1

Introduction

'Hadrian's Wall offers a vast archaeological database against which the ideas of theoretical archaeologists can be tested'

David Breeze (2009a, xii)

1.1 About this book

To set out a somewhat counterintuitive stall straight away, this is not primarily a book about Hadrian's Wall. First and foremost, it is an exploration of how evidential reasoning is conducted in archaeology, which happens to use Hadrian's Wall as a case study. In doing so, it focuses on one specific question — why the Wall was built — and one specific time period — the reign of the Emperor Hadrian. For this reason, it should not be considered a comprehensive account of the Wall — Breeze and Dobson's seminal work (2000), more recent assessments by Hodgson (2017b) and Symonds (2021), Collins' (2012) analysis the Wall in the later Empire, and Hingley's (2012) study of the Wall's post-Roman history are recommended for readers with that in mind. Frontier scholars will ideally find the discussion of the archaeological evidence and the debates about functionality of interest, but it is hoped the book will broadly appeal to anyone concerned with how we reason about the past using the fragmentary and partial evidence that remains.

In order to provide a more focussed and usable volume than the thesis this book originated from, the text has been slimmed down, some of the more indulgent discursions and speculations have been excised, the references have been updated, and more signposting has been added. Different sections of the book will likely vary in appeal according to the interests of the individual reader and, whilst it is designed to have a logical flow through the chapters, it has also been structured to allow more selective reading. For instance, those interested in epistemology who have relatively little background in Roman Britain may wish to use Chapters 3 and 4 as a frontier primer, providing useful context to the case study, whereas Roman frontier specialists may choose to skim over these sections or else skip them entirely.

The aim throughout is to explore how to make best use of partial evidence, integrate different theoretical perspectives, recognise and mitigate biases, ensure multivocality and avoid debate stagnating when positions become entrenched. In an increasingly fragmented discipline, the need to enable collaborative work and to combine the benefits of disparate approaches is increasingly apposite. There is an epistemological tension between a growing quantity of increasingly niche research, often demanding very specific expertise, and its integration into broader research questions, which calls for new methodologies to overcome (Kitching 2024). Despite an inevitable degree of underdetermination in archaeological reasoning, archaeologists rarely outline in detail the ways in which multiple explanations can account for the evidence available. Focussing on long-duration questions and specific causal 'smoking guns' has been suggested as a way to play to archaeology's strengths (Perreault 2019) but, as well as explaining cultural change over thousands of years, the archaeological record can nevertheless offer insight into the decision-making of individuals at specific points in time. Indeed, the focus on the experience of human beings, rather than humanity in the abstract, is one of the discipline's key strengths.

The intended function of Hadrian's Wall presents an ideal case study as it offers both a good size dataset as well as being a subject of continuing controversy and debate. This has sometimes appeared to stagnate along binary oppositions (Collins 2012, 4) — an issue not unique to frontier studies (Hingley et al. 2018). As the largest archaeological monument in Britain, and the most complex artificial frontier of the Roman Empire, Hadrian's Wall is a compelling reminder of the power and impact of the Roman imperial project. Despite less than 10% of the Wall's fabric being visible in the twenty-first century (Bidwell and Hill 2009, 40), the Wall is by far the empire's best-preserved frontier and recognised as such as a World Heritage Site since 1987. Over four centuries of inquiry and excavation have revealed the Wall's structures in increasing detail and produced a large assemblage of artefacts, all of which have served to improve our knowledge of this most evocative of sites.

Such is the corpus of knowledge that has been built up for the Wall that the casual observer could be forgiven for thinking that archaeologists have by now uncovered everything worth knowing about it (Symonds and Mason 2009, 1). Indeed, when Mortimer Wheeler wrote that Hadrian's Wall no longer mattered as a major historical problem (1961, 159), he was simply reflecting the prevailing view of Romano-British archaeology in the mid-twentieth century and, in a sense, he was correct. The key questions that occupied archaeologists of that period, relating to dating and the order of construction for the Wall's main elements, had been resolved (Breeze and Dobson 2000, 72-82; Hodgson 2017b, 48-51; Breeze 2019b, 45-54). However, such definitive declarations fail to recognise the contingent nature of archaeological interpretation and the extent to which assessments of the past are the result of judgements in the present (Kitching and Witcher 2023). Each generation of archaeologists asks

the questions that they view as important and reframes the problem in light of new discoveries.

Knowledge of *what* the physical remains represented had never been lost, the Wall continuing to feature in maps and chronicles of the sub-Roman era (Shannon 2007). Later antiquarians wrestled with the question of *who* was responsible for their construction before John Hodgson correctly postulated that the Stone Wall was built on the orders of Hadrian (1840, 149-322). Henry MacLauchlan undertook a survey of the Wall in the nineteenth century to answer the question of exactly *where* it ran, although there are areas where the precise course of the Wall and the distribution of the frontier installations still remain uncertain (Symonds and Mason 2009, 9), and the archaeologists of the early-twentieth century satisfied themselves that they had securely answered the question of *when* the various elements were built in relation to each other (Richmond 1950, 43-56). Around the same time, R. G. Collingwood used a detailed appraisal of the archaeological evidence (1931a, 62-63) to produce a reappraisal of *why* the Wall was built, hitherto largely assumed to be defensive in purpose (Collingwood 1921a; 1921b), and subsequent scholars debated the same issue using a variety of innovative approaches (e.g. Breeze and Dobson 1972; Mann 1974a; Donaldson 1988; Whittaker 1989; Isaac 1990). More recently, detailed work by Poulter (2009) and Hill (2006), amongst others, has revealed *how* the Wall was surveyed and constructed.

From at least the nineteenth century, then, the answers to these questions about Hadrian's Wall were sought from a detailed study of the structural remains themselves (Birley 1961, 55-69). By the turn of twenty-first century, though, there was a growing sense that such a focus, and a perceived avoidance of comparative approaches and broader theory, was too parochial and theoretically conservative (Elton 1996, viii; James 2005, 502). More broadly, a reaction against the New Archaeology had resulted in a scepticism of functional explanations in archaeology (e.g. Shanks and Tilley 1987). With these developments in mind, it is perhaps unsurprising that this period saw a general decline in the study of Hadrian's Wall in Britain, and the question of its function specifically (Hingley 2008a; Breeze 2018). However, a dichotomy between a focus on the material record of archaeology on the one hand and archaeological theory on the other is an artificial one (Trigger 2007, 133-154). Similarly, though prompted by a valid corrective to unchecked functional-processualism, the broader reaction against functional explanations was somewhat overdone given the original critique was primarily directed at a narrower definition centred on systems theory.

Archaeology is the study of humanity through the material traces it has left behind and everything consciously created by humans serves a function, whether that be the thorough and premeditated strategy of a group or the simple and cursory amusement of an individual. Put simply, nothing deliberately created by humans can be divorced from function as something motivates the act of creation in the first instance and, in attempting to satisfy that purpose, a functional process takes place. This is not to argue in favour of teleological determinism or nomothetic explanations — not all humans involved in creating something necessarily want the same thing, what they want is liable to change, and what they ultimately create might not be what they want — but to argue against functional explanation *in toto* is to remove human agency and intentionality from the analysis. Even critics of functional analysis such as Shanks and Tilley characterise art in decidedly functional terms as something which *operates* and *transmits* non-verbal communication (1987, 140, 150). Moving away from a narrow definition of function, Carl *et al.* denied the existence of a contradiction between the practical and the symbolic, preferring instead 'progressively more explicit modes of symbolic representation' (2000, 329). For instance, a monument designed to symbolise the personal power of an emperor may serve several functions, from intimidating opposition to reinforcing personal ego. In this sense, symbolism is a means to an end rather than an end in itself but is nonetheless compatible with a functional interpretation.

Interpreting the iconology of architecture involves understanding a building as a symbol and what meanings were conveyed through form for contemporary people (Binding 2019, 1). Thus, in symbolic architecture the form is not accidental but is deliberately designed to express a function through the association of ideas (Smith 1956; De Zurko 1957, 4; Summerson 1963, 19-39; Norberg-Schulz 1966; Collins 1998, 25; Thomas 2007, 17, 53-69). As an example, Hadrian's Pantheon (*Figure 1.1*) is recognised as a building of great symbolic power (Mark and Hutchinson 1986, 24-34; Joost-Gaugier 1998, 21-42), but this symbolism works by delivering a message to its audience through its association of new ideas with those that will be readily recognised. For instance, the concept of a dome already carried a symbolic message (Smith 1950) but was here presented on an unprecedented scale, thus enhancing that message's delivery. The use of Egyptian granite in the portico columns (Grasshoff and Berndt 2014, 1-14) arguably performs something similar. The end-state is not that the Pantheon is symbolic, but that it successfully harnesses symbolism to deliver a specific message and achieve the desired effect. Viewing Roman architecture in abstract aesthetic terms is almost certainly an anachronism, its construction and use in a Roman context tending towards a participatory social and political function (Hölscher 2018, 296).

Functionalism and symbolism are therefore not mutually exclusive and replacing a perceived functional bias with a focus on abstract symbolism risks avoiding key questions by dismissing them as irrelevant. As Hölscher remarked in a discussion of the Parthenon frieze, 'if *we*, as distant scholars, are not able to determine the theme… this is *our* problem. But we should not escape from this situation by projecting our ignorance into antiquity, declaring the problem to be non-existent or of secondary importance — or even intended' (2018, 250). Of course, this also leads us

Figure 1.1 Interior view of the Pantheon dome, Rome (P Kitching, courtesy of the Pantheon and Castel Sant'Angelo – Directorate of National Museums of the city of Rome).

to another problem with pursuing functional explanations — that this most fundamental of questions remains unanswerable. Susan Mattern succinctly captured this sense of pessimism in observing that 'recent scholarship has argued that the purpose of Roman frontiers is uncertain in all cases' (2002, 112). Whilst certainly true, such uncertainty is neither uniform nor immutable. Architectural form and function are inherently linked (Sullivan 1896, 408), human-constructed and human-arranged spaces conveying the designers' intent through their form and use (Dardel 1952, 40), and form is often recognisable archaeologically. This link between form and function was evidently clear to the Romans themselves, Vitruvius emphasising the close relationship between a building's function on the one hand and architectural design and scale on the other (Vitr. *De Arch*., 6.5.2). Certainly, form and function do not operate in isolation, with climate, topography, available materials and social drivers all playing a role (Trebsche 2009, 506), but the link nonetheless exists and can provide valuable insight alongside the available literary sources, epigraphic information and other examples from elsewhere around the Roman Empire. The latter has even been broadened beyond classical antiquity to include analogies from other locations and periods (Stevens 1955, 397-400; Chaichian 2014; Frye 2018), aiming to take account of partial evidence and multiple or changing functions (Trebsche 2009, 513).

The continuing importance of this question is reflected in the *Frontiers of Knowledge Research Framework* Action Plan, which notes the requirement to assess existing models for the function of the Wall (Symonds and Mason 2009, 62). Indeed, the last decade or so has seen something of a resurgence, which this study responds and contributes to, in consideration of the Wall's function as reflected in its form (e.g. Hodgson 2017b, 157-175; Breeze 2019b, 61-92; Symonds 2021, 51-130). Answering this question, though, remains far from straightforward. The aforementioned tension between detailed structural evidence and broader synthesis is particularly acute when it comes to Hadrian's Wall (Hingley 2008a, 26). The Wall's intended function is therefore an ideal case study for investigating how archaeological knowledge is constructed and how to navigate between partial, disparate data and more general understandings.

1.2 Hadrian's Wall and the question of function

The Wall itself had a complex building history, its design undergoing significant alterations soon after construction commenced (Birley 1961, 269-270; Breeze 2014, 41-64). The bulk of the soldiers in the region were originally planned to be based in earlier forts positioned to the south (*Figure 1.2*) until a dislocation from the original design saw the addition of forts on the line of the Wall itself

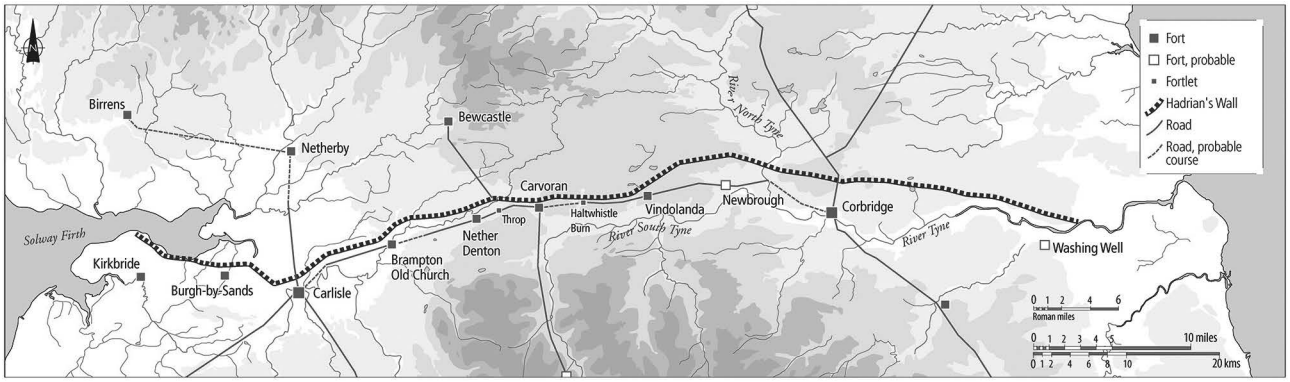

Figure 1.2 The initial plan for Hadrian's Wall (courtesy of David Breeze).

(Hodgson 2017b, 50). Similarly, the western sector of the Wall curtain was initially constructed of turf, whilst the eastern sector was built using stone (Bidwell 2009; Hodgson 2017b, 10) and was originally of a broader gauge than as completed (Breeze and Dobson 2000, 59). Following the dislocation (*Figure 1.3*), the Wall consisted of a stone curtain stretching for 73 miles from the Tyne in the east to the Solway in the west. A series of forts was placed along this line around every 7 1/3 miles (11.8km) and a large linear ditch and earthworks, the Vallum, was built to the south. At every mile there was a fortified gateway, known as a milecastle, and every third of a mile was a smaller tower, or 'turret'. A series of fortifications, minus the curtain, extended down the Cumberland coast and a number of outpost forts were maintained between ten and fifty miles to the north (Breeze 2006c, 50-90). The structures existed in a broader militarised zone, including hinterland forts along key lines of communication, stretching as far south as the legionary fortresses at York and Chester (Breeze 2019a, 161-163).

The story of the Wall's interpretation is equally convoluted, as explanations for what this massive undertaking was meant to achieve have been proffered, overturned, and challenged in turn. There is therefore a level of generalising in any summary of the Wall's interpretation and individual scholars should not be seen as necessarily wedded to any specific reading. On the contrary, scholars have often been open to exploring a variety of different interpretations. Notwithstanding these caveats, the various explanations for the Wall's function can be grouped into three main categories, discussed in detail in Chapter 3 but summarised here:

1.2.1 The defensive theory

Early antiquarians, notably Horsley in his posthumously published *Britannia Romana* (1732, 110, 126), drawing on the work of Gildas and the Venerable Bede, interpreted the Wall as a primarily defensive barrier. Though substantially undermined following Collingwood's influential work in the 1920s (1921b, 4-9; 1921a, 37-66), this interpretation has been revised by Luttwak (2016) who proposed a model of preclusive defence. The discovery of obstacles on the line of the berm in the early 2000s seemed to suggest a more defensive role and, since then, Bidwell (2008), Hodgson (2017b, 172) and Symonds (2022) have all explored the case for a defensive interpretation. Despite an earlier emphasis on the Wall as primarily intended to control the movement of people and goods, Breeze has also recently revisited a possible defensive role, noting the impact of potential shortages in military manpower on imperial decision-making (2019a, 205).

1.2.2 The symbolic theory

It is also possible to view the function of the Wall through the lens of its symbolic potential. For instance, Anthony Birley emphasised its symbolic role, both as a display of imperial power and as a signifier of a change from a

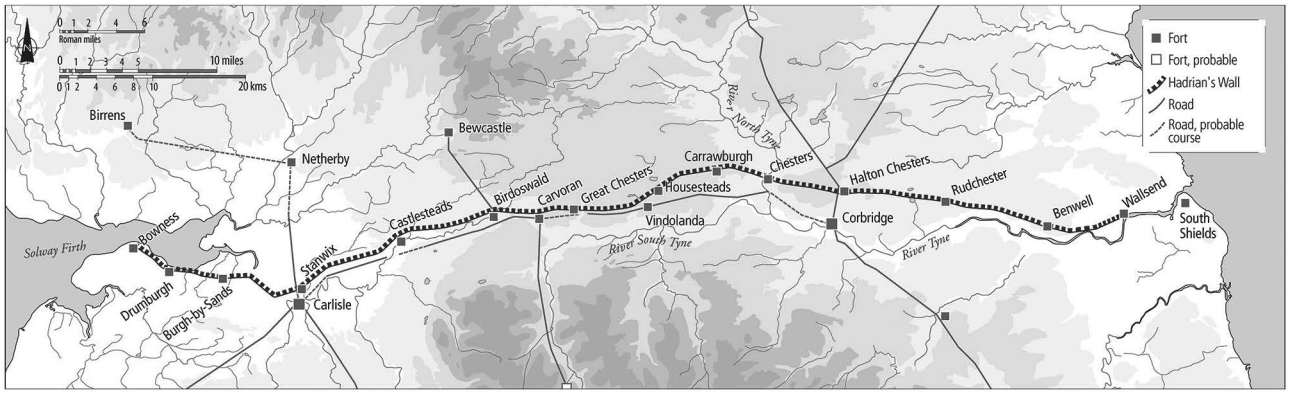

Figure 1.3 The amended plan for Hadrian's Wall (courtesy of David Breeze).

previously expansionist strategy (2001, 131). Everitt echoed this view in referring to the Wall as a 'magical metaphor for Roman imperium' (2009, 224). Certainly, several aspects of the Wall's design and construction lend themselves to a symbolic interpretation. These aspects have been explored by both Mattern (2002, 114-116) and Hill (2006, 32), whilst Hodgson has also discussed the symbolic value of the Vallum to the rear of the Wall (2017b, 173). Hingley and Hartis have similarly explored the notion of the Wall as a 'vast physical statement of imperial might', which served to reinforce Roman identity in otherwise debateable lands (2009, 79-96).

1.2.3 The control-of-movement theory

The idea that the Wall was primarily designed to control the movement of people was first posited by Collingwood (1921a, 65) and developed considerably by Eric Birley (1956, 33; 1961, 273), who proposed that it was built to support controlled economic development to the south. This central idea was developed by other scholars of the 'Durham School', with Breeze and Dobson concluding in 1976 that the Wall served to control the movement of people, the forts having a separate though co-located military function. More recently, Jones and Woolliscroft's analysis of aerial photography noted the potential utility of milecastles as checkpoints in the control of movement (2001, 76-77), whilst Whittaker (1997) argued how predominantly social, economic and ecological factors led to the establishment of broad frontier zones. More recently still, Symonds has examined the relationship between the frontier installations and river crossings in controlling mobility (2020).

These interpretations stress the importance of security rather than defence, the threat being one of infiltration rather than invasion, resulting in the transformation of a previously mobile Roman army into 'the paralysing role of frontier guards' (Breeze and Dobson 2000, 23). The centrality of economic and security drivers in these readings has prompted comparisons with more modern frontiers designed for that purpose (Breeze 2019a, xvii). In this regard, the use of Hadrian's Wall as an archetype for modern preclusive barriers has been interrogated and addressed in the emerging interdisciplinary field of border studies (Hanscam and Buchanan 2023). Provided the different ways analogies can be used are understood (Kitching 2025), such approaches not only enable archaeology to engage with important contemporary debates but also introduce new perspectives on the use and significance of boundaries in the past, helping to place artificial frontiers within their broader social context (Gardner 2022; Gardner 2023).

1.2.4 Other explanations

These three broad categories may be said to summarise the main views put forward for the function of the Wall but not, it must be stressed, all of them. The hypotheses considered must be grounded in plausibility and internally coherent if hypothesis-testing is to avoid the imposition of narrow, anachronistic propositions (Hodder 1999, 56). Thus, some of the other arguments put forward for Roman frontiers are not considered here, either because they are judged not to be applicable to Hadrian's Wall specifically, or because they are assessed as implausible *a priori*, as is the case for the pseudo-archaeological challenges noted by Collins (2020b, 46). Also not considered here is the argument that the Wall was constructed simply to keep the army busy (Mann 1974a, 532; James 2011, 159); despite some literary references to soldiers being put to work as a check on lethargy (Tac. *Ann*. 11.20), the Wall's convoluted development strongly suggests it was more than 'a mere displacement exercise' (Breeze 2019b, 158). The displacement theory is also incoherent with the situation outlined in Chapter 3 involving conflict, manning shortfalls and the requirement for additional troops in the form of *Legio VI Victrix* (Mattingly 2006, 188). Finally, the notion that frontier installations were places to house troops in the absence of towns (Hodgson 1989, 177-189), a theory which makes some sense in the Levant where a curtain wall was notably absent, is not considered applicable to northern Britain. This is not to say that these interpretations could never be assessed in a systematic way like the others, merely that the constraints of time and space prompted their exclusion here.

1.3 Developing another hypothesis

The ossification of the military, social and economic interpretations, each driven by differing approaches and methodologies, has resulted in what Collins refers to as 'a schism in the conceptualization of Roman frontiers… [where] the exclusion of certain factors… has inhibited further development of the discipline' (2012, 4). Exploring the positive aspects of all these interpretations, alongside a reconsideration of the evidence base as a whole, offers an opportunity to move beyond oppositional analysis and develop new, inclusive ways of thinking about old problems. Thus, numerous complementary elements evident in the defensive, symbolic, and control-of-movement interpretations can be drawn into a single coherent interpretation of the early Wall, termed here as one of deterrence (detailed in Chapter 5). This hypothesis considers the Wall as a means to inspire awe (deterrence by denial) and enable punitive action (deterrence by punishment), focussing on the cognitive and perceptual elements of Roman power.

Deterrence is not synonymous with defence; there are superficial similarities between the two, particularly in the case of deterrence by denial, but in terms of aims they are distinct. A defensive approach is successful if it succeeds in repulsing an attack, whilst a deterrence approach succeeds if it alters the decision-making calculus of an opponent in a manner favourable to the deterrer. In short, defence is a short-term and narrowly defined practical effect, whereas deterrence is a longer-term, wide-ranging, and cognitive effect. Although it has come to be viewed as a modern phenomenon, and in some

cases almost synonymous with nuclear strategy (Zagare and Kilgour 2000, 4-5), deterrence is credibly as old as the earliest urban settlements (Cioffi-Revilla 1999, 249) and its principles are evident in antiquity, notably in the context of the Peloponnesian War (Lebow, 2007). This is particularly noteworthy given that Greek culture and ideas may have been a greater influence on Hadrian's thinking than the policies of his predecessors (Crow 2004b, 129-130). Therefore, whilst cognisant of how modern theories shape our perception of the past (Johnson 2004, 105) and wary of anachronism, it is important to be open to new perspectives from which to re-conceptualise long-standing problems (James 2002, 37).

Neither is a deterrence interpretation a euphemism for a narrow military reading of the Wall's function. It is not uncommon in the literature of the Wall to find the terms 'defence' and 'military' conflated, the problems with a defensive interpretation used to conclude that the Wall did not have a military purpose (e.g. Collingwood 1921b). The military history of the frontier zone received the bulk of attention in the earliest Wall scholarship (Symonds and Mason 2009, 1) and this has resulted in more recent scepticism of military readings (James 2002, 26). It has been argued that more recent discourse on Roman archaeology 'tends to concentrate excessively on social elites and the supposedly peaceful civil core of the empire' as a result (James 2002, 1). Whilst attention to broader factors was arguably long overdue, neglecting the more strictly military aspects brings with it the danger of simply producing an inversion and losing some valuable insights in the process (Woolf 1993, 180).

Given that Hadrian's Wall was built, operated, and maintained by the Roman army, it would be difficult to deny the significance of its military aspects and the significance of the army in Roman affairs overall (Mann 1974a, 509; Campbell 1984; Bispham 2008). In truth, the custom of applying binary 'military' or 'civilian' labels to Roman sites belies the fact that the communities who occupied them were likely much more heterogeneous (Haynes 2014) and that even the ostensibly 'civil' settlements cannot be fully understood outside of their military context (Casey 1982). The deterrence hypothesis is envisaged instead as a holistic approach, moving away from binary oppositions. In consequence, the symbolic elements of the Wall are viewed not as elements of an abstract monument, but as an integrated design in pursuit of an overall function. This is reminiscent of Alfred Gell's theory on art as a component of technology, utilising the 'halo-effect' of mastering technical difficulty to achieve a cognitive effect on the intended audience, including as a weapon in psychological warfare (1992, 40-67). The psychological value of fortifications, as opposed to their purely practical value, was arguably clear to the Romans (Driessen 2005b; Goldsworthy 2006, 113).

In examining deterrence as a cognitive process, this study must look not only at the Roman military, but also its often-overlooked antagonists. It is towards the latter that any deterrence posture would be directed and discussing this aspect is essential to place the Wall within its broader social and political context. Mattingly has noted Rome's considerable skill with 'deterrence diplomacy…a cynical use of power, manipulating and compelling subject peoples to make required responses' (2006, 89-91). That such an approach was applied not only to provincial peoples but also, through frontier policy, to manipulate those nominally outside of the empire, is the basis for the deterrence interpretation of the Wall. In this way, it can help bridge the dichotomy in Roman scholarship between the archaeology of conquest on the one hand, and post-conquest, *limes* studies on the other (Fernández-Götz et al. 2020, 1634).

1.4 A focus on people

Exploring intended function requires a focus on the perspective of the Wall's creators. However, it should be stressed that placing the Romans at the centre of the analysis in no way implies that the Roman view was the sole perspective, exceptional or justified. The application of post-colonial theory to Roman archaeology has highlighted the risk that a focus on the Roman perspective, arising from a reliance on ancient literary sources, can go 'hand-in-hand with a generally positive view of the empire itself' (Gardner 2013, 4). Indeed, the imperial context of the origins of Romano-British archaeology arguably contributed to a tacitly approving and broadly euro-centric view of Roman imperialism (Hingley 2000; Hingley 2001). However, notwithstanding the important contributions of post-colonial theory to Roman archaeology, it is important not to underplay the asymmetries in power and agency in the Roman world (Gardner 2013, 19; Hingley 2014, 42). The preference in recent Roman archaeology for social over strictly military questions has already been noted, but the understandable antipathy toward imperialism and violence should not preclude research when their omission risks inadvertently overlooking the role of power inequalities and coercive force in the establishment and maintenance of the empire. As Woolf puts it, 'in recognising and rejecting any sense of identification we may have with the Roman empire, it is not necessary to side with their opponents' (1993, 181), especially given that violence was by no means a uniquely Roman trait (Eckstein 2006). The aim is therefore to examine the purpose of the Wall from the perspective of Rome, specifically the imperial decision-making elite of the early second century, with the understanding that, although one perspective among many and itself neither static nor homogenous, the stratified and partisan reality of the empire afforded this group disproportionate influence and power (Hingley 2021). The position of the Indigenous population, again not homogenous and variously tolerant, cooperative, and antagonistic, is examined in Chapters 3 and 8 to draw out these disparities, particularly as part of a discussion of how the Wall might have functioned from a deterrence perspective.

Analysis of the Wall's form is key but, in contrast with recent theoretical developments following the ontological

turn (e.g. Olsen 2010), the approach is not intended to be material-centric. In investigating *why* the Wall was constructed, and the purposes it served, the spotlight throughout remains on the humans who designed, built, and used it. In short, despite the focus on architectural form, the analysis is concerned with interpreting Roman actions through their material culture, not in ascribing agency to the latter itself (Wheeler 1964, 17). Certainly, human relationships with material culture are reflexive, involving the reciprocal processes of creation and inspiration, but are nonetheless contingent on the action and choice of human beings. This falls short, in this author's view, of the strict definition of agency with regard to objects of material culture. If the admitted ability of objects to influence human behaviour can be characterised as agency (e.g. Malafouris 2013, 121-149; Robb 2015, 167-168), then this cannot be considered synonymous with human agency (Pickering 1995, 16-19) and probably warrants bespoke terminology less open to ambiguity. Although this could be dismissed as quibbling over semantics, the difference is important given that assigning equivalence or divorcing agency from accountability raises challenging ethical questions (Fernández-Götz et al. 2020). Notwithstanding any semantic reservations, an assessment of the Wall's meaning through an examination of how the many individuals who engaged with and perceived it (and, indeed, continue to perceive it) remains important. Although the latter is not the focus here, Chapter 9 explores the subsequent influence of the Wall and therefore the effect it had irrespective of the effect it was *intended* to have, as well as the performative potential of monuments in and of themselves.

1.5 Chronological and geographic range

The Wall has a long and complex history and as such, there is no one single interpretation applicable to its entire lifespan (Hingley 2012). Different individuals and cultural groups have perceived and responded to the Wall in diverse ways since its construction, often viewing their own interpretation as hegemonic (Witcher et al. 2010, 105-128). Considering this, it is necessary to set clear boundaries to any research. This study is confined to investigating the purpose of the Wall as it was originally envisaged by its designer(s). It does not suggest that this was how it was perceived by all who encountered it nor that this function was static. It therefore includes the successive phases of Hadrianic construction, including the fort decision and the construction of the Vallum. Post-Hadrianic alterations are referenced in the discussion in Chapter 8, but do not form part of the main analysis.

Similarly, the case study focusses on Hadrian's Wall specifically as unique amongst Roman frontiers and not necessarily representative of any general approach. The study area therefore includes the structures within the Wall zone as far north as the outpost forts and as far south as the installations on the Cumbrian coast. Although it is hoped that the findings will provide useful context to the discussion of frontiers more broadly, the focus here is on the individual case of Hadrian's Wall and does not assume that a coherent or compatible strategy existed or was applied across all frontiers.

1.6 Book organisation

Having outlined the background, aims and research bracket in this introductory chapter, the second chapter summarises the approach taken and the theoretical influences in developing the methodology. This includes the collation of the data, mapping how it is used to construct evidential statements about the Wall and grading it to understand its limitations, and the testing of the constructed evidence against multiple hypotheses. Both the evidence grading and hypothesis testing are acknowledged as subjective processes but are intended to explicitly record the often-unconscious decisions made in archaeological reasoning. By 'recontextualising' the data in this way, it offers a rich evidential resource (Wylie 2016, 204-220). It is essentially the method advocated by Collingwood whereby 'the historian puts his authorities in the witness-box, and by cross-questioning extorts from them information which in their original statements they have withheld' (1946, 237).

Chapter 3 examines the historical background to the problem, ensuring the appropriate context is considered in developing and testing the hypotheses. The question of the Wall's function cannot be divorced from this broader historical context and this chapter therefore considers the pattern of Roman military intervention in Britain and the specific situation on Hadrian's arrival. As well as examining broader Roman frontier policy, Chapter 3 also discusses the pre-Roman Iron Age population, in particular their approach to diplomacy and warfare.

Chapter 4 reviews the existing hypotheses relating to the Wall's function, setting them in their historical and historiographic context. These theories did not develop in a vacuum and this chapter discusses how each of the approaches developed and how they relate to each other. As noted in Section 1.1, those with a background in frontier studies may wish to skim or forego the contextual discussion in Chapters 3 and 4.

Testing the existing hypotheses against the constructed evidence highlighted a number of complementary elements which could be combined into a coherent interpretation, summed up as a deterrence hypothesis. Chapter 5 examines this hypothesis, including the concepts of deterrence by denial and punishment and, crucially, the role and prevalence of deterrence in classical antiquity. Given his personal involvement, this section also discusses the biography and personality of the Emperor Hadrian and the extent to which these suggest a knowledge and employment of deterrence concepts. A biographical approach, in particular where individuals are known to have spent time in a specific location for which evidence survives, can help reconstruct how their experiences might have impacted their ideology, perception and choices (Rogers 2015, 71-99). Conceptualising deterrence in

antiquity aims, in so far as possible, to avoid (or, at least, remain critically conscious of) the 'unexamined back-projection' of modern ideas (James 2005, 502).

Chapter 6 discusses the evidential statements used in the testing, for both the Wall as it was initially envisaged and as it was envisaged at the end of Hadrian's reign. The statements are not the result of new fieldwork but use existing data from both published sources and grey literature. The aim is to consider how statements about the Wall are constructed and explore the implications of different constructions and varying grades of confidence in them. Next, Chapter 7 systematically explores the relationship between these evidential statements and the existing hypotheses, combining the complementary elements into the deterrence hypothesis which is tested in turn. A sensitivity analysis of the initial conclusions examines how much they are influenced by the inclusion or exclusion of specific evidential statements or the grade applied to them.

Logically, the hypothesis with the least incompatible evidence should be the strongest and the hypothesis with the most incompatible evidence the weakest. However, multiple working hypothesis testing is not a mathematical process but a means to accurately capture all the elements of the analytical problem and the cognitive process by which conclusions were drawn. As even Hempel noted, the scientific method 'involves the acceptance of [a] hypothesis on the basis of data that afford no deductively conclusive evidence for it, but lend it only more or less strong 'inductive support'' (1966, 18). The conclusions drawn are not, therefore, the result of simply counting evidence, but a synopsis of the insight the analysis has given in visualising the exact nature of the relationship between the evidence and the hypotheses. Rather than an example of the mathematisation rightly questioned by Shanks and Tilley (1987, 57-59), it is a methodology which emphasises and makes explicit the conceptualisation of the archaeological data.

Chapter 8 summarises the arguments for why a deterrence interpretation can be considered plausible, focussing on the concepts of internal coherence, historical context and evidential correspondence first outlined in Chapter 2. This includes a discussion of how the Wall could have functioned in practice, the evidence for deterrence by punishment in action, and how viewing the Wall from a deterrence perspective might shed light on the reasoning behind the swathe of design changes that accompanied the fort decision. Chapter 9 then considers the broader ramifications of this unique experiment in Roman frontier building, including whether Hadrian's Wall influenced subsequent approaches to the frontiers in northern Britain. The final chapter summarises the findings of the analysis and considers the implications for the future direction of research into the Wall's function. It considers how best to strengthen the evidential statements we use in archaeological reasoning and where the priority areas for focused research might be. The chapter concludes with a discussion of the wider applicability of the methodology to other archaeological problems.

A number of appendices are also available as digital downloads to accompany the book. Links to these resources can be found at the end of the Table of Contents. Appendices 1 and 2 list the evidential statements for the initial and revised plans for the Wall respectively, as well as how these were constructed and graded using supporting evidence. Appendices 3 and 4 detail the testing of the two sets of evidential statements against the hypotheses, listing in an open and auditable way whether the evidence was deemed to be essential, more compatible, not applicable, less compatible, or incompatible with the hypotheses under consideration. Lastly, Appendix 5 maps the research outputs against the Research Framework Action Plan for Hadrian's Wall.

1.7 Summary

In summary, this study explores a systematic means of evidential reasoning in archaeology, using as a case study the question of the initial intended function of Hadrian's Wall, through the following key steps:

- The compilation of evidential statements about Hadrian's Wall, exploring how they are constructed using archaeological data, and assessing the overall strength of these statements in a way that is transparent and modifiable with the addition of new information.
- Examining the constructed evidence alongside multiple working hypotheses, revealing which elements are most compatible with the evidential statements.
- Drawing on the complementary elements of the existing theories to produce and test a broader theory for the function of Hadrian's Wall, grounded within a Roman context and discussing the prevalence of its key principles in classical antiquity.
- In the light of the testing results, drawing conclusions on the broader implications of the findings in terms of how the Wall operated in practice, its efficacy, and its influence on subsequent Roman frontiers in Britain.
- Identifying areas for future research which could shed additional light on the question of function and Hadrian's Wall and assessing the broader applications of this approach to other problems of archaeological reasoning.