

Chapter 9: Causal explanation

Introduction

Explanation is the tissue of history – without it, we are left with disarticulated bones.¹ Historical explanation weaves fragmentary factual propositions about the past into intelligible wholes - webs of intention, action and reaction. There are many genres of historical explanation, from the simple narrative to the factorial explanation (Coffin, 2006): the simplest involve telling a story at a human scale and the most complex involve analytical modelling of, and evaluative commentary on, 'stories'. Even the most simplistic and story-like of explanations are answers to questions, since we cannot even begin to describe, let alone explain, an aspect of the past without a question to help us decide what to include and exclude in our account (Hewitson, 2014). Getting better at history involves progressive mastery of genres of historical explanation, moving from the concrete to the abstract (Coffin, 2006), and the ability to ask and answer explanatory questions.

This chapter aims to clarify what analysing and evaluating causes and consequences involves, drawing on the work of history education researchers, history teachers and historians.

What is historical explanation?

Historical explanation is fundamental in the curriculum at all key stages in the requirement

that students should come to ‘understand historical concepts such as... cause and consequence’ (DfE, 2013, p.1) and is most clearly explained in the DfE’s subject content specification for A Level, where it is stated that students should be able to ‘analyse and evaluate the causes and consequences of historical events and situations, and changes and developments in the periods and/or themes studied’(DfE, 2014, p.2).

Historical explanations are answers to the question ‘Why?’ which can take many forms including ‘Why did X happen?’, ‘Why did X happen when it did?’, ‘Why did X happen so rapidly?’, ‘Why did X have such a dramatic impact?’, and so on. ‘Why?’ questions can take more or less sophisticated forms, also, rising from explanatory questions (such as ‘Why was Charles I executed on 30th January 1649?’) to meta-explanatory questions (‘What are the different explanations of why Charles I was executed and which are the most compelling?’).

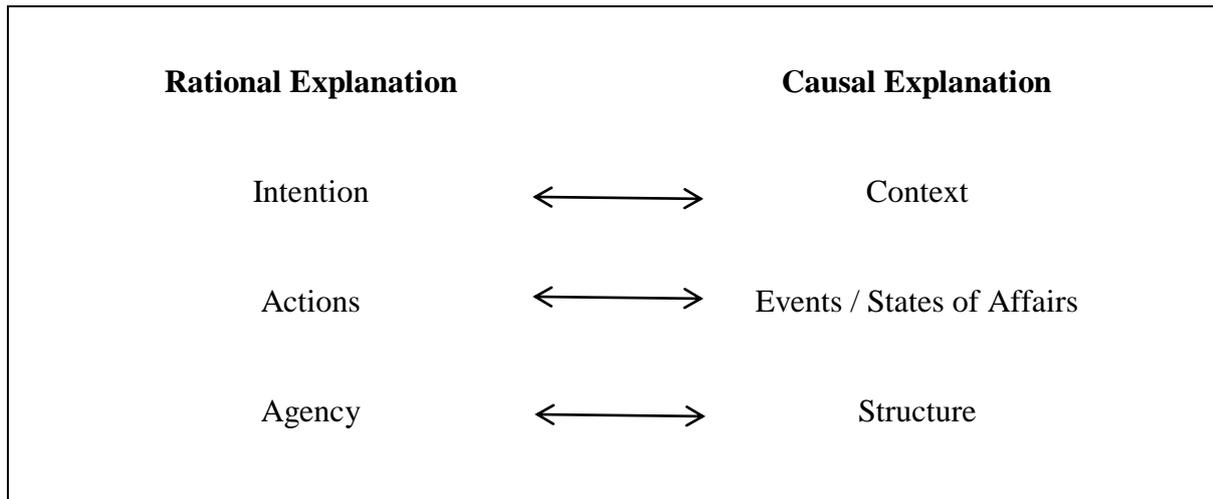
Historical explanation is multi-faceted (1) because reality is (and was) multi-faceted; (2) because we can enquire into different facets of the past: and (3) because we can pose questions of different types and at different scales. Shemilt (2010) distinguishes between empathetic explanation, focused on how people in the past perceived and understood their worlds, intentional explanation, focused on what historical actors intended and did to enact those intentions; and causal explanation, focused on the unintended consequences of actions performed by human actors or on factors of change that lack intention and belief – such as states of affairs that shape the context for action or non-human ‘agents’ (e.g. the weather). Simplifying Shemilt’s analysis to a binary model, we can distinguish between ‘*rational explanation*’ and ‘*causal explanation*’. Rational explanation is a matter of ‘explaining the reasons for action’ (Lee, et al., 2001:113) that motivated past actors, consciously or unconsciously, and I construe ‘reasons for action’ to include actors’ beliefs and ways of

seeing the world as well as their particular intentions at particular times. Causal explanation involves explaining 'the causes of outcomes' (Lee, et al., 2001:113), which often include much more than the intentions of particular historical agents. Causal explanation involves giving an account of the ways in which 'what happened' resulted from interaction between the intentions of historical actors and factors shaping the context for action including things like:

1. the unintended consequences of intentional action (outcomes that nobody in particular intended, such as the 'decline of deference' or 'global warming');
2. states of affairs that shape the context for decisions made by actors in the past (such as famine or war); and
3. the impact of non-human 'agents' (such as the cholera bacillus or Krakatoa).

Historical explanation can, therefore, be understood to involve at least two dimensions (Figure 1) - the *intentional* and *rational*, on the one hand, and the *contextual* and *causal*, on the other - albeit in differing degrees depending on the nature of problem to be explained. The two dimensions are separable analytically but they interact in practice. Events, actions and states of affairs shape and are shaped by individual hopes, intentions and beliefs. Individuals are always located in natural and in human contexts and contexts enable and constrain, making acting and thinking possible and also setting limits to the possible and the thinkable. 'Agency' (intention and action) and 'structure' (context and causality) and are also mutually conditioning – historical agents are shaped and constrained by structures of resource, belief and expectation but these structures are in turn reproduced and / or reshaped by individual decisions (Giddens, 1984).

Figure 1: Two modes of explanation



Some conceptual and discursive challenges that historical explanation can present for students

Students can find many of aspects of causal analysis very challenging. There are at least two dimensions to consider – *conceptual* challenges and *discursive* challenges. Again, these are analytically separable but overlap in practice since language is our principal tool for formulating, refining and exploring concepts (Woodcock, 2005).

Research studies give us indications of the kinds of ideas that students are likely to have about explanation in history (Carretero, et al, 1997; Shemilt, 1980 and 1983; Lee, 2005; Lee *et al.*, 1996; Lee *et al.*, 2001; Lee and Shemilt, 2009; Voss and Wiley, 1997; Voss, et al., 1994) and many of these ideas are barriers to historical understanding. The research suggests, for example, that students tend:

- To treat causes as if they were discrete things rather than relationships between things;

- To personalise or ‘agentify’ 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;
- To model causes as working in a uni-linear, mechanical and cumulative way; and
- To treat what happened as inevitable.

Students tend also 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, 2003; Chapman and Woodcock, 2006).

Discursive challenges associated with historical explanation arise from history’s linguistic complexity. The language of history is highly abstract – historians are interested in the past which, whatever else it is, is clearly not tangible and present and

the language of history often involves the... use of... abstract and general nouns and verbs which communicate a variety of concepts. These abstract nouns may involve:

- roles: leader, monarch, emperor, minister, factory worker, servant,
- structures: government, monarchy, republic. empire, army
- processes: invasion, conquest, discovery, colonisation, reform
- actions: rule, migrate, prevent, deportation, passed (a law)

(Cooke, 2009, 1-2).

History also involves mastery of ‘a variety of determiners, nouns, verb forms and adverbs which express the notion of making a generalisation’, of the language of ‘inference’, of the language of time and of ‘language which communicates the notion of cause and effect... words or phrases such as: because, therefore, due to, caused, led to, resulted in’ and so on (Cooke, 2009, 1-2).

Learning to write historical explanations, Caroline Coffin has shown, involves progressive mastery of modes of writing, which increase in their levels of abstraction and in the linguistic tools that they require. Table 1 summarises some of the issues that Coffin explores (2006, pp.66-94 and 116-138).

Table 1: Historical explanation as ‘genre’: linguistic challenges

Genre	Aim	Linguistic challenges
Biographical recount	Narrate individual human actions	Select and explain actions in a linear (chronological) manner and at the level of the individual agent using the everyday language of agency
Historical accounts	Narrate events and developments at scales larger than the individual agent, providing explicit causal explanations	Select and explain actions and events in a linear (chronological) manner and at scale, using process verbs (e.g. ‘influence’) and explicitly attributing causal links between story elements.
Factorial and consequential explanations	Explain the causes or consequences of historical events and developments, modelling explanation in terms of types of cause / consequence	Select and explain actions and events as above but in a non-linear manner (e.g. in numerative sequence – ‘1 st , 2 nd , etc.’), using abstraction (e.g. ‘The reasons included...’) and nominalisation (e.g. ‘The economy caused..’) to organise explanation elements, and explicitly attributing causal weight to factors.

As the table shows, progressing in historical explanation involves mastery of increasingly sophisticated language (e.g. nominalisation). Mastery of language and conceptual development are linked. As Coffin says ‘if students are to make progress, they need to learn how to handle abstract representations of cause’ (p.127) and the direction of progression in Table 1 is away from the chronological sequencing of ‘story’ and towards reorganisation of story elements using concepts.

Making analytical distinctions and having the vocabulary with which to make such distinctions go hand in hand. Both Woodcock (2005, p.11) and Coffin (2006, p.124 and p.129) identify and exemplify the vocabularies that students need to attribute causal roles and causal weight with precision.

The remainder of this chapter assumes that developing historical literacy involves *the explicit teaching of historical reasoning strategies and vocabularies*, a proposition for which we have promising research evidence (Reisman, 2012; Stoel, et al, 2014). The contention is not that we should focus *only* on reasoning and conceptual development. It is perfectly possible to teach historical reasoning explicitly *and* to use this as a tool to scaffold the development of substantive knowledge – indeed, it is hard to see how substantive knowledge can become substantial (rather than merely fragmentary) without the aid of questions and endeavours to process and organise it. Knowing has conceptual architecture (Donovan and Bransford, 2005).

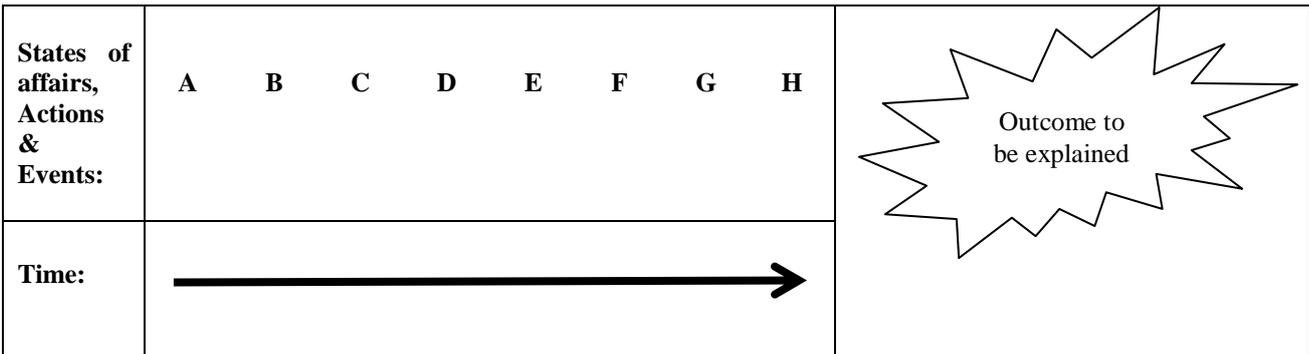
Strategies to Develop Children’s Mastery of Historical Explanation

Scaffolding story comprehension and analysis

Explanation is the analysis of historical actions, events and states of affairs and is an operation conducted upon a sequence of events in order to enable reasons for ‘what happened’ to be understood.

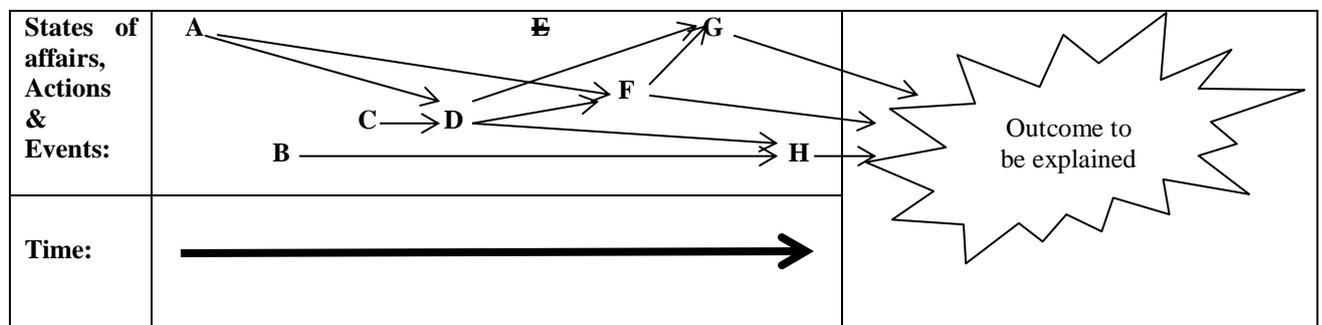
An initial task, then, when setting out to explain an aspect of history, is to help students to build a representation of ‘what happened’ in linear-sequential order: sequence needs to be secure to consider *consequence*. We need, in other words, to build a representation of the *chronicle* (White, 1973). A chronicle answers the question ‘What happened *before* Outcome X?’ and provides an inventory of actions and events organised chronologically using connectives such as ‘and then’ and ‘next’ or their visual or spatial equivalents. Figure 2 models a chronicle and students could be asked to transform a written chronicle into a sequence of cards or a wall display representing it or to construct one from primary materials.

Figure 2: Representing a chronicle



A chronicle does not yet give us a *story*. Contrary to the ways in which ‘story’ is often presented, in opposition to analysis, story *is* analytical (Megill, 2007): it has *plot*. ‘Storifying’ a chronicle involves emploting it, attributing causal relationships within it, identifying plot line/s and replacing the ‘next’ and ‘and then’ of chronicle with ‘as a result of’, ‘because’, and so on. To transform chronicle into story requires a new question also: chronicle’s ‘What happened *before* Outcome X?’ becoming ‘What happened *to bring about* Outcome X?’). Figure 3 transforms Figure 2, adding plot-lines and eliminating inconsequential events (E becomes ~~E~~).

Figure 3: ‘Storifying’ a chronicle by adding plot-lines

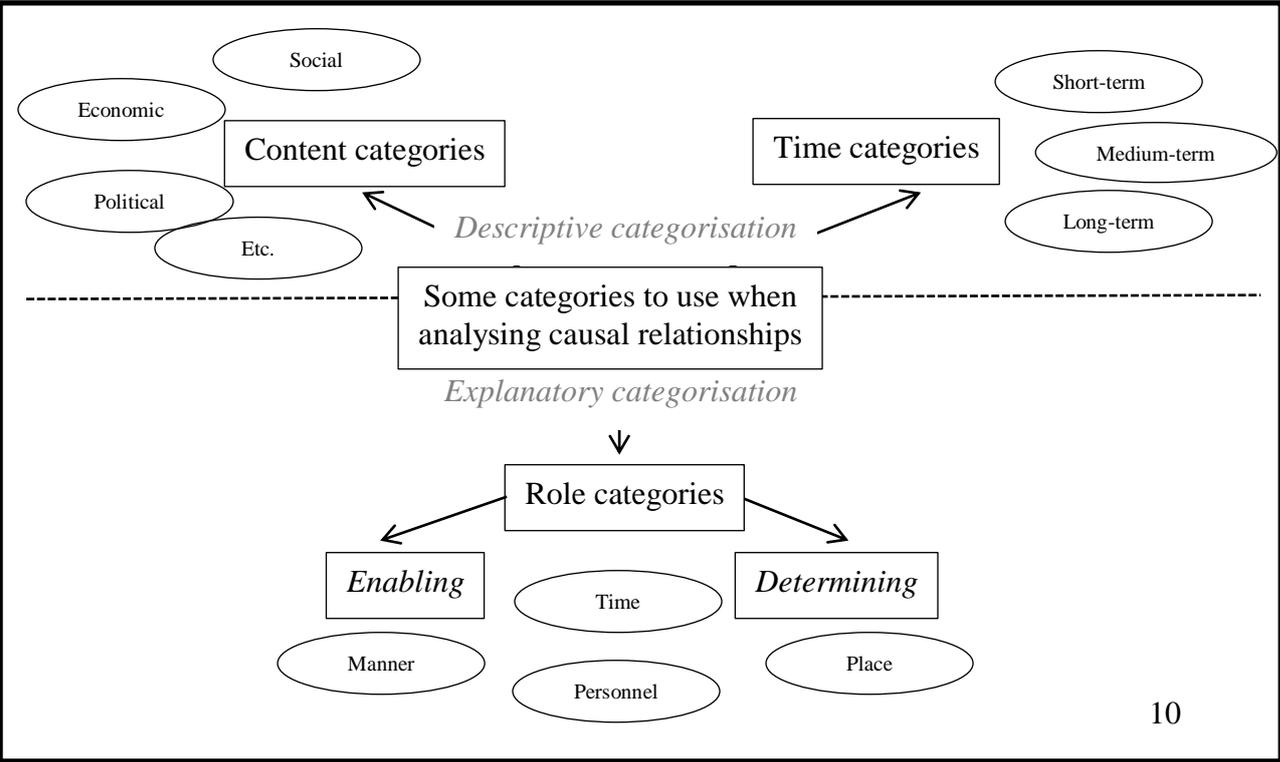


Potentially, the movement from Figure 2 to Figure 3 is a highly complex one – emploting links and eliminating the inconsequential requires detailed reflection on consequences and asking understanding-deepening questions like ‘Just what was it that resulted from story element F?’ A useful strategy here, if students are working with cards for each story element, is to ask them to write the consequences (if any) arising from each element on the reverse of each card. The ‘Figure 2 to Figure 3’ transformation also surfaces a number of useful analytical contrasts. Already, in Figure 3, we have multi-linear rather than uni-linear (or

billiard ball) model of how an outcome arose. Instead of ‘one damn thing after another’ we have three explanatory starting points (A, B and C) that feed into an interlinked web of causal relationships. These relationships are also of different kinds: some are direct (such as ‘F to Outcome’) and some indirect (such as ‘A to F to outcome’) and the relationships operate over variable time-scales (compare ‘A to F’ to ‘H to Outcome’). We can also ‘see’ that three story elements are acting on the outcome (H, F and G) which raises what is likely to be a fruitful analytical question: ‘How *exactly* do these three aspects of the ‘story’ impact the outcome and do they do so to the same extent and with equal force?’

We are likely to need more categories than are likely to emerge spontaneously from interlinking story elements to arrive at the kind of concept-driven abstraction and modelling that Coffin argues is essential to sophisticated explanation. We need to ask new questions and to introduce new tools (Figure 4) and explicitly to ‘polish’ students’ ‘conceptual lenses’ (Chapman, 2003).

Figure 4. Some categories to use when analysing causal relationships



Time categories have already emerged from the discussion of Figure 3. Student analysis of a ‘story’ can be enhanced by introducing further complexity and by asking questions like the following:

- What *kinds of thing* have importance in our story?
- What *kinds of relationship* were involved?

Figure 4 categorises causal relationship by time but also by content – by the *types of thing* that are involved in the historical event or process that we are trying to explain. One might ask, for example, ‘How far is this a story about the economy?’ or ‘What role did political developments play in shaping the outcome?’ Categorization by time or by content remains, fundamentally, descriptive – we are putting labels on things that tell us what kind of thing they were and over what time scale they operated, but this does not tell us what *role* these things played in driving change or what their consequences were. Descriptive categorisation has clear limits, then, but it is useful, nonetheless: it is helpful to know, for example, if the process we are trying to explain was primarily high political and if short-term causal relationships, operating rapidly over a matter of days and weeks, played an important part in bringing about the outcomes that were interested in explaining.

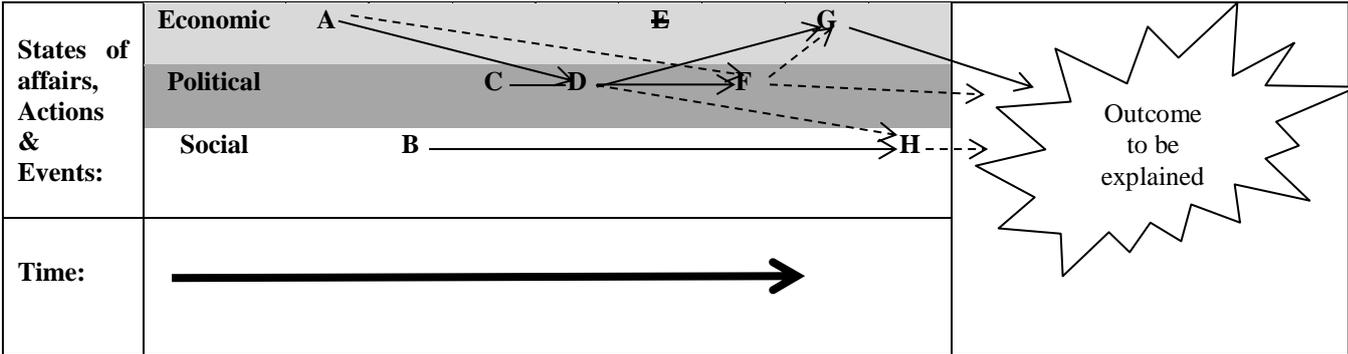
A more powerful categorization is provided by explanatory categories. Causal relationships can be analysed into at least two types: *enabling* relationships and *determining* relationships. We can talk about *enabling causal relationships* (Lee, et al., 1996; Coffin, 2006) through which one or more of the elements of a sequence of events or situation shapes actions or states of affairs so as to make another action or state of affairs *possible* or *probable*. There are many ways in which an outcome might be enabled: one event or situation element may have enabled the outcome in question, for example, by *deepening* a crisis, by *worsening*

a shortage, by *speeding up* change, enabling a particular group to seize an opportunity, and so on (Woodcock, 2005; Coffin, 2006, p.124).

Determining causal relationships can be analysed and broken down in a number of ways: a particular relationship might be held to have determined the *point in time* when an outcome occurred, another to have determined *the place* where it occurred, another to have determined *the key personnel* involved, yet others to have determined *the manner* in which it occurred, and so on. We can ask questions like ‘Did X make Y happen as it did or did X just make Y more likely?’ to focus students' thinking on enabling relationships. Questions can also help to focus students on determining relationships: ‘Why did X happen?’ can be refined into ‘Why did it happen in Poland?’, ‘Why did it happen in 1941?’, ‘Why did it happen so quickly?’, ‘Why did it happen so violently?’, and so on. Alternatively we can ask ‘Did X make Y happen when it did?’

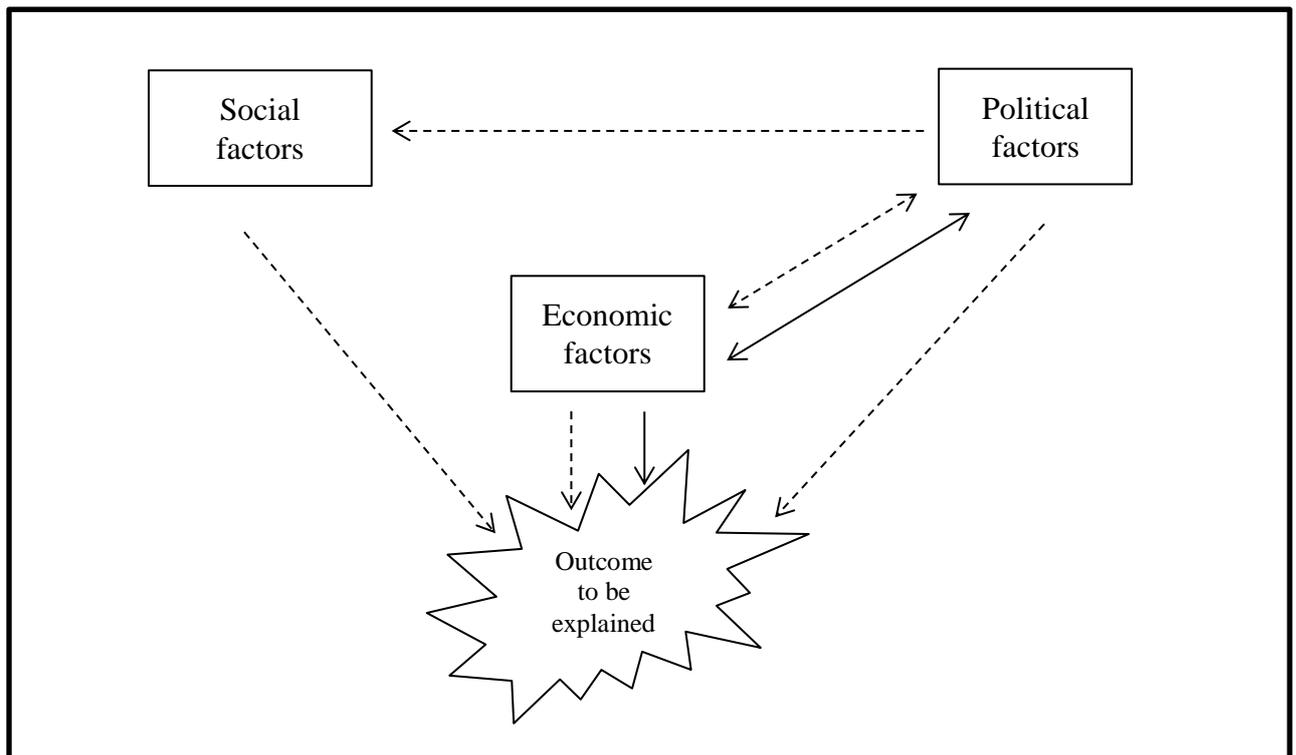
Figure 5 Rewrites Figure 3’s analysis, making use of these additional categories – through the addition of rows, coded using ‘content’ categories, and through formatting (dashed lines denoting *enabling* causal relationships and unbroken lines denoting *determining* ones).

Figure 5: Analysing a story: adding categorisation by content and by role



It is probable that students who have been encouraged to develop their knowledge and understanding of a sequence of historical events by interrogating and restructuring it in the ways indicated in Figures 2, 3 and 5 will have progressed their ability to explain it analytically also. The analysis in Figure 5, nevertheless, remains chronological rather than factorial.

Figure 6: Analysing a story: replacing chronological with factorial organisation



The analysis in Figure 6 asks the question ‘What *kinds of relationship* were key in *enabling* and *determining* the outcome in question?’. To pursue answers to questions like this is to engage in *factorial explanation* and to take analysis to a higher level of abstraction than

‘story’, removing chronology as an organising principle: factorial explanation does not *tell the story*, it *analyses the plot*. As in Figure 5, dashed lines denote *enabling* causal relationships and unbroken lines denote *determining* ones. Single-headed arrows denote one-way interaction, and indicate its direction, and double-headed arrows indicate interaction between factors.

The analysis that the figure performs on the chronological account represented in Figure 5 is informative. Completing it *makes it explicit*, first, that social factors did not interact at all with the other aspects of the situation in question and only had an enabling effect on the outcome, second, that political and economic factors did interact and were mutually enabling and determining, third, that both political and economic factors had an enabling impact on the outcome, helping to make it possible, but that, fifth, economic factors were crucial in making the outcome occur as and when it did.

Explanation Modelling

We come to know and understand history by thinking about it. The previous sections have focused on the explicit teaching of historical explanation strategies as an approach to addressing the interconnected tasks of (a) building substantive knowledge and (b) building powerful conceptual understanding.

Historical thinking entails building a clear 'situation model' (Wineburg, 1994, pp.88-89), or mental representation, of the history being analysed. An effective representation should enable students to explore interconnections between its elements in historically robust ways.

There is a lot to be said for using literal models to aid conceptual modelling. They can be two-dimensional and take the form displays or diagrams and involve card-sorting or display work that uses spatial organisation, colour-coding, and physical or graphical links between action, event and situation cards to model relationships of cause and consequence - examples include Figures 2-3 and 5-6, Counsell's 'zone of relevance' model (2004) and the 'diamond nine' (Chapman, 2003). Models can be virtual - flow charts or animated diagrams in PowerPoint – or actual and three-dimensional, for example, games used as analogies, such as *Buckaroo* (Chapman, 2003) or *Jenga* and *The Marble Maze* (Chapman and Woodcock, 2006). Models are concrete analogies and analogies can take many forms, including extended analogical stories (Chapman, 2003). Analogies work by providing a simplified template for a more complex situation or by allowing students to use what they know to explore the unfamiliar. All models and analogies have limits but they can be useful tools for deepening thinking about how elements of the past fitted together. A crucial question with models and analogies is always 'closeness of fit' and reflecting on the extent to which they *do* and *do not* help us understand the history we are trying to think about can deepen understanding and build metacognition.

Simulations can be very effective in helping students think about causal relationships and importance. Simulations aim to deepen understanding of actions or of contexts of action (Moorhouse, 2008). Simulations can enable students to say things like 'We did X because... and if Y hadn't happened we wouldn't have', and so on, and thus scaffold rational understanding. There are many types of simulation and they can be constructed in many ways,

for example, using IT (Chapman and Woodcock, 2006). There are problems with simulation, as with analogies and models - particularly where simulated outcomes are at variance with actual outcomes. Limits can, again, be valuable because discussing *why* simulated and actual outcomes differed can deepen historical understanding.

Counter-factuals and 'possibility thinking'

Lee and Shemilt have argued that a key marker of progression in historical understanding is the development of 'possibility thinking', or the understanding 'that history is not a one-way street' and that past '*actuality*' (what happened) was one '*causal possibility*' at the time and that 'alternative outcomes' were 'real as well as logical possibilities' (2009, p.46). To engage in 'possibility thinking' is to 'pose counterfactual questions and... begin to explore possible pasts': to move from asking 'Why x?' to explaining 'why we could have had x or y or z as opposed to p or q or r' (2009, p.47). These history education research findings are supported by arguments in the philosophy of history from the form of historical explanation to the logical necessity of counter-factual analysis:

In order to assess where X had any 'determining influence' on Y, and what sort of influence that was, we must also consider the possible impact of W, V, U, T, and so on, on Y. Causation does not occur in a vacuum: hence it is always a matter of assessing the relative strengths of various different possible causes.

(Megill, 2007, p.7)

To think counterfactually about the past is to ask ‘what if’ questions and to explore how a sequence of events or situation in the past might have altered if one element of the sequence had been changed or removed (Ferguson (ed.), 1996). What happens to our ‘Outcome’, for example, if ‘G’ is imagined away from Figure 5?

Counterfactual history is controversial, particularly in ‘exuberant’ forms (Megill, 2007, pp.151-156) or where it is used to argue for pure contingency in the past and to diminish structural causality (Evans, 2014). It seems probable, however, that asking counterfactual questions will help students deepen their understanding of what actually happened (since to reason counter-factually is to work through the exact implications of the various components of the actual past) and strengthen their analytical capacities and their grasp of the *conditional* (‘if... then...’ and ‘if not... then not...’). It is also a powerful tool to use when establishing historical importance – when you ask what would have happened ‘without X’ you focus on identifying the precise consequences and relative weight of X, of Y, and so on.

Chapter Summary

Historical explanation is a complex matter. This chapter has endeavoured to explore some key aspects of it, emphasising the *explicit teaching* of *conceptual* and *linguistic* aspects of learning to explain history and stressing the importance of ‘*possibility thinking*’ to mastery. There is more to say than can be said here, for example, about the importance of extended writing to historical explanation (Counsell, 2004). This chapter aims to provide entry points into the

wider pedagogic discussions.

Key Questions

- Why is historical explanation challenging for students?
- How can we help students build their knowledge and understanding of both the historical past and the analytical strategies that are necessary to make sense of it?
- What conceptual tools do students need to develop to help them master historical explanation?
- What are the linguistic challenges posed by historical explanation and how can we help students develop explanatory literacy?
- What is ‘possibility thinking’ and how can we develop it?

Further reading

Chapman (2003) and Woodcock (2005) have had considerable impact on pedagogic discussion in England and are a key background to recent debates. Additional relevant *Teaching History* articles are summarised in HA (2012). Coffin (2006) discusses the language of causation in depth and makes useful practical recommendations on developing mastery of

historical discourse. Lee and Shemilt (2009) is essential reading on progression in causal reasoning.

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¹ I have written about causal explanation before and this paper depends heavily on my earlier work. In large part, this chapter is a re-visioning of a paper written for the Historical Association (Chapman, 2008). I am grateful to the HA for permission to rework it. I am grateful, also, to my colleague Catherine McCrory: my thinking on the importance of 'making it explicit' has benefitted considerably from Catherine's insights (see McCrory, 2016).