

# Could Legitimation Code Theory offer practical insight for teaching disciplinary knowledge? A case study in geography

Esther K. L. F. Vernon 

Teacher of Geography, Saffron Walden County High School, Essex, UK

## Correspondence

Esther K. L. F. Vernon, Teacher of Geography, Saffron Walden County High School, Essex, CB11 4UH, UK.  
Email: eastervernon@gmail.com

## Funding information

None

## Abstract

This article explores the relationship between disciplinary knowledge and subject pedagogy, utilising Maton's Legitimation Code Theory (LCT). It suggests ways that LCT could help facilitate deeper communication both within and between subject communities, providing a conceptual framework that gets beneath empirical manifestations to identify epistemic and semantic principles that generate those modalities. LCT's potential to represent systematised concepts diagrammatically may also enable wider communication. Following this, a small-scale case study is presented exploring the nature of the knowledge in the core topic *Changing Places* in the new geography A-Level (UK). This argued that what could be understood as a mismatch of expectations and dispositions by teachers and students can be understood more fundamentally as a contradiction (a 'code clash') regarding what counts as the 'rules of the game' within geography. The article ends by outlining implications for school geography rooted in the logic of the knowledge being pedagogically preinscribed, that is, that different knowledges' distinct epistemologies have real implications for how that knowledge should be recontextualised, reproduced and evaluated. It concludes that the exam board's recontextualisation of

this disciplinary knowledge is not merely a simpler interpretation; it is more significantly a different ideal 'knower' that is being nurtured and examined.

#### KEYWORDS

disciplinary knowledge, geography education, Legitimation Code Theory, pedagogic discourse, recontextualising

## INTRODUCTION

I was standing today in the dark toolshed. The sun was shining outside and through the crack at the top of the door there came a sunbeam. From where I stood that beam of light, with the specks of dust floating in it, was the most striking thing in the place. Everything else was almost pitch-black. I was seeing the beam, not seeing things by it. Then I moved, so that the beam fell on my eyes. Instantly the whole previous picture vanished. I saw no toolshed, and (above all) no beam. Instead I saw in the irregular cranny at the top of the door, green leaves moving on the branches of a tree outside, and beyond that, ninety-odd million miles away, the sun. Looking along the beam, and looking at the beam are very different experiences.

(Lewis, 1945 (2017), p. 52).<sup>1</sup>

To what extent is disciplinary knowledge pedagogically preinscribed? How does the nature of knowledge change across the key stages of the National Curriculum within a particular subject discipline and how does this affect students' experiences of the subject? What makes a student's essay more sophisticated? A teacher's lesson more powerful? A disciplinary understanding more authentic? Can this be taught explicitly, or must it necessarily emerge indirectly? These are important questions for teachers, school leaders responsible for curriculum, and wider subject discipline and other education communities involved in teacher education, continuing professional development or the creation of subject specifications for national assessment (Key Stage programmes of study, GCSE and A-Level). Neo-Bernsteinian scholars would argue that to aim to address them with acuity requires a conceptual framework to analyse knowledge and that can engage teachers in specific and focused rather than more generic conversations about what they are teaching (Bernstein, 2000; Maton, 2014; Morais, 2002; Rata et al., 2019). Such a framework or theorising needs to get beneath the surface features of teaching and learning disciplinary knowledge to identify principles that generate different modalities of these practices rather than merely labelling their empirical realisations. Legitimation Code Theory (LCT) is such a theory (Maton, 2014). It supports the analysis of the organising principles of practice in teaching school subjects and their explicit description, as well as dialogue across school subjects.

In 2014, in his book *Knowledge and Knowers*, Karl Maton made this observation:

Knowledge is described as a defining feature of modern societies, but what knowledge is, its forms and its effects, are not part of the analysis. Instead knowledge is treated as having no inner structures with properties, powers and tendencies of their own, as if all forms of knowledge are identical, homogenous and neutral.

(2014, p. 2)

Maton is the principal architect of the LCT, a framework for exploring practices in terms of their organising principles or 'legitimation codes', including knowledge practices, in different arenas of social life, such as education. It can be used for both researching and shaping teaching practice (Maton & Chen, 2019). Indeed, it is now being used across numerous countries to shape educational research, curriculum design and pedagogic practice, where researchers and teachers are motivated by concerns with social justice and knowledge-building. For example, regarding music (Maton, 2007), history (Martin et al., 2010), physics (Georgiou, 2016), humanities (Doran, 2019) and curriculum design in political science (Clarence, 2016a)<sup>2</sup>. Maton is one of the first-wave thinkers (see: Maton & Moore, 2010; Moore et al., 2006; Moore & Muller, 2002; Muller et al., 2004; Young, 2008) who contributed much to what Lambert (2011) referred to as the 'knowledge turn', and to the development of a neo-Bernsteinian social realism (see its second wave: Barrett & Rata, 2014; Hoadley et al., 2019; Morgan et al., 2019; Muller & Young, 2019; Rata, 2019; Young et al., 2014). This has sought to address the knowledge paradox in education, what Maton termed 'knowledge blindness'. It is an issue that has also been taken up within the geography education community (Beneker & Vaart, 2020; Catling & Martin, 2011; Cuthbert & Standish, 2021; Firth, 2007, 2011a, 2011b, 2013, 2015a, 2015b, 2018; Huckle, 2017; Lambert, 2014, 2018, 2019; Maude, 2016, 2020, forthcoming; Morgan, 2014, 2017, 2019; Morgan & Lambert, 2017; Puttick, 2013, 2015, 2018; Roberts, 2014; Slater et al., 2016; Vernon, 2016, 2019; Whalley, 2020).

This article is concerned with the relationship between disciplinary knowledge and subject pedagogy. It will draw upon a case study written from the position of a geography teacher researching their own teaching practice. The case study's aim was to better articulate the nature of the geographical knowledge being worked with in the school subject and to consider the implications of this for teaching and learning geography. As such, it sought to shed light on the pedagogisation of knowledge and its recontextualisation from the field of production to reproduction utilising LCT. The article will first outline the basic details of that small-scale research study (the author's Master's research) before introducing LCT's dimensions of Specialisation and Semantics in general terms, then commenting on how this might be complementary to other emphases. In order to illustrate its practical application in the support of teaching and learning, it will then focus on that example of its mobilisation, where it was drawn upon alongside the work of Tim Cresswell (1996, 2013, 2015), a human geographer, and C.S. Lewis's metaphor of looking 'at' and 'along'. This research was carried out in 2016–17 just as the outworking of the UK's curriculum reform (Department for Education [DfE], 2010) began first teaching of the new A-Level and GCSE specifications. In this way, by outlining LCT's concepts and illustrating their application, my hope and argument is that LCT can offer a practical set of tools through which practitioners and researchers can interrogate forms of knowledge and knowing. Ultimately, the aim of the article is to help teachers better see geographical knowledge—its nature, forms and effects within educational practice. This has implications for subject teaching, curriculum design and external exam assessment concerned with epistemic access (Firth, 2011b, 2015a, 2015b; Muller, 2014; Wheelahan, 2010; Winch, 2013; Young et al., 2014).

## A SMALL-SCALE EXAMPLE OF LCT IN PRACTICE

To gain insight into the nature of the knowledge in terms of its structure and structuring of knowledge and knowers, LCT was used within analysis of empirical data pertaining to my teaching of the topic of *Changing Places* within the newly reformed geography A-Level (exams taken at age 18 in the UK). The research was conducted in the academic year of 2016–2017, with the main data collection period being from September to January—this period therefore represents the reformed A-Level's first teaching in the UK. The A-level

reform was part of a wider curriculum reform encompassing all the Key Stages across the UK (Dominiczak, 2013; Gibb, 2015; Gove, 2009). Within geography, and particularly within human geography, part of the aim was to see a significant re-engagement of university thought with the school curriculum (A Level Content Advisory Board [ALCAB], 2014; Evans, 2016; Rawling, 2015). Amid this particularly intense period of curriculum change, *Changing Places*, one of the compulsory topics across exam board specifications, stood out as a pressure point, eliciting strong reactions from teachers.

The research used an interpretive approach (Crotty, 1998), through a case study methodology in the sense defined by Taylor (2013, 2016), to study one year 12 class of 23 students (mixed ability setting), taught by and including the author. Taylor conceptualises the 'case' as 'space' by drawing on Massey's relational way of thinking about 'place' as a 'bundle of trajectories' (Massey, 2005, p. 119 in Taylor, 2013, p. 808). This enabled this case to be bound in a way that welcomed the complex, dynamic nature of knowledge working. Figure 1 represents this, where the curricularised geographical knowledge is seen as a product of the teacher's and students' interactions with it:

'Teacher's pedagogy' and 'students' representations' are different ways in to capturing the activated nature of the curricular knowledge. This does not preclude the profound significance of other agents and factors in the 'curriculum making' process (Bladh, 2020; Deng, 2018; Cf. Lambert & Morgan, 2010; Lambert et al., 2015), most significantly here chief examiners (see Puttick, 2015, particularly p. 350); rather, it recognises their influence and seeks to analyse the product of these interactions. This means the nature of the geographical knowledge can be both abstracted and contextualised as the object of study. The structure of the original research questions was based on Bernstein's notion of education, comprising three message systems: curriculum, pedagogy and evaluation (1971, p. 159), and the way this was utilised by Chen (2010, in Maton & Chen, 2016, p. 44) in her application of LCT's specialisation codes. However, as the study progressed, it became clear that the scope needed to be adapted for the scale of this analysis. Consequently, the meaning of 'evaluation' was changed from 'assessment' to 'informal evaluation' (which would include, e.g., conversations and body language), and 'curriculum' taking the form of 'content knowledge' was subsumed into 'pedagogy'. To this end, the following two research questions were explored:

1. In what ways was the geographical knowledge activated through pedagogy?
2. In what ways was the geographical knowledge represented in informal evaluation?

Due to space, and the degree to which these questions are cumulative in nature, this article will focus its discussion on the first of these research questions, and only draw upon aspects of the second in order to contextualise the first.

The close-to-practice nature of this study (BERA, 2018) meant there was the potential for some degree of conflict between my role as a teacher and the researcher. As previously intimated, the topic *Changing Places* was chosen partly because of the strong reactions

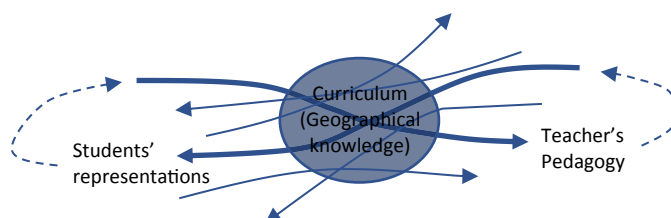


FIGURE 1 Conceptualisation of the case study: teacher's and students' sense-making of the geographical knowledge within the topic *Changing Places*

it elicited amongst teachers and students (the cohort consisted of three classes with six geography-specialist teachers). *What is the nature of the knowledge in this new A-Level topic?* was, in equal proportion, a sensitive but important question to ask. The power asymmetries between the teacher and the student combined with the role difference between a teacher and the researcher meant that, as I witnessed my students' responses to the topic (such as nervousness and frustration), I would at the same time often be teaching them how to interpret and respond to their responses. The issue of who is doing what knowing and what degree of ownership and commitment they hold over their claims to know is complex. I have outlined how the case study's conceptualisation welcomed this. I will now briefly explain the practical responses taken.

The intention was that all methods be as unobtrusive and naturalistic as possible, for example, in as far as I was aware, I would not ask students questions that I would not have asked as their teacher. This ruled out more direct and possibly more insightful approaches, such as focus groups, in favour of observation and document analysis. The data collection methods consisted of a research diary [RD] kept by the author every evening after the lessons as routine, and a few other occasions. At a preliminary stage, a questionnaire [Q] was taken of another class in the cohort using categories adapted from Maton's (2007) analysis of school music. Third, the author's own teaching notes, plans and resources [TN] were analysed after the course had finished for their 'degree' of recontextualisation (Puttick, 2015), and the content of the knowledge to be learnt (i.e., what had been taught) was written up as a summary document (students also used this for a revision aid). Fourth, nine hours of audio-visual recording of the class [V] was collected as a 'back-up' in the later stages of the course (at this stage the intention had still been to focus on document analysis). Fifth, the written work [W] of 10 students, reflecting a range of exam question styles, was selected and analysed through a process of open coding (Boyatzis, 1998, p. 31), as well as every student's reflection task [RT] which they completed at the end of the course. At the start of the term, permission for research was granted by all students and their parents, and BERA ethical guidelines (2011) were followed. Data analysis of the research diary and recordings took the form of first a bottom-up approach using open coding to explore emerging themes (Boyatzis, 1998; Dey, 1993), then a top-down approach of organisational coding using the analytical concepts of LCT explained in the following section. The aim was to always allow the data to speak on its own terms in an attempt to avoid unsubstantiated theoretical imposition, though in reality this gaze was always present to some degree. Following this, the priority became the process of creating an 'external language' for the theory's 'internal language' (Bernstein, 2000; Maton & Chen, 2016; Maton et al., 2016; Neves et al. 2004, pp. 173–182). This has been an iterative process of breaking down the abstract concepts (conceived in the field of production) into the chain of their realisation in my context (the field of reproduction, the topic *Changing Places*, the first year of its teaching, within a particular department, with a specific teacher and class). Figure 3 shows a small aspect of this. An external language is essential because LCT's concepts do not themselves make contact with the particular, and LCT does not itself give explanations; rather, it helps generate them (Maton, 2014, p. 16). It has been, effectively, a tool to help see both a clearer and more complex picture.

## LCT SPECIALISATION

Specialisation is one of the five dimensions of the sociological framework of LCT, which subsumes and extends key concepts from the work of Basil Bernstein and Pierre Bourdieu. Specialisation analyses the organising principles of knowledge in terms of what makes a claim to know 'legitimate'—what makes it worthy as a claim to truth. It starts from the simple premise that every practice, belief or knowledge claim is about or oriented towards something

and by someone (Maton, 2014, p. 29). In this way, knowledge is comprised of both *epistemic relations* (ER) to the object of study, and *social relations* (SR) to the actor. As such, ERs conceptualise knowledge structures and SRs conceptualise knower structures. Either relation can be stronger (+) or weaker (-) along a continuum of strengths, and in relation to the other (Clarence, 2016a, p. 126), where stronger denotes the object of knowledge, method or the attributes of the knower are clearly defined and bounded (Classification) and that boundary message is highly controlled (Framing) (see Maton, 2014, pp. 31–32). Together these concepts can realise four modalities: a *knowledge code* (ER+, SR-) when the actor's claim to legitimacy is based on the possession of specialised knowledge; a *knower code* (ER-, SR+) when the attributes, attitudes and dispositions of the actors are the main measures for achievement; an *elite code* (ER+, SR+) when both are equally important; and a *relativist code* (ER-, SR-) when effectively 'anything goes'—it is a 'blank gaze' (Maton, 2014, p. 186) as it legitimates neither (see Figure 2).

Maton theorises two further layers to both the epistemic and social relations, both of which are relevant to school geography, but the focus in the extracts that follow will be the social relations; so, I will outline these further before progressing. Within the knowledge's social relations, Maton defines four *gazes*. Moving from the SR- end of the spectrum to the SR+ end, he describes a *trained gaze*, *cultivated gaze*, *social gaze* and a *born gaze* (Maton, 2014, p. 95). A gaze is 'a particular mode of recognising and realising what counts as an 'authentic' sociological reality'; 'to know *is* to gaze' (Bernstein, 2000, p. 164, emphasis added; see Collier, 2003). Within the discipline of geography, all these gazes are at play, but within school, geography analysis resides towards the SR- end of the spectrum, as the basis for subjectivity (such as where a person is from, what social class, gender or race they are) is not a criterion for defining them as 'knowers'. Indeed, there is silence on the role of subjectivity itself—geographical accounts of the world are not traditionally assigned the status of 'texts' (social constructions requiring interpretation) and 'subjectivity' is understood simply, and negatively, as 'bias'. Within the social relations, Maton distinguishes two kinds: *subjective relations* (SubR) between knowledge practices and 'kinds of knowers'—these valorise or prescribe the identities, attributes and dispositions the knower should possess; and *interactional relations* (IR) between knowledge practices and 'ways of knowing'—or more literally, 'ways of interacting' with 'significant others' in the field (Luckett, 2016, p. 1004; Maton, 2014, p. 184), for example, through emersion in a canon, or apprenticeship with a master or coaching to raise identity-consciousness. Again, this 'who' and 'how' of knowing

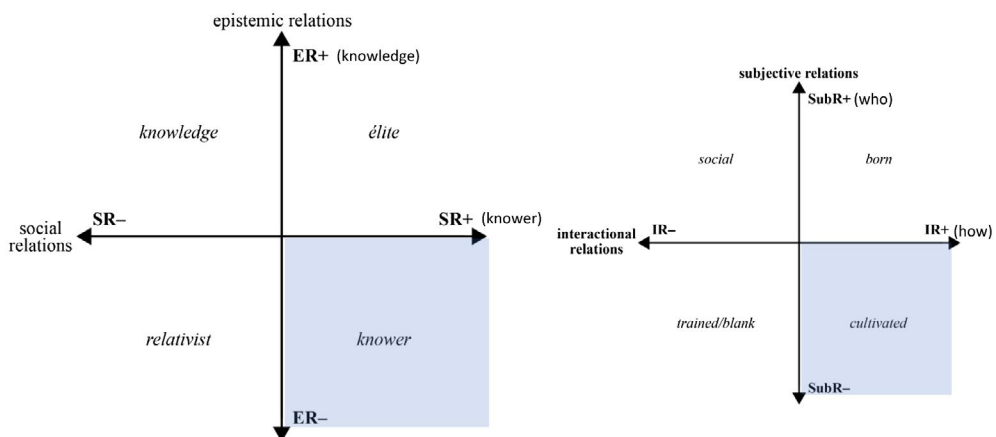


FIGURE 2 The relevant remits of the Specialisation plane discussed in this case study: knower code (left) with a cultivated gaze (right) (Maton, 2014, p. 30, 186)

(see Figure 2) can be stronger or weaker along a continuum of strengths (see Maton, 2014, pp. 185–186).

A third layer of organising principles unpacks the IRs: Maton's notion of *lenses* (2014, p. 189). These 'refract' the gaze in particular ways (ibid., p. 193). The 'interaction' within *interactional relations* in the humanities is usually through texts (Luckett, 2016; Luckett & Hunma, 2013) and these relate more or less closely either to the 'World' or to the 'Word' (Maton, 2014, p. 190): *ontic lenses* (OL) to the objects of study (e.g., English students may study a poem and geography students a place) and *discursive lenses* (DL) to disciplined studies of those objects (e.g., how different geographers have theorised place, or how they analyse creative texts to gain insight into the issues of the place). If we zoom-out to layer one, the 'facts' pertaining to the ontic lens (and thus the *social relations*) also pertain to the subordinated *epistemic relation* (ER-) of the knower code (ER-SR+). These analytic distinctions outlined above are inseparable empirically (Maton, 2010, p. 161), and hence are not easily unravelled from each other; consequently, in analysis, it has been important to start with the broader orientation of layer one before considering finer distinctions. Figure 3 brings these three layers together into one sketch showing the external language of description I settled on as I recontextualised the theory from the field of production (university disciplines) into that of reproduction (school subjects).

A final feature I will note, regarding the potential value of delineating the epistemic and social relations in the knowledge in this visual way, comes from Luckett and Hunma's (2013) analysis of course documents and exam papers in the humanities and social sciences in a university in South Africa. They observed that in some cases the location of legitimation can change over time, consequent on increased mastery of the subject. A pattern that can be inferred from their analysis of one of the subjects is the movement from location 3 in Figure 4, to location 4 then 5b over the first year of an undergraduate course. In relation to their analysis, I have sketched one potential progression pathway (locations 1 to 5) for the domain of human geography such as that in *Changing Places*.

Plausibly, this could occur iteratively within the course of a lesson or over months or years of a geography student's apprenticeship in the knowledge—there may be disagreement about locations and timings—but what is important is this: a sketch that makes visible the 'rules of the game' enables a subject community to have those conversations. And it is, in Hugo's words, '*these intricate decisions* [that] make a community of practice flourish as it deals with actual engaged analysis that gives and demands reasons' (2014, p. 10, emphasis added). Making the ways of interacting entailed in a gaze more explicit could be very helpful for students—a point made by Luckett and Hunma (2013) and elsewhere by Luckett (2016), and Derry (2016) and within geography education by Firth (2015c, 2017) through their engagement with Brandom's analysis of inferential reasoning.

## LCT SEMANTICS

The Specialisation code denotes the location of 'verticality' in the knowledge, that is, where the capacity for cumulative knowledge-building resides (Maton, 2014, p. 86). But how is this achieved? LCT's dimension of 'Semantics' is helpful here. Semantics explores forms of knowledge in terms of two key concepts: *semantic gravity* (SG) refers to the degree to which meaning is context-dependent, and *semantic density* (SD) refers to the degree of condensation of meaning. And again, these can be relatively stronger or weaker: the weaker the semantic gravity (SG-), the more abstract the meaning; the stronger the semantic density (SD+), the greater the complexity and depth of meaning. Many have argued these concepts can provide us with insight into the 'what', 'why' and 'how' of pedagogy, making explicit the system of meaning experts tend to take for granted and so fail to 'see', and thus make visible

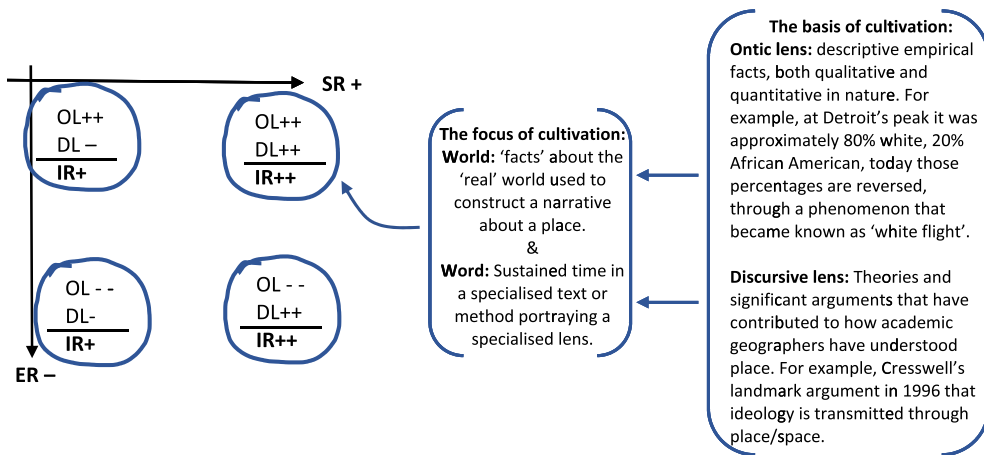


FIGURE 3 Sketching the locations of the ontic and discursive lenses pertaining to the interactional relations, within the cultivated gaze of a knower code in the context of the geographical knowledge represented in this case study

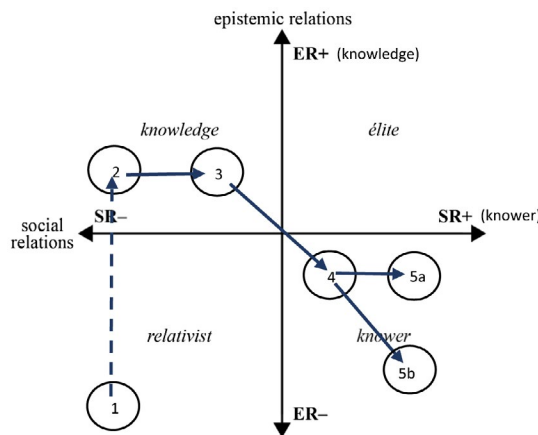


FIGURE 4 Mapping one potential progression pathway in students learning of *Changing Places* on the Specialisation plane (Maton, 2014, p. 30)

for novices. For example, where on the semantic spectrum is the new knowledge students are grappling with? Why does it matter? How do they need to connect it with prior knowledge to make new meaning? (Clarence, 2016a, p. 126). They have been particularly helpful when profiled as change over time, drawing on Maton's notion of 'semantic waves'; indeed, rich, small-scale, subject-specific insights such as that from Hammond within history teaching (2014; see also Counsell's (2000) notion of 'residue knowledge') may, arguably, be built-on by means of this 'switch' (Moore, 2006) into the conceptual.

LCT's capacity to systematise observations and, moreover, to represent these visually has been of great value to me as a teacher. However, LCT is not without its critics (see Singh, 2015). Indeed, as Maton's LCT Specialisation is extending Bernstein's knowledge structures (Maton, 2010, pp. 160–164; 2014, p. 71), Wheelahan's (2010) critique of Bernstein's analysis in her development of the 'social realist' approach offers indirect critical insight on LCT. She draws on the philosophy of critical realism to show the need for greater emphasis on



the intricacies of the epistemic relations within knowledge structures, that is, the objects of knowledge in the vertical discourse. This in turn has been drawn on within geography education (see: Huckle, 2017; Vernon, 2019). Wheelahan's philosophical-sociological approach, I am arguing, offers a complementary insight to LCT. That is, Maton and Wheelahan both build on Bernstein's knowledge structures and they do so in different directions. In Addition to this, Firth (2011b) has argued that LCT's structural and therefore generic approach is both its strength and its weakness, suggesting it offers a helpful and perhaps crucial beginning but that there may be an under-theorisation of knowledge's social relations within it. For example, the intricacies of different ways of reasoning and adjudicating within a given discipline are not necessarily given traction through such a unifying framework. This structural approach, as Singh points out, can prevent a more nuanced insight into the knowledge issue (Singh, 2015, p. 488) opening LCT to the danger of caricaturing, or simply facilitating another form of intransitive 'genericism' (Counsell, 2016). This is a warning that needs to be taken seriously. In Maton's own words, LCT is not a 'cookie-cutter'; it demands the work of translation across the discursive gap to empirical studies, and moreover, it is an evolving theory. This article does not propose LCT as a 'magic bullet', but rather a potentially profoundly helpful conceptual toolkit for educators.

## **IN WHAT WAYS WAS THE GEOGRAPHICAL KNOWLEDGE ACTIVATED THROUGH PEDAGOGY?**

The research was seeking to make explicit the relationship in practice between epistemology and pedagogy. In other words, in the context of this case study, how far did the knowledge appear to be pedagogically preinscribed? A consequence of this question was the delineation of a spectrum of negotiation<sup>3</sup> between the teacher and the students, where negotiation conveys something of the tension and complexity involved in the relations between the legitimation principles themselves (of the disciplinary knowledge) and between the teacher and the students' outworking of these. The heuristic was 'DRAWING-OUT putting-in' (where within the knowledge's nature the end was to develop the knower) versus 'drawing-out PUTTING-IN' (where the end was to develop the knowledge). These two poles indicated different emphasises or trajectories within the nature of the knowledge, influenced by Young's analysis of the differences between Durkheim and Vygotsky's thought (Vernon, 2019; Young, 2008). Where Durkheim saw structure as the defining criteria for classifications, with a top-down movement from the 'sacred' to the 'profane', Vygotsky emphasised content, with a bottom-up movement from the 'everyday' (spontaneous) to the 'scientific' (non-spontaneous). However, the dichotomy, for Vygotsky, consists of internally related concepts—the abstract concept is constantly being concretised through the ascent. We will focus now on the ways geographical knowledge was activated through pedagogy at the micro-scale of classroom dialogue, then the broader scale of lesson sequencing, in which Lewis' idea of looking 'at' and 'along' was applied to lenses within the knowledge.

## **What can epistemic and social relations look like in the classroom?**

The following section will discuss three examples from classroom dialogue<sup>4</sup> [V] taken from one lesson towards the later stages of the course, in which the film *8 Mile* (2002) was analysed as a text pertinent to one of their place studies: the city of Detroit, USA. The examples will illustrate movement across the spectrum of negotiation from stronger to weaker bounding of social relations (i.e., to ways of knowing and knowers) within the knowledge. However,

all remain within the knower code, bound as they are, within the discipline, by an interpretivist theoretical perspective.

Before illustrating the application of the codes, it will be helpful to contextualise both this lesson and the lesson drawn on in the fourth dialogue. Therefore, I will first outline the relevant subject matter to the lesson, and the students' prior exposure to these ideas, as well as some of the challenges and joys in teaching and learning it. To aid this, I will briefly draw on some examples from the second research question regarding how the knowledge was represented by the students, though it is important to note that to actually address that strand of the case study is beyond the scope of this paper. The exam specification (aqa.org.uk) for *Changing Places* stated that to develop their data analysis 'skills' students 'must engage with a range of quantitative and qualitative approaches' (ibid.). Specific examples listed that would be markedly different to their GCSE experience (exams taken at 16, prior to A-level) include 'audio-visual media', 'artistic representations', 'film, photography, art, story, song etc', 'reminiscences' and 'discursive/creative material' (stated in contrast to 'factual text'). Perhaps anticipating a cautious response by teachers to such significant changes, the specification emphasised explicitly that 'particular weight must be given to qualitative approaches involved in representing place, and to analysing critically the impacts of different media on place meanings and perceptions' (ibid.). This brings us to the broader conceptual knowledge the lesson below was aiming to teach into. *Changing Places*, as expressed by the exam specification, has two foci: the impact of 'relationships and connections' on people and place, and secondly, the importance of 'meaning and representation' of place in the past and the present (ibid.). Additionally, 'representation' and 'identity' are themselves 2 of the 14 (new) 'specialised concepts' in the new geography A-level (Skinner et al., 2016). This second angle, on 'meaning and representation', is what undergirded the sequence of lessons the 8 Mile lesson fits within, with Detroit being one of their main 'place studies'.

We should pause at this stage to underline the point made in the research design of this case study. How *Changing Places* was conceptualised and taught by me in 2016 is not intended to represent a model of good practice. It simply represents what happened—which despite my best efforts included both successes and failures on my part (speaking as the teacher). Indeed, in terms of pedagogy, as will become apparent in even the short extracts below, I often failed to draw-out the class to deeper understanding during whole-class discussion times<sup>5</sup>. And in terms of curriculum making, I have subsequently significantly changed the structure and the focus of parts of the course and how I teach it. That said, the principles that guided me (speaking as the teacher) and which will be drawn out in the discussion below (speaking as the researcher) have not only remained but become more significant in how I have subsequently designed and taught *Changing Places* to my students.

The meaning and representation section started within a place study of Birmingham, a city in England well known as a former manufacturing powerhouse but that has since undergone significant deindustrialisation and change. Birmingham is similar in that regard to Detroit, which is a post-industrial city *writ large*. In their study of Birmingham, students had engaged with advertising media, song and journalistic representations<sup>6</sup>; and it was the first time they had seriously considered the ways their own and others' knowledge about places was *mediated by* representations (i.e., interpretations), rather than simply *representing* places [TN, RD]. In this, there were several fascinating misconceptions revealed. For example, Jessie (who had a top-attaining profile) thought the author was not betraying 'opinion' because they had not said 'I think...' [RD]; and Sophia and others were convinced the journalistic representations were 'balanced' (and thus, in their minds, represented the world neutrally and absolutely) because the author had quoted 'both sides' [RD]. These may be reflecting a typical writing frame students often learn in their GCSE subject years; it certainly reflected a wider pattern of students being unused to considering the knowledge itself as

an object of thought. Additionally, almost all of them (the limitations of my research design make it hard to be more precise) brought with them an unarticulated positivistic theoretical perspective to their study of geography. Jessie and Sophia's protestations triggered some dispute amongst the class. The discussions that ensued were not recorded, but I noted that several of the students began to smile as they realised that, having thought they had 'unmasked' the text, they had actually themselves fallen into the trap of the journalist's construction [RD]. Speaking as their teacher, this moment of reflexivity by the students had been hard-won, and it made an impression on me. The peer-to-peer dialogue it had raised amongst them was the more significant because they were a very quiet group for both me and their physical geography teacher.

Following this, we moved on to consider these concepts to do with meaning and representation at the global scale. This will be touched on later, and it was less relevant to the *8 Mile* lesson, so it will only be noted here that the intention was that it afford students the opportunity to practise thinking with these concepts more rigorously through concrete examples (representations of various kinds—noted in lines 7–8 of Figure 8). Said's concept of 'the other', the role of dichotomies in shaping our geographical imaginations (the term 'dualistic' was explicitly layered up throughout this sequence), and how politics, power and proximity can interplay to shape representations were some key themes explored.

The students' (and the teacher's) responses to the topic overall were unanimous in the view that it was a very different kind of geography to their prior conceptions. It represented not only new concepts and ways of thinking, but a new value system, and this did not sit happily with everyone. For example, Mark reflected, 'it's not that it's hard, it's just, I don't get how it's geography'. James was similarly explicit when he remarked to me at the end of class one day, 'I swear this isn't geography, this is philosophy!' [RD]. His views on one of the place authors was explicit, again reflecting both the inexperienced way the breadcrumbs had been laid for them by me, and the clash of the new value system. In James' mind, geography had never been penned by people; it had always just been; so why now? and why did they matter? On the other hand, others professed great interest and even enjoyment in the topic. Isabella, who often struggled, said (voluntarily and enthusiastically) at the end of a lesson somewhere in the 'global scale' section that 'these lessons' were 'really full on and really interesting' [RD]. Meanwhile, Mark dismissed the source work as 'all about interpretation', which by his reckoning was a derogatory quality for any knowledge to possess [RD]. Indeed, a phrase that recurred, though not necessarily with the wholly negative meaning Mark ascribed to it, was that this knowledge was 'not' or was 'less scientific' [RD, Q], by which they meant it was not as factual as GCSE geography. Indeed, Arthur, who reflected that he was 'really enjoying all of it', and engaged thoughtfully in class discussion, yet identified this new quality in the knowledge of needing to engage with the subjective as merely 'waffle'. He could not see the disciplinary constraint, whereas Kieran and Emma, to some degree, could and this showed in how they wrote [W] as well as how they reflected on it [RT]. In Kieran's words, this change in the knowledge 'makes the subject feel more "real world" and it allows application of my studies to real life'—he saw the 'theory' as *doing something* to both the way he saw, evaluated and wrote about events [RT]. Emma thought the knowledge had become more 'sensitive' and 'more aware' of how economic processes can affect people. Rather than its discursive nature being merely a melee of subjectivity, she saw that 'ideas either extend each other or contrast' [RT]. In Emma's mind, there was reasoning at play. For all the students, however, there was no doubt that the nature of this geographical knowledge 'felt different'.

To return to our sequence, after considering issues of meaning and representation at the global scale, we progressed to considering how place (and narratives about places) could be represented through film, with a focus on *8 Mile*. The focus of this lesson below, as it was represented to the class, is shown in Figure 5.

Lesson title: 8 Mile: Detroit, Affect, Place

Sub-questions: 1) How does this film represent Detroit? (method)

2) What is Detroit's place-meaning? (identity)

Worksheet questions:

**Place-meaning represented:**

- Impression of the **physical environment** of the place? (specific evidence) Are there 'traces' of wider processes?
- Impression of the **people (demographic) and the culture** of the place? (specific examples?)
- When you put it all together: main impression of this place?

**Method of representation:**

- How is **music** used to make you feel a certain way? (give examples)
- What does the **framing of scenes** draw your eye to? (Lighting? How is 'background' used?)
- How is **narrative/characters** used to create an impression of the place? (Is it complex/simple? Hopeful/bleak? One perspective/multiple?).

One of three film stills to annotate. This one is from the scene discussed in example 2:



**FIGURE 5** Worksheet questions containing original emphasises (bold). These drew on Taylor (2004) and the wider emphasis on 'affective logics' was influenced by Carter and McCormack (2006). The film stills were taken by the author

It included a brief introduction to Detroit, but the main 'factual' and explanatory content of this place study came after the focus on representation and identity. Detroit is an iconic example offering particular insights into other more general processes operating at different scales (such as globalisation). Therefore, after this lesson, the students learnt that America's Steel Belt became its Rust Belt, and that a complex amalgamation of both cultural and economic factors at different scales led to a population decline in Detroit of over 60% since its peak in 1950. This left behind a population more than 80% African-American, which is racially and spatially divided (nowhere more starkly than across 8 Mile Road), and in the main, extremely poor (roughly 40% live below the poverty line) and excluded (or 'switched-off') from the benefits of globalisation. These facts are represented vividly in *8 Mile*. To turn now to our spectrum, this first extract below represents stronger bounding of the social relations within the knowledge.

Example 1 (SR+++):

James: Miss when you think of the music, it's like, I don't know, it sounds like something's happening but it's not... don't know how to put it

- T: yeah  
 James: like err I can't really describe it  
 T: yeah yeah. It's got a sense of building  
 James: yeah  
 T: and yet it doesn't quite actualise  
 James: no  
 T: yeah yeah totally, really effective... and that really fits with the narrative as well ... it's dark both kind of emotionally and physically and they kind of help each other...  
 T: [referring to the stills of the inside places] If you're going to describe this place emotionally what kind of words might we use?  
 James: emotionally like frightening  
 T: yeah, certainly not safe

In this extract, the relations to the object, namely, how 'affect' conveys meaning in the film, are relatively weakly classified and framed (ER-) whilst training the knower's subjectivities is more the target (SR+). The intention is to try and give James the words to express what he is thinking, sensing and feeling in his engagement with the source. Both of us have the germ of an idea in our minds, but I am, in a manner, checking it with him progressively to ensure what I say is congruent with his interpretation. It is therefore *his* bounding of the object that is the stronger, drawing on non-specialised experience (SR-). That said, it is not that students could say 'anything', an explicit framework for analysis has been set up, and their interpretations may be corrected, but with the language of not being 'convinced' rather than 'right/wrong' [V, RD]. Therefore, a cultivating of subjectivities is at play, which has the aim of regulating the students' reasoning and modelling (in a fledgling way) how claims to know are weighed. This suggests a knower code (ER-, SR+) with a cultivated gaze, but one that does valorise the learner's own dispositions as a knower (SubR+). However, ultimately these are subservient to the know-how established through the 'place-meaning represented' and 'method of representation' framework outlined in the worksheet and reinforced by my selections and questions (SubR-, IR+). Lastly, as they have not yet studied Detroit in detail factually, the gaze is not refracted through an ontic lens (OL-); rather, to achieve this gaze requires extended interaction with the film as a text representing Detroit—the film itself is not a geographical text, but geographical ideas are drawn out of it by applying the framework, thus suggesting a discursive lens (DL+).

Example 2 (SR++):

- T: did anyone pick up anything about um the way he was situated? [...] The way he was orientated towards that landscape? [...] so the film will have, the guys making the film will have made a decision about that, obviously, and they're trying to show you something... did we get any further on that?  
 Class: [silent]  
 T: where was he? as he passed through it? [...] what was he in?  
 Class: [short answers, unintelligible]  
 T: how was he passing through the area?  
 S: oh, he was on a bus!  
 T: he was on a bus looking in wasn't he. And did we see, did we see any other white people as he was driving past? ...in fact have we seen any other white people, apart from his mum, in this whole film? [...]  
 T: ...he stands out a mile, he's kind of passing through it. So actually we get a sense of he's he's separate from it, in the way they've framed it, the way they've kind of set it up, he's not part of it he's going through it and looking at it as he's going through, from inside the bus [...]

- James: ...what he's wearing as well, it sort of mirrors what the place is like so there's no, there's no like, he wears baggy clothing, and always wears his hat, it's not like appealing, it's not what he wants... but it just [unintelligible] reflects the area... there's not much improvement ...dirt
- T: mmm, no, it's not glamorous is it

The object is being quite clearly demarcated, concerning the character's journey to work into downtown Detroit, crossing 8-mile Road and with that the transgression of a profound racial segregation. The students watched an extract from the film and analysed a film still (shown in Figure 5) selected to emphasise this point, suggesting some degree of strength in the epistemic relations. But the meaning is still being 'drawn-out' of the observations and, as it is a little harder, the rules that regulate reasoning and judgement (what to observe and why) are slightly more explicit, suggesting stronger social relations. Ultimately, the legitimate knower needs to be able to gain an understanding of the text that is deeper than both an 'ordinary understanding', which accounts only for meaning that is visible (Counsell, 2013, p. 315), and an unsystematised understanding, which interprets hidden meaning (as in everyday knowledge) but is unable to objectify and systematise that subjectivity. Elsewhere we had been applying disciplinary concepts to do with place to interpret or explain what the film was portraying. For example, Cresswell's notions of 'normative landscape' and 'transgression' (1996)<sup>7</sup> (DL+), and concepts such as 'deindustrialisation', 'global shift' and 'white flight' (OL+). The students' relationship to the place is mediated by layers of interpretation: a geographical interpretation of a film-maker's interpretation of the place-meaning (IR++). This is to speak of the knowledge, though realising that understanding (speaking of the pedagogy) involved iterative strengthening and weakening of both the social and epistemic relations in the knowledge. Condensed, this example represented ER-, SR+/ SubR-, IR+/OL+, DL+.

### Example 3 (SR+):

- T: what makes you say it used to be busy?
- Arthur: well there, well there, there was, there was quite a few buildings with lots of advertising boards but then the buildings have been sort of broken down or vandalised
- T: yep. I'll use the word vitality, is that alright? ...um absolutely ...there does seem to be evidence as he's going through... something used to be here, this is like a place that used to be, which kind of is what makes it all the more sad, because it's not like it's going in an upward trajectory

Again, the modelling (thus, classification and framing) here is more explicit (ER↑, SR↑) because '*vitality*' is a denser substantive concept. Moreover, the main way of developing the knower was to help them make the conceptual shift from the concrete (SG+) to the (slightly more) abstract (SG↑) but with overall semantic density remaining weak: '*buildings have been sort of broken down or vandalised*' shifts to '*a place that used to be*' that has a '*trajectory*'—bringing in the dimension of temporality to place meaning. This intimates (but does not make explicit) more disciplined, abstract substantive concepts such as 'traces' and 'palimpsest'. In other words, valid observations (drawing-out) are legitimised by connecting them into a different constellation of meaning (putting-in). This suggests a degree of discursive lens but dominated by the ontic lens, as there is greater emphasis on empirical description than explicit theoretical concepts. Overall, it can be condensed as ER-, SR+/ SubR-, IR+/ OL+, DL-. Together, these code shifts are sketched on Figure 6; however, I should emphasise my earlier point: these are relative loci; were we to introduce for example, an analysis of History or English Literature A-Levels, I suspect our current locations would shift left within the knower code.

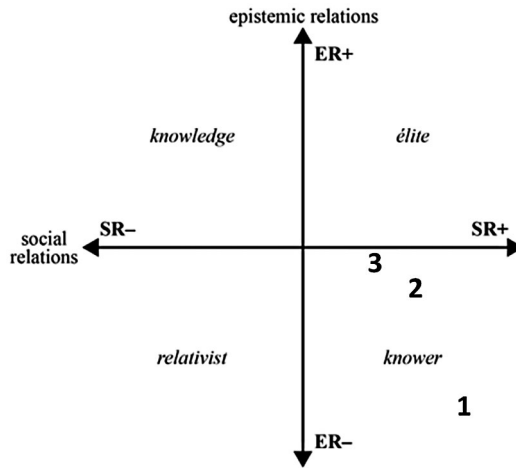


FIGURE 6 A sketch of examples 1–3, Specialisation plane from Maton (2014, p. 30)

	Approach to 'place'	Outline
surface	Descriptive approach	Common sense? <ul style="list-style-type: none"> <li>• Places rather than place</li> <li>• Focus on what is observable and distinctive</li> <li>• A place can be clearly demarcated</li> </ul> <i>May have seen it in history</i>
↓	Social constructionist approach	Seeks to explain <ul style="list-style-type: none"> <li>• Looks for underlying processes –place is a remnant/instance of these structural conditions</li> <li>• Sensitive to power geometries and heterogeneity</li> <li>• May be political</li> </ul> <i>May have seen it in the social/political sciences</i>
	Phenomenological approach	Seeks to find essence (of human existence in-place) <ul style="list-style-type: none"> <li>• Sensitive to authenticity –values direct, personal, unselfconscious experience of both human &amp; physical world</li> <li>• Explicit reaction against spatial science approach</li> <li>• May be nostalgic or inadvertently value-laden</li> </ul> <i>May have seen it in the arts</i>
depth		

FIGURE 7 Framework for teaching approaches to place: looking 'at' lenses

### Looking 'at' and 'along' lenses

Lewis' metaphor of looking 'at' and 'along' a beam of light helps unpack a key feature of this SR+in the way it was interpreted and mobilised in this case study. A beam of light was a distinct approach to place, based on the framework outlined in Figure 7 drawn from Tim Cresswell (2015) and Eleanor Rawling (2011). This was taught explicitly to the students in the early stages of the course and continually referred back to for orientation and application and, though contestable, these were treated as relatively stable categories.

This helps show what the discursive lens at this level of generality (weak semantic gravity) looked like in principle. Geographers who think through entirely different lenses can be grouped together when viewed at this very high level of generality by Cresswell (2015). In this way, as well as teaching me about place and geographical knowers, he was himself modelling a particular discursive lens (DL+)—a way of 'seeing' the broader theoretical terrain. Yet, in his looking 'along', here was one legitimate way to look 'at' these different beams of light in order to teach the conceptual backbone of *Changing Places* at its highest level of generality. And, crucially, for these lenses to be meaningful, it was clear that the relationship

between ideas was as much the focus as the ideas themselves. This has significant pedagogical implications to do with sequencing, semantic density and the degree of curriculum time spent at a weaker semantic gravity. For example, does one appreciate the power of place as a political force (i.e., in its socially constructed form) only once one has first been forced to think about the primal nature of place to human existence (i.e., in its phenomenological form) and vice versa? [TN, RD]. This was felt more simply as ‘why does place matter?’. Taking this question seriously is not mere ignorance, nor is it intellectual indulgence; rather, it dignifies the student and the knowledge. It foregrounds the intrinsically relational structure of meaning, and in so doing underlines the practical implication that surfacing the argument, the semantic constellation of the concept, is imperative in accessing meaning.

The following example from a classroom dialogue and the learning intentions of the lesson it sits within, residing towards the SR+end of the spectrum of negotiation, illustrates and unpacks the notion of looking ‘along’ a beam of light. It also gives a little insight into how this mode of interpretation was being assimilated by a student (‘James’):

- T:** Have we worked out what his approach is, Question 5, go on James... [responding to volunteer]
- S:** [unintelligible]
- S:** [students directed each other towards the display board to rephrase his answer]
- James:** ...social-constructionist
- T:** how do you know? where in the text?
- James:** with different places and how they use each other, like the one about the, err... [gives an example]
- T:** yeah yeah so throughout the whole thing what's he trying to do?
- James:** it's like a trend, sort of dunno
- T:** he's not talking about his feelings, is he, he's not talking about his experience...
- S:** [unintelligible]
- T:** OK, and therefore, so it's about connections, it's about money, and therefore, your point... [...] But his approach, he's not just describing what he sees... he's not fleshing out his kind of feelings about place...
- Arthur:** he's just looking at the world err in individual places and comparing it and seeing how its volatile and always... he sees there's not really a pattern of the world changing in the same way, but everything is individual and different
- T:** OK you're absolutely right, you're absolutely right, it is but this is even simpler... so he's doing what? He's not just describing...
- S:** so he's constructing
- T:** he's constructing what?
- S:** a place
- S:** a theory
- T:** a theory... so he's explaining, yeah, it's a theory, an explanatory theory, this is his theory as to why the world looks like it does, why different places look the way they do. It's a social-constructionist approach in that, it's about how is this place constructed, constructed means made. ...his answer? It's about money, it's about the degree to which it's connected to the global flow of money, and and the nature of that relationship – is it in a positive way or is it losing out? And that is what determines what that place will be like. So it's not... [the other two approaches] ...it's all explanation, a very very powerful explanation. [...]
- James:** is it quite dualistic like?
- T:** so one of your critiques of it can be he's coming at it from, he's coming at it seeking to explain, this is his framework, so it means he's not doing the other things, but just be careful with that [...]



The class had spent most the lesson reading an extract from *The geography of it all* from David Harvey's *The enigma of capital and the crisis of capitalism* (2010, pp. 142–155) and completing an accompanying worksheet titled 'Applying your theory: seeing the world through a geographical lens' [TN]. The intention was that it gave opportunity to recognise an approach-in-action by providing a degree of immersion in a source that was at a lesser 'degree' of recontextualisation (Puttick, 2015). Similarly, they read extracts from Tuan (1977), Cresswell (2015) and Massey (2005) earlier in the term, constituting other 'place authors' relevant to the course. This plenary discussion showed the strongest bounding (C/F) regarded the procedural knowledge of Harvey's reasoning: '*how do you know? where in the text? ... so it's about connections... but his approach... so he's doing what?...'* 'Question 5' was 'What approach to place is D. Harvey using? How do you know (give example)? So, what would you expect in the following pages?' [TN]. Looking 'along' the discursive lens of the geographical knower (Harvey) was the *focus*, and being able to identify, think through and reflect on it was the *basis* of achievement in this lesson (ER-, SR+/SubR-, IR+/DL+).

However, there is also a quite strong bounding of the substantive knowledge in the selection of the text and the level of scaffolding in the other worksheet questions. Concepts had the potential to be animated with meaning in two ways. Firstly, concepts and places pertinent to their 'key case studies' in this course were being given the opportunity to be filled with more flavours and instantiations (Hammond, 2014; Hugo, 2014) as horizontal and vertical connections were made from across the full spectrum of semantic gravity, shown in Figure 8. This increases the density of their *epistemic* semantic constellations (SD↑ pertaining to the subordinate ER). For example, for the class, Pennsylvania would resonate with Detroit via subsumption into the category 'rust belt', the process 'deindustrialisation' or the interpretation 'switched-on/off place', each move constituting increased weakening of semantic gravity (moving higher up the spectrum on the left in Figure 8). Thence on, any similarity in Detroit and Pennsylvania's experiences, once spotted, will rub-in the pattern and influence the original meaning of 'Detroit': the horizontal depth bringing colour, the vertical depth bringing disciplinarity.

Secondly, and inextricably linked to the first, the meaning was also activated by the students experiencing something of the *axiological* constellation that underpinned Harvey's

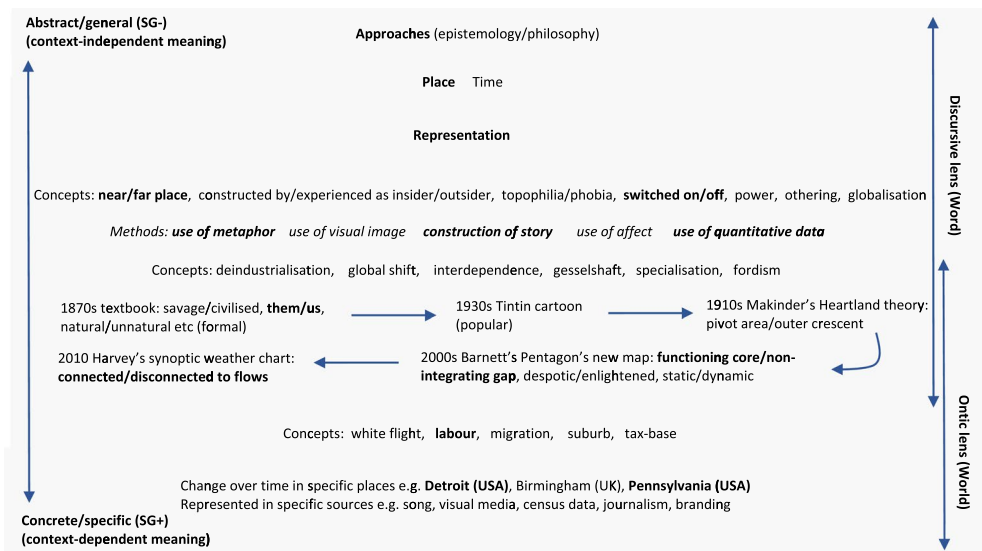


FIGURE 8 Basic semantic constellation to show layers to the concept 'dualistic' ('bold' indicates most relevant to this lesson)

interpretation. In other words, not just *what* this text was talking about but *how* it was talking about it—Harvey's reasoning and values. This permeates every page. For example, through positioning (underlined), metaphor (the image of a weather chart) and positive/negative charging (*italicised*) of the semantic constellations so established. For instance, from the last page of the extract:

Are there, then, some geographical principles to which we can *tentative/* appeal to understand all this *seeming chaos* on the ground and the role it plays in capitalism's reproduction? ... *Principle number one* is that *all* geographical limits to capital accumulation *have to be overcome*. Capital, Marx wrote in the *Grundrisse*, must *strive to tear down every spatial barrier* to intercourse, i.e. to exchange and *conquer the whole earth* for its market.' It must also *perpetually strive to 'annihilate this space with time'*.

The relevance of the substantive knowledge in this lesson could nudge the specialisation code over into an elite code (ER+, SR+) but because the emphasis is that the wide range of phenomena can be understood through a nuanced interpretive gaze (IR+), the ER+ is ultimately subservient and instead, in this lesson, adds an ontic lens. The remit of intent is: How does this lens feel to you? How does it reason? Filter? Explain? How does it compare to Barnett, Relph, Tuan, Cresswell or Massey? What are the commitments that come with it? What does it seek to do? What does it prioritise? Or ignore? What assumptions does it make? How convincing are you finding it? They could have learnt *about* his approach without reading him. Or they could have *looked 'at'* his lens via a few select paragraphs. But to *look 'along'* his lens requires more exposure, which, despite the limited scope of this plenary, is what was being prioritised in this instance. Rendering: ER-, SR+/SubR-, IR+/OL+, DL++, number 4 on Figure 9.

James' assimilation of this is interesting. We have reached shore in so far as the scope of this short plenary allows (*'It's all explanation, a very very powerful explanation.'*), and then James asks: *'is it quite dualistic like?'*. Concerned that this interesting detour may lose the rest of the class, I ignore his question and answer a different (imagined) one; one that takes us from his lower semantic gravity of *'dualistic'* (it objectifies lines 4 and 7–8 from the top of Figure 8, thus sits somewhere between lines 3 and 4) back up to my intended 'destination' level of a weaker semantic gravity (SG-, line 1). Yet, in some ways, James was doing

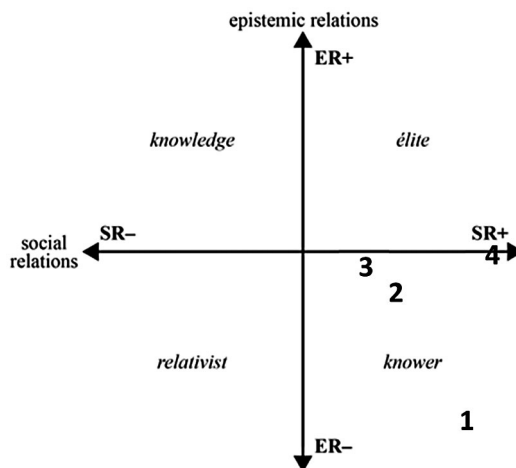


FIGURE 9 A sketch showing where the intent of the lesson, example 4, lies on Maton's Specialisation plane (2014, p. 30)

precisely what they had been learning to do so intensely: mobilising an abstract concept as part of a discursive lens. By now 'dualistic' was an analytical tool in their armoury, built up explicitly over several weeks, to help them critique certain texts (sources of any kind) more rigorously. In other words, he was doing at the substantive level what was the main learning objective at the epistemic level—a semantic range he may have been more comfortable with.

Such connecting and effectively weaving together of concepts across this degree of semantic range (Figure 8) had been a significant and very new feature of previous lessons [TN, RD]. Afraid of the pull towards the well-worn groove of mere inert consumption, I had been attempting (not always successfully) to help them layer-up (i.e., densify) concepts that I had considered to be more powerful. In this I had been both inspired and daunted by Rata's argument that teachers need to know their subject well enough to choose the most powerful or 'best' content—by 'best' she meant *that 'which most vividly and evocatively demonstrates the concept's breadth and depth of abstraction and its place within the generative principles of the subject'* (2016, p. 173). If my students could see a disciplined concept such as 'Othering' (as mentioned in course accredited material) *writ large*, then they would be more able to engage with it authentically *writ small*. This was my rationale at the time. So, after the Birmingham sequence of lessons and prior to the Detroit sequence had been a sequence based on the idea of a particular 'geographical imagination' and that it could consciously and subconsciously 'teach', 'construct', 'represent', 'interpret', be 'wielded' and even 'cause' events in history, *and* that its evolution could be traced over time through concrete sources of different styles and purpose, right up to the contemporary (examples in line 7–8, Figure 8)<sup>8</sup>. The hope was that they would then be able to 'apply' the idea to their formal 'case studies' with a greater appreciation of its power. From this prior knowledge, 'perception' and 'representation' of distant places (line 3) could be, as James had remembered, 'dualistic' (line 4). The concepts in bold from the constellation of Figure 8 were likely semantic routes for them in this lesson, with 'switched-on/off places', and thus James' 'dualistic', immanent in Harvey's text.

Explicitly looking 'at' and 'along' different approaches to place in order to surface and activate the social relations in the knowledge meant the objective was never to manoeuvre students into a particular *discursive lens*<sup>9</sup> but rather to help them cultivate a 'meta-understanding' (Taber, 2013, pp. 133–135). Similarly, for teachers, LCT is a form of metacognition; it can help them 'see' the 'rules of the game' so that these can inform their curricular and pedagogical decisions and, in turn, make the principles of legitimation in the knowledge explicit to their students and thus increase the possibility of epistemic access.

## IMPLICATIONS FOR PRACTICE WITHIN SCHOOL GEOGRAPHY: WHERE ARE THE SOCIAL RELATIONS?

What was strikingly 'new' in the new A-Level topic *Changing Places*, in the way it was mobilised and experienced in this case study, was the movement in parts towards the SR+ end, from the blank or trained gaze that teachers and students were used to into a cultivated gaze. Specifically, the discursive lens of the cultivated gaze within the social relations of the knowledge (ER-, SR+/SubR-, IR+/DL+):

Allowing the knowledge's social relations to become visible as an object of study is epistemic territory that has, historically, been *off-piste* for school geography, closely correlated as it is with the bewildering 'gap' between the academic discipline and the school subject (see, Butt & Collins, 2018; Castree et al. 2007; Goudie, 1993; Hill & Jones, 2010; Tate & Swords, 2013). Empirically, this movement could be described as a mismatch of expectations and dispositions, but more fundamentally, it can be understood as a 'code clash' regarding what

counts as the 'rules of the game' (Figure 10). I will outline briefly some practical implications of this for geography and pedagogic discourses more broadly.

First, in terms of the epistemic and recontextualising logics, where the location of the legitimating principle lay affected pedagogic decision making—that is, knowledge is pedagogically preinscribed. This is a foundational logic to acknowledge. However, pedagogic discourse (Bernstein, 2000) comprises evaluative logics also, and with time<sup>10</sup> it became clear that the exam board would neither incentivise nor reward the pursuit of 'cultivation', albeit consequent on the preinscription. This means that, secondly, if the official examinations do not set questions that probe into the social relations of the knowledge, then we must say this is not simply a 'different' or 'simpler' interpretation of the knowledge; it is more profoundly a different ideal knower that is being nurtured and examined.

Third, for the knower to be made visible as part of the nature of the geographical knowledge, exam questions and mark criteria would need to explicitly require the student to mobilise and critique the interpretations and justifications of geographical knowers. To look 'at' and 'along' their philosophical approaches or paradigms knowingly as they consider how and why specific places have changed; to discuss substantive arguments and interpretations as they consider the representational practices by which meaningful places and narratives about identity are created, imagined, reinforced or changed. This means, pedagogically, the orientation toward the knowledge would be one of drawing-out its inferential structure (semantic constellations comprising both epistemic and axiological connections), rather than imposing onto it an artificial one (the exam specification clauses; the 'mystery'; the superficial or descriptive problem; the generic skill). To surface the social relations is to surface the narratives and debates by which meanings are made.

Fourth, by making the knowledge's legitimating principle explicit, its intellectual rigour is also 'surfaced and animated' (Firth, 2015b). Tate and Swords's empirical study is instructive here. Their first-year undergraduate geography students located themselves overwhelmingly near the bottom of a taxonomy of the cognitive domain, as 'descriptive learners with little evaluative, critical or argumentative skills' (2013, p. 235). They felt resentment and disappointment that crucial cognitive foundations had not been laid in geography A-Level (2013, p. 236) as, in their students' words, it had not required of them 'to think for themselves and consider other possible explanations'; 'facts were just taken at face value' (p. 235). This chimes with some students' reflections in this case study. Writing before the DfE and ALCAB

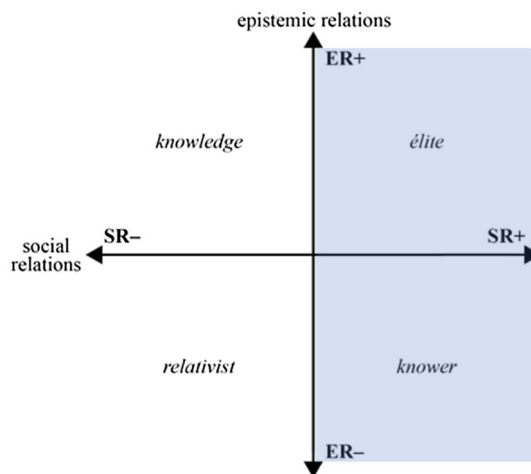


FIGURE 10 Code clash in *Changing Places* (Specialisation plane from Maton [2014, p. 30])

discussion phase for the new A-Level in 2014, Tate and Swords argue that the critical edge of some approaches within cultural geography may provide the needed scope for students to 'grapple with real-world issues' (p. 236), but the emphasis here, I argue, is that introducing these would require students to look both 'at' and 'along' these lenses. *Changing Places*, in its examined version, has indeed introduced some terminology and names that originally come from a critical approach. But not their discourse; not the fertility of their inferential relations.

Lastly, reaching the higher semantic gravity (SG-) and stronger semantic density (SD+) intimated above would require dialogue with discursive texts and there is no shortcut for this, for both the teacher and the students need the concepts' wider constellations to be surfaced if they are to be understood meaningfully and respected. The 'interaction' of *interactional relations* is unlikely to be grasped and appreciated through atomised inert representations (see Derry, 2016 and Firth, 2015c): to 'know' requires a dialogue of thought, in a fledgling way, with knowers. This targets both the ontic and discursive lenses of the knower code because it leaves in something of the system of meaning and commitments, or reasons and arguments, within which a concept exists for a disciplined knower. Connections *constitute* the concept. These are the 'norms' the knower binds themselves with—the generative mechanism of the structure of the knowledge.

### ACKNOWLEDGEMENTS

The author would like to thank Liz Taylor and John Beck, the anonymous reviewers, and particularly Roger Firth whose conversations on earlier versions of this article have been invaluable.

### ETHICS STATEMENT

Ethics were approved by the author's institutions: Saffron Walden County High School and the University of Cambridge. Participants signed consent forms in line with ethical procedures.

### CONFLICT OF INTEREST

None.

### DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

### ORCID

Esther K. L. F. Vernon  <https://orcid.org/0000-0001-9778-5833>

### ENDNOTES

- <sup>1</sup> Lewis' essay *Meditation in a toolshed* was brought to my attention, helpfully, by Puttick (2013).
- <sup>2</sup> Some helpful examples in fields readers may be closer to: within Music see: Martin (2016), Carroll (2019a, 2019b); within English: Christie (2016); within Biology: Kelly-Laubscher and Luckett (2016); within Maths: Thornton (2008); with regard to curriculum design see: Hugo (2014), Clarence (2016b), Luckett (2016), Shay and Steyn (2016), Maton and Chen (2019); with regard to academic writing see: Ingold and O'Sullivan (2017), Kirk (2017); and regarding teaching and teacher education, see Hugo (2015), Szenes et al. (2015), and Puttick (2018).
- <sup>3</sup> This term 'negotiation' came from helpful conversations with Liz Taylor and John Beck (2016–2017).
- <sup>4</sup> '[...]' indicates extraneous dialogue left out; 'S' indicates the student(s) couldn't be identified from the recording; 'underlined' indicates emphasis was given.
- <sup>5</sup> Additionally, sometimes my pace was too fast and that contributed to some students' anxiety about the newer

ideas. Moreover, the thread that held the sequences of lessons together was too abstract and involved for some to follow, and some of the sources that gave insight into representation and place-meaning at the global scale were too complex and, equally unintended, too periphery to the exam board's intended interpretation of the subject matter.

<sup>6</sup> As I was new to this remit of geography, I drew heavily on the methods and sources demonstrated by Hall (2008) regarding how journalism can construct urban narratives in the context of post-industrial cities. This notion is applicable to both Birmingham and Detroit.

<sup>7</sup> Students were able to use some authors' concepts, but they stayed at quite a literal level. Consequently, in subsequent years, I have attempted to teach them more explicitly how Cresswell's (1996) argument in *In place/Out of place* showed that ideology is transmitted through place/space. This is important because we experience the world fundamentally as a set of places, that is, we exist in place (not on the head of a pin). Therefore, to have 'transgressed' the unwritten rules of a place is potentially to be 'out-of-place' at a deeper level of being. Moreover, this is not simply the commonsensical notion of 'not fitting in' as the textbook later implied. Cresswell is primarily revealing a way in which the lived world is given meaning by those who have the power to give it, and they can use this social-spatial mechanism for political purposes, such as to divert attention away from 'real' social problems (homelessness, racism or elitism). Therefore, rightly mobilised, these terms do not simply describe a place nor a feeling. They reveal a mechanism by which *place has an effect*.

My rationale at the time was that perhaps both these levels of meaning could be applied to draw out a distinctively geographical flavour to our analysis of the film *8 mile* as an iconic filmic representation of Detroit. In the main, I was not successful. The logic was: Being a white rapper in downtown Detroit (i.e., anywhere south of 8 mile road), Jimmy "B-Rabbit" has not only transgressed the rules of that space in a challenging way. He has demonstrated that different places carry different meanings, that these are socially constructed, and they have real effects on people's lives and futures. Moreover, to just accept the 'normative landscape' as somehow natural or incidental is to play an active role in its construction. The film plays this out vividly. However, to be clear, these concepts were never used to pass judgement; the aim was only to reveal something of the social-spatial mechanism at play. This is simpler than Cresswell's argument, and perhaps inevitably a distortion of it, but I wanted my students to have the opportunity to practice 'thinking with' and 'seeing' abstract concepts such as 'transgression', 'normative landscape', 'power' and 'place-meaning' in the concrete so that they could become more meaningful. And film has the power to reach into our imaginations in a way that statistical data are less likely to.

<sup>8</sup> Inspired by O'Tuathail et al. (2006)—from which Thomas P. M. Barnett's article, *The Pentagon's New Map*, came (Figure 8). This book considers different domains of geopolitical thought through influential readings to that date. It makes explicit the representational practices by which meaningful worlds and places are created at the global scale.

<sup>9</sup> With very great thanks to Liz Taylor and John Beck whose conversations on this have been invaluable.

<sup>10</sup> Textbooks arrived after teaching of the course had finished, and gradually more exemplar exam questions and answers became available.

## REFERENCES

- ALCAB. (2014). *The A Level content advisory board: Report of the ALCAB panel on geography*. <https://alevelcontent.files.wordpress.com/2014/07/alcab-report-of-panel-on-geography-july-2014.pdf>
- Barrett, B., & E. Rata (Eds.) (2014). *Knowledge and the future of the curriculum: International studies in social realism*. Palgrave Macmillan.
- Beneker, T., & van der Vaart, R. (2020). The knowledge curve: Combining types of knowledges leads to powerful thinking. *International Research in Geographical and Environmental Education*, 29, 1–11.
- BERA. (2011). Ethical guidelines for educational research.
- BERA. (2018). *BERA statement on close-to-practice research*. <https://www.bera.ac.uk/publication/bera-statement-on-close-to-practice-research>
- Bernstein, B. (1971). *Class, codes, and control: Volume 1 theoretical studies towards a sociology of language*. Taylor and Francis e-Library.
- Bernstein, B. (2000). *Pedagogy, symbolic control and identity: Theory, research, critique* (Revised ed.). Rowman & Littlefield.
- Bladh, G. (2020). GeoCapabilities, Didaktical analysis and curriculum thinking—Furthering the dialogue between Didaktik and curriculum. *International Research in Geographical and Environmental Education*, 29, 1–15.
- Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Sage Publications.
- Butt, G., & Collins, G. (2018). Understanding the gap between schools and universities. In M. Jones, & D. Lambert (Eds.), *Debates in geography education* (2nd ed., pp. 263–274). Routledge.

- Carroll, C. (2019a) A field divided: How Legitimation Code Theory reveals problems impacting the growth of school music education. In *Routledge handbook: Sociology and music education* (2nd edn). Routledge.
- Carroll, C. (2019b). Seeing the invisible: Theorising connections between informal and formal music knowledge. *Research Studies in Music Education*, 42, 1–19.
- Carter, S., & McCormack, D. (2006). Film, geopolitics and the affective logics of intervention. *Political Geography*, 25, 228–245.
- Castree, N., Fuller, D., & Lambert, D. (2007). Geography without borders. *Transactions of the Institute of British Geographers*, 32, 129–132.
- Catling, S., & Martin, F. (2011). Contesting powerful knowledge: The primary geography curriculum as an articulation between academic and children's (ethno-) geographies. *The Curriculum Journal*, 22(3), 317–335/1–18.
- Christie, F. (2016). Secondary school English literary studies: Cultivating a knower code. In K. Maton, S. Hood, & S. Shay (Eds.), *Knowledge-building: Educational studies in Legitimation Code Theory* (pp. 158–175). Routledge.
- Clarence, S. (2016a). Exploring the nature of disciplinary teaching and learning using Legitimation Code Theory Semantics. *Teaching in Higher Education*, 21(2), 123–137.
- Clarence, S. (2016b). Surfing the waves of learning: Enacting a semantics analysis of teaching in a first-year Law course. *Higher Education Research & Development*, 36(5), 920–933.
- Collier, A. (2003). In defence of objectivity. In *In defence of objectivity and other essays: on realism, existentialism and politics*. Routledge.
- Counsell, C. (2000). Historical knowledge and historical skills: A distracting dichotomy. In J. Arthur, & R. Phillips (Eds.), *Issues in history teaching*. Routledge.
- Counsell, C. (2013). Interpretivism: Meeting our selves in research. In *School-Based Research: A guide for education students*.
- Counsell, C. (2016). History teacher publication and the curricular 'what?': Mobilising subject-specific professional knowledge in a culture of genericism. In C. Counsell, K. Burn, & A. Chapman (Eds.), *MasterClass in history education* (pp. 243–252). Bloomsbury.
- Cresswell, T. (1996). *In place out of place: Geography, ideology and transgression*. University of Minnesota Press.
- Cresswell, T. (2013). *Geographic thought: A critical introduction*. Wiley-Blackwell.
- Cresswell, T. (2015). *Place: An introduction*. Wiley Blackwell.
- Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Sage.
- Cuthbert, A. S., & A. Standish (Eds.) (2021). *What should School's teach? Disciplines, subjects and the pursuit of truth* (2nd ed.). UCL Press.
- Deng, Z. (2018). Rethinking teaching and teachers: Bringing content back into conversation. *London Review of Education*, 16(3), 371–383.
- Department for Education. (2010). *The importance of teaching: The schools white paper 2010*. Department for Education.
- Derry, J. (2016). Inferentialism and education. In *Philosophy of Education Society of Great Britain: Annual Conference* (pp. 1–10). New College. <https://www.philosophy-of-education.org/dotAsset/aa55343b-57cf-401d-ad6e-ea421a0f8a2c.pdf>
- Dey, I. (1993). *Qualitative data analysis*. Routledge.
- Dominiczak, P. (2013, July 8). Michael Gove: New curriculum will allow my children to compete with the very best. *The Telegraph*. <https://www.telegraph.co.uk/education/educationnews/10166020/Michael-Gove-new-curriculum-will-allow-my-children-to-compete-with-the-very-best.html>
- Doran, Y. J. (2019). Cultivating values: Knower-building in the humanities. *Estudios De Linguistica Aplicada*, 37, 1–27.
- Evans, M. (2016). Reflections on the changes to A Levels. *Geography*, 101(3), 156–163.
- Firth, R. (2007). *Geography teachers, teaching and the issue of knowledge* (pp. 1–29). Nottingham Jubilee Press.
- Firth, R. (2011a) Debates about knowledge and the curriculum: Some implications for geography education. In *Geography, education, and the future* (pp. 141–163). Continuum.
- Firth, R. (2011b). Making geography visible as an object of study in the secondary school curriculum. *Curriculum Journal*, 22(3), 289–316. <https://doi.org/10.1080/09585176.2011.601209>
- Firth, R. (2013). What constitutes knowledge in geography? In D. Lambert, & M. Jones (Eds.), *Debates in geography education* (pp. 59–74).
- Firth, R. (2015a). Constructing geographical knowledge. In G. Butt (Ed.), *Master class in geography education: Transforming teaching and learning* (pp. 53–66). Bloomsbury.
- Firth, R. (2015b). Disciplinary knowledge: Task design in geography. In I. Thompson (Ed.), *Designing tasks in secondary education: Enhancing subject understanding and student engagement* (pp. 70–85). Routledge.
- Firth, R. (2015c) *Inferentialism and teaching and learning in geography*. Geography Teacher Educators Conference, Oxford.
- Firth, R. (2017). What might inferentialism's view of the human knower have to offer geography education? *Geography*, 102(2), 86–90.

- Firth, R. (2018). Recontextualising geography as a school subject. In M. Jones, & D. Lambert (Eds.), *Debates in geography education* (2nd ed., pp. 275–286). Routledge.
- Georgiou, H. (2016). Putting physics knowledge in the hot seat: The semantics of student understandings of thermodynamics. In K. Maton, S. Hood, & S. Shay (Eds.), *Knowledge-building: Educational studies in Legitimation Code Theory* (pp. 176–192). Routledge.
- Gibb, M. P. (2015). How E.D.Hirsch came to shape UK government policy. In J. Simons, & N. Porter (Eds.), *Knowledge and the curriculum: A collection of essays to accompany E. D. Hirsch's lecture at Policy Exchange* (pp. 12–20). Policy Exchange.
- Goudie, A. (1993). Editorial: Schools and Universities—The great divide. *Geography*, 78(4), 338–339.
- Gove, M. (2009). *What is education for? Speech by Michael Gove MP to the RSA 30 June 2009*. Royal Society of Arts. <https://www.thersa.org/globalassets/pdfs/blogs/gove-speech-to-rsa.pdf>
- Hammond, K. (2014). The knowledge that 'flavours' a claim: Towards building and assessing historical knowledge on three scales. *Teaching History*, 157, 18–24.
- Harvey, D. (2010). *The Enigma of capital and the crisis of capitalism*. Profile books.
- Hall, T. (2008). Contesting the urban renaissance: Journalism and the post-industrial city, *Geography*, 93(3), 148–157.
- Hill, J. L., & Jones, M. (2010). 'Joined-up geography': Connecting school-level and university level geographies. *Geography*, 95(1), 22–32.
- Hoadley, U., Sehgal-Cuthbert, A., Barrett, B., & Morgan, J. (2019). Editorial: After the knowledge turn? Politics and pedagogy. *The Curriculum Journal*, 30(2), 99–104. <https://doi.org/10.1080/09585176.2019.1601844>
- Huckle, J. (2019). Powerful geographical knowledge is critical knowledge underpinned by critical realism. *International Research in Geographical and Environmental Education*, 28(1), 70–84. <https://doi.org/10.1080/10382046.2017.1366203>
- Hugo, W. (2014). Editorial: Semantic density and semantic gravity. *Journal of Education*, 59, 39–63.
- Hugo, W. (2015). The work of pedagogy: How metaphor, metonymy, abstraction and densification are used in teaching. In *Keynote*. Legitimation code theory conference, Cape Town. [https://www.academia.edu/14254089/The\\_work\\_of\\_pedagogy\\_how\\_metaphor\\_metonymy\\_abstraction\\_and\\_densification\\_are\\_used\\_in\\_teaching?auto=download](https://www.academia.edu/14254089/The_work_of_pedagogy_how_metaphor_metonymy_abstraction_and_densification_are_used_in_teaching?auto=download)
- Ingold, R., & O'Sullivan, D. (2017). Riding the waves to academic success. *English for Academic Purposes*, 26(2), 39–43.
- Kelly-Laubscher, R., & Luckett, K. (2016). Differences in curriculum structure between high school and university biology: The implications for epistemological access. *Journal of Biological Education*, 50(4), 425–441.
- Kirk, S. (2017). Waves of reflection: seeing knowledges in academic writing. In *EAP in a rapidly changing landscape: Issues, challenges and solutions*. Proceedings of the 2015 BALEAP Conference, Reading.
- Lambert, D. (2011). Reviewing the case for geography, and the 'knowledge turn' in English national curriculum. *The Curriculum Journal*, 22(2), 243–264.
- Lambert, D. (2014). Subject teachers in knowledge-led schools. In M. Young, D. Lambert, C. Roberts, & M. Roberts (Eds.), *Knowledge and the future school: Curriculum and social justice* (pp. 159–188). Bloomsbury.
- Lambert, D. (2018). Editorial: Teaching as a research-engaged profession: Uncovering a blind spot and revealing new possibilities. *London Review of Education*, 16(3), 357–370.
- Lambert, D. (2019). On the Knotty question of 'Recontextualising' Geography. *International Research in Geographical and Environmental Education*, 28(4), 257–261.
- Lambert, D., & Morgan, J. (2010). *Teaching geography 11–18: A conceptual approach*. Open University Press.
- Lambert, D., Solem, M., & Tani, S. (2015). Achieving human potential through geography education: A capabilities approach to curriculum making in schools. *Annals of the Association of American Geographers*, 105(4), 723–735.
- Lewis, C. S. (1945). Meditation in a toolshed. In *Compelling reason: Essays on ethics and theology*. William Collins.
- Luckett, K. (2016). Making the implicit explicit: The grammar of inferential reasoning in the humanities and social sciences. *Universal Journal of Educational Research*, 4(5), 1003–1015. <https://doi.org/10.13189/ujer.2016.040510>
- Luckett, K., & Hunma, A. (2013). *Making gazes explicit: Facilitating epistemic access in the humanities*. Higher Education.
- Martin, J. L. (2016). Musicality and musicianship: specialization and jazz studies. In K. Maton, S. Hood, & S. Shay (Eds.), *Knowledge-building: Educational studies in Legitimation Code Theory* (pp. 193–213). Routledge.
- Martin, J., Maton, K., & Matruglio, E. (2010). Historical cosmologies: Epistemology and axiology in Australian secondary school history discourse. *Revista Signos*, 43(74), 433–463.
- Massey, D. (2005). A global sense of place. *Space, place and gender*. University of Minnesota Press. <https://www.unc.edu/courses/2006spring/geog/021/001/massey.pdf>
- Maton, K. (2007). Knowledge-knower structures in intellectual and educational fields. In F. Christie, & J. R. Martin (Eds.), *Language, Knowledge and Pedagogy: Functional linguistic and sociological perspectives*. Continuum.



- Maton, K. (2010) Canons and progress in the arts and humanities: Knowers and gazes. In K. Maton, & R. Moore (Eds.), *Social realism, knowledge and the sociology of education: Coalitions of the mind* (pp. 154–178). Continuum.
- Maton, K. (2014). *Knowledge and knowers: Towards a realist sociology of education*. Routledge.
- Maton, K., & Chen, R.-T.-H. (2016). LCT in qualitative research: Creating a translation device for studying constructivist pedagogy. In K. Maton, S. Hood, & S. Shay (Eds.), *Knowledge-building: Educational studies in Legitimation Code Theory* (pp. 27–48). Routledge.
- Maton, K., & Chen, R.-T.-H. (2019). Specialization codes: knowledge, knowers and student success. In *Accessing academic discourse: Systemic functional linguistics and Legitimation Code Theory*. Routledge.
- Maton, K., Martin, J. R., & Matruglio, E. (2016). LCT and systemic functional linguistics: Enacting complementary theories for explanatory power. In K. Maton, S. Hood, & S. Shay (Eds.), *Knowledge-building: Educational studies in Legitimation Code Theory* (pp. 93–114). Routledge.
- Maton, K., & R. Moore (Eds.) (2010). *Social realism, knowledge and the sociology of education: Coalitions of the mind*. London and New York: Continuum.
- Maude, A. (Forthcoming). *A Recontextualisation: selecting and expressing geography's 'big ideas'*. Unpublished manuscript for a book based on London IGU CGE Recontextualising Geography Conference, 2019, pp. 1–14.
- Maude, A. (2016). What might powerful geographical knowledge look like? *Geography*, 101(2), 70–76.
- Maude, A. (2020). The role of geography's concepts and powerful knowledge in a future 3 curriculum. *International Research in Geographical and Environmental Education*, 29(3), 232–243. <https://doi.org/10.1080/10382046.2020.1749771>
- Moore, R., Arnot, M., Beck, J., & Daniels, H. (Ed.) (2006) *Knowledge, power and educational reform: Applying the sociology of Basil Bernstein*. Routledge.
- Moore, R. (2006). Knowledge structures and intellectual fields: Basill Bernstein and the sociology of knowledge. In R. Moore, M. Arnot, J. Beck, & H. Daniels (Eds.), *Knowledge, power and educational reform: Applying the sociology of Basil Bernstein*, pp. 28–43.
- Moore, R., & Muller, J. (2002). The growth of knowledge and the discursive gap. *British Journal of Sociology of Education*, 23(4), 627–637.
- Morais, A. (2002). Basil Bernstein at the micro level of the classroom. *British Journal of Sociology of Education*, 23(4), 559–569.
- Morgan, J. (2014). 'Neither existence nor future': The social realist challenge to school geography. In B. Barrett, & E. Rata (Eds.), *Knowledge and the future of the curriculum: International studies in social realism* (pp. 136–152). Palgrave Macmillan.
- Morgan, J. (2017). Persevering with geography. *Documents D'anàlisi Geogràfica*, 63(3), 529–544.
- Morgan, J. (2019). *Culture and the political economy of schooling: What's left for education?* London and New York: Routledge.
- Morgan, J., Hordern, J., & Hoadley, U. (2019). On the politics and ambition of the 'turn': Unpacking the relations between Future 1 and Future 3. *Curriculum Journal*, 30, 105–124.
- Morgan, J., & Lambert, D. (2017). For Knowledge—But what knowledge? Confronting social realism's curriculum problem. In B. Barrett, U. Hoadley, & J. Morgan (Eds.), *Knowledge, curriculum, equity: Social realist perspectives*. Routledge.
- Muller, J. (2014). Every picture tells a story: Epistemological access and knowledge. *Education as Change*, 18(2), 255–269. <https://doi.org/10.1080/16823206.2014.932256>
- Muller, J., B. Davies, & A. Morais (Eds.) (2004). *Reading Bernstein, researching Bernstein*. Routledge.
- Muller, J., & Young, M. (2019). Knowledge, power and powerful knowledge re-visited. *The Curriculum Journal*, 30(2), 196–214.
- Neves, I., Morais, A., & Margarida, A. (2004). Teacher training contexts: Study of specific sociological characteristics. In B. Davies, A. Morais, & J. Muller (Eds.), *Reading Bernstein, Researching Bernstein* (pp. 168–186). Routledge.
- O'Tuathail, G., S. Dalby, & P. Routledge (Eds.). (2006). *The geopolitics reader* (2nd ed.). London and New York: Routledge.
- Puttick, S. (2013). Looking at and looking along: A conceptual framework for teaching different perspectives in geography. *International Research in Geographical and Environmental Education*, 22(4), 353–366.
- Puttick, S. (2015). *Geography teachers' subject knowledge: An ethnographic study of three secondary school geography departments*. Unpublished DPhil Education. <https://gerecodotorg.files.wordpress.com/2014/04/puttick-dphil.pdf>
- Puttick, S. (2018). Student teachers' positionalities as knowers in school subject departments. *British Educational Research Journal*, 44(1), 25–42.
- Rata, E. (2016). A pedagogy of conceptual progression and the case for academic knowledge. *British Educational Research Journal*, 42(1), 168–184. <https://doi.org/10.1002/berj.3195>
- Rata, E. (2019). Knowledge-rich teaching: A model of curriculum design coherence. *British Educational Research Journal*, 45(4), 681–697. <https://doi.org/10.1002/berj.3520>

- Rata, E., McPhail, G., & Barrett, B. (2019). An engaging pedagogy for an academic curriculum. *The Curriculum Journal*, 30(2), 162–180. <https://doi.org/10.1080/09585176.2018.1557535>
- Rawling, E. (2011). Reading and writing place: A role for geographical education in the 21st Century? In *Geography, Education and the Future*, pp. 65–83.
- Rawling, E. (2015). Curriculum change and examination reform for geography 14–19. *Geography*, 100(3), 164–168.
- Roberts, M. (2014). Powerful knowledge and geographical education. *The Curriculum Journal*, 25(2), 187–209. <https://doi.org/10.1080/09585176.2014.894481>
- Shay, S., & Steyn, D. (2016). Enabling knowledge progression in vocational curricular: Design as a case study. In K. Maton, S. Hood, & S. Shay (Eds.), *Knowledge-building: Educational studies in Legitimation Code Theory* (pp. 138–157). Routledge.
- Singh, P. (2015). The knowledge paradox: Bernstein, Bourdieu, and beyond. *British Journal of Sociology of Education*, 36(3), 487–494.
- Skinner, M., Abbiss, P., Banks, P., Fyfe, H., & Whittaker, I. (2016). *Geography for A-Level and AS* (4th ed.). Hodder Education.
- Slater, F., Graves, N., & Lambert, D. (2016). 'Editorial: Geography and powerful knowledge', and 'A response to Graves and Slater'. *International Research in Geographical and Environmental Education*, 24(1). <https://discovery.ucl.ac.uk/id/eprint/1485742/3/IRGEE%20EDITORIAL%20Vol%2025%20Issue%203%20Graves,%20Slater%20and%20Lambert.pdf>
- Scenes, E., Tilakaratna, N., & Maton, K. (2015). The knowledge practices of critical thinking. In *The Palgrave handbook of critical thinking in higher education*. Palgrave Macmillan.
- Taber, K. (2013). *Modelling learners and learning in science education: Developing representations of concepts, conceptual structure and conceptual change to inform teaching and research*. Springer.
- Tate, S., & Swords, J. (2013). Please mind the Gap: Students' perspectives of the transition in academic skills between A-Level and degree-Level geography. *Journal of Geography in Higher Education*, 37(2), 230–240.
- Taylor, L. (2004). *Re-presenting geography*. Cambridge: Chris Kington Publishing.
- Taylor, L. (2013). The case as space: Implications of relational thinking for methodology and method. *Qualitative Inquiry*, 19(10), 807–817.
- Taylor, L. (2016). Case study methodology. In N. Clifford, M. Cope, T. Gillespie, & S. French (Ed.), *Key methods in geography* (pp. 581–595). Sage.
- Thornton, S. (2008). Speaking with different voices: Knowledge legitimation codes of mathematicians and mathematics educators. In *Proceedings of the 31st Annual Conference of the Mathematics Education Research Group of Australia*. MERGA. <http://legitimationcodetheory.com/knowledge-base-2/thornton-s-2008-speak-ing-with-different-voices-knowledge-legitimation-codes-of-mathematicians-and-mathematics-educators-in-goos-m-brown-r-makar-k-eds-proceedings-of-the/>
- Tuan, Y. F. (1977). *Space and place: The perspective of experience*. University of Minnesota Press.
- Vernon, E. (2016). The structure of knowledge: Does theory matter? *Geography*, 101(2), 100–104.
- Vernon, E. (2019). Teaching to the epistemic self: Ascending and descending the ladder of knowledge. *The Curriculum Journal*, 31(1), 27–47. <https://doi.org/10.1080/09585176.2019.1655460>
- Whalley, B. (2020). The science tradition in physical geography: 2016 A Level specifications and 'powerful geography'. *Geography*, 105(3), 142–156.
- Wheelahan, L. (2010). *Why knowledge matters in curriculum: A social realist argument*. London and New York: Routledge.
- Winch, C. (2013). Curriculum design and epistemic ascent. *Journal of Philosophy of Education*, 47(1), 128–146.
- Young, M. (2008). *Bringing knowledge back in: From social constructivism to social realism in the sociology of education*. London and New York: Routledge.
- Young, M., Lambert, D., Roberts, C., & Roberts, M. (2014). *Knowledge and the future school: Curriculum and social justice*. London: Bloomsbury.

**How to cite this article:** Vernon, E. K. (2021). Could Legitimation Code Theory offer practical insight for teaching disciplinary knowledge? A case study in geography. *The Curriculum Journal*, 00, 1–26. <https://doi.org/10.1002/curj.105>