustain our environment
	Factual knowledge	Study of the social, economic, political and environmental world	
	Predictions for the future	Understanding the world	
	Facts, figures and real-life events	Study of ethical (<i>sic</i>) differences	
	Predict future events – like the weather	Studying peoples’ social & economic backgrounds	
	Learning how to read maps	Understanding the world and the processes that take place	
	Study of the earth	Social, environmental & political themes	
	The science of the world	Learning about the world and what is having an impact on the earth	

Table 4. Critical categories and illustrative example statements

Starting on the left of the table, *knowing* - the ‘technical interest’ - is typically instrumental in that it reflects the interest of human beings in acquiring the sort of knowledge that potentially facilitates technical control. The ‘practical interest’ refers to

knowledge 'not reducible to scientific knowledge' but knowledge 'in the form of interpretive understanding which can inform and guide practical judgement' (p. 135). Finally, the 'emancipatory interest' goes beyond interpretation of subjective meanings to examine how "existing forms of communication may be systematically distorted by prevailing social, cultural or political conditions" (p. 135). In other words, this interest is concerned with freedom and rational autonomy through a dialectically related praxis guided by "a moral disposition to act truly and justly, called by the Greeks *phronesis*" (p. 33). Here, in Carr and Kemmis' argument, lies the difference between the interpretive and emancipatory interests. Where they differ is that the critical view recognises how aims may be distorted and impeded by ideological forces and institutional structures. In this sense, environmental issues, for example, should be tackled not only as *individual* matters [to be studied in the classroom or field] but also, as Carr and Kemmis (1986, p. 31) put it, "*social* matters requiring collective or common action."

The technical interest is equated with statements that apparently see the study of the world as a more-or-less objective and value-free enterprise: that is, the study of 'bare facts'. There are also, in this category, statements that explicitly state that such knowledge is practically useful in so far as it can, for example, 'help us to predict future events'. The practical interest contains those statements that emphasise how we are to interpret and understand the world more as a dynamic system of processes. Also included here are statements that imply human geographies and the relationships amongst and between people, place and processes. The importance of 'understanding' such relationships is quite often raised via these statements. Words like 'sustain' and 'impact' are also included, implying the importance of the need for informed practical judgement in environmental matters.

The final category, representing the emancipatory interest, is all but empty. It is only towards the right do students implicitly ascribe a moral purpose to geography. It might seem odd, at first glance, to offer a classification with an almost empty category – but this is because the categories used here did not ‘emerge’ from the data – they were prescribed in order to illuminate what aspects of thinking about and interacting with the world might, possibly, be ‘missing’ from the participants’ experiences and conceptions of geography. Thus, the emancipatory interest is taken here to be a concern for knowledge that, firstly, does not see us as disconnected and neutral observers or hands-on manipulators of the world in pursuit of material satisfaction and comfort – but as agents with a yet-to-be discovered but essential interest in the impact of our actions. This interest draws us away from geography as the study of “landscapes of consumption and spectacle” (Chouinard, 1994, p. 34) and back into the world as stakeholders in the future of the planet and our place upon it. Ultimately, this perspective values informed, committed practical action, or *praxis*, as the means by which we might liberate ourselves from the calculative thinking that positions the earth and its resources as ours to own, consume and study at arm’s length.

An emancipatory interest is also concerned with critical reflection on the technical and practical knowledge that we already have, and how it has been presented to us in our education. For example, we might learn about growing global energy demands as an inevitable fact of life and then consider further some of the ‘techno-fixes’ on the supply side that society might deploy to meet those demands – such as ‘fracking’ or exploitation of tidal and wave power. A critical and potentially transformatory consideration, on the other hand, might question how we are to tackle the demand side of the equation – how we can consume less and what our responsibilities are. Geography is seen in this framework not as a study of givens –

what the world *is* (particularly ‘what it is’ from the normative middle-class, western perspective) – but what it *might be*. Geography thus becomes, to borrow a term from Heidegger, a projection of possibilities.

Discussion

The ways in which these teachers describe geography seems to be primarily as a school subject: something learned by cognizing subjects. This may be inevitable given the context in which the research was conducted; the participants are trainee teachers, and the geography sessions they were due to have were not about geography in general, but about teaching geography in the primary school.

Placing an emphasis on learning information and facts is quite different to what geography is to young children, and also what geography is to academic geographers. For example, Skar et al.’s (2016) work on children’s engagements with outside environments contrasts children’s experiences of “free” time against more schooled experiences. They argue that “free and spontaneous play functions as a key to more bodily, emotional and sensuous interaction in contrast to when children are engaged in numerous planned activities” (p. 527). Central to this argument is the way in which children and nature are theorised as interrelated – or hybrid – rather than dichotomous. For example, Taylor (2011) challenges “scholars to engage with geography’s hybrid nature/culture analytic...not seeking to provide an answer to the ‘nature’ of childhood but to open it up to a new form of political enquiry which attends to the interconnectedness of the human and more-than-human world” (p.432). Continuing this argument, Taylor (2013) calls for us to think “differently about nature, as well as what it means to be human... reconceptualiz[ing] what counts as nature outside the bounds of the nature/culture divide...” (p.66). The concept of nature has received much attention (Cf. Castree, 2005; Whatmore 1997, 2002), including arguments attempting to disrupt

“the purification of culture and nature into distinct ontological zones” (Whatmore 1997, p.46). In each of these cases, the purpose of the discipline is to offer critical perspectives on the relationships between people and nature, and to do so through an engaged praxis. For example, Whatmore set out to “perform [her] philosophical positions rather than state...them outright” (Braun, 2005, p. 835). Bruce celebrates this geography as “joyful...that finds in the open-ended nature of being the basis for hope” (p.834). It is hard to overstate the contrast between these geographies and the current political climate in which the landscape and functions of ITE (Initial Teacher Education) are increasingly viewed as “narrow and technical”, under a mission that risks becoming a vehicle for delivering educational reforms and feeding into systems of school improvement (McNicholl, Ellis, & Blake, 2013). This context is manifested in accountabilities linked to inspection regimes and content rooted in the delivery of statutory responsibilities (Ellis & McNicholl, 2015). Trainee teacher progress is rigorously evidenced, tracked and monitored, with teacher status secured upon meeting a set of national Teachers’ Standards, in an approach that fosters a tick-box mentality.

A strong emphasis in contemporary ITE has been to position learning to teach as a critically reflective process, whereby classroom practice is guided and shaped by engagement with theory. Consequently, when space and time are afforded to trainee teachers to step back from a pre-occupation with classroom practicalities, attention focuses upon the reflective practice of teaching, drawing upon concepts of teaching and learning. Whilst clearly such reflection is important, this approach potentially marginalises consideration of the geographical content to merely a transactional vehicle for the teaching and learning process (Lambert & Jones, 2013).

Against this backdrop, many of the previous studies have possibly been too cautious, in seeking to propose recommendations to inform future training which sit within the established conventions, rather than exploring fundamental questions around the purpose of geography. Furlong (2005) argues that, prior to the “rush to conformity” of the 1980’s, in an era with less constraints, there were greater opportunities to engage in creative and innovative teacher education with students. More recently, Catling has suggested that curriculum making gives the “teacher permission to decide how they are going to work in relation to the subject, to the children and in terms of their range of approaches and techniques in teaching” (2013, p7). But this is inevitably dependent upon the enthusiasm and expertise of the geography subject leader and, without a pipeline of suitably inspired newly qualified primary teachers, such opportunities may be difficult to sustain.

Conclusions: distant memories or future possibilities?

In a sense it was too late to ask these participants what *is* geography?, because we were really asking what *was* geography (when you did it)? This might explain why two of the trainee primary teachers answered ‘boring’. For them the content of geography and the means of its delivery is already a distant, vague and unhappy memory. Ought we not to be asking what could or should geography be? Wooldridge and East (1951) wrote that “Geography begins only when geographers begin writing it” (p. 161) – but that all depends on what you class as ‘doing geography’. The geography that our trainees are referring to finished, for them, when they no longer had to do it – and, thus, no longer had to write it.

Perhaps we need to stop defending geography as a subject and focus on reconstructing it as a life-long moral enterprise. Academic geographers have long considered ‘Moral geographies’, and we discussed several examples of academics’

expansive and even joyful geographies – but they have had little influence on school geography. There are interesting questions to explore elsewhere about why this might be the case. Our concern is that, for some time - in particular, taking the two-decades over which studies have found trainee teachers to hold similar conceptions of the subject - there has been a ‘means-ends’ or ‘calculative’ approach to geography curriculum design and delivery that has emerged from a range of short and medium term problems created by the need to respond with alacrity to, for example; policy directives, funding shortfalls, recruitment crises and fluctuating student numbers (Winter, 2009, 2012). In this environment it is easy to become defensive.

We have argued that the underlying problem lies with our Cartesian tendency that positions us as subjects in a world of objects – or as geographers in a world to be studied. In this sense we see geography, as the participants here demonstrate, in epistemological terms – as a body of knowledge that is, somehow, ‘out there’. However, if we could move our thinking towards a more meditative stance that views geography from an ontological perspective concerned with our humanity, our being-as-humans, and our future on the planet, we may be able to begin to fill the empty final column of our typology. The methodological means of this move in thinking has been described, drawing upon the work of Heidegger, by Barbara Dalle Pezze (2006) in these terms:

Calculative thinking... calculates, plans and investigates [setting] goals and wants to obtain them. It serves specific purposes... and works out many new and... different possibilities to develop... [D]espite all this, Heidegger states that a ‘growing thoughtlessness’ is [still] in place and needs to be addressed. (p. 99)

Reflection as we commonly understand it is often of the calculative, short-term problem-solving type and, as such, is ‘thoughtless’ towards deeper concerns. Although

practically useful, this thinking has the potential to negate authentic being by its very instrumentality.

The ongoing move across the ontological difference from the world of entities to a meditative consideration of the fullness of what it means to be here is something that feels more and more like an awakening of a dormant facet of our own humanity than a profound methodological discovery. So much of what we know as geography is a 'given' account of the world as it is (or was) when seen through a particular lens. We spend much time studying patterns and developing models in an attempt to explain and understand something that is forever running away from us, but we rarely take time to consider how technologies and innovations, purportedly designed to make things better, are affecting our whole experience of being authentically human and, indeed, what it actually means to be 'authentically human' in a world that we attempt to control but which often seems out of control.

Our future work will explore in greater depth how this change in thinking, approach and emphasis might, in turn, influence what we know to be geography. In *Huck's Raft*, Mintz (2004) gives accounts of white children, in the days of the colonization of the American West, who had been abducted by the indigenous population. When the abductees were eventually found, their rescuers were somewhat bemused to find that the children did not want to go back to the regulated and oppressed lives they knew before. The point here is that what we might describe as *geography* had become, for them, a way of life. There is a clear link here with the 'self-evident' indigenous knowledge of remote cultures extant in the world today who do not, generally, go to school to 'do' geography. However, we may be getting ahead of ourselves! We must recognise that an emancipatory interest in the world is not only a legitimate means of seeking knowledge, but also an essential accompaniment to the

often ‘thoughtless’ technical and practical interests that guide us to see geography as merely the study of ‘consumption’ and ‘spectacle’. Geography, in as much as it is a study of something, should be a study of being.

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Table 1. Catling's (2004) Categories of postgraduate primary trainee teachers' conceptions of geography (Morley 2012, p.126)

Table 2. Data comparison against Morley's (2012) survey into conceptions of Geography.

Table 3. Data comparison against Catling's (2004) survey into conceptions of Geography.

Table 4. Critical categories and illustrative example statements