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Extraordinariness is a useful concept for everyday life and for academic research, frequently invoked within archaeology. In this contribution I explore how this term might be defined and whether it is appropriate for a large early Neolithic structure excavated at the site of WF16 in the southern Levant, dating to c. 11,200 BP. I draw on research regarding categorisation, concepts and their relationships to words, to suggest that Structure O75 can usefully be considered as 'extraordinary' because it does not comfortably fit into a category of finds currently used by Neolithic archaeologists. To do so, a brief review of the history of Neolithic research is required because that has shaped the categories that archaeologists bring to the archaeological record and hence what might be viewed as either ordinary or extraordinary discoveries. I conclude that extraordinary objects such as Structure O75 are likely to have played an active role in the conceptual and linguistic developments that was associated with the transition from mobile hunting and gathering to sedentary farming communities.

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Introduction

Archaeologists make frequent use of the word 'extraordinary', sometimes when truly astonished by the unexpected nature of their discoveries, and sometimes when promoting their finds to others. The term is often used casually, and risks being devalued. As such, it is useful to consider how it might be defined and what implicit thought processes might be going through archaeologists' minds when the term is invoked. My case study for doing so concerns a large structure from an early Neolithic settlement in southern Jordan, Structure O75 from the site of WF16. I ask whether this should be considered extraordinary by archaeologists and whether it might have also been thought in those terms by the Neolithic communities of the southern Levant.

My definition is that 'extraordinary' objects are those which challenge the mental categories we possess about the world, otherwise known as our concepts. Categorisation is one of the most basic functions of all living creatures and central to all human activity (Mervis and Rosch, 1981; Lakoff, 1987). We continuously place the objects and events we perceive into mental categories and on that basis decide how to think and act in the world—without categorisation there would be mental and behavioural chaos. The terms 'category' and 'concept' are often used interchangeably, but formally category refers to a set of objects in the world, while the mental representation of that set

is referred to as a concept (Marceschal et al., 2010). Sometimes we are confronted with objects or events that do comfortably not fit into any existing concept. For that reason, these are deemed 'extraordinary'. That was my response to a Neolithic structure excavated in 2008–10 at the site of WF16 in southern Jordan, dating to c. 11,200 BP and referred to as Structure O75 (Fig. 1; Mithen et al., 2011; Mithen et al., 2018). This example is selected to explore the definition of extraordinary, its role in archaeological research and the process of culture change during prehistory. Prior to presenting that case study, I will draw on Mervis and Rosch (1981) and Lakoff (1987) to elaborate on issues relating to categories and concepts and their relationship to language and thought, proposing that the 'extraordinary' is a driver for cognitive and cultural change. There is, of course, an enormous literature and much academic debate about categories and concepts, the consideration of which is beyond the scope of this article.

Categorisation and concepts. Categorisation is primarily undertaken automatically and unconsciously. Our categories and resulting mental concepts are hierarchical, as in mammal, dog, and terrier. They tend to have prototypes, which are the most typical examples for a category, such as a robin for the category of
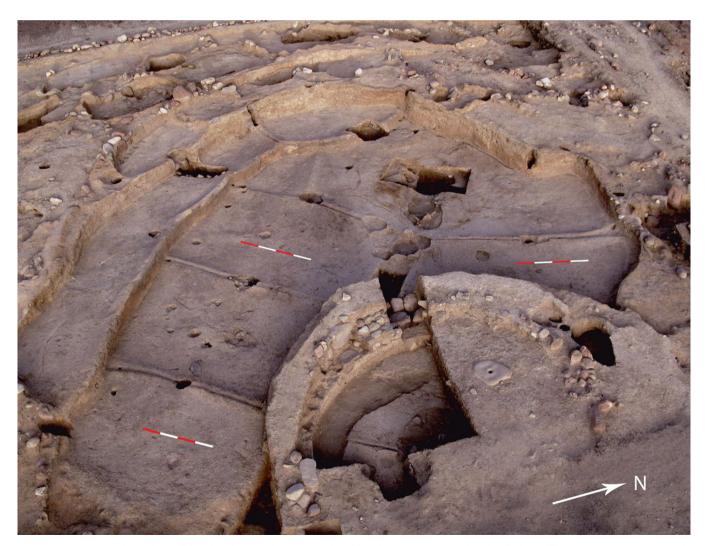

Fig. 1 Structure O75 at the early Neolithic site of WF16, showing two tier of benches, a central trough and radiating gullies. The circular structure in the foreground is a later building, Structure O100.

bird. Our concept of dog is typically formulated around a protype of a hairy animal with four legs, a tail and which barks, even though individual members of that category might lack one or more of these features. Categories often have fuzzy boundaries: is a tomato a type of vegetable or fruit? Concepts can be abstract ideas with its members being quite different in form. The concept of 'kindness', for instance, would include a diverse range of actions that have no physical resemblance to each other but share characteristics of providing support, generosity and friendliness.

Categorisation can also be a conscious process: when seeing an object in the sky we can ask whether is it a bird or a plane? Conscious categorisation is central to the process of archaeology: excavated finds are typically placed into categories of 'ceramics', 'tools', 'bones' and so forth, and those categories are further divided by specialists, such as tools into points, scrapers and blades, and bones into those coming from mammals, birds, fish and so forth. Overlapping categories arise: an awl made from a gazelle tibia is a member of both the mammal bone and pointed tool categories. Without such categories, the analysis of finds would be chaotic.

On rare occasions, archaeologists excavate objects that do not fit comfortably into any existing concept, requiring category boundaries to be redefined or a new category to be introduced. Such discoveries have led to some of the greatest debates within archaeology and generated progress in our understanding about the past. When fossils representing a peculiarly shaped human skull were discovered in the Neander Valley in Germany in 1856, a long debate was sparked as to whether those fossils should be categorised as *Homo sapiens* or a different species. This debate has continued to run and been frequently invigorated by new fossils finds. It has transformed our concept about 'being human' in the sense that we now recognise multiple members of the genus *Homo* who thought and behaved in different ways. In these regard extraordinary objects can be considered as active in the process of conceptual change.

Within Neolithic archaeology, the discovery of Göbekli Tepe in 1994 required a change in the concept of Neolithic sites in the Levant and SW Asia more generally. This hill-top site in southern Turkey has multiple enclosures with huge stone monoliths decorated with engravings of wild animals (Schmidt, 2010; Dietrich et al., 2012). The extent to which this was also a domestic settlement remains unclear (Banning, 2011), with food remains, suggesting preparation for large gatherings rather than routine subsistence (Dietrich et al., 2019). The like of Göbekli Tepe had never been seen, or imagined, before, leading to a frequently cited phrase that 'this changes everything we know about the Neolithic'. Archaeologists still struggle with how to categorise Göbekli Tepe and lack suitable words to describe it, leaving our concept of the Neolithic in flux. A parallel case comes from northern Britain where the site of the Ness of Brodgar was discovered in 2002 in the Orkney Islands, having a scale and type of architecture that was previously unimaginable for Neolithic Britain (Card, 2018). Having now received extensive excavations, whether Göbekli Tepe and the Ness of Brodgar remain 'extraordinary' is a moot point. Many Neolithic archaeologists have adjusted their categories/concepts to encompass such sites, perhaps considering them to be merely 'remarkable' rather than extraordinary. Others, either less familiar with the Neolithic or with alternative site interpretations might still consider them 'extraordinary'.

The significance of words. When confronted with an extraordinary object, one that does not fit comfortably into a pre-existing mental category, we are forced to reconsider our concepts, which involve devising new terminology. This might even involve devising new words, there being a complex relationship between words and concepts, which is best described as having a 'constrained but flexible' mapping (Malt et al., 2010). New words can help establish a new concept with our minds, the word acting as a cognitive anchor and helping to spread the existence of this new knowledge into other minds by talking about it. The invention of the word 'dinosaur' by Richard Owen in 1842 enabled a set of heterogenous fossils discovered since the early 1800s to be placed together into a single new category. Such new words might be a novel combination of existing words, as with '*Homo neanderthalensis*', coined by William King in 1864 or 'Neolithic hill-top sanctuary' for Göbekli Tepe.

Words have a primary role in helping to formulate, communicate and to sustain mental categories. A consequence is that those who share a common language also share concepts and will tend to think and act in a similar manner. The alignment between words and concepts is not precise: two archaeologists might share the word for 'axe-head' but have different prototypes and boundaries for the category of objects to which it refers. Words can also be used to share and communicate concepts when no-one has a clear idea of what they might mean, with the word serving to mask that ambiguity, sometimes to the advantage of those in authority. For those in the UK the term 'Brexit' has played this role since 2016—everyone quickly learned and shared this new word and concept. It referred to a collection of actions and consequences relating to exiting the European Union, but no one had a clear understanding of what that collection involved. All that the Prime minister could state was that 'Brexit means Brexit'. The concept of the Trinity within Christianity is similar: this refers the unity of Father, Son, and Holy Spirit as three persons in one Godhead (*Encyclopaedia Britannica*). It is likely that no one really understands what that means, the 'mystery' being promoted as central to the concept.

The development of concepts and process of culture change. We are born with predispositions and intuitive understandings about the world and the types of entities within it. These structure our initial categorisations of items in the world, whether objects, people, events, or ideas (Hirschfeld and Gelman, 1994). Our personal experiences build upon this shared common foundation to influence the type of mental categories that develop, these remaining in constant flux throughout our lives. Social learning environments are paramount, with the words we hear playing a key role in forming the concepts we possess and hence the manner in which we perceive and think about the world (Edmiston and Lupyan, 2015). By sharing an inventory of words, members of a community learn and utilise a shared set of mental categories (Lupyan and Bergan, 2015).

The extent to which one person's unique set of concepts overlaps with that of another person depends on their social distance—I am more likely to share concepts with my family and the networks within which I operate (friends, academics and so forth) than with people who speak a different language and live in a different environment, social and economic circumstances. In general terms, we can characterise a 'culture' as a being group of people with shared concepts such that they think and act within the world in a similar manner, those concepts underlying the shared 'capabilities and habits' that Edward Tylor used to define as culture in 1871, and which resonates with more recent definitions (e.g., see Hofstede, 1994). This recognises that we are all part of multiple cultures to differing extents: we share different concepts with different groups of people—I can be considered as being a member of English, British and European culture, while also a culture of 'archaeologists' whose members are dispersed throughout the world, many of whom will hold concepts that are quite alien to me, speaking languages that I do not understand. As

such, what I may find to be extraordinary might be quite ordinary to someone from a different culture.

Anthropologists and archaeologists predominately study people from cultures who are socially distant and likely to have a different set of concepts to the one they use. This was highlighted in the classic article by Heider (1967) who noted the complete mismatch between the classification systems used for New Guinea axes by anthropologists/archaeologists and those used by the people who actually made and used such tools. Typologies based on shape and size and the archaeological distinction between axe and adze, were quite meaningless to how the tools were conceived and used. This distinction between categorisation systems has been characterised as that between the emic and etic perspectives, that of the insider and the outsider of a culture, with a recognition that both perspectives are valuable (Harris, 1976; Hayden, 1984). Prehistoric archaeologists lack access to the emic perspective of those who lived within sites they excavate and made the artefacts they find. The categories archaeologists use for tools, buildings, and types of waste might have no correspondence to the categories used by the people who conceived, made, used, and discarded such material. As such, an object that an archaeologist might consider to be extraordinary might have been quite ordinary to those in the past. And vice versa. In some cases, both the etic and emic perspective might have considered an object to be extraordinary, these deserving the title of the 'most extraordinary'.

How should we consider the Structure O75 from WF16? For whom today, if anyone, is this an extraordinary object? Was it extraordinary for the Neolithic inhabitants of WF16 and/or elsewhere in the southern Levant? If so, what impact did that have on the development of Neolithic culture?

The early Neolithic of the Levant. To consider the extraordinary or otherwise status of this structure, some archaeological background of the Neolithic in the Levant is required. The categories currently used by Neolithic archaeologists have been established by the history of their research. They do not, for instance, have a category for Neolithic wheeled vehicles, because no such object has ever been discovered.

The transition from mobile hunter-gatherer to sedentary farming communities occurred independently in several regions of the world during the early and mid-Holocene, between 11,650 and 5000 years ago. This laid the foundation for urban life and the earliest civilisations, and, some would argue, the process of wide scale environmental degradation that now threatens the survival of the planet and our species. Quite why people chose to make a fundamental change in their lifestyles has been a key question for archaeologists throughout the last century. The earliest occurrence of this was in the Levant, Iran and Iraq, where the process of Neolithization is recognised as being long-term and gradual, beginning with intensive harvesting of wild plants in the late Pleistocene soon after the LGM at 21,000 years ago and culminating at c. 10,000 years ago, with sedentary communities reliant on domesticated goat and barley (Goring-Morris and Belfer-Cohen, 2011).

The pre-pottery Neolithic A. Pulses of more rapid change occurred during this long-durée. Within the southern Levant, the region now covered by Syria, Lebanon, Israel, the OPT and Jordan, one such pulse is characterised as the Pre-Pottery Neolithic A (PPNA), occurring during the first millennium of the Holocene, c. 11,650–10,200 (Fig. 2). This was a period when hunter-gatherers engaged in the cultivation of wild plants in some cases, leading to storage (Kislev et al., 2006; Kuijt and Finlayson, 2009; Willcox and Stordeur, 2012). The appearance of more substantial architecture suggests reduced mobility and that sedentism may have preceded the emergence of fully domesticated plants and animals. Belfer-Cohen and Goring-Morris (2010) characterise the PPNA as a period of transition between a 'worldview' held by Epi-Palaeolithic hunter-gatherers and that held by Pre-Pottery Neolithic B (PPNB) farmers. From my perspective, a worldview is defined by the particular array of concepts held about the world and which influence how people think and act within it.

The PPNA was defined by Kenyon's discoveries at Jericho—a culture characterised by an absence of pottery and ground stone axes (both of which were defining features of the European Neolithic) with circular-based architecture, distinctive chipped stone artefacts known as El-Khiam points, cup-hole mortars, and shallow burials below the floors of structures. This was succeeded by the PPNB with rectangular architecture, new types of stone points, and evidence for domesticated plants and animals (Kuijt and Goring-Morris, 2002). Kenyon's excavations at PPNA Jericho discovered what remains an extraordinary building: a stone tower (Kenyon and Holland, 1981). The function of this remains elusive, but it was the first example of monumental architecture
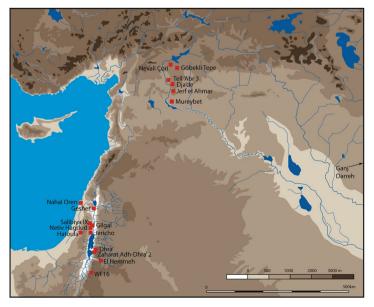

Fig. 2 Location of pre-pottery Neolithic A sites in the Levant.

discovered for the Neolithic. It remains a unique discovery, continuing to challenge our concepts about Neolithic capabilities and lifestyles.

Following Kenyon's discoveries at Jericho, knowledge about the PPNA accumulated slowly until the 1980s and 1990s when several sites underwent excavation, notably Nahal Oren, Hatoula, Netiv Hagdud, Sabaliya IX, GilgL and Gesher (Noy et al., 1973; Lechevalier and Ronen, 1994; Bar-Yosef and Gopher, 1997; Enoch-Shiloh and Bar-Yosef, 1997; Bar-Yosef et al., 2010; Garfinkel and Dag, 2006). These were clustered in the Mediterranean zone of the western side of the Jordan Valley and shared the distinctive PPNA characteristics that Kenyon identified at Jericho, and further served to shape the identity of that culture. Although plant and animal remains were poorly preserved, those recovered suggest a hunting and gathering economy, with some indications of cultivation. None of these sites had traces of monumental architecture, leading to a view that Jericho with its tower was at the apex of a settlement hierarchy. Considering the number of sites and the presence of Jericho, a not unreasonable supposition arose that the Mediterranean zone of the southern Levant was central to the development of the Neolithic (Kuijt and Goring-Morris, 2002).

That view became challenged during the 1990s as aceramic Neolithic sites of the equivalent time period with spectacular architecture and figurative imagery were discovered in northern Syria and southern Turkey, notably at Jerf el Ahmar, Göbekli Tepe, Dja'de, Nevali Çori and Tell 'Abr 3 (Stordeur et al., 1997; Schmidt, 2010; Coqueugniot, 1999; Yartah, 2004; Hauptmann, 1999). The results of earlier excavations in this region were also published, notably Mureybet (Ibáñez, 2008). Such discoveries revealed a new dimension to the earliest Neolithic. Other than the Jericho tower, there was no equivalent in the Mediterranean zone for the cultural complexity evident in the northern Levant. Particularly important discoveries at Jerf el Ahmar were large structures with internal benches implying communal gatherings and storage of grain (Willcox and Stordeur, 2012), while the extent of monumentality at Göbekli Tepe and the figurative imagery within the region were unprecedented. Perhaps not surprisingly, the spectacular early Neolithic archaeology of the northern Levant led some to designate this area as the 'Golden Triangle' of Upper Mesopotamia where the Neolithic arose (Aurenche and Kozlowski, 2001).

Although with far less dramatic finds, the PPNA archaeological record was also extended in the southern Levant on the eastern side of the Jordan Valley during the 1990s. The PPNA site of Dhra' underwent renewed excavation, revealing both a larger settlement and a more complex architectural history than had been anticipated (Finlayson et al., 2003). Three new PPNA sites were discovered on the eastern side of the Wadi Araba, south of the Dead Sea: WF16 (Finlayson and Mithen, 2007), Zaharat Adh-Dhra' 2 (ZAD 2, Edwards et al., 2002) and El Hemmeh (Makarewicz et al., 2006). These sites indicated that the PPNA had evolved over a wider region in the southern Levant that previously recognised, and indicated a more diverse architecture, notably the structure with a raised floor at 'Dhra interpreted as a granary (Kuijt and Finlayson, 2009) and dedicated mortuary structure at El-Hemmeh (Makarewicz and Rose, 2011).

Excavations at WF16, 2008–2010. Kuijt and Goring-Morris (2002, p. 371) suggested that PPNA sites in southern Jordan were 'smaller hamlets and seasonal camps', seeking to sustain the pre-eminence of the Mediterranean zone. That was not an unreasonable interpretation for WF16 as a seasonal camp based on the structures and finds excavated between 1997 and 2001 (Fig. 3; Finlayson and Mithen, 2007). It framed initial expectations at the start of the 2008–10 excavations at WF16: that the site would

Fig. 3 View of WF16 in Wadi Faynan, Southern Jordan, looking east towards the Jordanian plateau.

consist of a number of sub-circular structures between 3 and 7 m in diameter, with a small number of burials and occasional artefacts with incised geometric designs.

Those expectations were soon over-turned in light of the number, density and diversity of structures that were discovered, along with the quantities of incised stone, shell and stone beads, bone and stone tools, human burials and faunal remains that eclipsed those from the PPNA sites in the Mediterranean zone (Mithen et al., 2018). While this was partly a consequence of preservation and relatively deep stratigraphy, several objects are 'extraordinary' for the Neolithic of the region, including a pestle decorated with snakes and a finely polished, pointed stone baton. WF16 had evidently been far more than a mere seasonal camp on the fringes of Neolithic developments. This became further apparent when the animal fauna was catalogued and provided an exceptional number of bird bones dominated by those from buzzards. WF16 was also distinguished by its architecture.

O75, an extraordinary structure from WF16. Figure 4 provides the plan of the structures at WF16, numbering around 30 structures within the excavated area, although only a few have been explored and none have been completely excavated. They all have the same basic plan: a pit dug into the ground that was lined with pisé, which was also used to build low upstanding walls. Beyond that basic plan, they vary considerable in terms of size, internal structure, and likely function (Fig. 5). They match the range found throughout the southern Levant, although often with a better level of preservation. Structure O56 is relatively small, containing an anvil and set of artefacts that suggest it was specifically used for bead making; Structure O12 had an internal dividing wall and Structure O11, as with numerous others, had a mortar set into its floor. One structure, O45, is known in greater detail than others because it burned down, enabling us to reconstruct the superstructure (Fig. 6). It had a raised floor and contained an internal domed structure, both suggesting it had been used for storage. Although rather better preserved and perhaps more variable at WF16 than elsewhere, such semi-subterranean structures are typical for the PPNA, for sites both to the east and west of the Jordan Valley. They are all quite 'ordinary'.

Two structures are more notable. One is the only surviving structure from the final phase of the settlement, a free-standing circular building with stone and pisé walls, known as Structure O100 that was constructed within the space of Structure O75 after it had fallen into disuse (Fig. 1). This appears to be a precedent for the circular architecture of the earliest PPNB in the southern Levant, as found at Beidha (Byrd, 2005). The other is Structure O75 (Figs. 1 and 6).

Structure O75 was located at the northern end of the settlement (for a full description of its excavation and
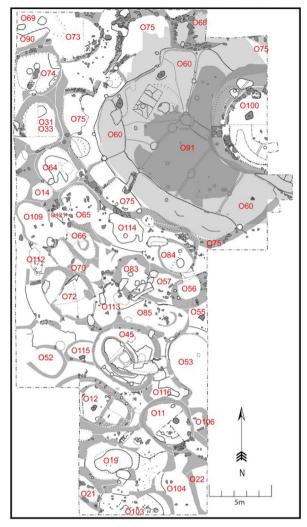
Fig. 4 Plan of excavated structures at WF16, with O75 located in the NW corner of the trench.

Fig. 5 Semi-subterranean structures at WF16. Those within the foreground include O12, with the dividing wall; O11, with a mud plaster floor; and O45, with an internal structure.

interpretation see Mithen et al., 2018). It is semi-subterranean, using pisé surfaces over a boulder/stone foundation. However, it is quite different from the other structures of this type: an impressive 20 m × 18 m in size, consisting of a mud plaster floor with multiple surfaces surrounded by a bench over 1 m deep and up to 0.5 m high, part of which has a second tier of similar dimensions, with a probable platform at the northwest apex of the structure (Fig. 7). These provide an amphitheatre-like form to the structure. The face of the lower bench on the southern side of the monument was decorated with a wave pattern. A later structure (O100) was constructed inside O75 once its original function had gone out of use.

O75 was bilaterally symmetrical around a vertically sided trough from which three pairs of radiating gullies formed a herring bone pattern (Fig. 8). Two cup-holed mortars were embedded into slightly raised platforms on the floor. A series of massive post-holes moulded into the surrounding wall, shallow post-holes in the centre of each gully and stake-holes in the floor suggest wooden posts, possibly supporting a superstructure. The best estimate for the date of its original construction 11,320–11,240 cal BP with activity resulting in the fill deposits of internal features lasting for up to 800 years.

Where fully excavated, the trough was lined with mud plaster c 0.75 m wide and 1.2 m deep. Some of its deposits had been water-laid, containing charcoal and shell that are interpreted as the

residues of material that had been washed into the trough from the floor of the structure, suggesting the trough may have acted as a drain. That may not have been its main purpose. The base of the trough was resurfaced on at least two occasions, while its southeast end extends beyond the outer wall of Structure O75. As such the trough could have feasibly provided access in and out of the structure, although how the trough itself was entered remains unclear.

The three pairs of parallel raised gullies—smooth ridges with a central channel—are moulded into the floor, running from the edge of the benches to the central trough in a regularly spaced pattern. Each raised gulley has a small pit at its midway point from which it appears a large post has been removed, leaving a ragged hole. Although the raised gullies initially appeared to have been designed to carry liquids, they bow down in the centre of their course, while mud plaster is not stable when damp. Two of them are simply smooth ridges in the plaster floor, while the channel in a third has been deliberately filled with plaster. The posts would also have blocked any flow of liquid. An alternative interpretation is that they served to divide the internal space of O75.

Structure O75 was subject to repairs and remodelling. The micro-stratigraphic analysis of the floor horizon indicated multiple plastering events interspersed with the accumulation of charcoal-rich silt. Evidence for substantial remodelling includes the alteration to the perimeter wall, the plastering over of the complex of features at the northwest of the trough, including a number of basins and post holes, the removal of posts from the raised gullies, and the plastering of the channel in some of the raised gullies. During the use-life of Structure O75, but perhaps after its formal shape had ceased to be maintained, a sequence of basins and hearths had been created in the centre of the structure, some of them formed by breaking up the mud-plaster of the main floor. This was sealed by silt and occupation deposits. A new mud-plaster floor was laid over these deposits, associated with the
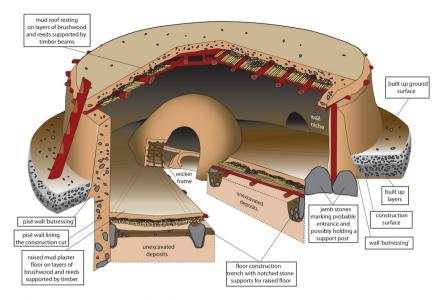
Fig. 6 Reconstruction drawing of structure O45 at WF16, by Darko Maričevič.

Fig. 7 Structure O75 during excavation in 2010, showing the two tiers of benches on its NW side.

building of Structure O100 within its interior. An organic-rich midden accumulated on the floor, containing faunal remains, shattered rock fragments, flints, and a wide range of artefacts.

Structure O75 is by far the largest structure found at WF16, representing a major building effort. The post-pipes and stake-holes suggest it had been partially or wholly roofed. This would have required a complex construction because its size could not have been spanned by single timbers. Figures 9 and 10 shows alternative scenarios for the roof based on the distribution and size of features and the load bearing capacity of the wall. It is difficult to resist the idea that it had involved significant cooperative effort to construct and was the focus for communal activity by the inhabitants of WF16, whether they were permanent or transient residents at the settlement.

The function of Structure O75 remains unclear. While the embedded cup-hole mortars might suggest communal plant processing activity, these could equally have been used for grinding pigments for decorating objects and bodies. The design of O75 makes it difficult to resist the idea that it has been used for performance of some manner—singing, dancing, ceremonial activities. Cut marks from the bird bones indicate some birds had their skins or wings removed, suggesting the making of elaborate costumes from the feathers of large birds of prey, including eagles

and vultures, as well as buzzards (White et al., in press). A high level of personal adornment is also implied by the quantities of stone and shell beads recovered.

Is Structure O75 extraordinary? And to whom? Structure O75 is certainly extraordinary for the settlement of WF16, being so different from all other of its excavated structures. Likewise, for the southern Levant, in the sense that there are no other known semi-subterranean structures of an equivalent size and design: it is a magnitude larger more complex than any other semi-subterranean Neolithic structure in the region, while only the quite different structure of the Jericho tower exceeds its scale. It does not fit comfortably into the categories for settlement structures that has arisen from the history of Neolithic research in the southern Levant. This does not necessarily mean that structures similar to O75 do not exist, they simply might not have been discovered. If, and when, they are, O75 at WF16 will no longer be extraordinary, just as dinosaur bones and Neanderthal fossils stopped being extraordinary as their discoveries accumulated.

When considered within the wider region to include the northern Levant and in the context of Neolithic architecture in general, however, Structure O75 might appear less extraordinary than it current does in the southern Levant alone. For this wider region, it may help to define one or more new categories of Neolithic structures, arising from a sub-division of 'settlement structure'. One such category contains those structures that appear to reflect community-based activities: the granary at 'Dhra, mortuary structure at El-Hemmeh and large structures with internal benches at Jerf el Ahmar (Kuijt and Finlayson, 2009; Makarewicz and Rose, 2011; Stordeur, 2015). Although these are all quite different in form and function from each other, they relate to a level of activity at the community rather than household level within Neolithic settlements—there is no physical prototype because this concept relates to communal activity of any kind. Moreover, the term 'communal structures' is unsatisfactory—rather like the word Brexit it hides more than it reveals, showing how we are 'lost for words' in our current system of categorising and conceptualising this type of Neolithic structure. Structure O75 is not, however, an entirely comfortable fit these structures because of its scale: its floor area is six times larger than that of the largest structure at Jerf el Ahmar.

Does Structure O75 fit more comfortably with the Jericho tower and enclosures at Göbekli Tepe, despite it being smaller in scale
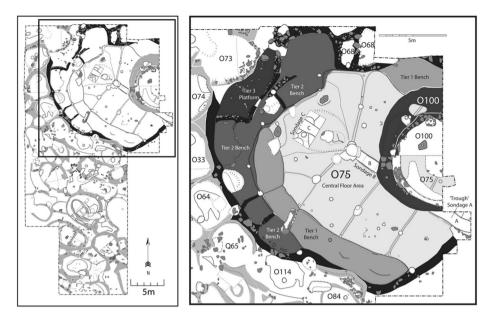
Fig. 8 Plan of Structure O75 at WF16. The two tiers of benches along the south and west sides of O75, also showing the shallow pits located at the middle of the raised gullies.
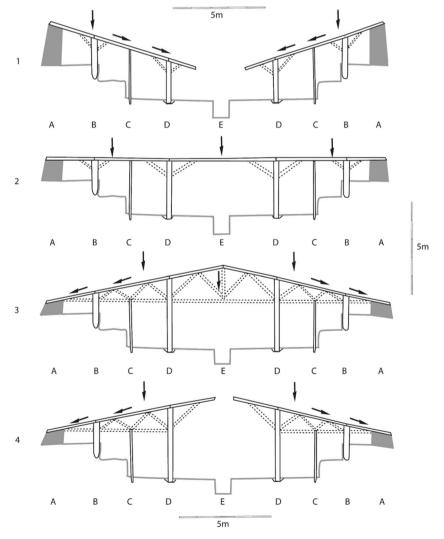

Fig. 9 Four scenarios for roof construction of Structure O75. The letters refer to arcs of stake- and post holes within the structure (see Mithen et al., 2018, figure 43.10) and the arrows mark the predominant direction of stress.
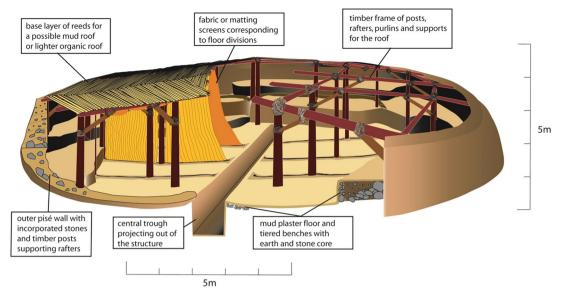
Fig. 10 Reconstruction drawing of Structure O75 at WF16, by Darko Maričevič.

than both? All three might be legitimately described as monumental rather than mere communal structures, with the design for both the enclosures at Göbekli Tepe and Structure O75, suggesting a role for performance with their central areas. While all three are quite different in form, they all imply large scale cooperative efforts in their construction, communal level activities in their use, and aggregations of people from a wider region rather than the settlement itself. In 2010, prior to the discovery of Structure O75, Belfer-Cohen and Goring-Morris (2010) had noted the possible emergence of central ritual localities in the PPNA, citing Göbekli Tepe and the Jericho Tower. These may have catered, they argued, to the continuing need of PPNA communities for wide-spread connections with other groups to mitigate the vagaries of food procurement prior to the emergence of farming. With O75 representing a third such structure, they argument is supported but still leaves these structures poorly defined—'ritual centres', 'communal buildings, 'monumental architecture'? Archaeologists are still struggling to define their categorical boundaries and are lost for suitable words and phrases.

This brief discussion illustrates how the notion of extraordinary varies with context: WF16 is extraordinary for WF16 but might be considered ordinary for the Neolithic of the Levant, although it does not have a close fit with either the 'communal' or 'monumental' structures. At the present time, all categories of early Neolithic structure appear to have extremely fuzzy boundaries. I suspect that is a true picture of the archaeological record and past settlement rather than a product of poor preservation, partial recovery, or muddled thinking by archaeologists. It reflects how the PPNA was a pulse of rapid cultural change within the long durée of the Neolithic transition during which settlements showing much higher degrees of variability than is found in the preceding Epi-Palaeolithic and following Pre-Pottery Neolithic B, a time when there is substantial re-categorisation of the world and conceptual change underway (Belfer-Cohen and Goring-Morris, 2010).

Just as the Jericho tower, Göbekli Tepe enclosures and Structure O75 challenge our mental categories for Neolithic structures, they are likely to have also challenged those for the Neolithic people of the early PPNA. Assuming that these structures were as rare as they currently appear in the archaeological record, and If they had acted as centres for aggregations of people coming from extensive geographical areas, those people are likely to have been astonished

at the monumental architecture, and for Göbekli Tepe the associated artwork. Indeed, they too would have been 'lost for words', not having a mental category into which to place such buildings. Similarly, when encountering the first domesticated goats, or seed grain that required to be sown by hand, that would have challenged existing concepts of animals and plants and their relationships with people. It seems likely, therefore, that the PPNA period was one in which people frequently encountered the extraordinary, had to continually revise their concepts about the world, and invent new words to mentally sustain and transmit those concepts to others (Mithen, 2018). As such, these objects are active participants in the process of cognitive and linguistic change. When considered within the long durée of the transition from mobile hunting and gathering to sedentary farming communities, the PPNA was an extraordinary period, and is providing archaeologists with extraordinary discoveries.

Conclusion
'Extraordinary' is a word frequently used in everyday speech and by academics of all disciplines. It is used by archaeologists either when genuinely astonished by what they have found, or more frequently by others, notably in the media, who wish to promote archaeological finds to the public. It is a term that deserves to be used cautiously to avoid becoming devalued, and one that requires exploring to appreciate when and why it appears appropriate to use.

I have suggested we can do this by drawing on ideas regarding concepts and categories, proposing that we feel something is extraordinary when it does not fit comfortably into one of the categories we possess, these frequently loosely defined by the words we use. Such categories are defined by our prior experience of the world. The history of Neolithic archaeology in the Levant had not led us to expect to find a structure of the size and character of O75 in Southern Jordan. It is extraordinary for the settlement of WF16 where all other semi-subterranean mud-plaster structures are much smaller in size and lack it complex internal features, as they are throughout the southern Levant. Although sharing many properties of construction, O75 does not sit comfortably in the category of domestic structures. If we were to focus not on its architecture but on its scale and likely function, O75 might be grouped with the enclosures at Göbekli

Tepe and tower at Jericho, these forming a new category of 'central ritual locations', as defined by Belfer-Cohen and Goring-Morris (2010). Although we must always be aware that such structures were more frequent in the past than the archaeological record currently implies, if these were as rare and geographically dispersed as these three examples imply, then we should expect such structures would have also been extra-ordinary for the Neolithic people who periodically gathered at them to undertake their ritual activity.

Data availability

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Competing interests

The author declares no competing interests.

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