

*The flow of ideas: shared symbolism
between WF16 in the south and Göbekli
Tepe in the north during Neolithic
emergence in south-west Asia*

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INTRODUCTION

The transition from hunter-gatherer to farming lifestyles involved changes in all aspects of human lifeways: how food was acquired, technology, patterns of mobility, settlement size and architecture; demography and social relations; ideas of ownership, property, and ideology. With such all-encompassing change, a gradual emergence of farming is more likely than a short-term Neolithic revolution within each centre of origin. Similarly, the transition is likely to have been a spatially diffuse process: plant cultivation, animal herding, sedentism, and so forth, developing independently in different localities. New ideas, tools, cultivated seed and other items would have flowed through spatially extensive social networks, coalescing in favourable environmental and cultural circumstances to create a diversity of farming lifestyles. We provide further evidence for the social networks that underpinned the emergence of farming in SW Asia by describing previously unrecognised symbolic connections between the northern and southern Levant.

GÖBEKLI TEPE AND WF16 AS NODES WITHIN A SOCIAL NETWORK

Steps towards farming in SW Asia involved the exploitation of wild cereals by Late Pleistocene hunter-gatherers (Weiss *et al.* 2004; Snir *et al.* 2015), their cultivation during the 10th- 9th millennium BC by Pre-Pottery Neolithic A (PPNA) communities in the Middle Euphrates and southern Levant (e.g., Wilcox & Stordeur 2012; Colledge *et al.* 2018; Weide *et al.* 2022), and the exploitation of legumes, fruits, and nuts in eastern regions, today's Iran and Iraq (Asouti & Fuller 2013). The first steps towards the domestication of goats are known from the 9th millennium BC of the Zagros Mountains (Zeder & Hesse 2000), but, as with cereals and legumes, there were likely multiple loci and different pathways towards domestication (Stiner *et al.* 2022). These and other constitutive elements merged to create sedentary communities

increasingly reliant on domesticated plants and animals, the Pre-Pottery Neolithic B 'farming villages', first appearing in the Euphrates Valley c. 9200 BC, and then rapidly spreading throughout SW Asia (Edwards 2016). How plant cultivation and animal herding articulated with changes in climate, population, sedentism, social relations, ideology, notions of property, and cognition, have been long debated (e.g., Childe 1928; Cohen 1977; Bender 1978; Bar-Yosef & Belfer-Cohen 1989; Cauvin 1994, 2000; Bar-Yosef & Meadows 1995; Hayden 1995; Mithen 1997; Powers & Lehmann 2014; Feynman & Ruzmaikin 2018; Bowles & Choi 2019).

The 1994 discovery and excavation of Göbekli Tepe in Upper Mesopotamia (southern Turkey) has influenced this debate in two key ways. With its impressive PPNA art and architecture, dated to between c. 9800-8300 BC (Dietrich *et al.* 2013), it placed emphasis on ideological change occurring within hunter-gatherer communities (Schmidt 2012), supporting Cauvin's (1994, 2000) view that developments in cognition and symbolism had priority over economic change during the transition to farming. Second, Göbekli Tepe shifted attention away from the southern to the northern Levant, that region also having the wild ancestors of wheat and barley; it has been termed 'the cradle of agriculture' (Lev-Yadun *et al.* 2000). Ideology and domestication may have been related: Mithen (2003: 167) suggested the intensive harvesting of wild cereals to feed large gatherings of people at Göbekli Tepe may have caused the emergence of domesticated strains as 'an accidental by-product of the ideology that drove hunter-gatherers to carve and erect massive pillars of stone', a view now supported by the evidence for feasting (Dietrich *et al.* 2012) and a 'massive presence of cereals' at the site (L. Dietrich *et al.* 2019).

Göbekli Tepe is likely to have been a gathering place for hunter-gatherers coming from dispersed residential groups. Seasonal aggregations are a core element of the hierarchical social networks that characterise hunter-gatherers: individuals; families, residential groups, seasonal and periodic gatherings, and regional populations (Hamilton *et al.* 2007; Bird *et al.* 2019). Such networks serve multiple functions: to maintain food security (Whallon 2006; Belfer-Cohen & Goring Morris 2010); to resolve social tensions and mitigate conflict (Johnson 1982; Clare *et al.* 2019); to facilitate cooperation (Apicella *et al.* 2012); to achieve reproductive success (Page *et al.* 2017) and maintain population viability (Wobst 1974). The flows of ideas, material culture and people enable dispersed communities to undergo similar trajectories of change while maintaining local identities.

Ethnographic accounts for the spatial scale of such social networks (e.g., Bird *et al.* 2019) suggests those of the Late Epipalaeolithic (c. 13,000-10,000 BC) and PPNA (c. 10,000-8200 BC) would have connected people throughout SW Asia, c. 1200km from north to south and c. 800km east to west. In addition to Göbekli Tepe, gathering places – nodes within the social networks – are likely represented by sites with particularly large structures, such as Karahan Tepe, Hallan Çemi and Jerf el Ahmar in the north, and Wadi Hammeh 27, Mallaha and Jericho in the south (Kenyon & Holland 1981; Rosenberg & Redding 2002; Stordeur & Abbès 2002; Çelik 2011; Edwards 2013; Finlayson & Makarewicz 2018).

With its large amphitheatre-like building (Structure O75), WF16 is a further candidate for a seasonal or periodic gathering place in the southern Levant (Figure 2). The site dates to between c. 9800–8200 BC with a focus of activity between 9400–9100 BC (Mithen *et al.* 2018). The WF16 bird bones are heavily dominated by raptors (White *et al.* 2021). Their analysis suggests the capture of buzzards during their spring/autumn had provided an occasion for seasonal gatherings: it is likely that performance, ceremony, and ritual occurred within the amphitheatre-like structure, using costume and body decoration made from bird skins, feathers, and talons (Mithen *et al.* 2022; Mithen 2022).

THE FLOW OF TECHNOLOGY AND MATERIALS

El-Khiam points, the type-artefact of the PPNA, provide the most striking evidence for the flow of material items and/or the ideas behind them through the SW Asian social network. These are found from Jebel Qattar in the far south to Göbekli Tepe in the north, and Hatoula in the west to M'lefaat in the east (Kozłowski & Aurenche 2005; Crassard *et al.* 2013). Geographic variation in the techniques used to make typologically similar points (Crassard *et al.* 2013) indicate the local expression of a generic idea. Similarly, while the production of large, regular blades becomes widespread during the final PPNA, the naviform knapping methods developed in the Middle Euphrates are distinct from simpler opposed platform techniques of the southern Levant (Smith *et al.* 2019). New finds constantly disrupt our understanding of chronology and direction of movement: the Helwan point had been identified as a marker of north to south flows (Edwards 2016) but has now been found as early in the south as the north (Fujii *et al.* 2019).

The distribution of obsidian also indicates north to south connections during the Epipalaeolithic and PPNA. With its major sources in Anatolia, obsidian has been found as cores, flakes and blades at the Natufian site of Mallaha (Khalaily & Valla 2013) and several PPNA sites in the southern Levant including Jericho, Netiv Hagdud and Iraq-el Dubb (Ibáñez *et al.* 2016). The low number of obsidian artefacts compared to later periods, and the fact that it was knapped like flint, suggests the formal exchange networks of the PPNB had yet to be established. Prior to these, obsidian likely passed through the existing social networks of material, technological and information exchange.

WF16 has been proposed as a hub for the exchange of obsidian, malachite, bitumen and marine shell (Goring-Morris & Belfer-Cohen 2011). Although the evidence for obsidian is scarce, worked copper ore and other greenstone at WF16 suggests a source for the greenstone beads found at numerous Neolithic sites in the southern Levant (Kuijt & Goring-Morris 2002). Near-identical doubled-holed greenstone pendants have been found at WF16 and Late Natufian sites in the Jordan Valley (Grosman *et al.* 2016: fig. 15.6; Mithen *et al.* 2018: fig. 35.16g).

More than 400 marine shell beads have been recovered from WF16, comprising a mixture of species from both Red Sea and Mediterranean sources (Cerón-Carrasco 2007; Mithen *et al.* 2018). Similar transfers of marine shells from multiple distant sources are evident from Epipalaeolithic sites in the Azraq Basin (Richter *et al.* 2011) and central Anatolia (Baysal 2019).

THE FLOW OF SYMBOLISM AND IDEOLOGY

The flow of symbolism and ideology has appeared more geographically constrained than that of material items and technology. While Epipalaeolithic and PPNA north-south connections are evident from mortuary practices, notably skull removal (Baird *et al.* 2013; Bocquentin *et al.* 2016), visual symbolism has seemed quite different. Benz & Bauer (2015) suggest there were 'common ideological concepts ... across northern Mesopotamia in the early Holocene' based on similarities in zoomorphic art and monumental architecture, epitomised by that of Göbekli Tepe, but were unable to extend that ideology to the southern Levant. PPNA art works are relatively scarce in that region, with zoomorphic imagery having been absent, or at best highly ambiguous. New finds from WF16 changes this situation. Although limited in number, they

provide evidence for some aspects of shared symbolism between the south and north – although this does not necessarily translate into a shared ideology.

Benches, geometric designs and a monolith

The amphitheatre-like structure at WF16 (Figure 2d) has internal benches, as found within the enclosures at Göbekli Tepe and in communal building EA53 at Jerf el Ahmar which is dated to a PPNA/PPNB transition phase of 9000-8495 BC (Stordeur & Abbès 2002). There is a striking similarity between the geometric designs on bench faces at WF16 and that on EA53. The wet mud plaster at WF16 had been grooved to make a zig-zag design, comparable to that moulded into the mud plaster at Jerf el Ahmar (Figure 3a). The design also appears on decorated slabs at Tell 'Abr 3 that had likewise formed the face of a bench in Building B2 (c. 9300-8800 BC, Yartah 2004; 2013: figs 9 & 10).

Shaham & Grosman (2019) have previously noted similarities in the geometric designs incised on stone from Late Epipaleolithic Nahal Ein Gev II (c. 10,700-10,000 BC, Grosman et al. 2016) and WF16 in the south and from Tell 'Abr 3 in the north. We are cautious about drawing conclusions in the absence of a formal statistical study but note that WF16 has a greater abundance of cross-hatched, wavy, zigzag and parallel lines than found elsewhere in the Natufian and PPNA of the southern Levant, such as at Netiv Hagdud, ZAD2 and Nahal Ein Gev (Bar-Yosef & Gopher 1997; Edwards 2007; Grosman *et al.* 2016). Such designs are ubiquitous in the north, with those from Tell Qaramel (Mazurowski 2003), Tell 'Abr 3 (Yartah 2004), Göbekli Tepe (Dietrich 2021) and Hallan Çemi (Rosenberg 2011a), amongst other sites, having similarities to those on stone vessels, stone plaques, and shaft straighteners from WF16 (Mithen *et al.* 2018: fig. 35.19; Figure 4).

On a further architectural parallel, we note a stone monolith had been erected at WF16 (Figure 3b). Although diminutive in size compared to those at Göbekli Tepe and Karahan Tepe, its sits within a niche of a stone walled building and is the only PPNA example we know of in the southern Levant (Finlayson & Mithen 2007).

Snakes and raptors

Snakes provide a pervasive theme in the imagery from the northern Levant and Upper Tigris Basin (Peters & Schmidt 2004; Zimmermann 2019). They are depicted on stone plaques, shaft-straighteners, monoliths, and stone vessels; they are incised, carved in bas-relief and occasionally sculpted in the round, with varying degrees of realism and abstraction (e.g., Figure 5a-d). While open to numerous interpretations, including links to phallocentrism (Hodder & Meskell 2011: 239), shamanism (Benz & Bauer 2015) and evolved phobias (Zimmermann 2019), snakes are recognised as central to early Neolithic ideology from north-western Syria to south-eastern Anatolia.

Figure 5f illustrates a cylindrical stone from WF16 with bas-relief carvings interpreted as snakes. It is more heavily worn than other ground stone artefacts from WF16, which suggests either greater antiquity or extent of handling. If the latter, this might indicate a history of exchange through the social network and/or extensive use in ritual activity. Four tapering wavy lines, one with a forked ending, carved in bas-relief and spaced evenly around the stone are interpreted as snakes (Mithen *et al.* 2018: fig. 35.30). A small baked-mud zoomorphic model from WF16 also resembles a snake's head, Figure 5e, comparable to the proposed small head of a snake carved in soft limestone from Tell Qaramel, Figure 5d.

The interest in raptors at WF16 is echoed in the north, with depictions at Göbekli Tepe, Jerf el Ahmar and Tell 'Abr 3 (Stordeur & Abbès 2002; Yartah 2004; Peters *et al.* 2005). They have been proposed as a symbol of death and as part of a shamanistic ideology (Hodder & Meskell 2011; Benz & Bauer 2015). Raptor bones at Zawi Chemi Shanidar, Jerf el Ahmar and Hallan Çemi, suggest that wings, feathers, and talons were used in costumes during ritual and performance (Solecki 1977; Gourichon 2002; Zeder & Spitzer 2016), as also inferred at WF16 (Mithen *et al.* 2022).

A 'half-skeletonised' animal and a gazelle (?)

'Halb skelettierten' is the term used by Schmidt (2013) to describe a group of animal and human sculptures from Göbekli Tepe that have prominent ribs (Figure 6a). Precisely what types of animals these depict and whether they represent de-fleshed, excarnated or emaciated creatures is unknown. They may imply death, a theme also expressed by the imagery of wild and dangerous animals in the northern Levant (Schmidt 1999; Hodder & Meskell 2011). Figure

6b illustrates a carved stone from WF16, also zoomorphic and with incised vertical lines suggesting exposed ribs. Although significantly smaller than the examples from Göbekli Tepe, the similarity is striking. Another impressive zoomorphic comparison is between the finely rendered head of a probable gazelle from Abu Hureyra, Figure 6c, and that from WF16, Figure 6d.

Stone faces

A small face carved in stone from WF16 has greater similarity to that from the contemporary site of Jerf el Ahmar in the Middle Euphrates Valley of the northern Levant than a face from the spatially closer but earlier Epipaleolithic (Natufian) site of Nahal Ein Gev II (Figure 7). Does this indicate a shared cultural tradition of making small stone faces by PPNA communities living more than 800km apart in south-west Asia? If so, would the small faces have been used in a similar manner and carried the same symbolic meaning? We note the differences: the Jerf el Ahmar face and others from the northern Levant have concave backs (Dietrich *et al.* 2018), while that from WF16 has a face on both sides (Mithen *et al.* 2018: fig. 35.22). This may represent a further example of the local expression of a generic idea

Phalli

Maleness and ‘phallogocentric’ art have been proposed as key themes in the symbolism of the northern Levant (Cauvin 2000; Hodder & Meskell 2011). Where gender is evident at Göbekli Tepe, male animal and human figures are most frequent, some having a prominent phallus (Figure 8a). Three ‘stand-alone’ phalli are known from Göbekli Tepe, one of which is 80cm in length (O. Dietrich *et al.* 2019; O. Dietrich *pers. comm.*). Pillars within an enclosure at Karahan Tepe have been interpreted as representing a ‘penis chamber’ (Thomas 2022) – although this has yet to be academically verified. WF16 has the only conclusive depictions of phalli from the PPNA in the southern Levant, with several realistic and schematic carvings, one of which is covered in red ochre (Figure 8b). Mithen *et al.* (2005) proposed that the process and equipment of food preparation – mortars and pestles – were embedded in a metaphor of sexual symbolism.

Batons

Figure 9a illustrates a highly polished, long and pointed stone artefact found on the floor of a semi-subterranean structure at WF16. It is made from a fine-grained, pale grey and white stone, the source of which is yet to be determined, and worked to form a fine point. Flake removals at its base suggest that it had been inserted into a haft. As far as we know, there are no comparable artefacts from the southern Levant. It has similarities to an artefact from Mureybet (Figure 9b), and to a so-called 'baton' from Gusir Höyük, which has two parallel incised lines (Figure 9c). Fragments of such batons are described from Hallan Çemi, these being made from soft stone, notched and cigar-shaped (Rosenberg 2011a).

The treatment of human bodies

Gresky *et al.* (2017: 1) described modified skull fragments from Göbekli Tepe that 'could indicate a new, previously undocumented variation of skull cult in the Early Neolithic of Anatolia and the Levant'. The fragments, coming from three individuals, had deep incisions along their sagittal crests (Figure 10a). In one case, there was a drilled perforation at the left parietal. A fragment of human skull with a drilled perforation was also recovered from WF16 (Figure 10b). Scattered cranial and mandible fragments from Structure O45 at WF16 suggest a skull had been displayed, becoming smashed when the roof of this structure collapsed (Mithen *et al.* 2018: 168-170, fig. 14.27).

A practice of 'painting' human bones was employed at sites in the Upper Tigris Basin. This is prominent at Körtik Tepe with 58% of its 407 skeletons having either red and/or black colouring forming diagonal bands, fine parallel lines, or dotted lines in a plaid pattern (Erdal 2015). Red and black bands were also found on human bones from Demirköy (Rosenberg 2011b) and Hasankeyf Höyük (Miyake *et al.* 2012). Erdal (2015) suggests the paint was transferred onto the bones from painted mats used to wrap the decomposing bodies.

Skeletal remains from both primary and secondary burials at WF16 have traces of black pigment, in one case forming parallel black bands on the rear of a skull, Figure 10c, also seen at Hasankeyf Höyük, Figure 10d. The WF16 bones often have residual or thick patches of gypsum plaster with impressions of textiles, suggesting they had been wrapped (Mithen *et al.* 2018: figs 21.19–20). This use of plaster also resonates with practices at Körtik Tepe where either entire or partial skeletons were covered with thin layers of gypsum plaster. On some

occasions this was applied in multiple layers interspersed with paint, suggesting some burials were repeatedly exposed for re-plastering and painting (Erdal 2015) – an interpretation that also appears appropriate for WF16. At El-Hemmeh, c. 50km north of WF16, a seated PPNA burial within a cist had much of its legs, arms and torso covered with white lime or gypsum plaster (Makarewicz & Rose 2010), directly comparable to the practice at Körtik Tepe.

Precedents for the use of both pigment and plaster on human bones come from late Epipaleolithic sites in the southern Levant (c. 10 000 BC). Lime plaster was used to cover burials at Nahal Ein Gev II (Friesem *et al.* 2019) while pigment, likely from painted wrappings, was found on skeletal remains from Azraq 18 (Bocquentin & Garrad 2016) and Shubayqa 1 (Richter *et al.* 2019).

CONCLUSION

The extent to which the small stone face from WF16 is comparable to that from Jerf el Ahmar remains in the eye of the beholder. Similarly for the snakes that wind their way over a stone cylinder from WF16, the half-skeletonised animal, and phalli; likewise for the decorated bench, batons, perforated cranium and treatment of the dead. Are the similarities between these and artefacts from the northern Levant, together with an interest in raptors, just coincidental? We suspect not – their range and the level of comparison indicate that cultural convergence is unlikely. Although the same symbols do not necessarily reflect the same ideology, the combination of raptors, snakes, a half-skeletonised animal, and phalli, all represented at a location of social gathering, suggests an ideology at WF16 resonant with that in the north – potentially a specific expression of shamanism (Benz & Bauer 2015; Mithen 2022). This indicates a more substantive flow of ideas between the south and the north than has been previously recognised.

The direction of flow remains unclear. With the absence of an Epipalaeolithic record in the vicinity of Göbekli Tepe, and no evident precedent within the known Epipalaeolithic of the Upper Tigris Basin (Benz *et al.* 2015; Kodus *et al.* 2018), it is unclear where its art and architecture originated. A local origin may be discovered as new fieldwork reveals the Epipalaeolithic of the region. Alternatively, with the links between WF16 and Nahal Ein Gev II, a Natufian/early PPNA origin in the southern Levant might be possible, with the ideology and

its material expression spreading to the north, where it flourished in the context of abundant wild cereals that enabled larger and more frequent social gatherings. Current dating is insufficient to demonstrate this is the case, although we note the decorated bench at WF16 is earlier than the PPNA/PPNB transition phase at Jerf El Ahmar that contains a bench embellished with a similar design.

Wherever and whenever the ideas originated, the finds from WF16 indicate that symbols and ideology were flowing along social networks that extended between the far south and the far north of south-west Asia during the formative millennia prior to the emergence of farming.

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FIGURE CAPTIONS

Figure 1. WF16, Göbekli Tepe, early Neolithic and selected Epipalaeolithic sites of the 11th-9th millennia BC

Figure 2. WF16, southern Jordan: (a) looking west along Wadi Faynan towards Wadi Araba; (b) site plan; (c) excavation April 2010; (d) Structure O75, looking north-east, underlying a later free-standing circular structure, O100; (e) Structure O75 under excavation, showing the decorated face of the bench (Figure 5). © Steven Mithen & Bill Finlayson

Figure 3. (a) Decoration on benches: Jerf el Ahmar © Danielle Stordeur. Mission El Kowm-Mureybet. Ministère Affaires Etrangères, France; WF16 © Steven Mithen & Bill Finlayson; (b)

WF16 monolith set vertically within a niche formed by the intersection of stone walls within Trench 3, looking west; September 1999 © Steven Mithen & Bill Finlayson.

Figure 4. Examples of incised stone vessels: (a) Hallan Çemi (redrawn from Rosenberg 2011a); (b) Tell 'Abr 3 (redrawn from Yartah 2004); (c) Tell Qaramel (redrawn from Mazurowski 2003); (d) WF16 © Steven Mithen & Bill Finlayson

Figure 5. Snake imagery: (a) Nevalı Çori (Hauptmann 1999, reproduced with permission of the Euphrates Archive, German Archaeological Institute (Lee Clare)/Heidelberg University (Joseph Maran)); (b) Göbekli Tepe D-DAI-IST-GT2002-IW-0001 © Deutsches Archäologisches Institut, Göbekli Tepe Project; (c) Göbekli Tepe D-DAI-IST-GT2002-IW-P22_1944 © Deutsches Archäologisches Institut, Göbekli Tepe Project; (d) Tell Qaramel (redrawn from Mazurowski 2003); (e) WF16, SF2078 © Steven Mithen & Bill Finlayson; (f) WF16, SF1298 © Steven Mithen & Bill Finlayson

Figure 6. Half-skeletonized animals: (a) Göbekli Tepe D-DAI-IST-GT1996-DJ-A14 0051 and D-DAI-IST-GT2008-DJ-A61 0004 © Deutsches Archäologisches Institut, Göbekli Tepe Project; (b) WF16. SF1365 © Steven Mithen & Bill Finlayson. Gazelle (?); (c) Abu Hureyra, (redrawn from Moore *et al.* 2000); (d) WF16, SF115 © Steven Mithen & Bill Finlayson.

Figure 7. Small stone faces: (a) WF16, SF238 © Steven Mithen & Bill Finlayson; (b) Jerf el Ahmar (Stordeur & Abbès 2020) © Danielle Stordeur, Mission El Kowm-Mureybet. Ministère Affaires Etrangères, France; (c) Nahal Ein Gev II (Grosman *et al.* 2017), with kind permission of Leore Grosman © Gabi Laron.

Figure 8. Phalli: (a) Göbekli Tepe D-DAI-IST-GT1995-MMA02 (left) and D-DAI-IST-GT1998-KS-A07 (right) © Deutsches Archäologisches Institut, Göbekli Tepe Project; (b) WF16, from left to right SF2389, SF339, SF1005 © Steven Mithen & Bill Finlayson.

Figure 9. Batons: (a) WF16, SF531 © Steven Mithen & Bill Finlayson; (b) Mureybet (redrawn from Cauvin 2000); (c) Gusir Höyük (Karul 2011) © Necmi Karul

Figure 10. Drilled human crania (a) Göbekli Tepe © Julia Gresky DAI; (b) WF16, SF558 © Steven Mithen & Bill Finlayson. Skulls marked with lines of pigment: (c) WF16, Burial O38 © Steven Mithen & Bill Finlayson; (d) Hasankeyf Höyük © Yukate Miyake

