Changing Assemblages: Vibrant Matter in Burial Assemblages

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In this paper the notion of assemblage, as derived from the work of Gilles Deleuze, is explored in order to consider change in prehistory. An assemblage-based approach that draws on the concept of 'vibrant matter' is implemented as the means of understanding change. In this approach all materials are viewed as vibrant and in flux. These ideas are used to create a heterogeneous view of change where assemblages, or parts of assemblages, may change at varying speeds and rhythms and at many different scales. These ideas are explored through the case study of changing burial practices between 3000 and 1500 cal BC on the Isle of Man. I suggest that this kind of thinking allows us to study change differently, and explore the advantages of this approach for archaeology.

The study of change is arguably one of the most important things that archaeology has to offer the humanities: changes in materials, communities, identities, environments, and ideas can be studied over the very long term by archaeologists. Yet we rarely explicitly theorize the study of change. Too often we seek to characterize large blocks of time (whether that is the Neolithic, the Late Neolithic or 3000–2600 BC) as having a certain set of characteristics that differ drastically from what came before and that which comes after. We draw boxes around these blocks of stasis and label them periods, representing what happens within them as relatively static and what happens at the end of them as more dynamic. This has two consequences: firstly, I believe that we create a false picture of radically opposed periods of time and ways of life. Secondly, and as a result, when we study 'big changes' in the archaeological record, I suggest, we often seek some external 'cause' for change. Often that cause is singular and located in one moment in time in the 'transition' between periods (but see Robb 2013 for an excellent, different approach). Discussing periods of stasis interrupted by transitions of radical change is a very satisfying way to think about the past; we can easily and quickly talk about large periods of time and contrast them with other periods and go on to point our finger at that thing which causes the world to alter radically. In spite of this, I argue that we need a more complex understanding of change, one which more accurately captures the complex and messy nature of the world. The ideas proposed suggest that change is constant in all materials and as a result that the many heterogeneous assemblages that make up our world are always in motion. This theoretical approach does not deny that change happens at different scales and speeds, nor does it seek to create an undifferentiated past, but instead offers us a new way to map and understand change.

In this paper I explore the period 3000–1500 cal BC on the Isle of Man. The Isle of Man is located in the middle of the Irish Sea, surrounded by Ireland, England, Scotland and Wales (see Fig. 1) and the period discussed includes the Late Neolithic, what we could call the Chalcolithic, or Copper Age (see debates in Allen *et al.* 2012) and the Early Bronze Age: this is a case study using a time and a place located firmly in the middle. On the Isle of Man the contrast between the Late Neolithic and Early Bronze Age is arguably clearer than elsewhere. Piggott (1954, 351) described the Manx Late Neolithic as showing a 'notable insular individuality' and named it as one of his five secondary Neolithic cultures. Existing narratives suggest that, until the Late Neolithic, the Isle of Man fitted within broader patterns of material culture, mortuary practice and social tradition across the rest of Britain and Ireland (see, for example, Burrow 1999, 32).

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Figure 1. *Map of the Irish Sea area highlighting the Isle of Man and the location of Killeaba. (Map: Author.)*

During the Late Neolithic, the island had a unique material culture of flints, pottery, stone axes, burials and settlement patterns termed the 'Ronaldsway culture' (Burrow 1999, 32–3).[1] Around 2200 cal BC this 'unique' culture appears to have been abandoned and the island re-integrated into the wider patterns of material culture and practices that defined the Early Bronze Age of Britain and Ireland (Burrow 1999, 34). Explanations for these changes often focus on the apparent 're-entry' of the island into more 'broadly held' British and Irish practices (see, for example, Burrow 1999; Frieman 2008; Woodcock 2004). This creates a dichotomy: the Ronaldsway Late Neolithic is defined by cultural isolation and the Early Bronze Age by re-connection. The 'economic importance' of bronze is often identified as the driving cause behind the changes at the beginning of the Early Bronze Age (Woodcock 2001; 2004; 2008).

There are numerous reasons why this narrative emerges. It is a product of the opinions of men like Piggott, Clark, Megaw and Bersu, who played key roles in defining the period. It is also a product of geography: the island has a clear border we can draw around it thereby isolating it from (or connecting it to) other places. The material culture and archaeological evidence also plays a role—there are real and important differences between the Late Neolithic of the Isle of Man and Late Neolithics elsewhere and between the Late Neolithic and Early Bronze Age on the island. Another crucial part of this narrative hinges on the way that change is understood and theorized as long blocks of stasis and short periods of rapid change: it is this shortcoming in our theorization that this article seeks to address.

In this paper, I argue that by implementing the ideas of Deleuze (Deleuze & Guattari 2014; Deleuze & Parnet 2002) with regard to change and assemblages we can offer a fresh theoretical approach. Whilst we have seen a variety of new theoretical work focusing on the importance of relations in recent years (for example, Alberti *et al*. 2011; 2013; Conneller 2011; Fowler 2013a; Fowler & Harris 2015; Harris 2013; Hodder 2011; 2012; Ingold 2011; 2013; Jones 2012; Lucas 2012; 2015; Olsen 2007; 2010; Olsen *et al*. 2012; Shanks 2007; Webmoor 2007; Webmoor & Witmore 2008; Witmore 2007), little of this work has explicitly sought to consider how it is we theorize and study *change* in a relational framework (exceptions include Fowler 2013a,b; Fowler & Harris 2015; Harris 2014a; Jones & Sibbesson 2013; Lucas 2012).

Relational approaches to society focus on the way in which things are not just important in and of

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themselves; rather, what matters is the relations which things exist within. Relational approaches are not completely homogenous but generally seek to elevate the position of non-humans such as objects, plants, animals, soils, and rocks (and in some cases, beliefs and gods) and thereby acknowledge the important roles these varied components play in the world. In such approaches the world is understood to be made up of complex assemblages of heterogeneous and diverse components including, but not limited to, humans. A diverse range of metaphors for the conceptualization of these relationships exists: Latourian networks (Latour 1996; 1999; 2007), Ingoldian meshworks (Ingold 2007; 2011; 2012), the entanglements advanced by Hodder (2011; 2012) and Deleuzian-inspired assemblages (Bennett 2010; DeLanda 2006; 2016).[2] What unites these approaches is their focus on the importance of the relations within which any given person, animal, thing, or belief exists; it is these relations that define a component's properties and potentials. Assemblage-based approaches enjoy growing popularity in archaeological theory (see, for example, Brittain 2013; Fowler 2013a,b; Harris 2013; 2014a,b; Jones 2012; 2015; Lucas 2012; Normark 2009). An explicitly assemblage-based approach is adopted here because it offers an excellent means of thinking about change, as I demonstrate below.

What is an assemblage?

The term assemblage is already familiar to archaeologists, as it is frequently used to describe associated materials or objects.[3] Lucas (2012, 193–8) suggests that the term has two meanings in general archaeological parlance: an assemblage of objects united by their typological similarity, such as a *ceramic* or *faunal assemblage*; and secondly a group of objects which are united by being deposited together, such as a *finds assemblage* from a given site. The assemblage theory adopted here shares similarities with these concepts in that it, too, is about gathering together groups of things, but differs in that it gathers explicitly heterogeneous things, including people, animals, places and beliefs, and is a means of understanding how the world is.

Bennett (2010, 23) describes assemblages as '…ad hoc groupings of diverse elements, of vibrant materials of all sorts. Assemblages are living, throbbing confederations'. For authors such as Deleuze, Bennett and DeLanda, the world is made up of diverse, heterogeneous components, all of which exist enmeshed within varied and multiple relations. Assemblages refer to the temporary groups these components might find themselves in. We might consider the assemblage of a bus travelling between towns: the assemblage is made up of varied kinds of passengers—old and young, all going to different places to carry out different things; the bus driver (who has a different agenda) is also part of the assemblage, as is the road network, the money used to pay the fare, the seats and windows, the motor engine and the bus operating company. All of these components are brought together in a temporary assemblage that is the Number One bus on an afternoon in July. As the bus moves, the assemblage changes: different passengers get on and off, the location and road change, the levels of fuel and oil in the engine decrease and many other components besides are all in flux. Assemblages are always temporary (though that is not to say that they do not leave traces in the archaeological record); they are never fixed in time and space. Any component can at the same time be part of numerous different assemblages, and can itself be seen as an assemblage. For example, the driver of the Number One bus on that July afternoon is at once part of the bus assemblage and part of an assemblage that is her family, and a different assemblage that is all the buses operating in the area. Furthermore, we can consider the bus driver herself as an assemblage of organs, tissues, foods, liquids, beliefs, clothes and feelings.

DeLanda (2006, 17) argues that larger assemblages, the bus network for example, emerge from the component parts of smaller assemblages, such as a single bus, when relations between certain components are stabilized (though this does not mean that they cannot become de-stabilized and fall apart). Larger assemblages need not have the same properties as the smaller ones that make them up; for example, the bus network is capable of things a single bus is not. Scale is not simply a way of linking smaller and larger processes within assemblage theory,[4] nor is it a way to 'make space' for small-scale processes in large-scale explanations, or *vice versa*. Rather, assemblages offer us a way to move between multiple scales which are not necessarily 'bigger' or 'smaller' than each other; all the differing scales are folded together (see Harris, this issue). This '…gives assemblage theory a unique way of approaching the problem of linking the micro and macro-levels of social reality' (DeLanda 2006, 17). To return to the Number One bus, we might see the bus as a larger-scale (or more significant) assemblage than the driver, but if the driver does not come to work, the bus will not go anywhere (unless a replacement driver can be found); equally, if the bus breaks down, then whether the driver is there or not, the bus will not be going anywhere. The driver is one component in the bus company assemblage, but the bus company is but one component in the driver's

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personal assemblage. If the boiler in the driver's house explodes and she does not come to work, it has an impact on the bus company; and if the bus company goes bankrupt, it impacts the driver's personal assemblage. Assemblage theory is not about shuttling between a top-down or bottom-up approach to change, but folding these many scales together. There is no 'correct' scale at which to work in assemblage theory; rather, we work at many scales all at once—which scales (multiple) matter most to us as researchers will depend on the data before us and the questions we ask.

Conneller (2011, 22) has shown the ways in which the properties of a given component are the result of the active assemblage they exist within, rather than essential to that component. Relations within assemblages are relations of exteriority (DeLanda 2006, 10)—this means components from one assemblage can also be part of a different assemblage, where they will have a different effect and be enmeshed in different relations. For example, I might leave the bus and go to a café, where I will have different relations, and thereby properties, in an alternative assemblage. This gives an assemblage approach a unique way of dealing with locality and variety – it does not require or expect things to be the same always and everywhere.[5]

Change in burial assemblages

I explore the kind of approach to change that assemblage theory calls for by mapping[6] changing burial assemblages on the Isle of Man between 3000 and 1500 cal BC. The ending of a life (in whatever sense this might be understood) universally leads to change in the assemblages of relations that surround the deceased. As relations change, they must be renegotiated; differing behaviours may become appropriate, and new people and things may join the assemblages that surround the deceased (who could be a person, an animal, a belief, or a thing). In a simple example, the death of a grandparent shifts the roles of parents and grandchildren. A single death can send shockwaves through an assemblage that will include not only immediate family, but wider institutions, materials and people.

The Late Neolithic on the Isle of Man, dated to c. 3000–2200 cal BC, as introduced above, is notably different from the Late Neolithics in other regions across the British Isles and Ireland (Burrow 1997a,b; Crellin 2014; for a discussion of similarities and differences and their emergence, see Crellin in prep. c). The period is defined by archaeologists by a mixture of presences and absences. The distinctive forms of material culture found on the island, such as Ronaldsway Earthfast Jar pottery, Roughened Truncated Butt axes and hump-backed scrapers, highlight differences from the rest of the British Isles and Ireland. The absence of known henges,[7] pit circles, or indeed any kind of monumental construction, and the small amount of Grooved Ware further set the Isle of Man apart. There is very little Beaker pottery from the island (see Crellin 2014; in prep. c; Woodcock 2001; 2008), with only a single known example of a Beaker burial found at Baroose (Quine 1925). The Early Bronze Age, dated to *c.* 2200–1500 cal BC, is marked by changes in material culture and burial practices. Radiocarbon dates suggest an early date for the arrival of Food Vessels, presumed to be from Ireland (see Crellin 2014; in prep. c), further supported by an increasing number of examples of copper and early bronze metalwork, again from Ireland (Crellin 2014; in prep. c).

If we were to coarsely characterize the burial record of this period, we might note the dominance of cremation in the Ronaldsway Late Neolithic and the variety of locations within which cremated remains were buried (see Crellin 2014; 2015; in prep. c), then a transition to inhumations associated with Food Vessels at the beginning of the Early Bronze Age (*c.* 2200 cal BC) and a later shift towards the dominance of cremations buried with a Cordoned or Collared Urn in the later Early Bronze Age (*c.* 1800 cal BC) (Crellin 2014; 2015; in prep. c; Woodcock 2001; 2008). Obviously this is a simplification: it makes change appear staggered, and it becomes located in specific moments between different kinds of practices. Such discussion effectively '*black boxes*' all the parts of the assemblage that make up burial practices. The term *black box* comes from the work of Bruno Latour and refers to the way in which a particular assemblage (he would term it an actant) becomes so established that we no longer consider the relations that make it up and how these might be changing (Latour 1999; see also Harman 2009, 33–45), instead taking them for granted and presuming they are static. By *black boxing* burial practices, we reduce them to a series of categories focusing on the kind of remains we uncover as archaeologists. Talking about burial in these terms masks the continuous changes in practice that occurred between 3000 and 1500 cal BC[8] and the plethora of changes at other scales, such as the individual decomposition of a single cremation deposit or changing beliefs about death. It also masks the complexity of the assemblages that make up 'burial'; consider the dense assemblage of relations necessary to create a single pottery vessel to place in a burial, for example. Such a characterization, however, also allows us to talk with ease and haste about 'burial practices' as one

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component of a larger and overlapping assemblage—for example, the assemblage that is prehistory on the Isle of Man. Sometimes it is necessary to *black box* an assemblage temporarily in order to be able to explore a given question; the key thing is to know that within that *black box* there is a vibrant, fluxing, heterogenous assemblage.

'Cremated remains' are an assemblage that we might see as being relatively stable through the period, especially given that cremation burials occurred seemingly continuously from 3000 to 1500 cal BC (Crellin 2014; in prep. c). However, this apparent stability masks all kinds of changing assemblages within. In order to identify change in what one otherwise might label as stability, we need only open the *black box* that surrounds the term 'cremation'. When we open the *black box*, we begin to reveal the multiple kinds of assemblages involved in the production and treatment of cremated remains: for example, we might consider gathering and preparing wood or charcoal, as well as the practice of lighting fires and getting a body to burn. We must also consider components of the assemblage with less material aspects, such as 'beliefs about the human body', 'ideas about dying' and perhaps notions of the soul or an afterlife. Each of these components involved in the emergence of the assemblage 'cremated remains' is itself made up of other complex assemblages and relations. Opening the *black box* reveals that even that which we consider static is always on the move.

Vibrant matter

To illustrate the constant change that happens within assemblages, I explore a single assemblage of cremated remains, Cremation X from the site of Killeaba on the Isle of Man (see Fig. 1) (Crellin 2015; Cubbon 1978). Killeaba is a natural glacial mound that was excavated 1968–69 by A.M. Cubbon (Fig. 2). Recent redating of a number of cremations from the site has resulted in a proposed new sequence (Fig. 3), which suggests the site contains evidence of activity from the Middle Neolithic to the end of the Early Bronze Age. The site features a variety of burial deposits, including at least 12 cremations in pits, scoops, timber-lined pits, cists, miniature cists and as scattered deposits, as well as two inhumations. There is also evidence of a burning pit, dated to the Late Neolithic, and two Earthfast Jars. Earthfast Jars are large vessels, typically 30–100 cm tall, made of very coarse pottery, buried within the ground, with their rims level with the ground surface at the time of burial (Burrow 1997a,b).

Jane Bennett (2010) argues that the open-ended and fluxing nature of all assemblages is a result of the 'vibrancy' of all matter. Matter is not just the brute, dead solid stuff we like to imagine before us, but is rather always in flux and always changing at every scale. This vibrancy is present at every scale from the inside of bacteria to a rotting apple, from a person out running to a governmental institution. Even things which appear to be static are in reality always vibrant; often we cannot 'see' the nature of their vibrancy, usually because it operates at a scale imperceptible to us, be that within an atom, or over the course of a thousand years. In Bennett's presentation of the world, it is not just humans who are capable of bringing about change, but rather the vibrancy of matter itself, which means that all components, from trees to hairdryers, are constantly in flux. Bennett (2010, xvi) uses the term 'thing-power' to discuss the way that things are able to act and produce effects, thereby appearing alive, and exceeding 'their status as objects'. Human-power (or agency) is just another case of 'thing-power' for Bennett (2010, xvi).

Cremation X consists of a deposit of cremated remains, scattered in a pit, accompanied by a Food Vessel (see Figs. 2 & 3). Focusing on the material properties of Cremation X, we can observe that their chemical composition and physical form have continued to change right up to the present day; for example, interactions with worms, changes to the environment and relations with the soil have all shifted the physical form of the cremated remains through time. Today the remains are held in the Manx Museum, where they exist enmeshed within relations to curators, museum policies, the pottery sherds stored nearby, and researchers who come to study them—they are always on the move in new and varied vibrant assemblages. The chemical and material vibrancy of cremated remains is what makes them carbon-datable—this property reminds us that they do not stand still, they are always on the move, always part of a bigger assemblage. As archaeologists, we can exploit this vibrancy for our own ends and thereby shift the assemblages within which the remains exist, bringing them into new confederations both material (within a lab, for example) and conceptual (within our archaeological narratives).

Cremated remains are an example *par excellence* of vibrant matter—living people with thoughts, feelings and families transformed to lifeless human bodies: bodies transformed from soft flesh to fragments of (often still recognizable) burnt or charred bone: a new material that demands a different kind of interaction. The living person, dead body and cremated remains are all connected, but clearly have different properties and potentials. Relations shift from being with a talking, opinionated human to a largely silent and

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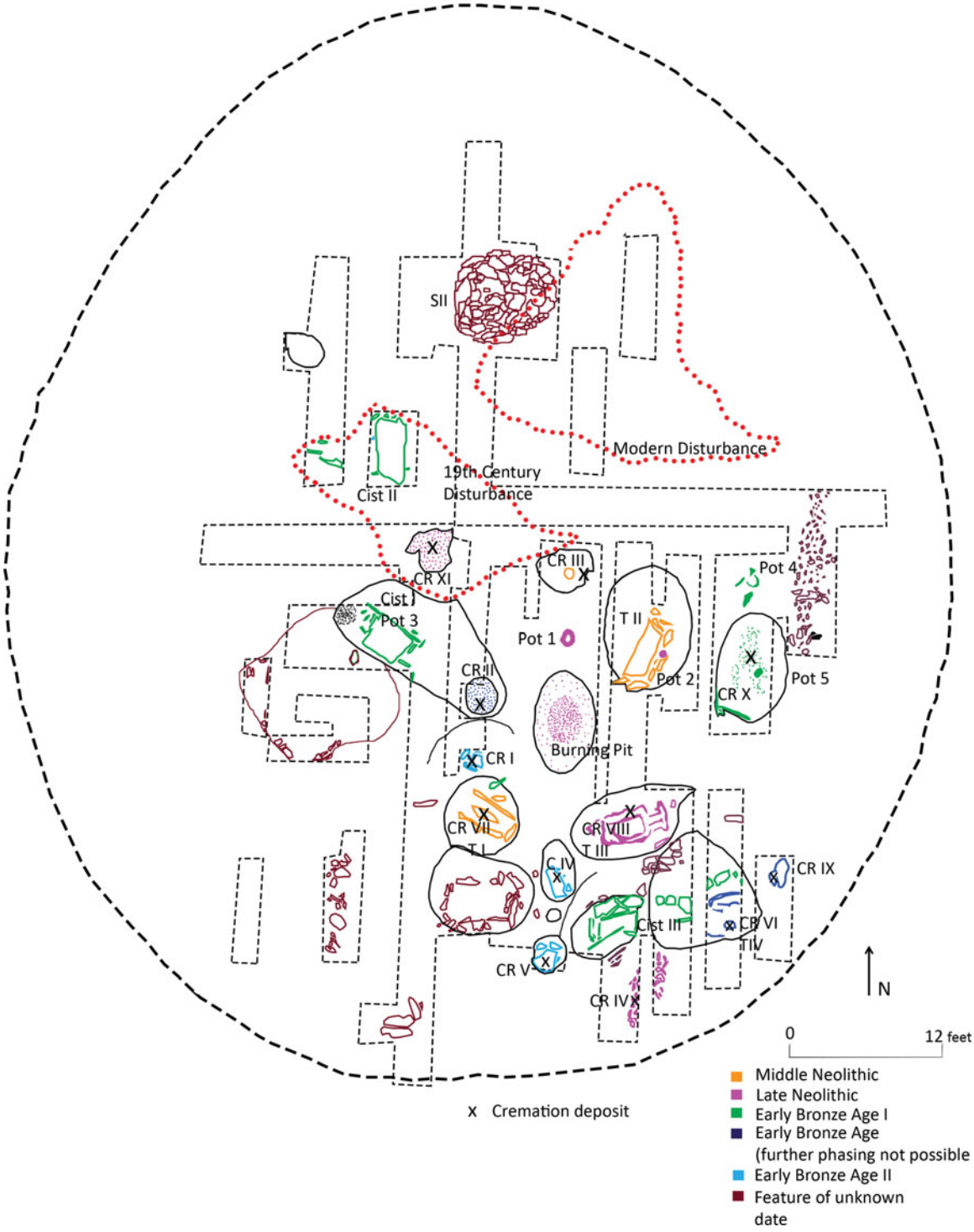


Figure 2. *(Colour online) Plan of Killeaba, Ramsey. (Based on original plan in Cubbon 1978, re-drawn, re-phased; to see the colour phasing, refer to the online publication. First published in Crellin 2015, col. pl. II. Reproduced with permission of Isle of Man Natural History and Antiquarian Society.)*

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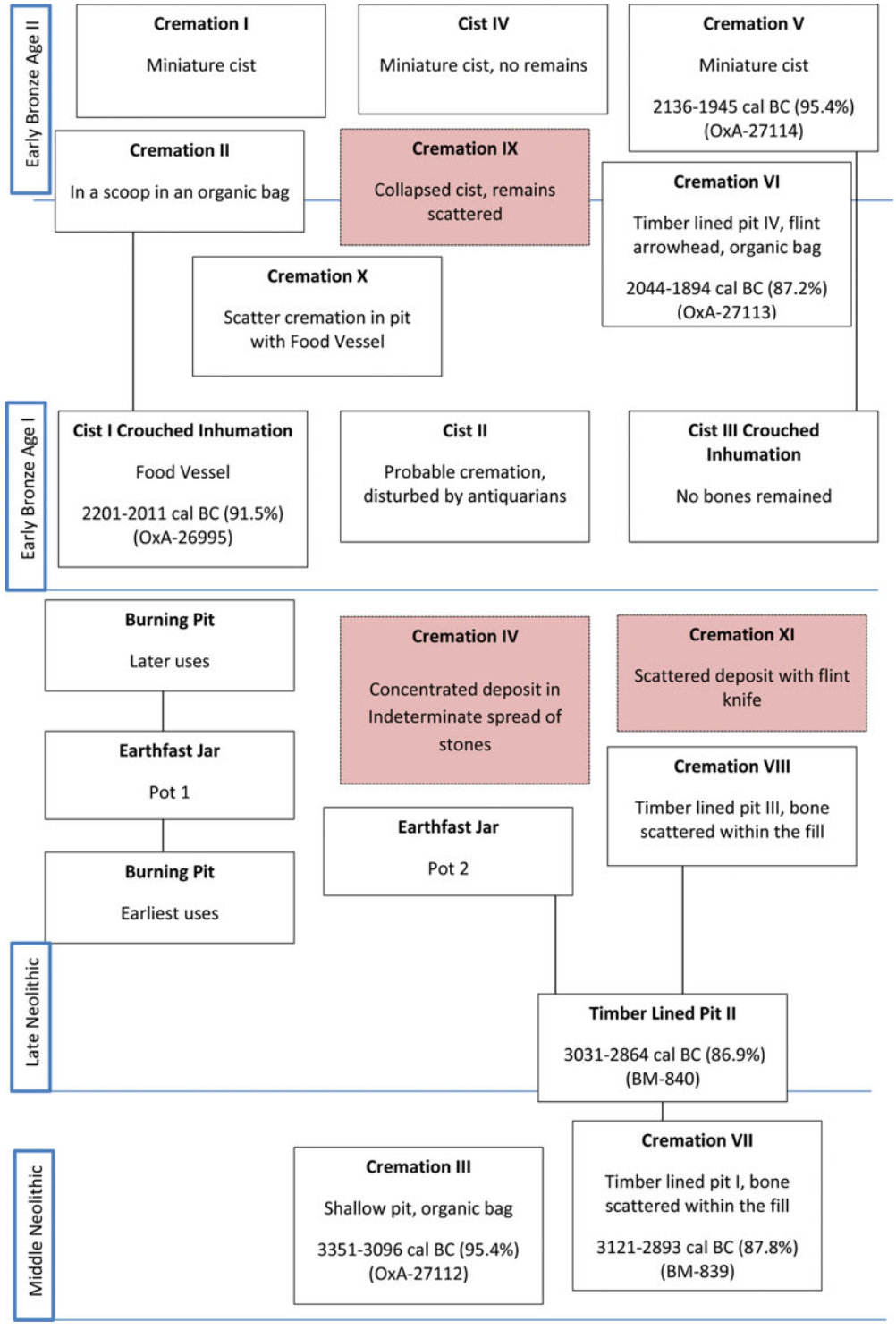


Figure 3. *(Colour online) Proposed sequence for Killeaba, Ramsey, based on radiocarbon dates and stratigraphic relations. Lines between boxes indicate stratigraphic relations and shaded boxes indicate there is uncertainty over the date of a particular feature. (Image from Crellin 2015, fig 4. Reproduced with permission of Isle of Man Natural History and Antiquarian Society.)*

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relatively fragile material. This assemblage is the residue of activity that included the actions of a community carrying out a cremation, the work and sweat of those that dug the pit for the cremation, and the influence of Irish potters who first made pottery in the Food Vessel style. The material properties of the cremated remains demanded particular action from people; for example, cremated remains pose a different challenge to those burying the deceased in comparison to a dead body. As feelings of grief and loss changed over time for the community surrounding the deceased, the properties and potentials of the remains would have shifted; people may have felt and acted differently towards them. These cremated remains had a material vibrancy that demanded a certain kind of response, and as the assemblage, including a community of mourners, surrounding them changed their own vibrancy, relations and properties also shifted.

Emergent causation

In any given assemblage, change comes about because of the constant vibrant flux of components and their relations; this is why an assemblage is never complete or static, but always issuing forward, always 'becoming' (*sensu* Deleuze & Guattari 2014). Given the complex and inter-related mesh of relations and components within assemblages, simplistic notions of causation cannot be sustained within assemblage-based analyses. Bennett (2010, 33) describes monocausal explanations as always the simplest reading of a given situation. If we are operating within a world that is relational, where each of us is made up of assemblages of materials, ideas, places and things and each of us is part of wider assemblages of people, animals, ideas, etc., then how can we suggest that causality is ever going to be singular or simple? Furthermore, if we are positing a world where things, animals, beliefs, places and gods can all play important and powerful roles in assemblages, then suggesting that humans are the sole cause of change is deeply flawed.

Bennett (2010, 33) argues that because 'single components' are in fact assemblages made up of many other components, we cannot identify a single cause. She suggests instead that we trace emergent causality where multiple components are always present, and any one effect becomes infused into other causes until cause and effect cannot be separated. We need to look at the assemblages that brought a particular effect forward. Certainly, we can identify cases where one component might be more or less powerful than others, or where several components act together with catalytic effect (DeLanda 2000; 2006). Such a view has a consequence for 'blame' and ethics: it asks us to look at the wider relations behind an event and it allows us to acknowledge the power of non-humans. It does not stop us from being outraged at injustice or human wrong-doing (Bennett 2010, 38), nor does it mean that humans are not at fault or should not accept responsibility for their role in harmful confederations; rather, it asks us to understand things in a more nuanced and complex way, one that acknowledges the deeply relational world within which we exist.

Changing relations, changing assemblages and phase transitions

Positing a world of flux and vitality within assemblages, at every level from the atom to the institution, means a world that is always changing. What changes within assemblages is the relations that components are in, and these changing relations allow different properties to emerge and thereby different and unpredictable futures become possible. Robb and Harris (2013, 225) state that

> …there is never a clean transition of the kind where 'first people thought A, then X happened and afterwards, they thought B'. Instead, the pattern tends to be one of rendition through continuity. Both A and B are almost always present both before and afterwards, but the relations between them have changed.

When we consider change we should not think of the world being one way initially and then changing to become completely another way. Rather, the same kinds of components are present both before and after the change, but the relations between them have altered, either a little or perhaps more radically. New innovations and components do not completely wipe out the past; rather, change can only be understood in light of what went before. As Fowler (2013a, 29, 53) argues, the properties of an assemblage or a component emerge from interactions (relations) and are historical, meaning that past relations affect the current properties of an assemblage or component. Even when some relations, and thereby properties of an assemblage, change, other properties of assemblages endure precisely because some of the relations within that assemblage continue (Fowler 2013a, 29; Fowler & Harris 2015); for example, the atomic forces that hold together the molecules within a clay pot endure, meaning that the form of the vessel remains largely similar from 2000 BC to the present, but other relations that vessel is in have shifted and changed, allowing different properties to emerge.

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This leads us to consider the speed and tempo of change within assemblages. Positing a world of constant flux does not mean that everything is always fleeting: the tempo of change of different components within assemblages, and assemblages themselves, varies greatly. To map change effectively, we need to explore the ways in which different components within a given assemblage are vibrant in varied ways. Returning once more to the Number One bus, the petrol is used up more quickly than the engine oil, and the metal body of the bus rusts more slowly. In all three cases this vibrancy is of differing intensities and provokes a response from the bus company. The bus might need refuelling every day, topping up with engine oil less frequently, and rust spots dealt with only annually. This is a product of both vibrancy and the relations these components are enmeshed within. Some components within an assemblage, such as the petrol, act as catalysts increasing the vibrancy of others; the vibrancy of other components, such as a maintenance mechanic or engine oil, will help to reduce the tempo of change.

Recognizing that change happens at different tempos and intensities is crucial if we are to write the complex narratives of change I am calling for. This also means recognizing when significant changes happen. *Phase transition* is the term DeLanda uses to identify notably marked changes within an assemblage (DeLanda 2000; 2006; see also Harris 2014a, for an archaeological application). *Phase transitions* are the result of the build-up of numerous smaller interrelated changes that contribute to a more marked change: heating water from 1°C to 100°C is a gradual process, but the *phase transition* at 100°C appears more marked. I understand change in *phase transitions* as being of the type described by Robb and Harris (2013) above, where A and B are present before and after the change, but the relations between them have shifted. Utiliszing *phase transitions* enables us to acknowledge that there are some marked changes in the past, but these are the result of multiple processes that had already been in motion for some time and can co-exist together.[9]

The risk here is that we place a *phase transition* in the locations where we once placed our periods of rapid change and we thereby revert to the model I argued against at the opening of this paper, where blocks of stasis are punctuated by periods of transition. This is not my intention. DeLanda's (2000) concept of a *phase transition* is based upon a build-up of gradual change that becomes an obvious marked change. When we boil a pan of water, different molecules of water reach 100°C at different moments, some sooner than others: when would we identify the *phase transition*? At a molecular scale, we could look at the moment one molecule evaporates; however, if we look at the assemblage of all the molecules in the pan, the moment of transition is more difficult to identify: is it when the surface boils, or there is a rolling boil, or all the water has evaporated? In each case, we are waiting for the visualization of a *phase transition*, when the nature of things appears changed. When a *phase transition* occurs depends on the scale which we are observing. This is not a weakness, but a strength: it allows us to consider different kinds of assemblages on their own terms and how they relate to assemblages of other scales.

Mapping change in burial assemblages

Assemblage-based approaches could be seen as inviting a focus on the microscale—examining a given deposit or thing as I did with Cremation X—but we can apply the same concepts over the longer term to map change at a different scale. In what follows, I explore the assemblage of all the burials from Killeaba. If we consider first the Late Neolithic assemblage: all known burials from this period found across the island are cremation deposits,[10] but within this category there is considerable variety, as cremation deposits are found in pits and scoops in the ground (as at Ballateare: Bersu 1947; and Killeaba: Cubbon 1978), as well as scattered in stony spreads (as at West Kimmeragh: Garrad 1987). Some Earthfast Jars have also been found to contain cremated remains (there are examples from Round Ellan: Burrow 1997b, 44; Scard: Kermode 1902; Ballig: Burrow 1997b, 38; and Ballateare: Bersu 1947). Earthfast Jars form a kind of solidified pit within the ground and the materiality of the Jars, with coarse fabric and large inclusions, appears to mimic earth (Crellin in prep. b). I have argued elsewhere (see Crellin 2014; 2015, for more detail) that complete Earthfast Jars can be interpreted as a temporary container for a variety of substances, including cremated remains. At Ballateare (Bersu 1947) and Killeaba (Cubbon 1978; see Figs. 2 & 3) there is evidence of what appear to be cremation pyres in association with Earthfast Jars. I have also argued that remains were collected following cremation and may have been placed in the Jars as a kind of temporary resting place, allowing protracted relations with the deceased to be completed, perhaps, before they were placed in the more permanent resting place of a closed pit. The assemblage here has relations back to Middle Neolithic assemblages at Killeaba, in that cremations date to both periods, yet the nature of the relations surrounding the way cremated remains were handled have

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changed; Late Neolithic cremations appear to have involved a degree of extended interaction with the deceased, with cremated remains being placed temporarily in Earthfast Jars (and maybe other locations). Here we can see that it is not a case of a wholesale change from the Middle Neolithic to the Late Neolithic: cremation remains the burial rite, but the nature of the relations the cremated remains are in have changed. Clarity is crucial in our discussion of assemblages, because our assemblages are messy, they overlap and bleed into one another; moreover clarity is particularly important if we are to succeed in writing description that deals with emergent causation. To be specific, then, the parts of the assemblage that surround the production of the cremated remains appear to have remained *relatively* static; however, we can see that the ways in which cremated remains were handled has shifted significantly.

The changes that occur in the treatment of cremated remains between the Late Neolithic and the Early Bronze Age are more marked. At Killeaba, in the earlier part of the Early Bronze Age both cremations and inhumations were deposited (one of each is accompanied by a Food Vessel). The use of inhumation was a clear change in burial practice; however, this is not a case of wholesale dichotomous change. Appleby (2013) has argued many of the initial stages in the preparation of the body for either inhumation *or* cremation were similar at this time; therefore, holding these two practices in a stark dichotomy is false and only serves to mask continuity of process at some stages in the handling of the dead. Change in the treatment of the deceased also needs to be considered alongside continuity; Cremation X, dated to the Early Bronze Age, was found scattered in a pit (echoing older traditions), accompanied by a Food Vessel (a novel practice). The assemblage has relations to older assemblages of cremated remains at the site—perhaps those burying the deceased knew of the tradition of cremation burials at this place, or maybe they accidentally stumbled upon older cremated remains inserted into the mound; equally they may have known nothing of the cremations within this mound and were influenced by relations of tradition at the time when cremation was prevalent in Ireland and Britain. New components, such as the Food Vessel, or the use of inhumation, all have to fit within existing assemblages of components; they alter these assemblages they enter, but they also exist within them and are understood in relation to them and their histories.

There are *phase transitions* occurring within this assemblage: these are not wholesale replacements of one practice with the next, but shifts in how the relations between various components work. These *phase transitions* are multiple and thinking about them returns us to the issue of scale. Cremation X as an assemblage is undergoing many *phase transitions*: the death of the person involved, the burning of the body to produce cremated remains, the placing of these remains in the earth. These changes are not a result of large-scale processes that define what the community must do following the death; rather, they are carrying out a specific set of burial practices, some of which are influenced by the vibrant nature of materials (how a body rots and how it burns), some of which will be influenced by older relations (what we might term tradition), some of which will be influenced by the unique nature of the assemblage (thereby giving rise to variety and innovation). At a different scale, this specific assemblage is folded into a broader assemblage and comes to play a role in shaping practice at this time and for us studying the period today. At this scale it is one of many, and the variety we see in all the assemblages relating to specific deaths gives rise to constant change within the broader assemblage.

Turning our focus specifically to the treatment of cremated remains: as argued above, the properties and potentials of any material or component change as a result of the relations it exists within. The wider assemblage that any given cremation deposit is part of during the Early Bronze Age has altered from that of the Late Neolithic with the addition of copper-alloy metalwork, new kinds of pottery, the emergence of inhumation practices and many other components besides. Whilst cremated remains appear to have continued to be produced throughout the period, we should not expect their properties, or the way they were treated and understood, to remain static. The emergence of stone cists within the assemblages was novel (though there are earlier examples of timber-lined containers for cremations at the site which may have been cited and recalled in the production of the earliest stone cists). The stone cist was a very different attempt to 'contain' human remains when considered in relation to earlier deposits buried within pits and scoops, and may be interpreted as a residue of a change in belief about how bodies needed to be treated and perhaps about the nature of the body itself. The cist appears, at least, to emerge in tandem with inhumation, and indeed we readily associate it with the containment of Beaker inhumations in Britain. If we consider the treatment and handling of cremated remains at this time, then we should expect the kinds of containers that are being used for inhumations to have influenced the way that cremated remains were handled and deposited in the ground. Rather than just focusing on the

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action of human agents, we can consider how the cist, as a thing, effects relations between various other components within the assemblage that is how cremated remains were handled. Initially (Early Bronze Age I in Fig. 3) it appears some cremated remains were still deposited in ways that echoed earlier treatments in pits and timber-lined cists, whilst others (the contents of Cist II, for example) were given equivalent treatment to an inhumation. As the practice of inhumation fades away (Early Bronze Age II in Fig. 3), the influence of the practice of building cists to contain the deceased can be noted in the continuation of the use of cists in a miniaturized form: no longer required to contain a full body, the size of the container appears to have shrunk (cf. Sørensen & Rebay 2008, on the blurring and co-development of inhumation and cremation traditions in Central Europe).

Burial practices throughout this period were far from static and are perhaps best characterized by variety—variety in the treatment of bodies, the inclusion of vessels, the nature of the container that held remains and beliefs about death and the body. In this paper I have focused on cremated remains at two very different scales, from a single deposit to the assemblage of all the cremated remains at Killeaba and, more specifically, how they were treated and handled. As the assemblages surrounding cremated remains changed, so did the way they were treated and handled; whilst cremated remains appear to have been created and deposited at every stage during the history of Killeaba, they were treated (and understood) in changing ways. This case study demonstrates the utility of an assemblage-based approach to change—it shows that change is not just located within singular transitional moments (such as the start of the Bronze Age), but is constant and on-going. Change has emerged at a variety of scales from the atoms within one cremation to an archaeological site over a period in excess of 1000 years. This has not been a history of shifting human agency, but rather a mapping of changing confederations of materials, including, but not limited to, people. Cause and effect have bled into one another and a nuanced and complex narrative has emerged.

Why are assemblages good to think about prehistoric change with?

Assemblage-based thinking, with an emphasis on vibrant matter, offers us a good way of thinking about change in prehistory. It asks us to acknowledge that change is always happening at many differing tempos and at different magnitudes, and we must accept that we cannot locate change at specific moments. It means we cannot fall into the trap of thinking that change only occurred at the start and end of periods whilst allowing us the space to think about how what appear to be moments of larger change emerged. Thinking in an assemblage-based way means that change emerges from within: it is not the result of some external factor that impacts at any one time or location; rather, it asks us how different components and assemblages might alter various relationships. It drives us away from a focus on the 'origin' of a practice and instead asks us to map nuanced changes through ever-shifting assemblages.

Assemblage-based thinking allows us to bring diverse components into our analyses, something that archaeology certainly provides; it allows space for human bones, pots, pollen records, radiocarbon dates, use-wear analyses and post-holes all to have roles in the narratives we can write, and allows space for evidence at every scale from the micro-wear on a flint blade to an analysis of every Beaker vessel across Europe. In this kind of approach, change is not just located in the will and agency of humans, but in diverse confederations of humans and non-humans. Such thinking allows space for ideas, beliefs and gods to play a role alongside animals, bodies and things. Assemblage theory also effectively allows for the locality and variety we see in archaeological evidence and offers us an excellent means to deal with the differing scales of analyses that archaeological evidence creates.

Conclusion

In this paper a Deleuzian-inspired assemblage-based approach has been explored as a means of mapping change in prehistory. Assemblages are understood as diverse and temporary groupings of heterogeneous components which are always in motion. I have argued that this approach means that we cannot locate change in single places at single times, nor can we expect to locate change at the beginning and end of periods. By focusing on shifting assemblages of vibrant matter, we come to disrupt the traditional notion of a Late Neolithic and Bronze Age held in stark contrast. This does not deny that there were significant changes at this time; instead, it asks us not to *black box* evidence and seek to contrast and dichotomize change; rather, we should delve within assemblages and map complex flows of emergent causality. The nature of archaeological evidence means that pinning down a single cause or protagonist for any given sequence of events or changes is impossible. This is not a failing of archaeological

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evidence; rather, it reflects reality where singular protagonists never act alone. We cannot seek a single (human) cause, such as 'the rise of the individual' or 'emergence of social hierarchy', for the changes we observe in the archaeological record; rather, we need to consider the roles played by a variety of more democratic components, including changing materials, beliefs, communities and things, all of which will play a role in bringing about change.

When we consider the emerging chronology for the Early Bronze Age, where the currency of Beakers, Food Vessels, Vase Urns, Cordoned, Collared and Encrusted Urns all overlap with at least one other style (see Brindley 2006; Needham 1996; 2005; Sheridan 2004; 2007), where cremations and inhumations appear interchangeable with each other at certain times (Brindley 2006, 3), and where a variety of options for the deposition of grave goods appears to have been practised, the notion of a simple sequence where there is clear replacement between one practice and the next becomes ever less likely. This is a case of theory and data meeting neatly. Whilst there are notable and significant changes between the Late Neolithic and the Bronze Age, it is not a case of wholesale replacement, but rather one of 'rendition through continuity' (Robb & Harris 2013, 225), where relations between existing components change and thereby the properties of the components change. New components emerge in assemblages (metalwork and Food Vessels, for example), but they are understood in light of other older components and have to fit within (and change) existing relations between different components. We can map, in ever more detailed and nuanced ways, changing practices in assemblages at every scale; rather than seeking a singular explanation for changes in burial practice, instead assemblage-based theory encourages us to look closer, to delve within assemblages at many scales and map change more accurately than before. One could argue that such an approach fails to address the 'causes' of change; I would argue instead, following Bennett (2010, 33), that we trace emergent causality where cause and effect cannot be separated as they flow seamlessly into one another. Focusing on relations and probing within vibrant assemblages allows us to reveal more nuanced histories of change.

Notes

1. Whilst Piggott's other 'secondary Neolithic cultures' have since been questioned and dismantled (see Thomas 1996), the 'Ronaldsway Culture' appears to have remained intact.
2. For an analysis of the differences and similarities of these approaches, see Fowler (2013a, 43–9).
3. For a history of the use of the term in archaeology, see Joyce and Pollard (2010).
4. There is a contrast here between DeLanda's (2006) presentation of scale in assemblage theory in *A New Philosophy of Society* and the discussions of scale in Deleuze and Guattari (2014); DeLanda's different scales of analysis appear to grow larger and stack within each other, working from people and their networks up to organizations and governments and later cities and nations. By contrast, Deleuze and Guattari shuttle between different scales in a messier way; their scales fold into one another.
5. And as Latour (1999, 156) has shown us, no 'fact' or 'property' is the same always and everywhere.
6. I described this process as 'tracing change' in an earlier version of this paper. One of the peer reviewers pointed out the distinction in Deleuze and Guattari's thinking in *A Thousand Plateaus* (2014, 12–15) between tracing and mapping: mapping is described as an active and performative process which creates connections, has multiple entrance points and occurs '…in contact with the real' (Deleuze & Guatttari 2014, 12). Tracing is placed in contrast (though not a dualistic opposition) to this. Research is always active, performative, creates connections and allows new understandings to emerge (cf. Fowler 2013a; Lucas 2012). The message is clear: 'Make a map, not a tracing' (Deleuze & Guattari 2014, 12), and researching changing assemblages is, in their terms, a form of mapping, not tracing. This point deserves further discussion than space will allow here, but will be explored as part of a forthcoming book (Crellin in prep. a); I thank the reviewer for this excellent observation.
7. Although this is disputed by Darvill, who identifies a mini-henge, henge and ring-ditch at Billown: see, for example, Darvill (1997; 1999; 2000).
8. The issue of our poor control of the term contemporaneity and the various ways we might understand overlapping forms of change has been addressed recently by Gavin Lucas (2015).
9. Such a concept also avoids creating progressive, developmental and teleological narratives—this is discussed at length in Crellin (in prep. a).
10. See Crellin (2014; 2015), for re-dating and a review of the burial evidence from the Ronaldsway Late Neolithic.

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