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Developing Historical and Metahistorical Thinking in History Classrooms: Some Reflections on Research and Practice.[i]

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Abstract

The history of history education, past and present, often resembles a history of contestation, in which rival and polarized understandings of the meanings of 'history' and 'history education' vie for dominance (Nakou & Barca, 2010). A common polarity in debates on history curricula is the opposition between 'knowledge' and 'skill', an opposition that has had considerable currency in recent curriculum reform processes in England which have emphasised 'core knowledge' (DfE, 2013).

Drawing on examples of classroom practice (Chapman, 2003; Woodcock, 2005; Buxton, 2010) and on systematic research and theorizing (Shemilt, 1983; Lee & Shemilt, 2009) this paper aims to destabilize such binary talk and to explore the ways in which 'first order' knowledge and understanding about the past and 'second order' or metahistorical knowledge and understanding of how the discipline of history works are both logically inter-related and inseparable in practical terms. The notion of historical 'enquiry' (Counsell, 2011) is explored as a pedagogic tool for the simultaneous development of these inter-related dimensions of historical thinking.

Introduction

As has often been the case around the world (Carretero, 2011; Nakou & Barca, eds., 2010; Taylor & Guyver, 2011), recent public discussions of history curriculum and pedagogy in England have tended to be structured through overdrawn dichotomies - between 'content' and 'skills', between 'traditional' and 'progressive' and between 'child-centred' and 'subject-centred' pedagogies (Lee, 2011, pp. 132-134). This paper aims to demonstrate the emptiness of these oppositions through discussion of a key aspect of historical understanding - historical explanation. It will argue that these oppositions present us with fallacious choices that restrict options to 'either / or' where, in reality, more complex choices, including 'both / and', are possible and desirable and, very probably, inevitable.

I make my case partly by discursive argument but largely by presenting and reflecting on a pedagogic strategy of precisely the kind that is frequently lampooned by advocates of traditional curriculum and pedagogy (Ferguson, 2011; Gove, 2013b). I will seek to show, first, that we have to start from where children are likely to be if we are to move them forward, second, that any attempt to reform history curriculum that does not attend to the nature and complexity of conceptual learning in history will be self-defeating and, third, that pedagogies that enable metacognition are essential if we want to progress historical learning.

Binary educational logic and facile false oppositions

Many critics of educational practices in England in recent years have emphasized 'tradition' and advocated a focus on 'core knowledge' when evaluating curriculum and pedagogy (DfE, 2013; Gibb, 2010, 2012). Typically, a focus on knowledge transmission has been counter-posed to a focus on cultivating 'skills'. 'Traditional' pedagogy, in which the teacher is active in exposition and knowledge transmission, has been advocated as a route to excellence and high standards (Gove cited in Montgomerie, 2010; Gove, 2013a). These critics opposed themselves to what they perceived as 'progressive' pedagogy which they characterized as facile and as exhibiting low aspirations for pupils (Gove, 2013b).

It is the binary opposition of 'content' to 'skills' that is facile, however. As the American National Research Council has shown, we need at least three terms, rather than two, to think coherently about learning subject disciplines:

> To develop competence in an area of inquiry, students must (a) have a deep foundation of factual knowledge, (b) understand facts and ideas in the context of a conceptual framework, and (c) organize knowledge in ways that facilitate retrieval and application. (Donovan & Bransford, 2005, p. 1)

'Either/or' is, then, an unhelpful way of framing pedagogic debate: simplistic binaries are incapable of capturing the knowing and thinking involved in learning. The opposition between 'knowledge' and 'skills' is also clearly inadequate: learning a subject discipline involves factual knowledge, certainly, however, the notion of 'skill' fails to capture the cognitive complexities at stake which involve understanding rather than simply doing (Lee, 2005) and this understanding can certainly not be assumed to arise from the possession and 'retrieval' of 'facts'. Whilst 'facts' are necessary they are certainly not sufficient – learning involves 'ideas' as well as 'facts' and *both* need to be organized, rather than simply accumulated, in order to be used ('application') or recalled ('retrieval'). Learning is likely to progress best when *both* substantive knowledge *and* conceptual and procedural understanding are developed together and in tandem; when, as Bruner argued, they are 'spiraled' (Bruner, 1960; Rogers, 1979).

The false dichotomy 'knowledge' / 'skill' is linked to equally false oppositions between forms of pedagogy: between teacher dominated and student dominated pedagogies, for example. Again, 'both / and' is possible and 'either / or' is both simplistic and fallacious. As Fletcher has pointed out in a discussion of research on simulations:

> Most learning involves straightforward remembering, understanding, and applying, in fairly rote fashion… This activity is most effectively and efficiently accomplished through repetitive, behavioural, positivistic [pedagogic] approaches… Much instruction is intended to go beyond these limited learning objectives and is intended to develop analytic, evaluative, and creative capabilities. Such instruction requires richer learning environments to support the learner's representation building efforts. (Fletcher, 2009, p. 256)

How much history can be learned on the basis of the 'traditionalist' pedagogies advocated by English neo-liberals, such as the 'traditional education, with children sitting in rows, learning the kings and

queens of England', advocated by current recent Secretary of State for Education in England (Gove cited in Montgomerie, 2010)? As Allan Megill (2007) has argued, writing history involves a number of 'tasks' that we can distinguish for analytical purposes, although they are often difficult to disentangle in practice (Table 1)

Table 1. The Four Tasks of Historical Writing[ii] (Chapman, 2011a, p. 102 after Megill, 2007)

Task	Explanation
1. Description	Describing an aspect of historical reality – telling what was the case
2. Explanation	Explaining why a past event or phenomenon came to be
3. Evaluation	Attributing meaning, value and / or significance to aspects of the past
4. Justification	Justifying descriptive, explanatory or evaluative claims by supplying arguments to support them

Writing history and learning history in schools are, of course, different things. However, although children sitting in rows individually learning 'king lists' and chronologies may, of course, be developing some of the knowledge that they will need to engage in Megill's tasks, as long as memorizing is all that they are doing they are unlikely to be thinking historically in any meaningful sense. As Megill shows, even an apparently simple historical task - 'description' - involves conceptual organization and analysis: if all that students learn are 'facts' and if the only organization they understand is the 'list' then they can scarcely even 'describe' past persons, events or states of affairs, let alone explain or evaluate them. Rote learning has a necessary role in history education, as Fletcher shows, and without the kind of knowledge that can be built by these means there can be no meaningful analysis: all thinking, that goes beyond memorizing, however, involves 'representation building' and the development of conceptual tools for the purpose. Learning to explain why historical events occur places considerable demands on 'the learner's representation building efforts': it entails developing *both* complex situation models of past states of affairs (Wineburg, 1994) *and*, perhaps more importantly, developing an understanding of the 'explanation-forming concepts' and model building involved in historical explanation (Shemilt, 2010, pp. 6-8). Learning to do these things in the case of historical explanation, as in the cases of other aspects of historical learning, involves learning to develop new conceptual understandings (Lee, 2005) and unless conceptual dimensions of learning are attended to the 'learning' involved in lessons is likely to be transitory and minimal:

> Students come to the classroom with preconceptions about how the world works. If their initial understanding is not engaged, they may fail to grasp the new concepts and information, or they may learn them for purposes of a test but revert to their preconceptions outside the classroom. (Donovan & Bransford, 2005, p. 1)

Historical explanation

The remainder of this paper presents aspects of an evolving pedagogic strategy developed by a number of history teachers in England and elsewhere over the last ten years (Chapman, 2003; Woodcock, 2005; Chapman & Woodcock, 2006; Chapman & Facey, 2009; Evans & Pate, 2007; Teachers TV, 2007a, 2007b; Buxton, 2010; Waring, 2010, 2011; Worth, 2012).

One point of focusing on this strategy is to show how the terms that have been polarized into unhelpful oppositions in English public debates on curriculum and pedagogy are dynamically interrelated in practice. Another point of focusing on this strategy is that it shows that teacher creativity and invention are central to progressing teaching and learning. Our politicians are keen to focus on what 'cognitive science' can tell us about teaching and learning and they are also quick to mock classroom practices that conflict with their pedagogic preconceptions (Gove, 2013b). Yet, as has long been understood (Stenhouse, 1975), curriculum is realized and developed by teachers who do not simply deliver curriculum made elsewhere (Counsell, 2011). Finally, the discussion of this strategy aims to show that apparently whimsical 'gimmicks' often make clear curricular sense. A key point of history education must be to help children learn to think and understand the world in which they live (Shemilt, 2010) but we do not always have to be 'serious' to be doing serious work (Nietzsche, 1991).

Why is historical explanation important and why is historical explanation difficult?

> An historical enterprise that describes 'what' happened without attempting to explain 'how' and 'why' the past unfolded as it did is trivial; and one unable to answer a reasonable proportion of 'how' and 'why' questions is bankrupt. (Lee & Shemilt, 2009, p. 42)

Lee and Shemilt's observations are driven by an assessment of the wider aims of history education. Learning to explain the past is very probably necessary if pupils are to learn:

> to make sense of the ways in which the past has led to the present, to understand how and why things happen in human affairs, and to appreciate how the consequences of individual decisions and collective actions may propel us towards less or more desirable futures. (Lee & Shemilt, 2009, p. 42)

Even if we minimized the importance of such understandings, we would still have to accept that learning to explain was central to learning history. It is very probable that we cannot understand history at all without engaging with explanations and without using words like 'because' and phrases like 'as a result of'. Without them history is reduced to 'chronicle', or perhaps simply to 'annals', and is organized, in so far as it is organized at all, as pure sequence in terms of 'and then' or 'next' (White, 1987, pp. 6-7). There is no learning history, then, without learning about explaining history.

Causal explanation and historical explanation

Historical explanation is multi-faceted. As Shemilt (2010) has shown, there are at least three dimensions to it: empathetic explanation, focused on how people in the past perceived and understood the world, intentional explanation, in terms of past agents' intentions and actions, and causal explanation, focused on the unintended consequences of actions, on states of

affairs that shape the context for action, and on the impact of non-human 'agents', such as bacteria or volcanoes (Chapman, 2011b, p. 32). I will focus, in particular, on causal explanation in what follows and this is the aspect of historical explanation that the teaching strategies that I will explore below are concerned with.

Why do children find casual explanation challenging in history?

If there is no alternative but to think about explanation when thinking about history then it is important to understand the 'preconceptions about how the world works' relating to historical explanation that pupils are likely to bring with them to their history lessons. What challenges do causal explanations, in particular, present for pupils?

An initial problem, Shemilt has noted, relates to everyday and non-historical uses of the word 'cause':

> In everyday usage the label 'cause' often refers to the 'intention behind an action' or to the 'purpose for which something was made or accomplished'. Historians, while also offering intentional explanations, strive to identify the causes of events intended by nobody. In the physical sciences, it is often possible to identify 'sufficient conditions' for the occurrence of events, i.e. the conjunction of natural laws and initial conditions sufficient to guarantee an observed outcome. Except for the most trivial of instances, this species of causal explanation is unknown in history: the historian may aspire to do no more than identify the 'necessary conditions' for a given phenomenon, the conditions in the absence of which the phenomenon could not have occurred. (Shemilt, 2010, pp. 1-2)

Pupils find many of aspects of causal analysis very challenging. Research studies give us indications of the kinds of ideas that pupils are likely to have about causes and causal explanation in history (Carretero, et al, 1997; Shemilt, 1980, 1983; Lee, 2005; Lee *et al*., 1996; Lee *et al*., 2001; Lee & Shemilt, 2009; Voss & Wiley, 1997; Voss, et al., 1994): for example, pupils tend, unless we teach them otherwise, to treat causes as discrete things rather than as relationships between things; to personalize when explaining, in the senses, first, of exhibiting preferences for personal factors in explanation, and, second, of treating both actions and events in the same way as if they were equally 'made' by intending human agents. Pupils tend also to model causes as working in a linear, mechanical and cumulative way and to treat what happened as inevitable.

Practitioners also report that, unless we help them to learn otherwise, students tend to narrate when they are asked to explain, to provide lists of causes or factors without exploring how the items in the list might interrelate and to talk about causes without demonstrating understanding of what the specific consequences of particular actions, events and states of affairs might be (Chapman & Woodcock, 2006).

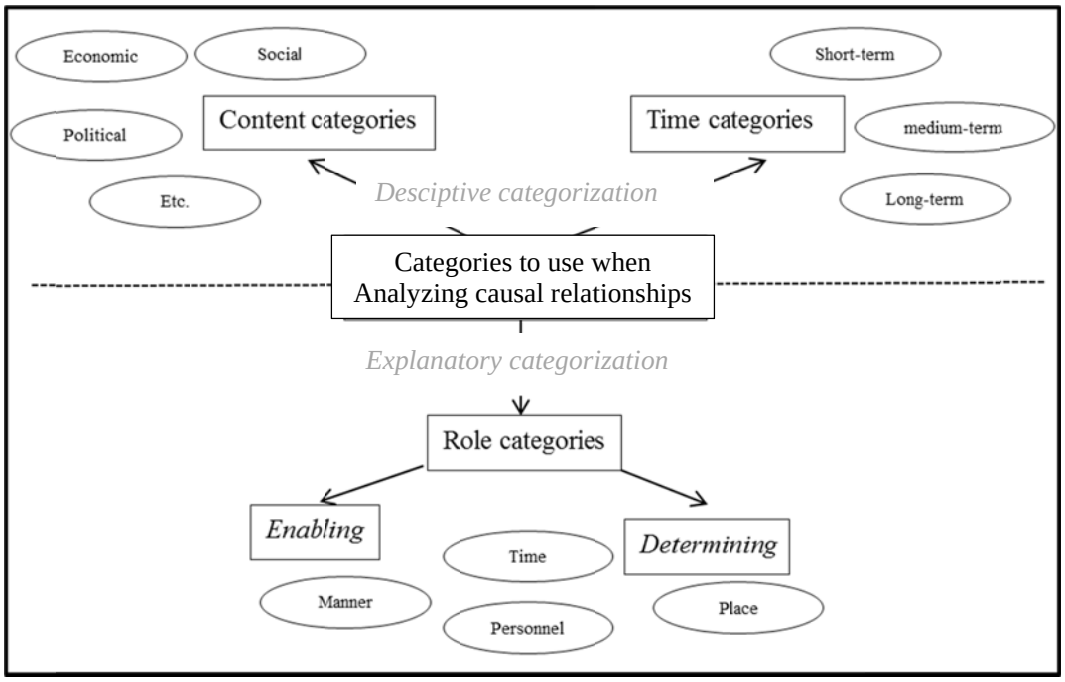
Developing causal understanding

Ten years ago I was teaching 16-19 year-old students and struggling to get them to construct causal explanations. This was a high stakes issue for the students, as their success in important public examinations depended on their ability to construct coherent arguments about causes, their inter-relationships and their relative importance (Chapman, 2003). It was a high stakes issue for me, as their teacher, not least because I had never really thought through what teaching these things well entailed. Like many history

teachers, I had been good at history at school: I had learned how to play the history 'game' without having to think very carefully about what the 'rules' were.

I began by reading works of history and historiography by eminent historians (such as Evans, 1997) and, as a result, developed a typology for categorizing causal relationships.

Figure 1. A system for categorizing causal relationships[iii](Chapman, in press)



The point of the typology was to support students in their thinking about classification (organizing factors into types) and to encourage them to go beyond relatively low level descriptive classifications (the top half of the diagram) and to move towards thinking in evaluative terms (using the categories in the bottom half of the diagram) about the *role* played in determining outcomes by agents, events and states of affairs. The problem with my system of categories, and the pedagogy that I adopted to communicate it to students, however, was that both were teacher-centered: I was explaining concepts to them, using teacher exposition to communicate abstractions without thinking about how my students already thought or about what they already knew. The teaching was not successful and it was only when one student made an analogy between the ideas I was trying to explain and a children's game (*Buckaroo*) that there was any evidence that my class were learning. In *Buckaroo*, players load up a donkey with 'sprung' legs until the donkey 'bucks' and throws off its load: the student drew analogies between the spring, the saddle and the various items loaded on the donkey and the concepts I was trying to communicate and, as a result of their intervention, dialogue and conceptual development became possible.[iv]

Teaching is, in large part, about learning from mistakes. In this case, I had a positive lead from a student: helping students learn means thinking about what

they already understand and, often, helping them to think differently using analogies with what they already know (Donovan & Bransford, 2005). The problem was finding an analogy that was complex enough to support the kind of conceptual learning that I was interested in developing. Class discussion of *Buckaroo* put me in mind of the proverbial phrase 'the straw that broke the camel's back', commonly used in England and elsewhere to explain why a situation or person 'breaks' under pressure in response to an apparently trivial provocation. I devised a rather 'silly' story that incorporated this 'straw', called 'The Terrible Tale of Alphonse the Camel and Frank the Camel Killer' (See Figures 2 and 3), and I devised a number of tasks that I hoped would help students *use* the story to develop their grasp of causal reasoning in history. The story and the tasks accompanying it were reported in a 2003 article (Chapman, 2003). The tasks, as they are described below, reflect the way in which the activity has evolved in use since that time.

Figure 2. The Alphonse story illustration (Chapman, 2003, p. 48)

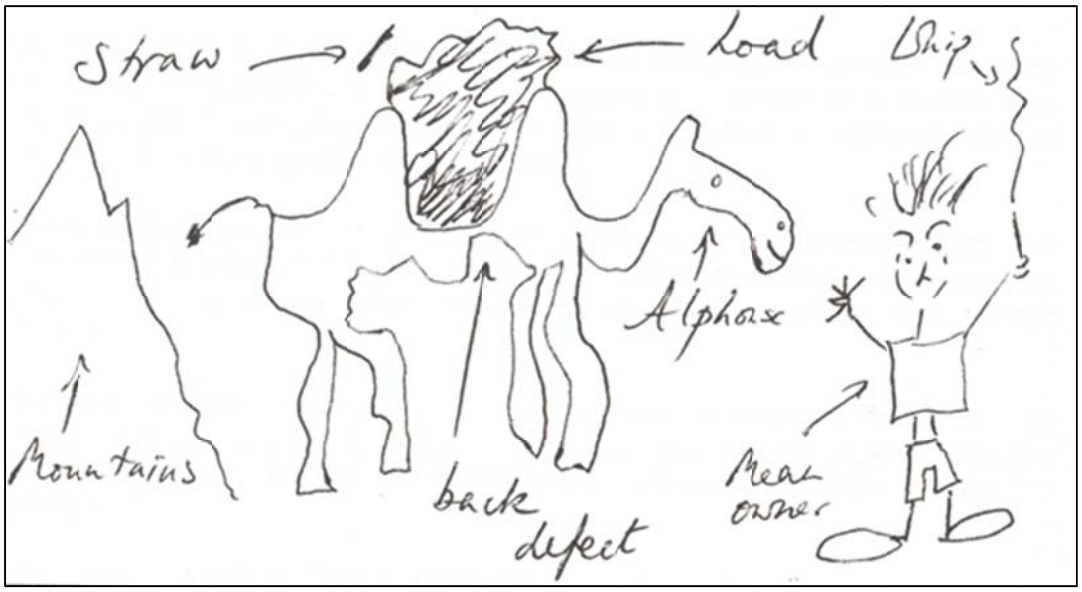


Figure 3. The Alphonse story text (Chapman, 2003, p.48)

> Once upon a time there was a camel (called Alphonse). For various reasons (relating to an unfortunate accident during his birth) the camel had severe back problems. This was not the end of his misfortune, however, because he had an evil exploitative owner (called Frank the Camel Killer) who regularly overloaded his camels prior to taking them on gruelling and totally unnecessary round trips up and down mountains on his way to deliver goods to his customers. These customers, shockingly, were completely indifferent to these frequent and gross violations of the rights of camels and found Frank and his antics at least vaguely endearing.
>
> Well, one Friday Frank had just finished loading-up Alphonse and his poor exploited fellow creatures for yet another gruelling and totally unnecessary round trip up and down the mountains. He had piled and piled and piled up the goods onto Alphonse's back and was taking a break and reflecting smugly on his handiwork, chewing a straw. On a whim he decided to add the bedraggled straw he had been chewing to Alphonse's load. Alphonse groaned obligingly. He eyed his owner with disgust. He keeled over and died of radical and irreversible back collapse.

I developed a number of tasks to accompany the story that led up to the students answering the following question:

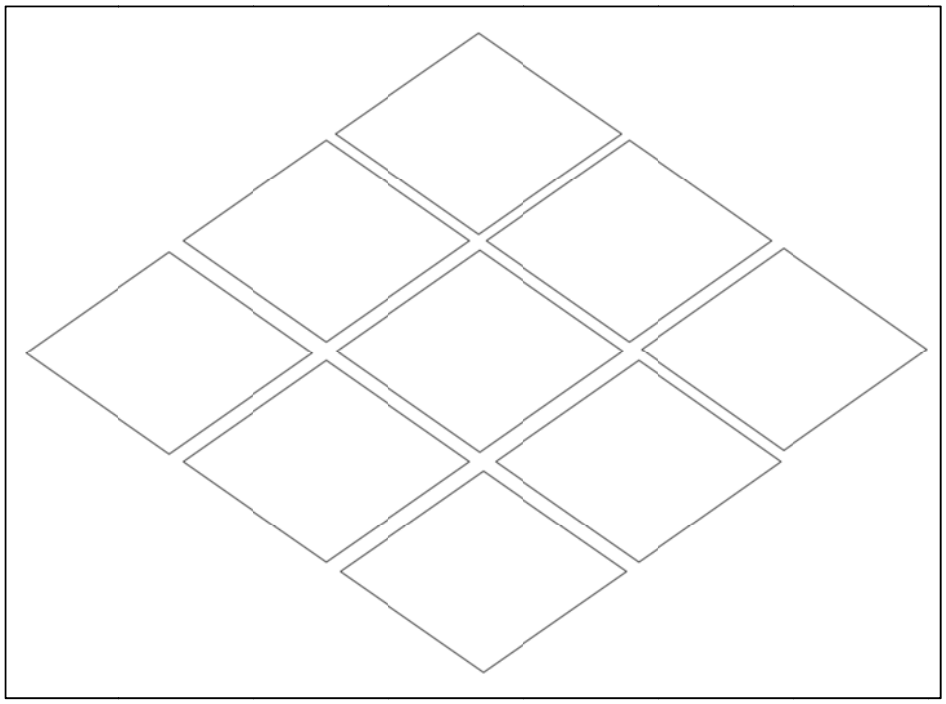
> Was it really the straw that broke the camel's back? Produce a reasoned analysis of the causes of Alphonse's death *making use of as many cause categories as possible*.

The first task was to identify as many different reasons as possible that might contribute to explaining why the camel died. I often present this element as a competition and groups of students frequently respond by trying to outdo each other in identifying longer and longer lists of causes. My personal favorite – a reason that links this fictional story to a very wide context indeed – is the domestication of animals (*if* camels had not been domesticated *then* this camel could not have been exploited in the way that he was and would not have died in the way that he did). Students have worked on the story in a number of contexts and I recall a Dutch student proudly asserting, in 2009, that the camel could not have died in the Netherlands 'because there are no mountains'. Once students have completed their lists of causes they are then asked to group them together into types based on similarity and difference using the typology of categories presented in Figure 1. 'Are there are any reasons that relate to the same kinds of thing?' 'Are there any reasons that had the same kind of effect on the outcome?', students are asked. Again students have demonstrated great resource, over the years, in identifying types of

reason. One group I worked with some years ago, for example, announced that many of the reasons could be summed up in one word – 'capitalism': *if* there were no division of labor, no products, and no customers to persuade to buy them, *then* the camel would not have been exploited and would not have died as he did.

A second task is to complete a grid listing reasons in one column and their results in another, in order to encourage students to think as precisely as possible about the various consequences and about what it was that particular people, events, or states of affairs 'caused'. Would it have mattered, for example, if Frank's customers had cared about animal welfare and, if yes, what difference might this have made? Just what difference did the trips up and down the mountains make? Finally, students are asked to model the causes of the camel's death using a 'diamond nine' card sort.

Figure 4. A blank 'diamond nine' card sort



To complete the 'diamond' students have first to identify the nine most important reasons for the camel's death from their list. In the process of preparation to teach my students about causal explanation I had read the book *Virtual History: Alternatives and Counterfactuals* (Ferguson, 1997) and I was thoroughly persuaded by the argument it advanced in favor of counter-factual explanation: taking an element of an historical situation away in the imagination and then asking what would have changed as a result seemed to me to be a very good way of thinking about, and thus deepening understanding of, the situation. To reduce their list to nine, students were asked to imagine how the story would change *if* successive aspects of the situation that they had listed had *not* been the case and to ask themselves the question 'Would the camel still have died?' Frequently, students

object to that formulation: camels are mortal, after all, death does not discriminate and this camel is so unfortunate also that imagining away many of its misfortunes is unlikely to save it from early death. Discussion frequently turns to the question of the *role* that various factors play in determining the fact that Alphonse died at this particular time, rather than at another, and the exercise certainly seems to have scope for enabling the kind of 'possibility thinking' that Lee and Shemilt see as key to progression in causal understanding (Lee & Shemilt, 2009, p. 45). The timing and manner of Alphonse's death was no more totally determined than many important outcomes in real history: here, as elsewhere, things could certainly have turned out differently, at least in some respects.

Once they have identified the nine most important reasons students are asked to use them to label the individual diamonds in the card sort. Two tasks then follow. On the one hand, the task of categorizing their nine reasons into types, using the typology of cause categories (Figure 1) and, on the other, the task of arranging the nine small diamond cards into a larger diamond. Students have reacted to this aspect of the task in a number of ways – sometimes the middle diamond is treated as the most important with the diamonds rippling out from it being treated as increasingly less important. Sometimes students treat the card at the apex of the diamond as the most important and work their way down in decreasing importance, with the three cards across the middle of the diamond being judged to be equally important. Sometimes students object to the diamond and propose another shape instead – for example, a flower with a stem. Sometimes students object to having to select nine reasons and argue for more cards or for fewer. Ultimately, of course, a diamond imposes needless constraints on student thinking and the whole point is to encourage the students to explore the possibilities and the limitations of this heuristic: whatever else it is, considering how useful one diamond made of nine diamonds is as a tool for representing a causal problem is a form of metacognition and the point of the diamond, as of the exercise as a whole, is to scaffold the development of students' metacognition. Finally, once the students have completed these exercises, they are tasked to answer the overall question in written prose, making reference to as many of the conceptual distinctions made in the typology of causal relationships as possible (Figure 1).

The story of the camel has, of course, very little to do with the serious business of real history. However, I have found that it works very well as a scaffold to develop student understandings of the analytical tasks that they are asked to complete in history and that it is useful as a tool for developing students' mastery of a vocabulary for analyzing why an outcome occurred. It is also a device for deepening thinking. The tasks that accompany the story require students to read a short narrative very carefully indeed, to analyze it into elements, to group these elements into types with common features, and so on. The analysis of the story can also become a shared paradigm of what historical explanation looks like (Kuhn, 1969, pp. 187-191). There are processes here that students are expected to follow when explaining real history, rather than a fictional story: reading carefully, analyzing in detail, categorizing, modelling relationships, and so on. It is, perhaps, easier to develop an understanding of these processes in a context where everyone knows as much as each other than it is to do so in a context where students know that they do not know 'all the facts' and that 'teacher knows more'. In this story, all

the 'facts' are 'on the table' and the invitation is to think closely, creatively and analytically about them. The key point, of course, is not the facts but learning how to think with and about them in the context of a question or problem (Collingwood, 1994).

The exercises associated with the camel story aim to closely parallel and to support students' historical learning. In 2003, my students were introduced to it as a scaffold to develop their analytical abilities while they were learning about aspects of British Imperial History. The story of the camel was not a substitute for learning about the British Empire (and resistance to the British Empire) but a tool to help students deepen their understanding both of the discipline of history and of the history that they were learning. The transfer of learning to history was achieved by simply repeating the exercises that students had undertaken when analyzing the camel story as they set about analyzing a real historical problem – 'The Causes of the Revolt of 1857'. The students completed the task on computers and the diamond nine was constructed from text boxes that could be dragged and dropped on screen rather than from cards that could be physically moved around (see Chapman, 2003, p. 53).

As I have noted above, this pedagogic strategy has evolved considerably since it was first developed. Alphonse has died at least twice (Chapman, 2003; Woodcock, 2005), as it were, and he has also acquired multiple identities – first Alphonse the Camel (Chapman, 2003; Woodcock, 2005), then Cam the Camel (Waring, 2010, 2011) and, most recently, Louis the Camel, a member of the Bourbon dynasty (Buxton, 2010). The story has been re-functioned in a number of ways also, in the context of particular historical enquiries.

James Woodcock's use of the Alphonse strategy enhanced it in three ways. First, additional details were added to the story – such as efforts to establish a camel 'trade union' which failed due to the moral failings of camels, 'selfish creatures who don't trust each other' who 'were more worried about looking after themselves than… working together' (Woodcock, 2005, p. 10): these details make it a more complex story and one more susceptible to multi-causal analysis. Second, Woodcock enhanced the conceptual and analytical components of the tasks linked to the narrative, drawing on Vygotskian insights into the importance of language and explicitly setting out to build the vocabulary that students need to make the kinds of conceptual distinction that analysis requires.

> If the only words students can use to describe causation are 'cause' or 'reason' they can never incisively and accurately analyse the process as it happened in a particular context... Each type of causation requires a different form of words: economic events might be 'triggered' or 'precipitated', an individual might be 'influenced' or 'motivated'. (Woodcock, 2005, pp. 7-9)

Woodcock provided students with 'word mats' that aimed to help them develop the precision of their expression and to encourage students to deliberate about language and to consider the extent to which the words that they were using captured the precise nature of the causal relationship that they are aiming to describe. The aim was also to help them develop new tools with which to make distinctions that they might not have been able to make previously. Students have to choose which words to use to link together cards on which key reasons for historical outcomes are identified (Woodcock, 2005, p. 11).

The third way in which Woodcock, and subsequent developers of this strategy, have improved upon the original is by explicitly articulating the strategy into historical enquiries.

Enquiry is widely used in England to organize historical learning (Riley, 2000), as a tool to motivate students and organize and focus learning and as a way of modelling history as a process (the process of generating knowledge through inquiry, contained in the etymology of the word). Enquiry, of course, involves 'discovery' – the point is to find things out and to *build* knowledge. It is not 'discovery learning', however, in the sense in which this term is understood in research literature critical of constructivism (Tobias & Duffy, 2009). Enquiry, as it is understood in the English history education community, is certainly intended to enable creativity and exploration but it aims to do so in the context of carefully crafted and sequenced activities planned by teachers that aim to help students answer a precise and conceptually structured 'enquiry question' and that lead pupils towards an outcome activity that will enable them to answer the question (Riley, 2000). Enquiry questions again demonstrate the vacuity of the oppositions that structure much contemporary discussion of curriculum and pedagogy: they are neither solely about 'knowledge' nor are they about 'skills', they are neither about didactic teaching nor about open discovery learning; instead, enquiry questions aim to *structure* learning so that pupils simultaneously *build* conceptual knowledge and understanding (history as a form of knowledge) and knowledge and understanding of the past itself (history as a body of knowledge) and they aim to do so in ways that encourage carefully planned and structured pupil activity.

In my original use of the camel story, the story was used as a 'concept gym' – a tool for developing conceptual and procedural understandings that pupils would subsequently use to develop their understanding of the causes of the Revolt of 1857. In the use and development of the story developed by Woodcock (2005), Evans and Pate (2007) and Buxton (2010), for example, the strategy is re-functioned and presented as part of clear sequences of learning that aim to help students *build* historical knowledge and understanding *through* enquiry. In Buxton's work, for example, the camel becomes 'Louis' and the story is fully articulated into the history of eighteenth century France as a device for exploring the reasons for the fall of the Bourbon dynasty (Buxton, 2010).

Alphonse has also been put to robustly to the test in a recent paper by Gerhard Stoel and colleagues (Stoel, van Drie, & van Boxtel, 2014) who integrated the story of Alphonse the Camel into an intervention that drew on Chapman (2003) but also on a range of other resources (such as Alexander, 2005). They designed an intervention that aimed to test the value of explicitly teaching children mastery of second order knowledge and understanding. Their 'quasi-experimental pre-test–post-test study' found that students in both the intervention and the control group demonstrated increased 'first-order knowledge' but that students who experienced the explicit teaching of concepts 'acquired significantly more knowledge of second-order concepts and causal strategies' (Stoel, van Drie, & van Boxtel, 2014, p. 1).[v]

Conclusions: Dialogue not dialysis

Dialysis – the rhetorical trope that engineers and feeds off 'disjunctive alternatives' (Leith, 2012, p. 268) – is useful to politicians, not least because 'you're either with us or against us'

rhetoric can make those who deploy it look determined, clear-sighted and decisive (CNN, 2001). As the last thirteen years have shown, however, it can also make for very bad politics. It is probable that it makes for bad education also: teaching and learning are complex processes and cannot be helpfully understood through stark and simplifying binaries.

This paper has aimed to deconstruct binary thinking about curriculum and pedagogy in history by exploring the development of a pedagogic strategy developed by a number of hands over a number of years: a strategy that aims to develop *both* knowledge *and* understanding of *both* historical concepts and processes *and* substantive knowledge and understanding of the past. The paper has also sought to illustrate one important and neglected way in which curriculum development works and to draw attention to the role that teachers and students can play in developing each other's thinking. Here, as elsewhere, dialogue is preferable to dialysis (Alexander, 2008).

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[ii] The table is based on Megill's work but adapts it: Megill uses 'interpretation' to refer to what I am calling 'evaluation' here for example.

[iii] This typology differs from the model I developed in Chapman (2003, pp. 47-48) and subsequently elaborated in Chapman and Facey (2009, p. 93) in that it does not make reference to 'necessary' and 'sufficient' causes and for the reasons identified in the quotation from Shemilt (2010, pp. 1-2) cited in section 3.iii above. It has taken me some time to fully appreciate the importance of Shemilt's observations.

[iv] It is very pleasing to note, in the light of the way that I developed a strategy inspired by this conversation about Buckaroo, that a version of the game now exists in which the donkey has been replaced with a camel.

[v] They also found no significant difference between the intervention and the control groups' written explanations – a finding that suggests, perhaps, that, in addition to categorization and close reading and modelling, the strategy needs to be supplemented with the elements that explicitly scaffold discursive writing (such as Counsell, 1997).