Chadwick, A. (2017). 'The stubborn light of things'. Landscape, relational agencies, and linear earthworks in later prehistoric Britain. *European Journal of Archaeology*, 19(2), 245-278.
<https://doi.org/10.1080/14619571.2015.1102006>

Peer reviewed version

License (if available):
Other

Link to published version (if available):
[10.1080/14619571.2015.1102006](https://doi.org/10.1080/14619571.2015.1102006)

[Link to publication record in Explore Bristol Research](#)
PDF-document

This is the accepted author manuscript (AAM). The final published version (version of record) is available online via Cambridge University Press at <https://doi.org/10.1080/14619571.2015.1102006> . Please refer to any applicable terms of use of the publisher.

University of Bristol - Explore Bristol Research

General rights

This document is made available in accordance with publisher policies. Please cite only the published version using the reference above. Full terms of use are available:
<http://www.bristol.ac.uk/red/research-policy/pure/user-guides/ebr-terms/>

‘The stubborn light of things’. Landscape, relational agency, and linear earthworks in later prehistoric Britain

ADRIAN M. CHADWICK

School of Archaeology and Ancient History, University of Leicester, United Kingdom

Several regions in Britain saw the construction of large, linear earthworks of banks and ditches during the later Bronze Age and in the Iron Age, often extending for many kilometres. In the light of recent theoretical discussions of materiality and relational agency within archaeology and other social sciences, and through an avowedly discursive poetics of place, examples of these earthworks are re-assessed as actants, capable of affecting and directing the lives of people, animals and plants. These linear earthworks were not static monuments, but were active assemblages or meshworks of materiality, movement and memory.

Keywords: landscape, agency, linear earthworks, meshworks, assemblages

Above, the last crow's wings

Cannot frighten from my blood

The stubborn light of things. Alison Brackenbury, *Brockhampton* (1995).

INTRODUCTION

Recent theoretical discussions within archaeology have explored notions that objects, animals, and plants may be imbued with agency, and have drawn upon wider ideas of relational agency, Actor Network Theory and assemblage theory discussed within sociology, cultural geography and anthropology. Without subscribing to simplistic environmental determinism, this article proposes that particular places and features in past landscapes possessed or were invested with agency through relations with people, animals, plants and forces. Examples of later prehistoric linear earthworks from Yorkshire are presented in an attempt to demonstrate how these features were meshworks or assemblages of movement, materiality, and agency, and to discuss the implications for archaeological practice.

AGENCIES AND MATERIALITIES

In past decades within archaeology it was assumed that the only agents were self-aware human beings able to recognise and evaluate the conditions under which they live, with the capacity to knowingly act upon the world. Although agency was often taken to mean knowledgeable individual actions, it also includes intersubjective and subconscious practices of human social groups that extend beyond and between individuals, and below self-awareness (Giddens, 1984; Johnson, 1989; Barrett, 2000, 2001; Latour, 2005; De Jaegher & Froese, 2009). Agency emerges in part through people's routinely embodied performances, some conscious, but others unthinking and inculcated from birth (Bourdieu, 1977: 210–14; 1992: 54–56). The actions, agencies and histories of human individuals and their life-spans are normally hard to identify in the past (Hodder, 2000), though burials provide the most obvious evidence. Larger-scale, longer-term traditions or changes in settlement, material culture and inhabitation are often more tangible.

The concern with individual human agency is a historically contingent notion particular to the contemporary, capitalist West. Across human cultures there is considerable variety as to how agency, ontology, mind, motivation and knowledge are regarded (Moore, 1994: 31; Fowler, 2004: 34–35; Harris & Robb, 2012: 670, 673). Some people consider themselves to be partly or compositely constituted, whilst social conventions, relationships with family and friends, or subordination of individual will to kin and community can at times take precedence over personal identity and agency (Strathern, 1988; Harris, 1989; Jackson & Carp, 1990; Whittaker, 1992; Poole, 1994; Busby, 1997; LiPuma, 1998; Overing & Passes, 2000). The archaeological significance of such relational approaches to identities, ontologies, and agencies is discussed elsewhere (Brück, 2001; 2004; Chadwick, 2004; Fowler, 2004; 2013; Casella & Croucher, 2011; Harris & Robb, 2012; Harris, 2013; Watts, 2013).

Actor Network Theory (ANT) proposes that people act upon and influence non-humans, but are in turn also affected by non-humans (Latour, 1993; 2005). ANT has been criticised for assuming that agency is distributed evenly throughout networks, and for failing to explain *how* the relational links between beings and the material world are constituted, including embodied, experiential engagements (see Ingold, 2008: 212; 2011: 94–95; Lucas, 2013: 375). It has even been suggested that it is not an analytical theory at all, merely a means of making rhetorical points (Ingold & Jones, 2002: 10). Nonetheless, ANT and other

ontologically relational ‘hybrid’ approaches have been productively used within the humanities to investigate human and non-human interactions (e.g. Murdoch, 1997; Macnaghten & Urry, 1998; Ingold, 2000; 2011; Jones & Cloke, 2008; Whatmore, 2002; H. Lorimer, 2006; Clark, 2008; Haraway, 2008; C. Johnston, 2008; J. Lorimer, 2010; Buller, 2014).

Some of these studies have focused on relationships between people and animals in agricultural communities. It has been observed that in daily and seasonal movements around landscapes, herders and animals share embodied experiences and memories of particular places and routes. People rely on other animals like horses and dogs to aid them in this work, but also effectively delegate some agency to livestock. ‘Hefted’ animals are familiar with preferred areas for grazing, water, and shelter, and older beasts are often trusted to lead the herd and find the best routes up hillsides and across streams (Gray, 1999; Lorimer, 2006; Gooch, 2008). In smaller-scale communities such trustful contacts often become especially close-knit (Faye, 1996; Campbell, 2005; Dwyer & Minnegal, 2005; Gooch, 2008; Fijn, 2011) but, although these may have considerable social and symbolic significance, they are also pragmatic and rarely sentimental relationships. Personhood and agency nonetheless emerge through these routine interactions between people and animals (e.g. Chadwick, 2007; Giles, 2007a; Argent, 2010; Chadwick et al., 2013; Mlekuž, 2013).

In parallel with these explorations of animality, discussions of material culture using ANT or other conceptualisations of relational agency have been concerned with obviating distinctions between humans and the material world, stressing how objects are components of wider networks, assemblages or meshworks of people and things (Deleuze & Guattari, 1987; Law & Hassard, 1999; Probyn, 2000; Barad, 2003; Latour, 2005; DeLanda, 2006; Clark, 2008; Bennett, 2010; Ingold, 2011). Some theorists have argued that despite the ‘material turn’ evidenced within archaeology and consumption studies during the 1980s and 1990s, many early approaches to materiality have still perpetuated implicit distinctions between subject/object, human/non-human, ignoring the intrinsic properties and agencies of things themselves (e.g. Ingold, 2007: 3–4; Webmoor & Witmore, 2008: 57; Olsen, 2010: 132–34). In these critiques, meaning and symbolism are not merely attributes imposed on objects and the material world, but rather these emerge through assemblages or meshworks of people and things. Things are thus integral to human sentience — they ‘support us, sustain us, exalt us’ (Lingis 1998: 76), and changing experiences of the material world were deeply implicated in the profound transformations during the evolution of *Homo sapiens* and earlier hominid

species. Objects thus affect people and human social practices through their sensuous properties (Robb, 2004; Gosden, 2005), but they also have intrinsic agential qualities that do not depend on humanity to nonetheless be part of wider assemblages of beings and materials.

This is still a subject of considerable debate (see Miller, 2007; Tilley, 2007; Burström, 2012). Some recent writing appears to advocate a form of normative materialism, asserting that objects are simply objects, without any social or symbolic meanings (Olsen, 2012: 22–23). This is highly questionable, as the physical and aesthetic qualities of material culture and object biographies lead people to invest them with a variety of meanings (Hodder, 1982; Kopytoff, 1986; Helms, 1988; Thomas, 1991; Hoskins, 1998; Tilley, 1999; Henare et al., 2007). To qualify Olsen's 2012 example (2012, 22), even to the most functionally-minded fisherman a boat is *never* simply a boat. It represents journeys to obtain material resources for building and/or financial expenditure, the investment of personal labour, pride in craftsmanship or despair and ridicule at the lack of it, hopes and fears of success or failure in the catch, memories of past trips and anticipations of future voyages, and shared social relationships that may be involved in the construction and crewing of a vessel. Boats may evoke memories of close relatives, triumphs and tragic disasters; recollections of bitter ice, freezing fog, baking sun, raw hands and rime-encrusted clothes. These human understandings and experiences, even if subconscious, nevertheless form part of the assemblage or meshwork the boat is situated within. At the same time, the materials used in a vessel's construction, whether it sits well on the water or wallows, the sheer physicality of the boat, these too are agential forces, components of assemblages. The boat will respond to waves and wind, or interact with life forms such as seals and barnacles, without a human presence.

Agential intra-actions and interactions may thus not involve humans at all, and agency and meaning continually emerge through assemblages redolent with vibrant and vital matter (Dobres & Robb, 2000: 14; Bennett, 2010: 12–13). Matter is itself a materialisation of phenomena, a result of interactions, not an inherently fixed property of abstract, independently existing objects (Barad, 2003: 817–22). Personhood too is not a fixed state of being but is instead constituted through relations with families, friends and social groups, with other living beings, other materials, and natural and anthropogenic landscape features, as parts of active assemblages, webs, or meshworks that are dynamic, constantly in change or flux. Materialities are mobile. Mobility is also a key feature of human identity, embodied experience, and social practice (Lefebvre, 1991; Ingold, 2004). The shared rhythms of walking with other people and with livestock would have been the basis for feelings of shared

social identity in the past. Movement is also a vital component of memory (Connerton, 1989). In many societies the landscape is a rich source of social memories and myths (e.g. Myers, 1991; Basso, 1996; Bradley, 2000; Hirsch, 2006; Tuck-Po, 2008; Kavari & Bleckmann, 2009; Wyatt, 2004; Impey 2013), and this knowledge is frequently absorbed when moving around the landscape in the company of others, often during everyday tasks. Prominent locales or particular objects may be the basis for such oral traditions.

Agency is therefore not intrinsic to humankind. Rather, to greater or lesser degrees, agency is an emergent outcome of interactions between different actants, be they human, other beings, or aspects of the material world. Landscape therefore cannot ‘possess’ agency, but agency nonetheless emerges through the interactions of humans, animals, plants, and other forces with landscapes. These discussions are therefore of importance to archaeology and human history, and to the humanities and science disciplines, for they question accepted epistemologies of knowledge and ontologies of existence, redefining the physical world and what it means to be agential, embodied, sentient, human, and non-human. Landscapes, and anthropogenic and natural features within them, constrain, afford, inspire, and direct human and animal bodies, experiences, memories, and imaginations.

PREHISTORIC LINEAR EARTHWORKS IN TIME AND SPACE

It is with these arguments in mind that we can turn to later prehistoric linear earthworks. These were often large and lengthy banks and ditches constructed across southern, central and northern England (e.g. Bowen, 1978; 1990; Richards, 1978; Spratt, 1989; Barrett et al., 1991; Gingell, 1992; Bradley et al., 1994; Stoertz, 1997; McOmish et al., 2002; Fenton-Thomas, 2005; 2008; Deegan & Foard, 2007; Oswald, 2011) (**Figure 1**). Much more substantial than field system ditches and banks, these ‘linears’ are often poorly dated, but most are thought to be of later Bronze Age and earlier Iron Age origin, though some may be later Iron Age or Romano-British. Linear earthworks sometimes slighted systems of Middle Bronze Age co-axial ‘Celtic’ fields, suggesting social changes in land allotment, land division, and perhaps land use (Bowen, 1978; Cunliffe, 2004); although this may have been overstated in places and many field systems persisted and were re-used during the Iron Age and Roman periods. The post-Roman and early medieval periods also saw the construction of large linear earthworks, sometimes built upon or extending similar prehistoric features, itself an interesting aspect of agency, social memory, and myth within past communities. Some of the discussion below is equally pertinent to these later linear earthworks in Britain, and to

similar prehistoric boundaries elsewhere in Europe, though word limits do not permit examination of the latter here.

Linear earthworks on the Yorkshire Wolds often followed ridges, with valleys on either side, or sometimes cut across valleys and watersheds (Fenton-Thomas, 2005; 2008; Giles, 2007a; 2012; Fiocoprile, 2014) (Figure 2). Some linear banks and ditches may have superseded pre-existing, unmarked trackways used by generations of people and animals, while others replaced or re-inscribed earlier pit alignments. In the pre-earthwork landscape, prominent trees, lines of ridges, breaks of slope, and memories of particular people and events, may all have been used to claim or maintain territorial space (Fenton-Thomas, 2008). Linear earthworks may have represented a materialisation of rights of access to grazing and water that had previously been the subject of face-to-face negotiation, oral testimony, and social memory (Giles, 2007a: 114). Although some cross-ridge dykes may have been territorial divisions and barriers, delineating and restricting access to certain areas, other earthworks were discontinuous features with occasional gaps, perhaps more for channelling movement in particular directions along valleys, towards upland pastures, or to springs and waterholes (Fenton-Thomas, 2005: 48; Giles, 2007a: 109, 113; 2012: 48–56). Prehistoric paths have been identified alongside linear earthworks at Walkington Wold and Riplingham (Wacher, 1966; Bartlett & Mackey, 1972). Once linear earthworks had been constructed, they continued to act as axes of movement, with sheep and especially cattle following such boundaries as they were herded along. In some instances their use as routeways may have been an unintended consequence of their construction (Tullett, 2010: 115).

On the Yorkshire Wolds the topography and character of the landscape often influenced the scale and form of the boundaries (Fenton-Thomas, 2005; Fiocoprile, 2014), with earthworks across valley bottoms different in character to those on higher ridges. They were not merely an anthropogenic imposition *upon* the landscape, but rather expressed the ‘potency of the natural topography’ (Fenton-Thomas, 2008: 267), a response *to* the landscape. Some linear earthworks made physical reference to Bronze Age round barrows, using them as landscape markers but perhaps also drawing on their mythical attributes or ancestral associations, abutting or respecting them as at Aldro, Thorpe Bassett, and Thwing (Stoertz, 1997: 34). Others were built across or cut through barrows, as at Cherry Burton and Vessey Pasture. Such slighting might have represented the appropriation of mythical or magical power, but could equally have been deliberate acts of negation or forgetting (Fenton-Thomas, 2013: 320). Many linear earthworks in southern England had similarly varied,

locally specific relationships with earlier features such as Neolithic long mounds and Bronze Age round barrows (Bowen, 1990: 11–12, 49; McOmish et al., 2002: 30–32, 42, 57–58; Sharples, 2010: 28–31), sometimes respecting them, elsewhere ignoring or slighting (cutting across) them.

Some earthworks had very long-lived histories, such as the Great Wold Dyke and the Sledmere Green Lane on the Yorkshire Wolds. The Sledmere Green Lane probably originated in the later Bronze Age; it consists of up to three parallel banks and ditches extending for at least 15 kilometres (Fenton-Thomas, 2003; 2008). It may have followed an earlier long-distance route linking well-watered, settled areas on the western and eastern edges of the Wolds with open, upland grazing. By the mid to later Iron Age, it was already an ancient presence. Some Wolds linear earthworks were closely respected by linear Middle Iron Age square barrow cemeteries that later extended alongside (Bevan, 1997; Stoertz, 1997; Fenton-Thomas, 2005; 2011; Giles, 2007b; 2012;). In the later phase of the cemetery at Wetwang, a large subrectangular enclosure used the Green Lane earthwork for its northern boundary. During the later Iron Age and Roman periods the Green Lane, by then a trackway, was respected by fields and settlements dividing the area to the south (Stoertz, 1997, fig. 36). The area to the north remained largely unenclosed, perhaps with different land-use, and the antiquity of the Green Lane may have helped legitimise this changing tenure and land division.

Anglo-Scandinavian cremation and inhumation burials were later inserted into or next to the Green Lane's silted-up ditches (Grantham & Grantham, 1965; Lucy, 1998), perhaps when its use as a trackway was reverting to that of a boundary (Fenton-Thomas, 2008: 260). By the eighth to tenth centuries AD the Green Lane was possibly both a trackway and a boundary, and was respected by many of the medieval hundred and township boundaries (Hurst, 1976). From the later medieval period it once again became an important, long-distance route, and was eventually incorporated into the coach road between York and Bridlington (Fenton-Thomas, 2008).

Some Wessex linear boundaries seem to have had similar significance in social and political terms. Iron Age hillforts such as Casterley Camp, Sidbury Camp, Quarley Hill, Woolbury, and Danebury, and the extensive midden site at East Chisenbury developed at locales where linear boundaries converged (Cunliffe, 1990: 329–30; 2003: 40–41; McOmish et al. 2002: 58), though this was by no means universal (Bowen, 1990: 13). This suggests that some places held significance *before* linear earthworks were built. This potential importance

is illustrated by the remains of five people, some of which had been victims of violence, excavated from the ditch of a linear earthwork at Tormarton in Gloucestershire (Osgood, 2006). One young man had a spear injury to the pelvis; another had part of a bronze spearhead lodged between two vertebrae, and had also suffered pelvic wounds and a blow to the skull. The earthwork was only about 60m long — perhaps its construction had proved too contentious and was abandoned. Late Iron Age *oppida* such as Calleva and Camulodonum were also surrounded by elaborate systems of linear earthworks, most without clear defensive function. Rather, they would have controlled the movements of people and animals, defining areas where herds could graze, and playing key roles in social display and status, and communal or elite identity.

Bokerley Dyke was a series of banks and ditches constructed during the later Bronze Age or earlier Iron Age, but renewed and extended during the later Roman and post-Roman periods (Bowen, 1990: 38–40). It may have reflected broad differences between social groups and places already in existence, but once built it repeatedly reinforced these. In its post-Roman guise Bokerley Dyke might have formed part of a social and/or political frontier between Britons and Saxons, and it was eventually incorporated within the county boundary between Dorset and Hampshire. Part of a later Bronze Age linear earthwork, at least 5 km long, was excavated at Boscombe Down near Amesbury, Wiltshire. This feature curved to avoid a Neolithic pit circle to the north, and Beaker and Middle Bronze Age ring ditches and burials to the south (Gibson, 2013: 109), perhaps dividing the landscape into areas used predominantly by the living from areas reserved for the dead. After a hiatus in occupation of up to a millennium, the linear boundary formed the northernmost edge of a zone of four Romano-British inhumation and cremation cemeteries, one cemetery boundary carefully abutting but not cutting the earthwork ditch. The inhumations dug into the silted-up ditch were unusual, and included the mixing and curation of skeletal remains, especially skulls (Gibson, 2013: 110). The prehistoric bank and ditch was clearly re-appropriated in a later period, but this perhaps reflects longer-term oral traditions or myths. At Portway near Andover in Wiltshire, a sinuous prehistoric linear earthwork that snaked between Bronze Age round barrows also had Anglo-Saxon burials inserted into its ditch (Cook & Dacre, 1985: 13). Excavations at Aves Ditch in Oxfordshire, a linear earthwork *c.* 4 km long and likely to date from the later Iron Age, revealed a grave cut into the ditch base (Sauer, 2005: 48–51). The skeleton of a 35–45 year old male radiocarbon-dated to cal AD 670–870¹ had most of the

head missing, possibly removed after its initial burial. This again suggests the persistence or reworking of the feature's social significance.

Many linear earthworks thus retained social and political influence long after their construction, whereas others slipped in and out of human significance. Through close-grained 'thick description' it is possible to untangle something of these knotted agencies and histories, but rather than reiterate the previously published excellent discussions of the East and North Yorkshire Wolds, or the Wessex linear earthworks, I will examine lesser-known examples (Figure 3).

THE ABERFORD DYKES

The Aberford Dykes complex is a series of linear earthworks known as Grim's Ditch, South Dyke, Becca Banks, and Woodhouse Moor Rein (Figure 4), located between the Rivers Aire and Wharfe, north-east of Leeds in West Yorkshire. Grim's Ditch can be traced for approximately 6.7 km northwards from near a palaeochannel of the River Aire, and extending north of the stream called Cock Beck. Its course then becomes unclear, although it may be followed along the line of some modern boundaries. In places its builders made use of a natural scarp, perhaps to make the bank more impressive; and it still survives to a height of up to 2.4 m, its ditch is up to 2 m deep and 9–12 m wide. It was once thought to be a Roman road (Codrington, 1918; Margary, 1973), but Faull (1981: 174) suggested that it formed part of defensive works of the fifth–sixth-century kingdom of Elmet. Small-scale investigations in the 1990s could not establish a date for the earthwork (Wilmott, 1993; Brown, 1995; Morris, 1999), but two sections excavated by the West Yorkshire Archaeology Service during the M1-A1 road scheme yielded radiocarbon dates of cal AD 86–335, cal 777–396 BC, and cal 790–400 BC (Wheelhouse & Burgess, 2001: 129) (Figure 5). A date of cal AD 33–321 came from slightly higher in one sequence. Along with evidence for ditch recutting, this suggests initial construction during the earlier Iron Age, with potential redefinition in the Late Iron Age prior to the Roman invasion of the north, and/or during the Late Roman period. The earthwork was built in a fairly open landscape with grassland, but also some cereal cultivation nearby (Carter et al., 2001).

Becca Banks extended for at least 5.5 km along the limestone scarp north of the valley of Cock Beck (Figure 6), with its western terminus somewhere near the hillfort at Barwick-in-Elmet. The last definite earthworks are located to the north of Cock Beck, but there are undated linear banks between Cock Beck and the hillfort. Older investigations of Becca

Banks revealed a ditch and a bank probably constructed in a single phase, with a possible palisade slot on top (Brooks, 1967), and in the absence of artefactual evidence the earthwork was regarded as probably early medieval in origin. Excavations by the West Yorkshire Archaeology Service established that the ditch was up to 8 m wide and 3 m deep (Wheelhouse & Burgess, 2001: 141). North-east of Aberford, cropmarks indicate that the linear earthworks cut across a double-ditched trackway and other features (Deegan, 2001: 25), whilst geophysical survey and excavation revealed that the bank was partly constructed over a subrectangular enclosure and associated ditches (Figure 4). This enclosure did not yield any dateable finds, but sherds of hand-made, possibly Iron Age, pottery were retrieved from buried soil beneath the bank, and within the bank matrix. The ditch fills contained some second-century Roman pottery and animal bone, and a radiocarbon date of cal AD 559–674 was obtained (Wheelhouse & Burgess, 2001: 144). The upper ditch fills contained Saxon and medieval pottery. More recent investigations by Network Archaeology revealed earlier postholes containing bank material which had filled them after the posts' removal. Plant macrofossils from buried soils sealed beneath the bank yielded radiocarbon dates of cal 400–200 BC and cal 100 BC–AD 70 (Gregory & Daniel, 2013a: 113), suggesting that Becca Banks originated in the later Iron Age.

South Dyke extended along the limestone scarp edge of Woodhouse Moor, south of Cock Beck. Again it was originally interpreted in military terms (Crawford, 1935; Alcock, 1954; Faull, 1981), but excavated sections have shown that the ditch was no deeper than 1.5 m. Along with Becca Banks to the north, it followed the natural contours of the terrain, forming a 'funnel', perhaps directing or controlling movement from the east to the west (Wheelhouse & Burgess, 2001: 148). Related earthworks may have existed at Castle Hill further to the east. South Dyke was aligned broadly east-west, except where it descended down into the clough of Cock Beck. As the place-name Aberford suggests, there was at least one ford in this locale, which the Roman road also used later. Surveys suggest that South Dyke was probably built in several different sections. During the M1-A1 project, one of its terminals was excavated just some 10 m from Cock Beck, where the ditch intersected with a natural water channel (Wheelhouse & Burgess, 2001: 132). A radiocarbon date of cal 104 BC–AD 112 suggests that it was built in the Late Iron Age, once again in a predominantly open landscape. The ditch was recut at least once, with fills of the recut producing an amphora sherd and radiocarbon dates of cal AD 212–413 and cal AD 141–404 (Wheelhouse

& Burgess, 2001: 135). The upper fills contained eleventh to thirteenth-century pottery, indicating that the earthwork survived as a landscape feature for some time.

South Dyke has a short gap where it may once have intersected with Woodhouse Moor Rein, which probably post-dates South Dyke (Alcock, 1954; Boucher & Webb, 1994). Aerial photographs and excavation have revealed probable later Iron Age or Romano-British cropmark features following the same general east-west orientation as South Dyke. These included a double-ditched trackway 30 m south of South Dyke; its ditches yielded hand-made pottery of Iron Age tradition as well as wheel-turned Roman wares, suggesting that it was contemporary or later in date (Gregory & Daniel, 2013b: 243). Woodhouse Moor Rein cut across these alignments, and across the grain of the land.

A 15 m long section of South Dyke was excavated by Network Archaeology in 2007–2008, ahead of pipeline construction (Figures 4 and 7). Five rock-cut pits containing burnt cobbles, animal bone, and worked, probably residual, flint preceded the construction of the bank; a radiocarbon date of cal 740–390 BC from one pit indicates earlier Iron Age activity (Daniel & Noon, 2007: 4–5; Gregory & Daniel, 2013a: 100–01). The pits also contained a limestone spindle whorl, a naturally pierced stone (called ‘hagstones’ locally, and regarded as having amuletic properties), and stone packing for a timber post. The later earthwork ditch was up to 3.5 m wide and 1.13 m deep; its primary fill contained butchered animal bone, charcoal, and burnt cereal, and over 1.3 tonnes of burnt stone (Gregory & Daniel, 2013a: 101–02, fig. 66). One bone yielded a radiocarbon date of cal 370–160 BC, and it is likely that the earthwork was constructed in the mid to later Iron Age, though a possible recut visible in the published section suggests later re-inscription. There were two pits south of the ditch, one containing carbonised material radiocarbon-dated to cal 210–20 BC.

During the later Iron Age a subrectangular, double-ditched enclosure was constructed across South Dyke, with the earthwork ditch re-used as the inner ditch of the enclosure. This may account for the apparent recut. This enclosure had an entrance in the south-west and was divided into two sub-enclosures, but contained few features and did not appear to have been used for domestic occupation (Gregory & Daniel, 2013a: 102–03)². The inner boundary ditches, the recut earthwork ditch, and the dividing ditch were all backfilled by the late first century BC, and there seems to have been a hiatus in activity until the Late Roman period, when colluvium containing much late third- and fourth-century pottery formed across the South Dyke ditch (Gregory & Daniel, 2013a: 103). The upper fills of the outer enclosure ditch and an oval pit within the former enclosure produced Late Roman ceramics, the pit also

containing a partly articulated ox carcase, minus its head, hooves, and limbs, perhaps removed along with the hide. This was possibly a ritualised deposit, although the difficulties of identifying such practices have been noted (Morris, 2008; Broderick, 2012; Chadwick, 2012; Garrow, 2012).

Becca Banks and South Dyke closely followed the natural grain of the land, an attentive attunement to topography. In largely open landscapes and on light-coloured Permian dolostone sedimentary geology these features would have been highly visible, whether as guides to movement, and/or statements of tenure. The worked flint and pit cluster at South Dyke suggest that this place had social significance even prior to the construction of the linear earthworks, and the pits may have formed part of a pit alignment (Gregory & Daniel, 2013b: 241). This again suggests an emergent quality to how the earthworks developed, and such locales may have accrued significance as places to pause along journeys (Tullett, 2010: 120). The large quantities of burnt stone and butchered bone at the base of the South Dyke ditch probably do not represent 'domestic' refuse, and may either be the result of repeated episodes of travellers and drovers halting along their route, and/or of feasting.

Large numbers of people gathered at this locale overlooking Cock Beck would have been able to see and hear for quite long distances. Any feast held at such a boundary might have had great political importance, and may even have been part of negotiations to ease tensions between groups. Becca Banks and South Dyke were possibly constructed by two different communities, with Cock Beck a natural routeway but also a potential social boundary (Roberts et al., 2010: 51). The gap between the earthworks might have functioned as a neutral 'buffer zone'. Here, animal bodies from different areas, or beasts belonging to different social groups, were broken down into other materials, and consumed, ingested (see Probyn, 2000; Law & Mol, 2008; Hofmann, 2013). The lives, taskscapes and bodies of people, animals and the materiality of earthworks emerged as densely tangled connections, temporalities and flows of agencies and energies (see Chakrabarty, 2000: 38–39; Hodder, 2012: 152–56). Materials could be transformed into new configurations, taking on novel qualities and meanings. River cobbles brought up from Cock Beck were burnt and bone was fragmented, transmuted into physical affirmations of gatherings and negotiations, entering extended connections of social obligations, ties to place, and the agencies of the earthwork, which absorbed and preserved these substances within its own fabric. The social became the physical, the physical became the social.

Pragmatic re-use of South Dyke's bank and ditch would surely have resulted in features abutting it, yet the later double-ditched enclosure overlapped and cut across South Dyke. This would have entailed considerable additional work for those digging the ditches and constructing the banks; it may have been an attempt to either negate the earthworks' meanings, or alternatively to deliberately incorporate and appropriate them within the fabric of the later enclosure. This effort is all the more puzzling as the enclosure does not appear to have been used for everyday domestic occupation or high-status inhabitation. It may thus have continued the tradition of this locale as a meeting place, the earthwork and the landscape directing and influencing human practice many centuries later. This earthwork, this place, continued to enchant. Even in the Late Roman period, when the enclosure was abandoned for some time, it may have retained something of its previous significance — the unusual pit with the cattle burial at South Dyke might have been a formal closure deposit.

The broad range of radiocarbon dates from Grim's Ditch, Becca Banks and South Dyke makes it difficult to establish construction dates relative to one another, though it is possible that Becca Banks post-dates the other two earthworks. The ditches and banks may also have been recut and rebuilt, with lengthy periods of bank and ditch construction, sometimes preceded by pits or postholes, illustrative of considerable complexity in building, use, and re-use. The construction of Woodhouse Moor Rein over the previous line of South Dyke suggests politics of contestation and appropriation. There have been several finds of Iron Age coins 1 km away from part of the Aberford Dykes complex, near springs along the valley of the Cock Beck, whilst a small Roman coin deposit was buried near the junction between South Dyke and Woodhouse Moor Rein. This reinforces the notion that this area witnessed the enactment of significant social and political practices, longer-term ebbs and flows of movements and agencies.

THE ROMAN RIG

The Roman Ridge or Rig³ in South Yorkshire consists of two lines of earthworks broadly aligned south-west to north-east, starting south-west of Wincobank hillfort in Sheffield as a single ditch and bank, but then apparently branching into two and extending to Swinton Common and Mexborough, a combined total of approximately 27 km (Figures 8 and 9). The

³ The name 'Roman Ridge' or 'Roman Rig' seems to be a nineteenth-century appellation, and probably derived from the mistaken belief that the raised bank was the line of a Roman road (Hunter, 1819: 24; Addy, 1893: 241), the term 'rig' being a local dialect term for a raised road.

earthworks have been surveyed in some detail (Preston, 1950), but remain essentially undated despite several small-scale excavations (e.g. Greene, 1950; Greene & Preston, 1957; Riley, 1957; Atkinson, 1994). It is far from certain whether the two lines of earthworks were contemporary. Ashbee states that the earthworks were planned and constructed as one entity (Ashbee, 1957: 265), but a section through the ditch in advance of the construction of a pipeline suggests that two stratigraphically earlier ditches may have pre-dated at least one stretch of a large ditch and bank (Atkinson, 1994: 47). Roman pottery recovered from secondary or tertiary ditch fills cannot date the primary construction of the ditches and banks. An unpublished investigation by Andrew Fleming in 1973 obtained two uncalibrated radiocarbon dates of 1670 BP and 4040 BP from the ditch, but the latter is almost certainly residual, and the exact context of the samples is unclear (Boldrini, 1999a: 26).

The Roman Rig earthworks have traditionally been linked to Wincobank hillfort, and to the small earthwork enclosure of Caesar's Camp at Scholes Coppice, as part of a postulated Iron Age defensive network, but this is highly problematic. The linear earthworks do not meet or articulate with the hillfort and are some distance from the enclosure, both of which are also poorly dated (Atkinson et al., 1992: 40; Coutts, 1999: 78). Boldrini favoured an Iron Age date (1999a: 30; 1999b: 103), suggesting that, rather than defensive barriers, the banks and ditches were social and territorial markers demarcating Brigantian and Corieltauvian territories, though perhaps they were renewed in later periods. They could also date to the first century AD, built as a reaction to the Roman occupation which halted between *c.* AD 51 and 70 along a frontier extending broadly between Chesterfield and Rossington. Ashbee (1957: 256–65) thus proposed that the Roman Rig was built hurriedly by supporters of the Brigantian leader Venutius, just as Alcock (1954) had suggested for the Aberford Dykes. A post-Roman date has also been advanced (Cronk, 2004), perhaps linked to the kingdoms of Elmet in the fifth to sixth centuries AD or Northumbria in the seventh to ninth centuries. These ideas may however be trying to shoehorn the ambiguous archaeological evidence into too narrow a culture historical context. Given the later prehistoric origins of the Aberford Dykes, an Iron Age origin (either in the earlier or later Iron Age) for the Roman Rig seems the most likely, but has yet to be proven.

The Roman Rig respected some contours and ridgelines, and on Wincobank Hill followed a natural line of Parkgate Rock sandstone (Stenton, 2011). Unlike Becca Banks and South Dyke it cut across other contours, apparently closing off some of the smaller valleys on the north-western side of the River Don (Figure 9). The slates, sandstones and mudstones of

the Coal Measures geology would have been less visible from a distance than the sedimentary rocks of the Aberford Dykes. Like Becca Banks, the earthworks were close to many springs, especially south of Wentworth Park, which possibly gave both the linear earthworks and the water sources additional social significance. Perhaps the earthworks drew attention to the streams, and also directed movement towards them. The ditch was separated from the bank by a narrow berm, and excavation of the Roman Rig at Kimberworth found that this berm consisted of crushed shale, consistent with movement along it (Atkinson, 1994: 47). Like South Dyke, the Roman Rig also seems to have been constructed in different sections, and in places probably in different phases. Survey and excavation along stretches of the earthworks at Kimberworth and Wath Wood revealed additional ditches (Atkinson, 1994; Latham, 1995), at Kimberworth underneath the bank and clearly pre-dating it. North-west of Wentworth Park there was a curious doubling of earthworks along the northernmost section of the Roman Rig between two becks (streams), extending for nearly 1 km and set apart by up to 30 m. Although both stretches are again undated, this configuration suggests a localised change in tenure or territory, and even the need for reconstruction as relations and connections were being reconfigured. Did construction change and affect social relations between social groups, and were there arguments over its initial course, even a ‘battle of the bulge’?

The banks and ditches of the Roman Rig were hardly a serious military barrier, for in addition to the gaps at streams and in valleys, as at Meadowhall, they could have been circumvented just a few kilometres to the north-east or south-west. Though potentially aligned on Wincobank, the earthworks do not appear to have ever had a direct physical relationship with the hillfort. Issues of preservation and neglect in more recent years aside, no clear termini have been identified apart from a possible end south-west of Wincobank³⁴. The earthworks often seem to have just petered out, without being anchored to any prominent natural or anthropogenic features, and Ashbee (1957: 262) felt that the banks were like lines of spoil rather than more careful constructions. They did not always follow the most defensible line, and their routes might equally have been influenced by the Parkgate sandstone outcrop, prominent trees, and/or specific locales with historical and social significance to local communities. This does not suggest a pre-planned system of defence in

³⁴ A small sub-circular earthwork enclosure surviving as a curvilinear ditch on the south-eastern slope of Wincobank Hill was identified following tree felling during the 1920s, and subsequently marked on the Ordnance Survey map of 1935 (Cronk, 2004: 47; Stenton, 2011: 5–6). This feature has since been buried and/or destroyed by landscaping, and its date and relationship to both Wincobank and the Roman Rig is thus unknown. It is however possible that it constituted a more ‘formal’ terminal of the linear earthwork.

depth, but rather a series of different banks and ditches progressively and even haphazardly added to one another over time, construction always in a process of becoming (Ingold, 1993; 2010). The Roman Rig may have eventually developed as a political statement of tenure and intent, overlooking and perhaps controlling a crossing and/or meeting place on the floodplain of the River Don, but its meanings and purpose might have changed over time, together with the flux and flow of the meshworks of agencies and affordances.

During railway construction in 1891 an inlaid brooch and a hoard of 19 Roman coins were found in the Roman Rig, near the edge of the River Don floodplain where the earthwork descended from Wincobank hillfort. The objects were under a flat stone inserted into either the bank or the ditch (*Sheffield and Rotherham Independent*, 24 August 1891; Addy, 1893: 249). Three other Roman coin hoards were possibly once associated with the earthworks. In places the ditches and banks of the Roman Rig formed part of historical parish and field boundaries still recognisable as earthworks today (Figure 10), and also influenced the lines of holloways (Travis, 2001); yet elsewhere they were ploughed out, or are slowly disappearing within the mulch of woodland. In contrast to South Dyke or the Sledmere Green Lane, the Roman Rig appears to have had less long-term human significance and influence on medieval and post-medieval communities. Many problems with dating and interpretation remain, and a programme of targeted excavation and scientific dating would be informative, as would palaeo-environmental and soil micromorphology sampling. The ambiguities surrounding the Roman Rig nevertheless reveal something of its agential presence — it resists simplistic interpretations, defies simple understandings (see Jones, 2012: 171).

FINDINGS

Linear earthworks are often regarded as intended outcomes of planning, yet their forms were the result of innumerable choices, improvisations and aleatory engagements with materials during sensuous, social construction practices (see Owoc, 2005; McFadyen, 2007; Pollard, 2013). Although some individual boundaries may have been planned, systems of linear earthworks developed over time, and even single linear earthworks could have taken months, years, or decades to build, as Becca Banks and the Roman Rig illustrate. Archaeologists often tend to view them as completed networks of boundaries, yet few if any people in the past would have conceived or experienced them as such. Some linear features began as post- or pit-alignments, then developed into segmented ditches and banks, a few becoming elaborate systems of multiple parallel and branching earthworks (Fenton-Thomas, 2005: 42–45; Giles,

2007a: 110; Gregory & Daniel, 2013b: 241). Accretive episodes of ditch digging and bank construction could have taken place during seasonal movements of people and animals, during which new assemblages of materials and agencies were brought into being (see DeLanda, 2006; Alberti & Bray, 2009; Jones, 2012; Lucas, 2013). During and after construction, earthworks guided or constrained further building and movement. Agency flowed to and fro from humans to earthworks, from earthworks to people, and back again. The creation of earthworks was conditional, fluid and emergent, and the difficulties of identifying clear beginnings and endings to construction (or even to the earthworks themselves) emphasise this. At the same time, the earthworks endured beyond individual human and animal lives, remaining substantially whole and retaining long-term agential properties even as bodies, bone and pottery decayed and fragmented. It was this agency and temporal persistence that may have lent these entities their greatest social significance, as more stable assemblages of otherwise relatively momentary, fluid events (see Ingold, 2010: 258; Hodder, 2012: 156; Lucas, 2012: 186–87).

Ingold (1993: 156) has suggested that landscape features only become boundaries through the activities of the people or animals that recognise or experience them. As noted above, some linear earthworks physically referenced natural and anthropogenic features that may have already accrued meaningful myths and stories by the time the earthworks were constructed (Fenton-Thomas, 2005: 46–47; Giles, 2012: 50), and it is not difficult to imagine how they could themselves become personified and the subject of topogenic folk stories. In the early medieval and later periods, prehistoric and post-Roman linear earthworks were often given evocative names such as Devil's Dykes, Grim's Ditch and King Lud's Entrenchments, some rooted in dimly recalled social memories, but others the result of expedient ideological and political discourses, and local legends. The same may have been true in prehistory, and after just a few generations many prehistoric earthworks might have become named features with their own identities, histories, and myths, exercising considerable influence over the lives, movements, and memories of the people and animals who encountered them.

The seemingly personal offerings at the Roman Rig and Aberford Dykes recall a larger hoard from Colchester, where 1247 third-century AD radiates were buried in one of two greyware pots inserted into an upper fill of the ditch of the Berechurch Dyke, part of the extensive Late Iron Age dyke system at Camulodonum (Crummy, 2011). At St Albans, 147 third- and fourth-century Roman coins were buried near the base of a recut of one of the

ditches of the *oppidum* of Verlamion (Verulamium), probably originally inside a leather purse or cloth bag covered by a flint nodule (Hood, 2012). Although these hoards were perhaps secreted for safekeeping, it is possible that they were votive deposits in what were perceived to be features of ancient, even ancestral significance. At Langtoft, Weaverthorpe, Middleton-on-the-Wolds, and Hunmanby in the Yorkshire Wolds, Iron Age and Roman coin hoards were also buried immediately next to or close to linear earthworks, once again highlighting how these constructions intervened with human lives and directed human practices centuries after their initial construction⁵. The apparently deliberate deposits of artefacts and human remains in many linear earthworks, where bodies and objects were absorbed or reconfigured, suggests a dynamic, perhaps animated quality to how these features were experienced and regarded in the past, as personifications or entities in their own right.

SIGHTINGS

In addition to their ontological and epistemological significance, theories of relational agency, meshworks, and assemblages have important methodological implications. Linear earthworks are usually transformed into lines on maps or plans, transcribed from aerial photographs, lidar or topographic surveys, or exposed during excavations. Such mapping is vital for identifying the extent and potential purpose of features, but may also remove the sense of lived human and animal experience (McFadyen, 2006; Sturt, 2006). This also promulgates an interpretational tendency towards sedentarism (e.g. Sheller & Urry, 2006; Cresswell & Merriman, 2011; Ingold, 2011), where places and the people who inhabited them are seen as essentially static. Mapping is a process of ‘territorialisation’ (DeLanda, 2006: 28–29), unintentionally disaggregating features into discrete classifiable entities, populating landscapes with fragments of description, but often ignoring the areas in between (Halliday, 2014). Archaeologists are poorly equipped to record such active, mutable entities; and despite ‘off site’ sampling techniques, also restricted in their abilities to investigate how the apparent spaces *between* features and settlements were actively inhabited places. The dynamic, emergent aspects of movement can confound conventional representations (Aldred & Sekedat, 2010–11). Classification and analyses need to take into account these fluid ways of becoming. Relational approaches allow us to consider the multiple, interdigitated connections between different materials, objects, actants, scales, and temporalities. Rhythmanalyses investigating changing spatial and temporal flows of activities and assemblages may be useful, where GIS and similar technologies can play an important

interpretative role (see Lefebvre, 2004; Sturt, 2006; Gillings, 2012; Hacıgüzeller, 2012; Aldred, 2014; Fiocoprile, 2014).

Our understanding of linear earthwork construction is often limited, particularly of their banks (Giles, 2012: 47). They are ‘extended artefacts’ (Robb, 2004) in a physical as well as a theoretical sense, and the investigation of massive ditches and banks will always present challenges (Figure 11), even if we excavate larger and more frequent sections, and acknowledge the ‘fuzziness’ or permeability of boundaries between features, people, and things. At South Dyke and other linear earthworks, human and animal bone, artefacts and burnt stone merged with their fabric. This mixing of materials may have conveyed subconscious notions of tenure and identity (see Evans, 2003: 141–43), with objects bringing their own biographies and agencies and combining with local earth and stone to form novel assemblages, taking on new meanings. Some Wolds linear earthworks had sherds of later Bronze Age pottery or bronze metalwork or moulds introduced into them (Giles, 2012: 44–45), perhaps a deliberate ‘entexturing’ of the earth. The colours and textures of the soil and stone exposed in ditches and banks were also part of such meshworks of materiality, perhaps with their own significance (Tilley, 1999; Jones & MacGregor, 2002; Parker Pearson, 2004; Owoc, 2005). While digging, people’s bodies would have been covered with sweat and soil, and cracks and cuts in their hands would have filled with earth — they would have taken part of these landscapes home with them as earthy contacts and contracts. Different materials such as clay, shale, limestone or sandstone would have lent their own particular qualities to these embodied encounters.

Investigating these assemblages requires attentiveness to context and materials, in order to interrogate individual life histories (see Joy, 2009: 545). The use of radiocarbon and other scientific dating techniques is vital. Within developer-funded commercial archaeology in Britain, however, detailed artefactual analyses and dating programmes are often cut or pared down by archaeological consultants on the grounds of reducing the costs to their clients (Fenton-Thomas, 2006; Cumberpatch & Roberts, 2011). Many site reports are divided into rigid period divisions, which can obfuscate longer-term links between features and materials. Some linear earthworks still affected human and animal practices, movements and myths for many centuries after they were first built, whereas for others their meanings and influence waxed and waned over long periods. Dividing landscapes or sites into static ‘time slices’ or layered ‘palimpsests’ cannot convey this temporal complexity (Fenton-Thomas, 2008: 270; 2013: 331; Chadwick & Gibson, 2013: 19). Publications and reports need to remain usable

with easily accessible information, but text and illustrations could also explore paths of movement, and the complex spatial and temporal interdigitations between place, agency, and materiality (e.g. Cooper & Edmonds, 2002; Bender et al., 2007). There is clearly great potential for much more integrated methodological and theoretical approaches (Jones, 2002; 2012; McFadyen, 2013; Alberti & Bray, 2009; Lucas, 2012; Pollard, 2013). Agency and relationality could become useful hermeneutic tools to explore flows of features, forces and materials, de-territorialising and dissolving disciplinary and classificatory boundaries.

SOUNDINGS

‘Why do we acknowledge only our textual sources but not the ground we walk, the ever-changing skies, mountains and rivers, rocks and trees, the houses we inhabit and the tools we use, not to mention the innumerable companions, both non-human animals and fellow humans, with which and with whom we share our lives?’ (Ingold 2011: xii)

Human and animal practices created conditions for the construction of linear earthworks, yet they in turn provided progenerative, performative arenas for encounters between different entities, features, and materials, human and animal sociality, people’s identities; and their memories, traditions, and myths. These were active assemblages, ongoing engagements with materiality and meaning (Figure 12). Each linear earthwork had its own characterful, agential presence, its own biography (Joy, 2009; Fioccaprile, 2014), the outcome of actions and interactions in the lives and memories of people, animals, plants, materials, and forces. Insights from assemblage or meshwork-based theories of relational agency can be combined with existing survey and excavation methodologies, and biographical and phenomenological approaches to generate specific, long-term landscape histories (e.g. Bender et al., 2007; R. Johnston, 2008; Chadwick, 2010; Gibson, 2015; for affective poetics of place see Edmonds, 2004; Pearson, 2007; Bristow, 2015).

If planned and imposed by local elites, earthwork construction, the mobilisation of labour, and the provision of food for people might itself have been a means of accruing and demonstrating status (see Sharples, 2010: 116). Such work may have brought people together, even if coerced, into communal acts of cooperative or competitive labour (Giles, 2012: 47). Age, gender, and tribal identities might have been negotiated through such work, and ties to land, livestock, and community reaffirmed. Yet this might well be too romanticised a perception. Construction could have been enforced through onerous clan and

tribal obligations or even threats of violence, taking farmers away from livestock and fields at crucial times, and people had to divert time and resources to maintain the earthworks.

Although some earthworks materialised existing rights and obligations, others may have represented profound social and political changes; they could have been violent impositions, severing previous social and tenurial ties and long-standing paths of movement, restricting or negating access to certain areas (Giles, 2007a: 114; 2012: 48–49). This was potentially challenged or contested by individuals or groups, on occasion with apparently deadly consequences. Earthworks generated new configurations and assemblages, affording the potential for novel encounters, practices, and assemblages (Joyce, 2008: 34). Their construction might have had unintended, unfolding consequences, encouraging longer-distance movements, ‘hardening’ senses of tenure or ownership, and exacerbating tensions between communities, a darker side to the entanglements between humans and the material world (Hodder, 2012; 2014).

In addition, these features did not cease to be active places even if forgotten by people — an arrogantly anthropocentric assumption. The world is more-than-human, and a much more radical, decentred ontological approach is possible (Murdoch, 1997; DeLanda, 2006; Ingold, 2007; 2011; C. Johnston, 2008; Bennett, 2010; Lorimer, 2010; Lucas, 2013; Buller, 2014). Linear earthworks were never simply inert, obdurate matter, only significant through their impact on human lives, but were actants with their own histories, afterlives, and legacies (see Bradley, 1987: 14; Hodder, 2012: 193). They were still inhabited by animals, even as soil slipped off banks and ditches silted up, and turf, bracken, and gorse hid the excavated earth. Earthworms and moles burrowed through them, and cattle and sheep grazed upon them or tried to scramble across their banks and ditches. Buzzards and crows wheeled in the pellucid sky above them, snipe thrummed, and skylarks trailed their ribbons of song; but the activities and sounds of picks and explosives in quarries, or the air-rending shriek of jet fighter engines, also later became part of their meshworks. On the back of ridges and in lower folds of ground the earthworks trapped early morning mists and crisp carapaces of frost. Pot sherds, burnt stone and charcoal within their material matrices mingled, settled and shifted. Scudding clouds cast shadows across these features, even as time softened their contours and some merged into the landscape, to become shades themselves on aerial photographs. Other non-human forces and energies held sway — ice, rain, and wind. On the high Wolds, and slopes above valleys, the wind is a near constant presence, sculpting trees and vegetation (Bunting, 2009: 25). People and animals brace muscles and bodies against its insistent

attentions, finding shelter within hollows, behind trees and field walls, or in the lee of linear earthworks. Gusts sigh, sigh and resonate.

The past too reverberates into the present, through ‘material trajectories beyond human control’ (Olsen, 2010: 126). Some linear earthworks continued to affect Saxons and Vikings, and medieval shepherds, post-medieval drovers and their animal charges, as well as more recent farmers, quarrymen, grouse shooters, hikers, antiquaries and archaeologists. Sometimes these energies and agencies were densely enmeshed with the bodies and biographies of people and animals when constructed and actively ‘in use’, or during archaeological excavations; but often these flows became more attenuated, dissipated by time and fading oral traditions. In movements alongside linear earthworks or across areas of upland pasture, and through messy meshworks of construction and the prosaic practices of everyday life, agency emerged through complex relational links between people, animals, objects and the landscape, materiality, and memory. And the crows have watched and been part of it all.

ACKNOWLEDGEMENTS

I would like to thank Anwen Cooper, Chris Gosden, Laura Morley and Letty Ten Harkel of the EngLaId Project for inviting me to be a discussant at the seminar on Landscape and Agency at the University of Oxford in June 2013, and to Ben Jervis and Harold Mytum for allowing me to present a version of this paper in their session at TAG in Bournemouth University in December 2013. This paper is part of a diptych or linked exploration of issues regarding relational agency, the other examining animality and trackways (Chadwick forthcoming).

Over the years I have benefited enormously from the help, ideas and advice of friends and colleagues, including Oscar Aldred, Chris Cumberpatch, Patrick Daniel, Mark Edmonds, Helen Evans, Chris Fenton-Thomas, Catriona Gibson, Melanie Giles, Daniela Hofmann, Mark Knight, Lesley McFadyen, Joshua Pollard, Gary Robinson, Helen Wickstead and Gwilym Williams. Anwen Cooper, Catriona Gibson and Patrick Daniel kindly commented on early drafts of this paper. Any remaining mistakes and misconceptions are my own. I am grateful to Colin Merrony, Chris Grimbley and Robert Johnston of the University of Sheffield for allowing me access to the Sheffield Library of Aerial Photographs (SLAP) that belonged to the late Derrick Riley, and for permission to reproduce some of his images here. I am also extremely grateful to Patrick Daniel and Network Archaeology, Jane Richardson, Ian Roberts

and Archaeological Services WYAS; and Jason Dodds, Ian Sanderson and the West Yorkshire Archaeology Advisory Service for allowing me to reproduce photographs held by them.

REFERENCES

- Addy, S.O. 1893. *The Hall of Waltheof: Or the Early Condition and Settlement of Hallamshire*. London: David Nutt.
- Alberti, B. & Bray, T. 2009. Animating Archaeology: Of Subjects, Objects and Alternative Ontologies. *Cambridge Archaeological Journal*, 19(3): 337–43.
- Alcock, L. 1954. Aberford Dykes: The First Defence of the Brigantes? *Antiquity*, 28: 147–54.
- Aldred, A. 2014. Past Movements, Tomorrow's Anchors. On the Relational Entanglements between Archaeological Mobilities. In: J. Leary, ed. *Past Mobilities: Archaeological Approaches to Movement and Mobility*. Farnham: Ashgate, pp. 21–47.
- Aldred, A. & Sekedat, B. 2010–11. Moving on to Mobility: Archaeological Ambulations on the Mobile World. *Archaeolog*.
<http://traumwerk.stanford.edu/archaeolog/2010/12/moving_on_to_mobility_archaeol.html#more> [accessed October 2013].
- Argent, G. 2010. Do the Clothes Make the Horse? Relationality, Roles and Statuses in Iron Age Inner Asia. *World Archaeology*, 42(2): 157–74.
- Ashbee, P. 1957. Excavation on the Roman Rigg near Wentworth. *Transactions of the Hunter Archaeological Society*, 7: 256–65.
- Atkinson, S. 1994. Archaeological Survey and Excavation in Advance of the Construction of the Rotherham to Stocksbridge Gas Pipeline. In: S.P. Whiteley & C.G. Cumberpatch, eds. *Archaeology in South Yorkshire 1993–1994*. Sheffield: SYAS, pp. 45–50.
- Atkinson, S., Latham, I.D. & Sydes, R.E. 1992. Investigations at Caesar's Camp, Scholes Coppice. In: M.J. Francis, C.G. Cumberpatch & S.P. Whiteley, eds. *Archaeology in South Yorkshire 1991–1992*. Sheffield: SYAS, pp. 31–40.
- Barad, K. 2003. Posthumanist Performativity: Toward an Understanding of how Matter Comes to Matter. *Signs: Journal of Women in Culture and Society*, 28(3): 801–31.
- Barrett, J.C. 2000. A Thesis on Agency. In: M.-A. Dobres & J. Robb, eds. *Agency in Archaeology*. London: Routledge, pp. 61–68.
- Barrett, J.C. 2001. Agency, the Duality of Structure, and the Problem of the Archaeological Record. In: I. Hodder, ed. *Archaeological Theory Today*. Cambridge: Polity, pp. 141–64.

- Barrett, J.C., Bradley, R. & Green, M. 1991. *Landscape, Monuments and Society. The Prehistory of Cranborne Chase*. Cambridge: Cambridge University Press.
- Bartlett, J.E. & Mackey, R.W. 1972. Walkington Wold Excavations. *East Riding Archaeologist*, 1(2): 1–100.
- Basso, K. 1996. *Wisdom Sits in Places: Landscape and Language Among the Western Apache*. Albuquerque, NM: University of New Mexico Press.
- Bender, B., Hamilton, S. & Tilley, C. 2007. *Stone Worlds: Narrative and Reflexivity in Landscape Archaeology*. Walnut Creek, CA: Left Coast Press.
- Bennett, J. 2010. *Vibrant Matter: a Political Ecology of Things*. Durham, NC: Duke University Press.
- Bevan, B. 1997. Bounding the Landscape: Place and Identity during the Yorkshire Wolds Iron Age. In: A. Gwilt & C. Haselgrove, eds. *Reconstructing Iron Age Societies*. Oxford: Oxbow, pp. 181–91.
- Boldrini, N. 1999a. Creating Space: A Re-examination of the Roman Ridge. *Transactions of the Hunter Archaeological Society*, 20: 24–30.
- Boldrini, N. 1999b. When is a Border not a Border? The Roman Ridge Re-evaluated. In: C.G. Cumberpatch, J. McNeil & S. Whiteley, eds. *Archaeology in South Yorkshire 1996–1998*. Sheffield: SYAS, pp. 101–04.
- Boucher, A. & Webb, A. 1994. M1-A1 Link Road, Site 21, Aberford. Geophysical and Topographic Survey. Unpublished report, Leeds: Archaeological Services WYAS.
- Bourdieu, P. 1977. *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.
- Bourdieu, P. 1992. *The Logic of Practice*. Cambridge: Polity Press.
- Bowen, H.C. 1978. ‘Celtic’ Fields and ‘Ranch’ Boundaries in Wessex. In S. Limbrey & J.G. Evans, eds. *The Effect of Man on the Landscape: the Lowland Zone*. CBA Research Report 21. London: Council for British Archaeology, pp. 115–23.
- Bowen, H.C. 1990. *The Archaeology of Bokerley Dyke*. London: Her Majesty’s Stationery Office.
- Brackenbury, A. 1995. *1829*. Manchester: Carcanet.
- Bradley, R. 1987. Time Regained – The Creation of Continuity. *Journal of the British Archaeological Association*, 140: 1–17.
- Bradley, R. 2000. *An Archaeology of Natural Places*. London: Routledge.
- Bradley, R., Entwistle, R. & Raymond, F. 1994. *Prehistoric Land Divisions on Salisbury Plain. The Work of the Wessex Linear Ditches Project*. London: English Heritage.

- Bristow, T. 2015. *The Anthropocene Lyric: An Affective Geography of Poetry, Person, Place*. London: Palgrave Macmillan.
- Broderick, L. 2012. Ritualisation (or the Four Fully Articulated Ungulates of the Apocalypse). In: A. Pluskowski, ed. *The Ritual Killing and Burial of Animals: European Perspectives*. Oxford: Oxbow, pp. 22–32.
- Brooks, R.T. 1967. Becca Banks – near Aberford, Yorkshire, West Riding. *Yorkshire Archaeological Journal*, 42: 12–14.
- Brown, K. 1995. Hollins Moor, Colton. Archaeological Evaluation. Unpublished report, Leeds: Archaeological Services WYAS.
- Brück, J. 2001. Monuments, Power and Personhood in the British Neolithic. *Journal of the Royal Anthropological Institute*, N.S. 7: 649–67.
- Brück, J. 2004. Material Metaphors: The Relational Construction of Identity in Early Bronze Age Burials in Ireland and Britain. *Journal of Social Archaeology*, 4(3): 307–33.
- Buller, H. 2014. Animal Geographies I. *Progress in Human Geography*, 38(2): 308–18.
- Bunting, M. 2009. *The Plot: A Biography of an English Acre*. London: Granta.
- Burström, M. 2012. If We Are Quiet, Will Things Cry Out? *Current Swedish Archaeology*, 20: 41–45.
- Busby, C. 1997. Permeable and Partible Persons: A Comparative Analysis of Gender and the Body in South India and Melanesia. *Journal of the Royal Anthropological Institute*, 3(2): 261–78.
- Campbell, B. 2005. On ‘Loving your Water Buffalo more than your own Mother’: Relationships of Animal and Human Care in Nepal. In: J. Knight, ed. *Animals in Person: Cultural Perspectives on Human-Animal Intimacies*. Oxford: Berg, pp. 79–100.
- Carter, S., Bunting, J. & Tipping, R. 2001. Grim’s Ditch North. The Analysis of the Buried Soil and Ditch Sediments. In: I. Roberts, A. Burgess & D. Berg, eds. *A New Link to the Past. The Archaeological Landscape of the M1-A1 Link Road*. Yorkshire Archaeology 7. Leeds: West Yorkshire Archaeology Service, pp. 230–33.
- Casella, E. & Croucher, K. 2011. Beyond Human: The Materiality of Personhood. *Feminist Theory*, 12(2): 209–17.
- Chadwick, A.M. 2004. ‘Geographies of Sentience’ – An Introduction to Space, Place and Time. In: A.M. Chadwick, ed. *Stories from the Landscape: Archaeologies of Inhabitation*. British Archaeological Reports International Series S1238. Oxford: Archaeopress, pp. 1–31.

- Chadwick, A.M. 2007. Trackways, Hooves and Memory-Days – Human and Animal Memories and Movements around Iron Age and Romano-British Rural Landscapes. In: V. Cummings & R. Johnston, eds. *Prehistoric Journeys*. Oxford: Oxbow, pp. 131–52.
- Chadwick, A.M. 2010. The Gray Hill Landscape Research Project, Llanfair Discoed, Monmouthshire, Wales. In: H. Lewis & S. Semple, eds. *Perspectives in Landscape Archaeology: Papers Presented at Oxford 2003–5*. British Archaeological Reports International Series S2103. Oxford: Archaeopress, pp. 94–106.
- Chadwick, A.M. 2012. Routine Magic, Mundane Ritual – Towards a Unified Notion of Depositional Practice. *Oxford Journal of Archaeology*, 31(3): 283–315.
- Chadwick, A.M. forthcoming. Foot-fall and Hoof-hit. Agencies, Movements, and Materialities; and Later Prehistoric and Romano-British Trackways. *Cambridge Archaeological Journal*.
- Chadwick, A.M. & Gibson, C.D. 2013. ‘Do you Remember the first Time?’ A Preamble through Memory, Myth and Place. In: A.M. Chadwick & C.D. Gibson, eds. *Memory, Myth and Long-term Landscape Inhabitation*. Oxford: Oxbow, pp. 1–30.
- Chadwick, A.M., Martin, L. & Richardson, J. 2013. The Significance of Goats and Chickens? Iron Age and Roman Faunal Assemblages, Deposition and Memory Work at Wattle Syke, West Yorkshire. In: A.M. Chadwick & C.D. Gibson, eds. *Memory, Myth and Long-term Landscape Inhabitation*. Oxford: Oxbow pp. 165–88.
- Chakrabarty, D. 2000. *Provincializing Europe: Postcolonial Thought and Historical Difference*. Princeton, NJ: Princeton University Press.
- Clark, A. 2008. Where Brain, Body and World Collide. In: C. Knappett & L. Malafouris, eds. *Material Agency: Towards a Non-anthropocentric Approach*. New York: Springer, pp. 1–18.
- Codrington, T. 1918. *Roman Roads in Britain* (3rd edition). London: Society for Promoting Christian Knowledge.
- Connerton, P. 1989. *How Societies Remember*. Cambridge: Cambridge University Press.
- Cook, A.M. & Dacre, M.W. 1985. *Excavations at Portway, Andover 1973–1975. Anglo-Saxon Cemetery, Bronze Age Barrow and Linear Ditch*. Oxford University Committee for Archaeology Monograph 4. Oxford: Institute of Archaeology.
- Cooper, A. & Edmonds, M. 2007. *Past and Present. Excavations at Broom, Bedfordshire 1996–2005*. Cambridge: Cambridge Archaeological Unit.

- Coutts, C. 1999. An Archaeological and Archival Study of Ancient Woodland in Sheffield. In: C. Cumberpatch, J. McNeil & S. Whiteley, eds. *Archaeology in South Yorkshire 1996–1998*. Sheffield: South Yorkshire Archaeology Service, pp. 72–79.
- Crawford, O.G.S. 1935. Arthur and his Battles. *Antiquity*, 9: 277–91.
- Cresswell, T. & Merriman, P. eds. 2011. *Geographies of Mobilities: Practices, Spaces, Subjects*. Farnham: Ashgate.
- Cronk, K.A. 2004. *South-West Yorkshire's Roman Ridge. A 'Who-Dug-It?' Mystery*. Rotherham: Clifton and Wellgate Local History Group.
- Crummy, P. 2011. In the days before banks. *The Colchester Archaeologist*, 24: 1–2.
- Cumberpatch, C. & Roberts, H. 2011. Life in the Archaeological Marketplace. In: M. Rockman & J. Flatman, eds. *Archaeology in Society: Its Relevance in the Modern World*. New York: Springer, pp. 23–44.
- Cunliffe, B. 1990. Before Hillforts. *Oxford Journal of Archaeology*, 9: 323–36.
- Cunliffe, B. 2003. *Danebury Hillfort*. Stroud: Tempus.
- Cunliffe, B. 2004. Wessex Cowboys? *Oxford Journal of Archaeology*, 23(1): 61–81.
- Daniel, P. & Noon, S. 2007. Asselby to Pannal Natural Gas Pipeline. The Aberford Dykes Complex: The South Dyke (Scheduled Monument No. 31520). Preliminary Excavation Report. Unpublished report, Lincoln: Network Archaeology Ltd.
- Deegan, A. 2001. Aerial Photographs. In: I. Roberts, A. Burgess & D. Berg, eds. *A New Link to the Past. The Archaeological Landscape of the M1-A1 Link Road*. Yorkshire Archaeology 7. Leeds: West Yorkshire Archaeology Service, pp. 13–35.
- Deegan, A. & Foard, G. 2007. *Mapping Ancient Landscapes in Northamptonshire*. Swindon: English Heritage.
- De Jaegher, H. & Froese, T. 2009. On the Role of Social Interaction in Individual Human Agency. *Adaptive Behavior*, 17: 444–60.
- DeLanda, M. 2006. *A New Philosophy of Society: Assemblage Theory and Social Complexity*. London: Continuum.
- Deleuze, G. & Guattari, F. 1987. *A Thousand Plateaus: Capitalism and Schizophrenia* (trans. B. Massumi). London: Continuum.
- Dobres, M.-A. & Robb, J. 2000. Agency in Archaeology. Paradigm or Platitude? In M.-A. Dobres & J. Robb, eds. *Agency in Archaeology*. London: Routledge, pp. 3–17.

- Dwyer, P.D. & Minnegal, M. 2005. Person, Place or Pig: Animal Attachments and Human Transactions in New Guinea. In: J. Knight, ed. *Animals in Person: Cultural Perspectives on Human-Animal Intimacies*. Oxford: Berg, pp. 37–60.
- Edmonds, M. 2004. *The Langdales: Landscape and Prehistory in a Lakeland Valley*. Stroud: Tempus.
- Evans, J.G. 2003. *Environmental Archaeology and the Social Order*. London: Routledge.
- Faull, M.L. 1981. The Roman Period. In: M.L. Faull & S.A. Moorhouse, eds. *West Yorkshire: An Archaeological Survey to AD 1500*. Leeds: University of Leeds, pp. 141–70.
- Faye, B. 1996. Relations homme-animal dans les élevages laitiers intensifs de Bretagne (France). *Anthropozoologica*, 22: 17–22.
- Fenton-Thomas, C. 2003. *Late Prehistoric and Early Historic Landscapes on the Yorkshire Chalk*. British Archaeological Reports British Series 350. Oxford: Archaeopress.
- Fenton-Thomas, C. 2005. *Forgotten Landscapes of the Yorkshire Wolds*. Stroud: Tempus.
- Fenton-Thomas, C. 2006. Consultants in Archaeology: Some Observations from the Field. *Rescue News*, 99: 7.
- Fenton-Thomas, C. 2008. Mobile and Enclosed Landscapes on the Yorkshire Wolds. In: A.M. Chadwick, ed. *Recent Approaches to the Archaeology of Land Allotment*. British Archaeological Reports International Series S1875. Oxford: Archaeopress, pp. 266–87.
- Fenton-Thomas, C. 2011. *Where Sky and Yorkshire and Water Meet: the Story of the Melton Landscape from Prehistory to the Present*. On-Site Archaeology Monographs 2. York: On-Site Archaeology.
- Fenton-Thomas, C. 2013. Granny's Old Sheep Bones and Other Stories from the Melton Landscape. In: A.M. Chadwick & C.D. Gibson, eds. *Memory, Myth and Long-term Landscape Inhabitation*. Oxford: Oxbow, pp. 315–33.
- Fijn, N. 2011. *Living with Herds: Human-Animal Coexistence in Mongolia*. Cambridge: Cambridge University Press.
- Fiocoprile, E. 2014. A Tale of two Earthworks: Exploring Variation in the Linear Earthwork Landscapes of Huggate Dykes and Wetwang-Garton Slack. Paper presented at the 17th Iron Age Research Student Symposium (IARSS), University of Edinburgh, May 2014.
- Fowler, C. 2004. *The Archaeology of Personhood. An Anthropological Approach*. London: Routledge.

- Fowler, C. 2013. *The Emergent Past: A Relational Realist Archaeology of Early Bronze Age Mortuary Practices*. Oxford: Oxford University Press.
- Garrow, D. 2012. Odd Deposits and Average Practice. A Critical History of the Concept of Structured Deposition. *Archaeological Dialogues*, 19(2): 85–115.
- Gibson, C.D. 2013. Out of Time but not out of Place. Tempo, Rhythm and Dynamics of Inhabitation in Southern England. In: A.M. Chadwick & C.D. Gibson, eds. *Memory, Myth and Long-term Landscape Inhabitation*. Oxford: Oxbow pp. 99–123.
- Gibson, E. 2015. Movement, Power and Place: The Biography of a Wagon Road in a Contested First Nations Landscape. *Cambridge Archaeological Journal*, 25(2): 417–34.
- Giddens, A. 1984. *The Constitution of Society: Outline of the Theory of Structuration*. Cambridge: Polity Press.
- Giles, M. 2007a. Refiguring Rights in the Early Iron Age Landscapes of East Yorkshire. In: C. Haselgrove & R. Pope, eds. *The Earlier Iron Age in Britain and the Near Continent*. Oxford: Oxbow, pp. 103–19.
- Giles, M. 2007b. Good Fences Make Good Neighbours? Exploring the Ladder Enclosures of Late Iron Age East Yorkshire. In: C. Haselgrove & T. Moore, eds. *The Later Iron Age in Britain and Beyond*. Oxford: Oxbow, pp. 235–50.
- Giles, M. 2012. *A Forged Glamour: Landscape, Identity and Material Culture in the Iron Age*. Oxford: Windgather Press.
- Gillings, M. 2012. Landscape Phenomenology, GIS and the Role of Affordance. *Journal of Archaeological Method and Theory*, 19: 601–11.
- Gingell, R. 1992. *The Marlborough Downs: A Later Bronze Age Landscape and its Origins*. Wiltshire Archaeology and Natural History Society Monograph 1. Salisbury: Wessex Archaeology.
- Gooch, P. 2008. Feet Following Hooves. In: T. Ingold & J.L. Vergunst, eds. *Ways of Walking: Ethnography and Practice on Foot*. Aldershot: Ashgate, pp. 67–80.
- Gosden, C. 2005. What do Objects Want? *Journal of Archaeological Method and Theory*, 12(3): 193–211.
- Grantham, C. & Grantham, E. 1965. An Earthwork and Anglian Cemetery at Garton-on-the-Wolds, East Yorkshire. *Yorkshire Archaeological Journal*, 41: 355–60.
- Gray, J. 1999. Open Spaces and Dwelling Places: Being at Home on Hill Farms in the Scottish Borders. *American Ethnologist*, 26(2): 440–60.

- Greene, D. 1950. 'The Roman Ridge,' Hill Top, Kimberworth, near Rotherham. *Transactions of the Hunter Archaeological Society*, 6: 95–98.
- Greene, D. & Preston, F.L. 1957. Two Excavations in the 'Roman Ridge' Dyke. *Transactions of the Hunter Archaeological Society*, 7: 20–25.
- Gregory, R.A. & Daniel, P. 2013a. Landscape 2 East: Sherburn in Elmet to the Cock Beck. In: R.A. Gregory, P. Daniel & F. Brown *Early Landscapes of West and North Yorkshire: Archaeological Investigations along the Asselby to Pannal Natural Gas Pipeline 2007–8*. Lancaster: Oxford Archaeology North, pp. 67–153.
- Gregory, R.A. & Daniel, P. 2013b. Discussion. In: R.A. Gregory, P. Daniel & F. Brown *Early Landscapes of West and North Yorkshire: Archaeological Investigations along the Asselby to Pannal Natural Gas Pipeline 2007–8*. Lancaster: Oxford Archaeology North, pp. 233–72.
- Hacıgüzeller, P. 2012. GIS, Critique, Representation, and Beyond. *Journal of Social Archaeology*, 12(2): 245–63.
- Halliday, S. 2014. Lost in Plain Sight. Paper presented at the IFA Conference and Training Event: Research in Practice, Glasgow, April 2014.
- Haraway, D. 2008. *When Species Meet*. Minneapolis, MN: University of Minnesota Press.
- Harris, G.G. 1989. Concepts of Individual, Self, and Person in Description and Analysis. *American Anthropologist*, 91: 599–612.
- Harris, O.J.T. 2013. Relational Communities in Prehistoric Britain. In: C. Watts, ed. *Relational Archaeologies: Humans, Animals, Things*. London: Routledge, pp. 173–89.
- Harris, O.J.T. & Robb, J. 2012. Multiple Ontologies and the Problem of the Body in History. *American Anthropologist*, 114(4): 668–79.
- Helms, M. 1988. *Ulysses' Sail. An Ethnographic Odyssey of Power, Knowledge and Geographic Distance*. Princeton, NJ: New Jersey Press.
- Henare, A., Holbraad, M. & Wastell, S. eds. 2007. *Thinking through Things. Theorising Artefacts Ethnographically*. London: Routledge.
- Hirsch, E. 2006. Landscape, Myth and Time. *Journal of Material Culture*, 11: 151–65.
- Hodder, I. 1982. *Symbols in Action: Ethnoarchaeological Studies of Material Culture*. Cambridge: Cambridge University Press.
- Hodder, I. 2000. Agency and Individuals in Long-term Processes. In: M.-A. Dobres & J. Robb, eds. *Agency in Archaeology*. London: Routledge, pp. 21–33.

- Hodder, I. 2012. *Entangled: An Archaeology of the Relationships between Humans and Things*. Chichester: Wiley-Blackwell.
- Hodder, I. 2014. The Entanglements of Humans and Things: A Long-term View. *New Literary History*, 45: 19–36.
- Hofmann, D. 2013. Intimate Connection: Bodies and Substances in Flux in the Early Neolithic of Central Europe. In: C. Watts, ed. *Relational Archaeologies: Humans, Animals, Things*. London: Routledge, pp. 154–72.
- Hood, A. 2013. King's Park, King Harry Lane, St Albans, Hertfordshire. Archaeological Monitoring and Excavation Phase 2: Post-Excavation Assessment. Unpublished report, Swindon: Foundations Archaeology.
- Hoskins, J. 1998. *Biographical Objects. How Things Tell the Stories of People's Lives*. London: Routledge.
- Hunter, J. 1819. *Hallamshire*. London: Lackington, Hughes, Harding, Mavor & Jones.
- Hurst, J. 1976. Wharram Percy: A Case Study in Microtopography. In: P. Sawyer, ed. *Medieval Settlement: Continuity and Change*. London: Arnold, pp. 114–44.
- Impey, A. 2013. Songs of Mobility and Belonging. *Interventions: International Journal of Postcolonial Studies*, 15(2): 255–71.
- Ingold, T. 1993. The Temporality of the Landscape. *World Archaeology* 25 2): 152–74.
- Ingold, T. 2000. *The Perception of the Environment. Essays in Livelihood, Dwelling and Skill*. London: Routledge.
- Ingold, T. 2004. Culture on the Ground: The World Perceived through the Feet. *Journal of Material Culture*, 9(3): 315–40.
- Ingold, T. 2007. Materials against Materiality. *Archaeological Dialogues*, 14(1): 1–16.
- Ingold, T. 2008. When ANT Meets SPIDER: Social Theory for Arthropods. In: C. Knappett & L. Malafouris, eds. *Material Agency: Towards a Non-anthropocentric Approach*. New York: Springer, pp. 209–15.
- Ingold, T. 2010. The Round Mound is not a Monument. In: J. Leary, T. Darvill & D. Field, eds. *Round Mounds and Monumentality in the British Neolithic and Beyond*. Oxford: Oxbow, pp. 253–60.
- Ingold, T. 2011. *Being Alive: Essays on Movement, Knowledge and Description*. Abingdon: Routledge.
- Ingold, T. & Jones, A. 2002. From the Perception of Archaeology to the Anthropology of Perception. An Interview with Tim Ingold. *Journal of Social Archaeology*, 3(1): 5–22.

- Jackson, M. & Karp, I. eds. 1990. *Personhood and Agency: The Experience of Self and Other in African Cultures*. Uppsala Studies in Anthropology 14. Uppsala: University of Uppsala.
- Johnson, M.H. 1989. Conceptions of Agency in Archaeological Interpretation. *Journal of Anthropological Archaeology*, 8: 189–211.
- Johnston, C. 2008. Beyond the Clearing: Towards a Dwelt Animal Geography. *Progress in Human Geography*, 32(5): 633–49.
- Johnston, R. 2008. The Place and Materiality of an Upland Field System at Cwm Ffyddlas, North Wales. In: A.M. Chadwick, ed. *Recent Approaches to the Archaeology of Land Allotment*. British Archaeological Reports International Series S1875. Oxford: Archaeopress, pp. 111–20.
- Jones, A.M. 2002. *Archaeological Theory and Scientific Practice*. Cambridge: Cambridge University Press.
- Jones, A.M. 2012. *Prehistoric Materialities: Becoming Material in Prehistoric Britain and Ireland*. Oxford: Oxford University Press.
- Jones, A.M. & MacGregor, G. eds. 2002. *Colouring the Past: the Significance of Colour in Archaeological Research*. Oxford: Berg.
- Jones, O. & Cloke, P. 2008. Non-human Agencies: Trees, Relationality, Time and Place. In: C. Knappett & L. Malafouris, eds. *Material Agency: Towards a Non-anthropocentric Approach*. New York: Springer, pp. 79–96.
- Joy, J. 2009. Reinvigorating Object Biography: Reproducing the Drama of Object Lives. *World Archaeology*, 41(4): 540–56.
- Joyce, R.A. 2008. Practice in and as Deposition. In: B.J. Mills & W.H. Walker, eds. *Memory Work: Archaeologies of Material Practices*. Santa Fe (NM): School for Advanced Research Press, pp. 25–39.
- Kavari, J.U. & Bleckmann, L.E. 2009. Otjiherero Praises of Places: Collective Memory Embedded in Landscape and the Aesthetic Sense of a Pastoral People. In: M. Bollig & O. Bubenzer, eds. *African Landscapes: Interdisciplinary Approaches*. New York: Springer, pp. 473–500.
- Kopytoff, I. 1986. The Cultural Biography of Things: Commoditization as a Process. In: A. Appadurai, ed. *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge: Cambridge University Press, pp. 64–91.

- Latham, I.D. 1995. A Topographic Survey of the Roman Ridge at Wath Wood, Rotherham. In: C.G. Cumberpatch, J. Mcneil & S.P. Whiteley, eds. *Archaeology in South Yorkshire 1994–1995*. Sheffield: South Yorkshire Archaeological Service, pp. 60–62.
- Latour, B. 1993. *We Have Never Been Modern*. Hemel Hempstead: Harvester/Wheatsheaf.
- Latour, B. 2005. *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford: Oxford University Press.
- Law, J. & Hassard, J. eds. 1999. *Actor Network Theory and After*. Oxford: Blackwell.
- Law, J. & Mol, A. 2008. The Actor-Enacted: Cumbrian Sheep in 2001. In: C. Knappett & L. Malafouris, eds. *Material Agency: Towards a Non-anthropocentric Approach*. New York: Springer, pp. 57–77.
- Lefebvre, H. 1991 [1974]. *The Production of Space*, trans. by D. Nicolson-Smith. Oxford: Blackwell.
- Lefebvre, H. 2004. *Rhythmanalysis: Space, Time and Everyday Life*, trans. by S. Elden & G. Moore. London: Continuum.
- Lingis, A. 1998. *The Imperative*. Bloomington, IN: Indiana University Press.
- LiPuma, E. 1998. Modernity and Forms of Personhood in Melanesia. In: M. Lambek & A. Strathern, eds. *Bodies and Persons: Comparative Views from Africa and Melanesia*. Cambridge: Cambridge University Press, pp. 53–79.
- Lorimer, H. 2006. Herding Memories of Humans and Animals. *Environment and Planning D: Society and Space*, 24: 497–518.
- Lorimer, J. 2010. Moving Image Methodologies for More-than-Human Geographies. *Cultural Geographies*, 17(2): 237–58.
- Lucas, G. 2012. *Understanding the Archaeological Record*. Cambridge: Cambridge University Press.
- Lucas, G. 2013. Afterword: Archaeology and the Science of New Objects. In: B. Alberti, A.M. Jones & J. Pollard, eds. *Archaeology after Interpretation: Returning Materials to Archaeological Theory*. Walnut Creek, CA: Left Coast Press, pp. 369–80.
- Lucy, S. 1998. *The Early Anglo-Saxon Cemeteries of East Yorkshire: An Analysis and Reinterpretation*. British Archaeological Reports British Series 272. Oxford: British Archaeological Reports.
- Macnaghten, P. & Urry, J. 1998. *Contested Natures*. London: Sage.
- Margary, I.D. 1973. *Roman Roads in Britain* (3rd edition). London: John Baker.

- McFadyen, L. 2006. Landscape. In: C. Conneller & G. Warren, eds. *Mesolithic Britain and Ireland: New Approaches*. Stroud: Tempus, pp. 121–38.
- McFadyen, L. 2007. Neolithic Architecture and Participation: Practices of Making at Long Barrow Sites in Southern Britain. In: J. Last, ed. *Beyond the Grave: New Perspectives on Barrows*. Oxford: Oxbow, pp. 22–29.
- McFadyen, L. 2013. Designing with Living: A Contextual Archaeology of Dependent Architecture. In: B. Alberti, A.M. Jones & J. Pollard, eds. *Archaeology after Interpretation: Returning Materials to Archaeological Theory*. Walnut Creek, CA: Left Coast Press, pp. 135–50.
- McOmish, D., Field, D. & Brown, G. 2002. *The Field Archaeology of the Salisbury Plain Training Area*. Swindon: English Heritage.
- Miller, D. 2007. Stone Age or Plastic Age? *Archaeological Dialogues*, 14(1): 23–27.
- Mlekuž, D. 2013. The Birth of the Herd. *Society and Animals*, 21: 150–61.
- Moore, H.L. 1994. *A Passion for Difference*. Cambridge: Polity Press.
- Morris, C. 1999. Grim's Ditch, Thorpe Park, Austhorpe, Leeds, West Yorkshire. Archaeological Excavation. Unpublished report, Leeds: Archaeological Services WYAS.
- Morris, J. 2008. Associated Bone Groups: One Archaeologist's Rubbish is Another's Ritual Deposition. In: O. Davis, K. Waddington & N. Sharples, eds. *Changing Perspectives on the First Millennium BC. Proceedings of the Iron Age Research Student Seminar 2006*. Oxford: Oxbow, pp. 83–98.
- Murdoch, J. 1997. Inhuman/Nonhuman/Human: Actor-Network Theory and the Potential for a Non-dualistic and Symmetrical Perspective on Nature and Society. *Environment and Planning D: Society and Space*, 15: 731–56.
- Myers, F.M. 1991. *Pintupi Country, Pintupi Self: Sentiment, Place, and Politics among Western Desert Aborigines*. Berkeley, CA: University of California Press.
- Olsen, B. 2010. *In Defense of Things: Archaeology and the Ontology of Objects*. Walnut Creek, CA: AltaMira Press.
- Olsen, B. 2012. After Interpretation: Remembering Archaeology. *Current Swedish Archaeology*, 20: 11–34.
- Osgood, R. 2006. The Dead of Tormarton: Bronze Age Combat Victims? In T. Otto, H. Thrane & H. Vankilde, eds. *Warfare and Society: Archaeological and Social Anthropological Perspectives*. Aarhus: Aarhus University Press, pp. 331–40.
- Oswald, A. 2011. *Prehistoric Linear Boundary Earthworks*. Swindon: Historic England.

- Overing, J. & Passes, A. eds. 2000. *The Anthropology of Love and Anger: The Aesthetics of Conviviality in Native Amazonia*. London: Routledge.
- Owoc, M.A. 2005. From the Ground up: Agency, Practice, and Community in the Southwestern British Bronze Age. *Journal of Archaeological Method and Theory*, 12(4): 257–81.
- Parker Pearson, M. 2004. Earth, Chalk, Wood and Stone: Materiality and Stonehenge. In: N. Boivin & M.A. Owoc, eds. *Soils, Stones and Symbols: Cultural Perceptions on the Mineral World*. London: UCL Press, pp. 71–90.
- Pearson, M. 2007. *'In Comes I': Performance, Memory and Landscape*. Exeter: Exeter University Press.
- Pollard, J. 2013. From *Ahu* to Avebury: Monumentality, the Social, and Relational Ontologies. In: B. Alberti, A.M. Jones & J. Pollard, eds. *Archaeology after Interpretation: Returning Materials to Archaeological Theory*. Walnut Creek, CA: Left Coast Press, pp. 177–96.
- Poole, F.J.P. 1994. Socialization, Enculturation and the Development of Personal Identity. In: T. Ingold, ed. *Companion Encyclopaedia of Anthropology*. London: Routledge, pp. 831–60.
- Preston, F.L. 1950. A Field Survey of the 'Roman Rig' Dyke, in South-West Yorkshire. *Transactions of the Hunter Archaeological Society*, 8: 285–309.
- Probyn, E. 2000. *Carnal Appetites. FoodSexIdentities*. London: Routledge.
- Richards, J.C. 1978. *The Archaeology of the Berkshire Downs: An Introductory Survey*. Reading: Berkshire Archaeological Committee.
- Riley, D.N. 1957. Investigation of Entrance through the 'Roman Ridge' in Shepherd's Plantation, Greasebrough, nr. Rotherham. *Transactions of the Hunter Archaeological Society*, 7: 18–19.
- Robb, J. 2004. The Extended Artefact and the Monumental Economy: A Methodology for Material Agency. In: E. Demarrais, C. Gosden & C. Renfrew, eds. *Rethinking Materiality: The Engagement of Mind with the Material World*. Cambridge: McDonald Institute for Archaeological Research, pp. 131–39.
- Roberts, I., Deegan, A. & Berg, D. 2010. *Understanding the Cropmark Landscapes of the Magnesian Limestone*. Leeds: Archaeological Services WYAS/English Heritage.

- Sauer, E.W. 2005. *Linear Earthwork, Tribal Boundary and Ritual Beheading: Aves Ditch from the Iron Age to the Early Middle Ages*. British Archaeological Reports British Series 402. Oxford: Archaeopress.
- Sharples, N. 2010. *Social Relations in Later Prehistory: Wessex in the First Millennium BC*. Oxford: Oxford University Press.
- Sheller, M. & Urry, J. 2006. The New Mobilities Paradigm. *Environment and Planning A* 38: 207–26.
- Spratt, D.A. 1989. *Linear Earthworks of the Tabular Hills of Northeast Yorkshire*. Sheffield: Department of Archaeology and Prehistory.
- Stenton, M. 2011. Wincobank Hill, Sheffield. Desk-based Assessment. Unpublished report, Sheffield: ArcHeritage.
- Stoertz, C. 1997. *Ancient Landscapes of the Yorkshire Wolds*. London: Royal Commission on the Historical Monuments of England.
- Strathern, M. 1988. *The Gender of the Gift: Problems with Women and Problems with Society in Melanesia*. Berkeley, CA: University of California Press.
- Sturt, F. 2006. Local Knowledge is Required: A Rhythmanalytical Approach to the Late Mesolithic and Early Neolithic of the East Anglian Fenland, UK. *Journal of Maritime Archaeology*, 1: 119–39.
- Thomas, N. 1991. *Entangled Objects*. Cambridge, MA: Harvard University Press.
- Tilley, C. 1999. *Metaphor and Material Culture*. Oxford: Blackwell.
- Tilley, C. 2007. Materiality in Materials. *Archaeological Dialogues*, 14(1): 16–20.
- Travis, J.R. 2001. Wath Wood and Boyd Royd Wood: An Archaeological Survey. *Transactions of the Hunter Archaeological Society*, 21: 1–42.
- Tuck-Po, L. 2008. Before a Step too Far: Walking with Batek Hunter-Gatherers in the Forests of Pahang, Malaysia. In: T. Ingold & J.L. Vergunst, eds. *Ways of Walking: Ethnography and Practice on Foot*. Aldershot: Ashgate, pp. 21–34.
- Tullett, A. 2010. Information Highways – Wessex Linear Ditches and the Transmission of Community. In: M. Sterry, A. Tullett & N. Ray, eds. *In Search of the Iron Age: Proceedings of the Iron Age Research Student Seminar 2008, University of Leicester*. Leicester Archaeology Monographs 18. Leicester: University of Leicester Press, pp. 111–26.
- Wacher, J. 1966. Excavations at Riplingham, East Yorkshire. *Yorkshire Archaeological Journal*, 41: 608–69.

- Watts, C. 2013. Relational Archaeologies: Roots and Routes. In: C. Watts, ed. *Relational Archaeologies: Humans, Animals, Things*. London: Routledge, pp. 1–20.
- Webmoor, T. & Witmore, C.L. 2008. Things Are Us! A Commentary on Human/Things Relations under the Banner of a ‘Social’ Archaeology. *Norwegian Archaeological Review*, 41(1): 53–70.
- Whatmore, S., 2002. *Hybrid Geographies. Natures Cultures Spaces*. London: Sage.
- Wheelhouse, P. & Burgess, A. 2001. The Linear Earthworks. In: I. Roberts, A. Burgess & D. Berg, eds. *A New Link to the Past. The Archaeological Landscape of the M1-A1 Link Road*. Yorkshire Archaeology 7. Leeds: West Yorkshire Archaeology Service, pp. 123–48.
- Whittaker, E. 1992. The Birth of the Anthropological Self and its Career. *Ethos*, 20: 191–219.
- Wilmott, T. 1993. Excavation and Survey on the Line of Grim’s Ditch, West Yorkshire 1977–83. *Yorkshire Archaeological Journal*, 65: 55–74.
- Wyatt, I. 2004. The Landscape of the Icelandic Sagas: Text, Place and National Identity. *Landscapes*, 5(1): 55–72.

BIOGRAPHICAL NOTE

Adrian M. Chadwick is currently a Research Associate at the University of Leicester, working on the Hoarding in Iron Age and Roman Britain project. He has worked for many British commercial archaeological field units, most recently as a Senior Project Officer with AC Archaeology. His research interests include landscape archaeology, Bronze Age, Iron Age and Roman Britain, land allotment and field systems, depositional practices, human-animal relations, and the intersections between archaeological theory and practice. Along with Catriona Gibson, he edited *Memory, Myth and Long-term Landscape Inhabitation* (2013).

School of Archaeology and Ancient History, University of Leicester, University Road, Leicester LE1 7RH.

E-mail: adrianchadwick@yahoo.co.uk

« La lumière tenace des choses » : paysage, agentivité relationnelle et ouvrages de terre linéaires en préhistoire récente de la Grande-Bretagne

De grands ouvrages de terre linéaires furent construits dans plusieurs régions de Grande-Bretagne vers la fin de l’âge du Bronze et pendant l’âge du Fer ; il s’agit de talus et de

fossés atteignant souvent une longueur de plusieurs kilomètres. En prenant les débats théoriques récents sur la matérialité et l'agentivité relationnelle en archéologie et dans les sciences sociales comme point de départ, et en suivant une approche délibérément axée sur la poésie des lieux, cet article réexamine ces levées de terre en tant qu'acteurs capables d'influencer et d'orienter la vie des gens, des animaux et des plantes. Les ouvrages de terre n'étaient pas des monuments statiques ; au contraire ils avaient le potentiel d'agir comme un ensemble actif, ou trame de matérialité, de mouvement et de mémoire. Translation by Madeleine Hummler

Mots-clés : paysage, agentivité, ouvrages de terre linéaires, trame, ensembles archéologiques

„Das beharrliche Licht der Sachen“: Landschaft, relationale Handlungsfähigkeit und spätvorgeschichtliche Erdwerke in Großbritannien

Große, geradlinige Erdwerke, d.h. Wälle und Gräben die sich auf mehreren Kilometern erstreckten, wurden in der späten Bronzezeit und Eisenzeit in mehreren Gegenden von Großbritannien gebaut. In Zusammenhang mit der Anwendung von neueren Theorien über Materialität und relationale Handlungsfähigkeit in der Archäologie und den Sozialwissenschaften, und durch eine absichtlich diskursive Einstellung gegenüber die Poetik von Landschaften, werden hier Erdwerke als aktive Teilnehmer, die das Leben von Menschen, Tieren und Pflanzen beeinflussen können, neu betrachtet. Die Erdwerke waren nicht passive Denkmäler, sondern aktive Komplexe oder Netzwerke, in welchen Materialität, Bewegung und Erinnerung tätig waren. Translation by Madeleine Hummler

Stichworte: Landschaft, Handlungsfähigkeit, lineare Erdwerke, Netzwerke, Befunde

Figure captions

FIGURE 1 A (left): Linear earthwork visible as cropmark ditches and surviving as earthworks in plantation woodland at Pasture Farm near Weaverthorpe, North Yorkshire. B (right): Cropmarks of linear earthwork ditches near Rudston in Humberside, also revealing a pit alignment.

By permission of University of Sheffield, Sheffield Library of Aerial Photographs (SLAP) 8321 and SLAP 8385, photographs by D. Riley

FIGURE 2 Part of the linear earthwork surviving in plantation woodland at Pasture Farm, near Weaverthorpe, North Yorkshire. This series of banks and ditches followed the line of a natural ridge.

FIGURE 3 Location map of some of the Yorkshire sites mentioned in the text.

After Preston, 1950, Stoertz, 1997, Boldrini, 1999b, and Roberts et al., 2010

FIGURE 4 Map of South Dyke, Becca Banks and Woodhouse Moor Rein at Aberford, West Yorkshire, with most modern features such as the village of Aberford and the line of the M1 motorway omitted in order to emphasise the relationships between the earthworks and the natural topography. Other known cropmark features are also shown. Contours at 5 m intervals, based on 1:25 000 Ordnance Survey map. Insets show excavation plans of the enclosure pre-dating Becca Banks, and the enclosure post-dating South Dyke.

After Wheelhouse & Burgess, 2001, Gregory & Daniel, 2013a, and information from WYAAS

FIGURE 5 Section across the ditch of Grim's Ditch near Colton, West Yorkshire, excavated by Archaeological Services WYAS. The ranging pole is 2 m long.

By permission of I. Roberts and AS WYAS

FIGURE 6 Aerial photograph of cropmarks and earthworks of Becca Banks, looking north-east across Cock Beck towards Hayton Wood. Note how the linear earthwork, extending from lower left to upper right, has caused differential tree growth within the woodland.

By permission of WYAAS, photograph by D. Riley

FIGURE 7 Excavation of the ditch of South Dyke by Network Archaeology, showing the deposit of stone in the basal fills, much of it burnt river cobbles.

By permission of P. Daniel and Network Archaeology

FIGURE 8 Cropmarks of the ploughed-out ditch and bank of the Roman Rig near Wentworth Park, South Yorkshire, extending from upper left to lower right.

By permission of University of Sheffield, Sheffield Library of Aerial Photographs (SLAP), photograph by D. Riley

FIGURE 9 Map of the Roman Rig, South Yorkshire, with most modern features such as Sheffield and the line of the M1 motorway omitted in order to emphasise the relationships between the earthworks and the natural topography. Though modern reservoirs have been constructed, and the River Don and many smaller watercourses have been canalised and culverted, these are shown in order to illustrate in more general terms where water would have been present. Cropmarks of undated shorter banks and ditches have also recently been identified on the south-east side of the River Don. Contours at 10 m intervals, based on 1:50 000 Ordnance Survey map .

After Preston, 1950, Boldrini, 1999, Roberts et al., 2010, and Stenton 2011

FIGURE 10 Part of the Roman Rig bank surviving as a later boundary to the south of Wath Wood, South Yorkshire.

FIGURE 11 Excavation of Grims Ditch at Bullerthorpe Lane by Archaeological Services WYAS, illustrating some of the challenges presented by lengthy and deep linear features.

By permission of I. Roberts and AS WYAS

FIGURE 12 Linear earthworks at Dikes Fields near Weaverthorpe, North Yorkshire, where a large funnel channelled the movements of people and animals into a major trackway, which may also have been used for sorting livestock. The small oval enclosure at the upper left appears to enclose several earlier or later features, including possible pits or square barrows. A possible round barrow bisected by one of the ditches is just in front.

By permission of University of Sheffield, Sheffield Library of Aerial Photographs, SLAP 8322, photograph by D. Riley