

Research Article

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Socialising the Landscape in the Early Neolithic of Thessaly, Greece

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Abstract: This article attempts to draw attention to the social choices of the earliest farming societies, evaluating new and old settlement data from the Early Neolithic of Thessaly in Greece. We examine the inhabitation of landscapes, the organisation of the inhabited spaces and the human–landscape interaction as a framework for the creation of a socialised environment. Taking into account aspects such as settlement location, duration, architecture and intra- and intersite arrangements, this study shows that the observed diversity in space and time reflects alternative modes of settlement and land use, variations in notions of permanence and continuity and different modalities of the adoption and meaning of new socioeconomic practices. This evidence challenges traditional interpretations of simplicity, homogeneity and change as being induced from outside and calls for a new reading of the Early Neolithic. We argue that the model of a single and uniform development, deriving from concepts of diffusionism and evolutionism, does not hold in Neolithic Thessaly (or in Greece). Instead, Neolithisation was a contextual process that involved human awareness and different choices, and that the social landscape created by the pioneering farming societies set the stage for all kinds of different developments that occurred in later phases.

Keywords: Neolithic Thessaly, settlements, landscape, architecture, use of space

1 Introduction

Debates on the Neolithisation of Europe, particularly in a South-Eastern European/Eastern Mediterranean context, have tended to focus on the origins of the Neolithic to determine the source and spread of farming in Europe, usually in terms of diffusionism (see Chapman & Souvatzi, 2020; Reingruber, 2018 for discussion). This has often resulted in an essentialist understanding of the emergence and development of the Neolithic or has delayed the exploration of Early Neolithic (EN) life in its own right. However, Robb (2013, p. 657) pointed out that the real problem is theoretical; we need to investigate the new relationships between humans, material culture and environment and the transformative effects of these relationships. Our concern in this article is not the cultural origins of people acting in Thessaly (Figure 1), from the mid-7th millennium onwards, but the spatial, temporal and social processes in which they were involved within the landscape they decided to live in.

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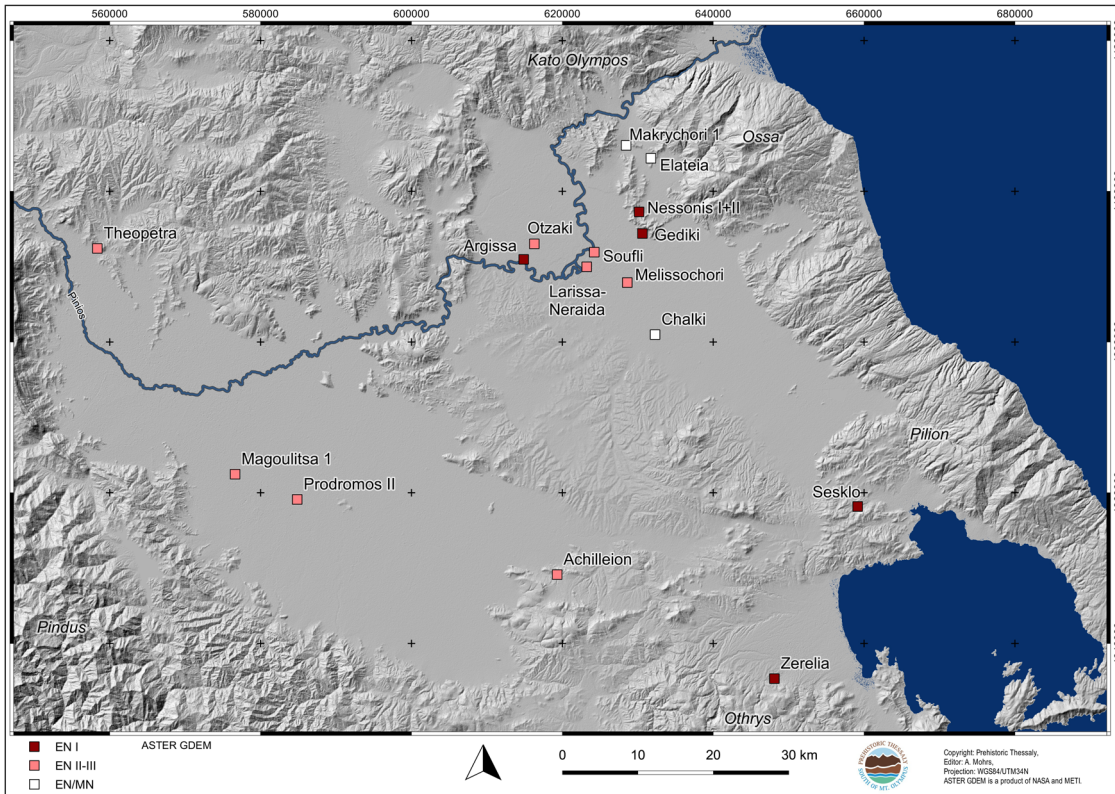


Figure 1: Map of Thessaly with the securely dated Early Neolithic sites mentioned in the text (Agathe Reingruber and Amelie Mohrs).

As a first step, awareness of the data limitations is essential in order to utilise all the available information effectively as well as to avoid merely reproducing biases, stereotypes and general theories of the past. Regarding time framework, the refinement of a uniform chronological sequence in Greece with definite time limits and interregional correlations is still underway. Comparisons with the Balkans and the Near East have also often resulted in confusing terminology and phasing. The consensus reached recently envisages an “Initial Neolithic” phase throughout Greece in which pottery was absent or scarce (ca. 6600–6500 cal BC¹). Its exact chronological position relies on critical evaluations of statistically modelled sequences (Reingruber & Thissen, 2017; Weninger et al., 2014) and not on single calibrated dates. But whether this is an absolute chronocultural period or a very early phase of the EN is debatable (see below). The EN is relatively long-lasting (6500–6000 cal BC) but has rarely been the subject of concentrated field research. The Middle Neolithic (MN), in contrast, emerged as a shorter period than previously believed (6000–5500 cal BC), and it is much better known than the EN. The Late Neolithic (5500–4500 cal BC) remains the best-documented period across Greece. The Final Neolithic (4500–3300 cal BC) has only recently been better distinguished from both the Late Neolithic and the Early Bronze Age (Dietz, Mavridis, Tankosić, & Takaoğlu, 2018; Tsirtsoni, 2016).

While the study of Neolithic Greece was initiated in Thessaly by the pioneering excavations of Christos Tsountas in the late 19th and early 20th century and Thessaly has been the focus of attention ever since, there are still several discrepancies and gaps in our knowledge. Sesklo was among the first sites of the EN to be identified in Greece (Tsountas, 1908) and was extensively re-excavated by Dimitrios Theocharis between 1956 and 1977 (Theocharis, 1973). Together with Argissa, excavated by Milošević in the 1950s, they constitute the two iconic sites that inspired discourse about the existence of a Preceramic period, as well as initiating debate about the cultural origins of the Greek Neolithic as a whole (i.e. indigenous vs imported) (Bloedow, 1991;

¹ Throughout the article the absolute dates are given as calibrated in the 1 sigma range (68.3% probability), using the latest calibration curve IntCal20 (Reimer et al., 2020).

Milojčić, 1956, 1962; Perlès, 2001; Reingruber, 2008; Theocharis, 1973; Thissen, 2005). Recent research based on the re-evaluation of the stratigraphical evidence from Argissa and other sites does not confirm the existence of a Preceramic period. Instead, a very short Aceramic phase seems to occur only in a few sites in the circum-Aegean area (e.g. Knossos, Franchthi, Uğurlu, Ulucak) (Reingruber, 2015).

In this study, we follow the latest chronological results obtained for Thessaly (Reingruber *et al.*, 2017, Table 3). Awaiting the final publication of Zerelia, the only Thessalian coastal site where a short Initial Neolithic at ca. 6600–6500 cal BC is in discussion², we focus on the EN I (6500–6300 cal BC), EN II (6300–6100 cal BC) and the short and ambiguous EN III (6100–6000/5900 cal BC). In relative chronological terms, these phases can be related to the following pottery sequences: monochrome pottery with simple shapes in the EN I, a diversification of styles in the EN II (with mainly red and light polished surfaces, blacktopped and early painted) and impressed pottery at the end of the EN. The last style, however, has not been identified throughout Thessaly, especially not in the southern parts (for instance, it is scant or even missing in Achilleion and Sesklo). For this reason, we discuss sites of the EN II and III together here.

There is also unevenness of the archaeological data between Eastern and Western Thessaly: while the former has been the focus of Neolithic research since Tsountas' time, the latter came under more thorough research in the 1970s by Chourmouziades and has since been comparatively neglected again until very recently. As a result, its archaeological record remains rather scanty (see Krahtopoulou, 2019; Orengo, Krahtopoulou, Garcia-Molsosa, Palaiochoritis, & Stamati, 2015). Furthermore, with few notable exceptions, earlier excavations all over Thessaly usually took the form of a single trench in order to observe the stratigraphic sequence, thus information on EN settlement extent and layout is often insufficient.

In recent years, however, big infrastructure projects have led to large-scale excavations and new intrasite analyses, whereas rescue excavations, systematic surveys and remote sensing have brought to light considerable information about old and newly detected sites and their complexity in the landscape (e.g. Krahtopoulou *et al.*, 2020; Kyparissi-Apostolika, 2012; Sarris *et al.*, 2017; Toufexis, 2017; Toufexis & Reingruber, 2021; Vouzaxakis, 2008). For instance, we now know seven EN (6500–5980 cal BC) sites for the Karditsa plain of Western Thessaly (Krahtopoulou, 2019). Although the explosion of these new data has not yet been fully analysed or published, the evidence is suggestive and a new picture is emerging.

2 The Early Neolithic Physical Landscape

Although mostly covered by a plain, Thessaly comprises a diverse physical landscape with mountainous borders on three sides, access to the Aegean Sea through the Pagasitic Gulf in the southeast and interlocking of hilly and flat areas towards the Phthiotis region in the southwest. Several natural sub-divisions include lower mountains, basins, river valleys and lacustrine environments. The Thessalian plain is divided by the low range of the Revenia mountains into two parts, known as the Western and Eastern Thessalian Plains. Recent research has shown that since the Quaternary and up to the late Antiquity both of these two major sub-plains were partially covered by lakes and/or marshlands (Caputo, Helly, Bravard, Rapti, & Valkaniotis, *in press*; Migiros, Bathrellos, Skilodimou, & Karamousalis, 2011, Figure 5; Reingruber, Toufexis, Valkaniotis, & Manakos, *in press*, Figures 1 and 2). The Peneios River, flowing from the Western to the Eastern Thessalian Plain and from there to the Aegean Sea, constitutes the longest hydrographic network of Greece (Caputo *et al.*, *in press*). The coastal plains have undergone major changes due to the trans- and regression episodes of the sea, although there are contradictory views as to whether the Neolithic shoreline was further inwards or outwards than the modern one.³ Partial inundation of the coastal plain since the

² We thank A. Moundrea-Agrafioti and G. Maniatis for personal information and specifications given in their lectures in Volos (March 2018) and Ljubljana (November 2016).

³ Zangger (1991, Figure 1) reconstructed the Neolithic coastline inwards, up to only 1 km east of Dimini, while Alexakis, Astaras, Sarris, and Vouzaxakis, (2008, Figure 5) argued that the EN coastline was even further outwards than the Late Neolithic or the present one. According to Kabouroglou (1994, pp. 49–50), the sea level in the gulf of Volos was about 20 m lower than today

Neolithic may explain why no EN sites have been found there. Finally, in contrast to the modern rather bare landscape owing to intensive modernised agriculture, the situation in the Neolithic was much more diverse: thick vegetation cover and dense forests, especially of oak and chestnut, in the uplands, with a good potential for water-retaining, wetlands and open grassland (Halstead, 1984, pp. 64–82; Sivignon, 1975, pp. 83–105). Overall, EN sites had at their disposal a variety of environments and resources, both upland and lowland, lakes and coasts, offering manifold opportunities for producing economy relying on agriculture, animal husbandry and material production.

3 The Early Neolithic I Sites

Deposits that can verifiably be dated to the EN I have been excavated at Sesklo (Theocharis, 1973), Argissa (Milojčić, 1962) and Zerelia (Moundrea-Agrafioti, 2017). They were also presumably reached at the nowadays completely levelled sites of Nessonis I and Gediki (Theocharis, 1962). Achilleion and Soufli Magoula, on the other hand, assigned to the EN I by previous research, have been re-dated to the EN II (Gallis, 1982; Reingruber, 2008; Reingruber & Thissen, 2009), while other sites, including Platia Magoula Zarkou and Nessonis II, have been re-dated to the MN (Pentedecka, in press) or the EN/MN transition, respectively (Reingruber & Toufexis, forthcoming).

The famous site of Sesklo is located 7 km west of the present coast of the Volos Bay and represents an inland hill-site. It was established in or after 6500 cal BC on a narrow natural spur at 150 masl, flanked by two deeply cut rivulets that had eroded a large part of the site already by Tsountas' time. The site is surrounded by low and high hills, most likely wooded at the time, and by lowland areas (Figure 2). Its



Figure 2: The tell of Sesklo and surrounding landscape from the southwest, aerial photograph (Copyright: Vassiliki Adrimi-Sismani).

around 8,000 years BP and 4.5 m lower around 5,000–4,500 years BP. Neolithic sites might have therefore existed in the area later occupied by the sea.

location offers an ideal connection point both in a north–south and east–west direction. While the evidence for a Preceramic period is ambiguous, the EN is well attested both stratigraphically and architecturally. In the EN I, rectangular foundation trenches and post-holes indicate above-ground wattle-and-daub houses. But perhaps the most outstanding characteristic in this early phase is the spatial arrangement of the settlement. As is well known, during the MN Sesklo combined a tell (Sesklo A) and a flat settlement (Sesklo B) spread below (Kotsakis, 1999; Theocharis, 1973). Interestingly, this combination seems to have started from the outset, comprising Sesklo A, which was later to rise 8.5 m high above ground, including 4.5 m of Neolithic debris, according to Theocharis (Figure 3), and Sesklo C, which was later abandoned. In other words, while area A shows successive levels of occupation forming over the centuries the tell, areas C and B both remained single-period flat sites, occupied only during the EN and the MN, respectively. One important implication here is that people explored a variety of habitation types and combinations right from the start, even within one settlement, as the example of Sesklo suggests.⁴

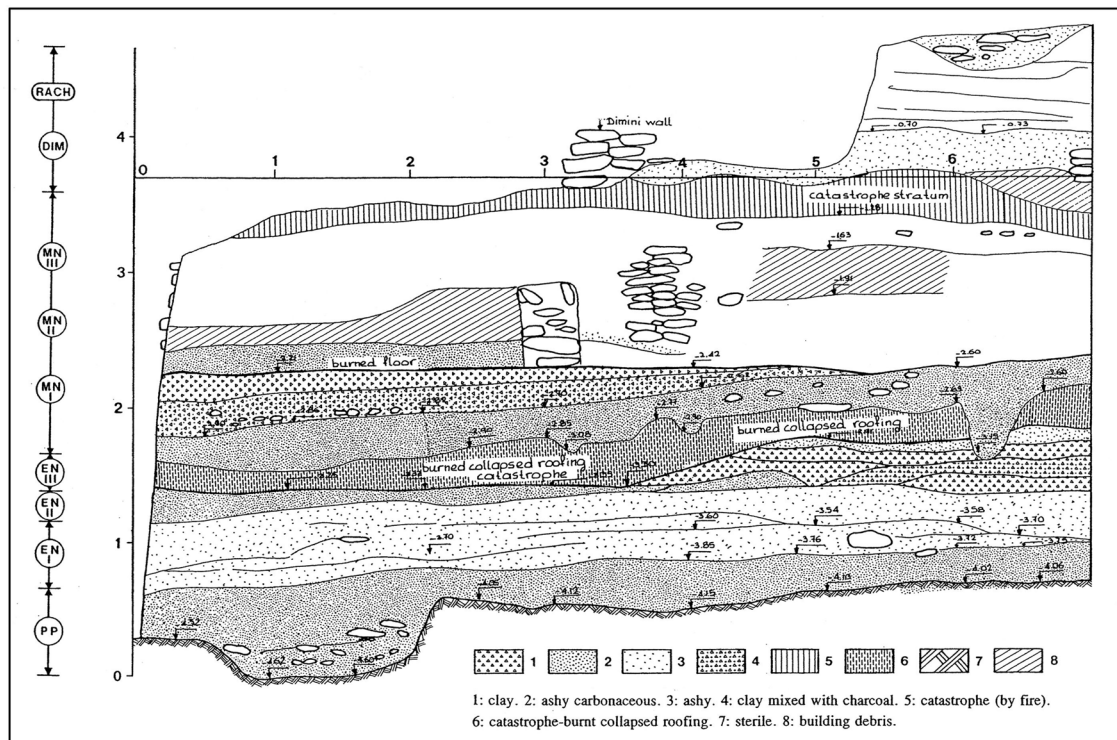


Figure 3: Sesklo tell: stratigraphic profile showing the sequence from the Early Neolithic to the end of the Middle Neolithic, a period of abandonment and reoccupation in the Late Neolithic II (Wijnen, 1981, Figure 5).

A different setting was preferred by the founders of Zerelia, a tell 7.5 m high, characterised by a more coastal and lacustrine environment. Zerelia was established either slightly earlier than Sesklo or around the same time, in or before 6500 cal BC, and seems to have been one of the “pioneer sites” (Horejs *et al.*, 2015) of the Aegean littoral. It is situated ca. 10 km west of the present shoreline, between two small lakes, at an elevation of ca. 150 masl. Directly on the bedrock, a succession of small hearths was found surrounded by red compact clay (Moundrea-Agrafioti, 2017). It was overlain by the MN deposits. As the final publication of the site has not been accomplished yet, it is not clear whether the site was used continuously throughout the EN or occupation was discontinuous and started anew during the MN.

⁴ For further discussion and suggestions about Sesklo and the co-existence of tells and flat sites see Souvatzi, 2008, pp. 76–106, 2017, 2020; Toufexis, 2017, pp. 23–30, 333–357.

In the Eastern Thessalian Plain, only Argissa is securely radiocarbon dated to the period between 6500 and 6300 cal BC. Part of the mound had been washed away by the Peneios River and this naturally provided profile was used by Milošević for the excavation between 1955 and 1958 of a stratigraphic trench of 24 m × 8 m. Neolithic deposits were preserved only in the eastern part of the trench in an area of ca. 50 m². The lowest levels contained pottery and small finds. Pit α and the postholes were dug in from above through levels of the EN II (Reingruber, 2008, p. 141, Figure 3.7). Other rather irregular features were first interpreted as dwelling pits, an interpretation which the excavator himself rejected later (Milošević, 1962). Another interpretation is that “pits” β–ζ may represent the uneven surface as encountered by the first settlers (Reingruber, 2008, p. 143). Rectangular buildings made of clay were documented in the succeeding levels belonging to the EN II and III (Milošević, 1962; Reingruber, 2008). The Neolithic deposits are less than 2 m thick so the major part of the 8.40 m high mound consists mainly of Bronze Age habitation layers (Figure 4). These cut and disturbed the MN layer, yet a continuity from the EN into the MN is attested.



Figure 4: The tell of Argissa today (left) next to the Peneios River (Copyright: Ephorate of Antiquities of Larissa).

Gediki was situated at the western fringes of the Chassambali hills. Theocharis (1962, pp. 73–76, Figure 1; Wijnen, 1981, Figure 20) exposed the 6.20 m thick deposit down to the sterile soil and established the whole sequence from the EN I to the MN, including the identification of a so-called Preceramic layer at the bottom of the trench. This layer was thin and sealed by sterile clayey soil, above which habitation continued with early pottery. Unfortunately, the mound has been levelled since and the evidence cannot be re-evaluated. The local landscape provided abundant water and raw material resources, especially serpentinites and marbles which have been used for tool manufacture from the EN I onwards in a wide area extending on both sides of the mountains (Toufexis & Reingruber, 2021).

On the northern side of these mountains, in the basin of Sykourio, a lake initially called “Nessonis” (currently known as “Bara Toibasi Lake,” Reingruber et al., in press) lent its name to the labelling of seven sites identified during the last century around its shores. The oldest site, Nessonis I, excavated by Theocharis in 1962, yielded two EN levels separated by a sterile deposit probably deriving from a flooding

event (Wijnen, 1981, Figure 21). According to the excavator, the lower level contained EN I pottery (“Frühkeramikum”) and the upper level contained EN II pottery (“Early painted:” Theocharis, 1962). At the EN/MN transition, the settlement shifted to a higher topographic position and evolved into a small mound (Nessonis II, Reingruber & Toufexis, forthcoming).

Information about settlement architecture in this phase is scanty. The many postholes reported from Argissa and Sesklo may have come from buildings higher up. Given the limited spatial extent of the excavation, no complete building plan has been recovered at either site, only construction debris. At Sesklo stone foundations may have been present, whereas burnt pieces of clay bearing wood impressions indicate that walls were constructed in the wattle-and-daub technique. At the same site, there is also evidence for pisé and timber constructions set into foundation trenches and reinforced with stones (Theocharis, 1962; Wijnen, 1992). Finally, some burnt mud-bricks may indicate early use of this technique too, although whether for building superstructure is debatable.

The limited number of currently known EN I sites does not permit inferences about settlement density in this phase.⁵ Sesklo and Argissa stand 52 km apart, and no sites have been located in between thus far. Overall, the earliest settlements utilised a variety of locations in the landscape, the common factor being the proximity to a water source, either rivulets, a river or a lake shore. Sites established closer to the sea are also located on or near natural hills. This variety attests to the flexibility of EN habitation and socioeconomic practice. In addition, the proximity of most sites to hills and mountains, where important raw materials occur, and considerably inland location of others, where tools made of those materials were used, suggests an awareness of the location of resources in the landscape and an involvement in their exchange right from the start.

4 The Early Neolithic II–III Sites

From the EN II (ca. 6300 cal BC) onwards, there is an increase in the number of sites and more comprehensible site plans. All of the earlier settlements continued⁶ and new settlements were founded not only in Eastern Thessaly (e.g. Soufli Magoula, Larissa-Neraida, Chalki-Larissa, Otzaki, Melissochori) but also in Western Thessaly (e.g. Achilleion, Prodromos II, Magoulitsa). New locations continued to be varied. In addition to the previous settings near hills and rivers, the alluvial floodplains of Agia Sophia and Mikrolithos (Demitrack, 1986; van Andel, Zangger, & Demitrack, 1990, Figure 9) also began to be settled.

Of the new sites in Eastern Thessaly, Otzaki is situated 2.5 km northeast of Argissa and the Peneios River in the middle of an alluvial plain (Figure 5). Its size is comparable to Argissa’s, amounting to 250 m × 150 m and 8 m in thickness. It was systematically investigated by Miložić from 1953 to 1955. EN deposits were located only in Trench III (“*Fläche III*”, 24 m²) (Miložić, 1971, pp. 14–16, Plans VIII–IX). They were 3 m thick, formed during the EN II–III and were sealed by an early MN layer dated to 6000–5800 cal BC. At a depth of 7.30 m, a corner of a clay construction was preserved to a height of 50 cm. It had walls made of 30 cm wide air-dried mud bricks without stone foundations and a clay floor 14 cm thick that rested directly upon the soil. Later, during the EN III, three rectangular, parallel buildings made of pisé and aligned in an N–S orientation suggest planning of the habitation area (Figure 6).

Cut by the Peneios River, Soufli Magoula was first investigated by Theocharis in 1958 and was interpreted as a Preceramic period site (Theocharis 1958, pp. 72–85). Later excavations by Gallis (1982) in the 1970s revealed a succession of levels belonging to all of the Neolithic phases, starting with the EN II (“Protosesklo” phase) at a depth of 3 m. The site is famous for its cremation burials in pits of ca. 60 cm × 20 cm

⁵ In his Atlas Kostas Gallis (1992, pp. 90, 113, 118, 145, 151, 164, 176, 183) recorded eleven more sites from Eastern Thessaly as belonging to the EN I. However, this dating is questionable because (a) it was based exclusively on surface finds, and (b) it was determined in terms of the presence or absence of decorated pottery, while colour is not always preserved on eroded sherds.

⁶ Except perhaps for Zerelia for which relevant evidence is not yet available.



Figure 5: The tell of Otzaki and surrounding landscape, aerial photograph (Copyright: Ephorate of Antiquities of Larissa).

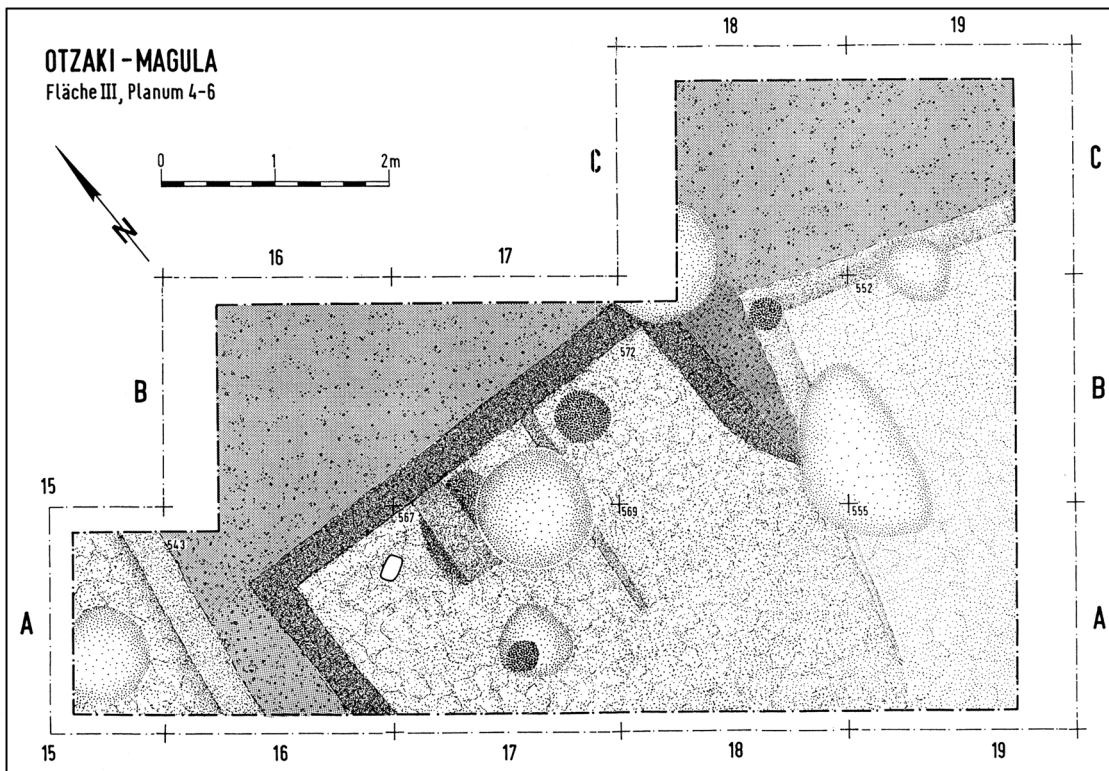


Figure 6: Architectural remains of the late Early Neolithic at Otzaki (Milojčić, 1971, Plan VIII).

large, a burial practice rather rare in the funerary record of Neolithic Greece. A total of fifteen cremation burials in pits and two larger cinerary pits were revealed at the eastern fringes of the mound, within the settlement area and in the lowest EN II level.⁷ Burnt bones and ashes were placed into the shallow pits and accompanied by vessels (Gallis 1982, p. 221 and Figure 7, 1996, p. 173). In the same part of the settlement, Gallis (1982, pp. 55–57) also excavated EN habitation deposits as well as part of an EN II ditch dug into the sterile. The ditch was 1.50–1.60 m wide and ca. 1.65 m deep.

Larissa-Neraida is a low mound originally 3 m high,⁸ showing two distinct EN phases, dated to ca. 6150–6050 cal BC (Reingruber *et al.*, 2017, Figure 9). The excavated area is characterised by various shallow pits, some representing partly subterranean buildings, and a shallow ditch 2.25 m wide (Alexiou, Anetakis, & Raftopoulou, *in press*; Anetakis, 2020).

Melissochori, located 7 km east of Larissa, was excavated between 1992 and 1995 (Toufexis, 2001, pp. 370–371). Only one of the two excavation trenches (trench B) yielded undisturbed EN deposits. They were ca. 1 m thick and found at a depth of 2.42–3.40 m. Although the small size of the trench did not permit firm architectural observations, there were indications of loamy floors and fragments of burnt clay. The pottery from the lowest levels is characteristic of the EN II with red slipped, early red painted and black-topped vessels. It was followed by shapes characteristic of the EN/MN transition, yet the impressed decoration, typical for the EN III at more northerly sites, is missing (Reingruber, 2008, p. 299).

The group of late EN settlements in Eastern Thessaly includes the following three sites founded at the EN/MN transition but inhabited mainly during the early MN. Chalki, located in the modern village of Chalki, is an impressive multiphased mound, occupied in the Neolithic and the Bronze Age. The Neolithic deposits had a maximum thickness of ca. 2.30 m in trench A, located at south-western edge of the mound. At the bottom of this and two other trenches were recovered finds belonging to the late EN/early MN, mainly inside pits dug into the sterile and interpreted by the excavator as potential pit-houses (trenches B and Γ) or probably in a ditch in trenches A and Γ (Toufexis, 2003, pp. 501–505, 2017, pp. 383–384, 392). Sherds with impresso decoration were few, as is often the case in the areas to the SE of Larissa.

At Makrychori 1 five concentric ditches at the western edge of the mound provide a unique example thus far in Greece of ditches cut into the solid rock (Toufexis, 2017, pp. 167–172). One of them (Ditch II) is dated to the transitional EN/MN phase⁹. It was investigated for 29 m and was up to 1.56 m deep and 1.23–1.70 m (rim) and 0.50–0.96 m (bottom) wide. It had an uneven U-shaped section and contained a wall on its inner side built with stone and mudbrick, the remains of which were found in the fill of the ditch (Toufexis, 2017, pp. 177–178, 317). Both the debris that filled the ditch and the area to the north of it yielded pottery characteristic of the EN/MN and MN.

In Elateia-Bigmeni Petra, a large flat site of 10 ha in size was established on an alluvial fan (Figure 7). Systematic investigations, both archaeological and geophysical, disclosed a well-structured settlement with loosely scattered living areas and open spaces, for example, for gardening, while the magnetogram provided clear indications for ovens and/or kilns. A ditch surrounded the north-eastern part of the site. According to the impresso pottery and the red-on-white painted or scraped sherds, the site was inhabited from the end of the EN and mainly during the early MN. The site provides a good example of how habitation shifted horizontally over an area of 500 m × 300 m (Reingruber, Toufexis, & Maniatis, 2021).

In Western Thessaly, permanent sites appeared during the EN I–II transition or rather at the beginning of the EN II. New stratigraphic, analytical and radiocarbon evidence indicates that Prodrornos II (or Plateia Magoula Prodrornos) was established around or after 6300 cal BC,¹⁰ the sequence of seven dates ending just before 6000 cal BC (Krahtopoulou, 2019; Krahtopoulou *et al.*, 2020). The site is located in the Kambos plain ca. 6 km north-east of the modern city of Karditsa and comprises a mound rising 5.60 m high above the

7 Interestingly, cremation burials were identified again in the early Late Neolithic (5500–5300 BC), this time in cinerary urns and in the south part of the site (Gallis, 1982, 1996, p. 173).

8 The mound has been engulfed by the modern city and levelled.

9 The other four rock-cut ditches date to the Late Neolithic I (Tsangli-Larissa and Arapi phases).

10 The oldest date was obtained on charred oak (D-AMS 017802, 7405 ± 57 BP, 6380–6220 cal BC) and can serve only as a *terminus post quem*.



Figure 7: The flat site of Elateia-Bigmeni Petra under intensive survey in September 2017 (Agathe Reingruber).

present surface. Excavation by Chourmouziadis in the 1970s (1971, 1972) revealed up to 4.20 m thick sequence of ten successive habitational phases, spanning the EN through the beginning of the MN. The findings include the remnants of a 10 m × 10 m large wooden feature, interpreted as a roof of a wattle-and-daub construction (Chourmouziadis, 1971). New research at the site indicates that this feature may be coeval with the other EN II findings revealed nearby or that it is associated with the EN I–II transition, although this transition is elusive (Krahtopoulou et al., 2020, p. 37). Three successive floors containing charred grains and food preparation remain under a thick layer of burnt daub date to 7395 ± 35 BP (6370–6220 cal BC) (Krahtopoulou et al., 2020, p. 36). Along with a contemporary extended destruction level immediately to the north (Chourmouziadis, 1972), they indicate fire destruction during the EN II. Interestingly, the burnt wattle and daub building was not replaced on the spot but was intentionally backfilled with material brought from the surrounding landscape (Krahtopoulou et al., 2020, p. 36). This implies that practices of house abandonment were already at work in the EN, attesting to, among other things, the social importance of the house or household from an early stage (Souvatzi, 2008). In addition, in the following phase, this plot changed function and was transformed into an open space (Krahtopoulou et al., 2020, p. 37). This further implies that shifts in the use of intra-site space, including changing locations of interior and exterior space as in Prodomos II, may have been standard even for mounds or places of a generally continuous habitation (Souvatzi, 2020). Prodomos II seems rather isolated in the Western Thessalian plain, but the recent identification of another three EN sites in close proximity (Krahtopoulou et al., 2020, p. 37) may suggest an interconnected settlement complex.

Achilleion was founded after 6300 cal BC. The initial phase (Ia) of large pits and yellow-plastered floors can be determined based on the statistically modelled ¹⁴C dates to 6280–6210 cal BC (Reingruber & Thissen, 2017). The inhabitants built and rebuilt substantial rectilinear structures using pisé on stone foundations or wattle-and-daub (Winn & Shimabuku, 1989) (Figure 8). Central lines of post-holes on the floors suggest a

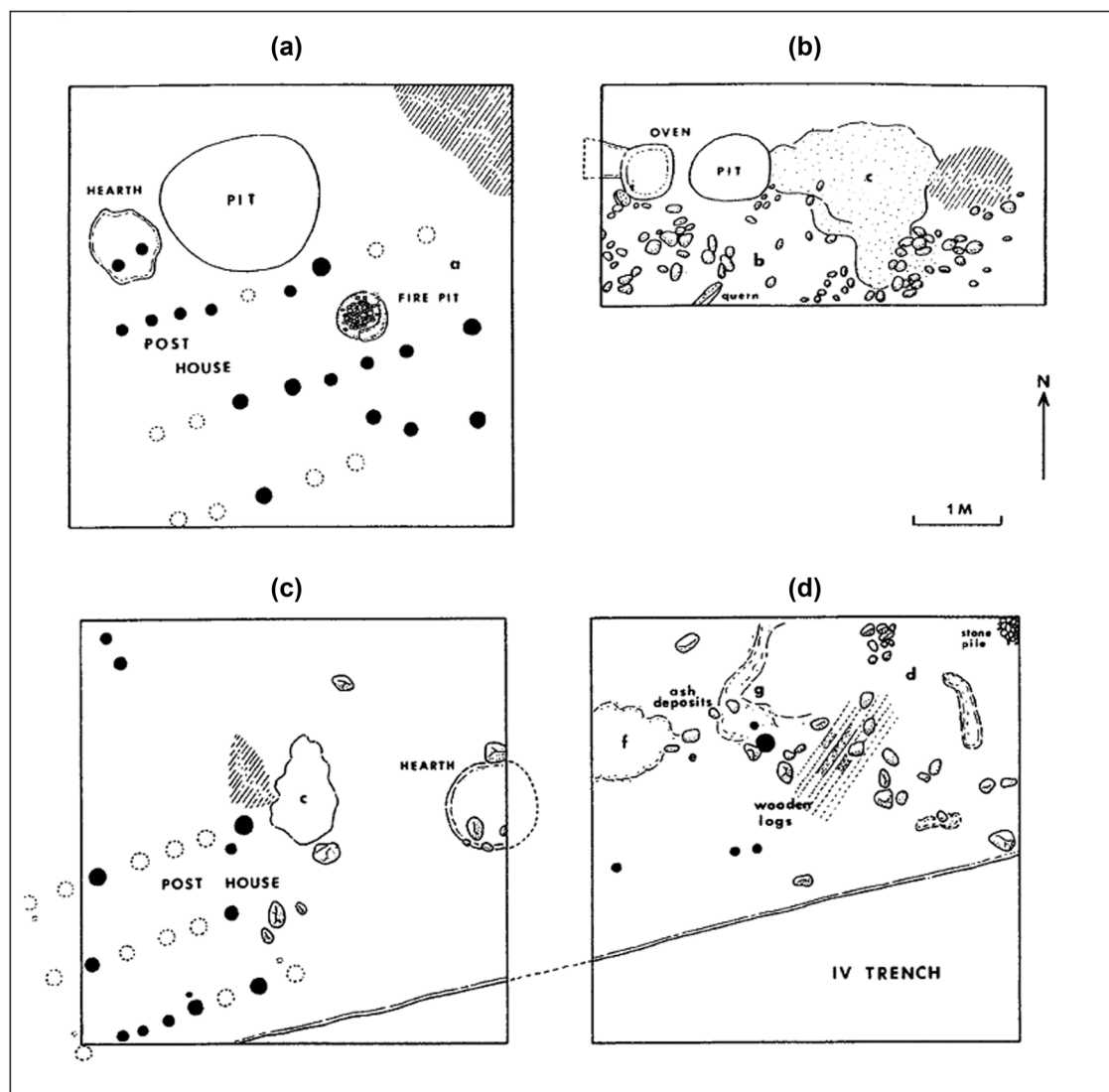


Figure 8: Architectural remains of phases IIa (squares a and b) and IIb (squares c and d) at Achilleion (Winn & Shimabuku, 1989, Figure 4.7 and 4.11).

pitched roof. The buildings were loosely spaced and separated by external activity areas, which contained well-constructed hearths, domed ovens, clay platforms, stone benches, plastered or pebbled surfaces and so on. One large building (phase IIIa) (12 m × 2.5 m) had three rows of posts and contained a domed oven and an area of reed matting. The E–W orientation of the buildings in all phases suggests a concern with planning.

The 4 m high sequence of Magoulitsa 1 near Artesianon (Karditsa) could be divided into three packages of different thicknesses: the oldest layer A could be assigned to the EN II based on the pottery styles; the middle layer B, with 3 m deposits is the thickest in the sequence, contains impressed sherds, whereas the uppermost layer C belongs to the MN (Papadopoulou, 1958, pp. 39–49). No observations have been made regarding building remains.

Finally, the Theopetra cave is the only site in Thessaly with repeated sequences of Mesolithic habitation until 6680 cal BC. After a gap during the EN I, there is a very limited indication for re-usage of the cave in the EN II around 6300–6200 cal BC (Facorellis, Kyparissi-Apostolika, & Maniatis, 2001, pp. 1034–7; Kyparissi-Apostolika, 2000).

In this phase evidence on settlement pattern and architecture is more abundant, permitting more concrete observations and the identification of important aspects. First, the variety of site locations

manifest in the previous phase not only continued but also expanded to include fertile alluvial plains and fans, in addition to floodplains and riverbanks. Second, there is also interesting variation in the duration of the lifetime or continuity of the settlements. Third, buildings were generally small and rectangular (ca. 6 m × 5 m), although a degree of diversity in building size, layout and construction technique is also attested. There are three main construction techniques: wattle-and-daub, mudbrick and pisé, sometimes built on stone foundations or reinforced by additional posts or stones (Figures 6 and 8). Floors were made of clay and occasionally pebbles. Furthermore, it seems that people began to engage with space more intensively and in a variety of ways including not only houses or buildings per se but also the digging of ditches and the creation of burial grounds, thus becoming increasingly involved with the settlement and the landscape.

5 Discussion

Despite the limitations outlined in the beginning, and although much has still to be learned about the EN in Thessaly (and in Greece for that matter), several interesting patterns are already discerned.

The early farming communities explored an array of physical settings, ranging from coastal plains to wetlands or marshlands and to low hills, and kept evaluating them. They also explored various site types or site combinations, manifesting different perceptions of the relationship between land, time and resources, even within one settlement (e.g. Sesklo). Diverse architectural choices can also be detected. Even sites that are relatively close to each other or which are situated in the same or similar physical settings can present a picture of intersite contrasts, ranging from partly subterranean oval buildings to above-ground rectangular structures and including three different construction techniques, sometimes occurring even in the same site (e.g. Achilleion).

Another important pattern is that the sites did not remain static over time, as is commonly believed. Settlement continuity, discontinuity or abandonment and intrasite changes are present and provide further insights into the relationship between early groups, landscape and time (Souvatzi, 2013). It also becomes evident that no settlement was established in order to develop into a pre-planned fully-formed monument. Several of the sites examined here remained flat and probably shifting during the EN (e.g. Elateia) or at most, they became low mounds (e.g. Nessonis II). As Chapman and Gaydarska (2018, p. 155) have pointed out, no tell began as a fully-formed monument but started life as a “flat” site. Only a few of the early sites were transformed into the impressive social landmarks that are now known as “tells” and not before the MN (Perlès, 2001, p. 174; Toufexis, 2017, p. 340). At both Sesklo and Argissa, for instance, the total thickness of the deposits accumulated during the EN is 1.5 m only. In addition, whereas at Sesklo the habitation continued until the end of the MN with the accumulation of a further 2 m of deposits, at Argissa only a thin, disturbed level suggests such a continuation.

At some sites (e.g. Sesklo, Argissa, Achilleion and Chalki), the rather flimsy architecture of the initial phases was replaced in the subsequent phases by more solid rectangular buildings. This suggests a growing commitment to space and the community. At other sites, such as Prodromos II, changing locations of interior and exterior space may reflect changes in social relationships and perhaps even a cyclical perception of time regarding what was deposited and where. A similar sense of periodicity may apply to the inhabitants of lacustrine or riverine landscapes and generally, of zones susceptible to flooding, who must have witnessed alternating phases of dry and wet environmental conditions.¹¹

A final pattern concerns the human awareness of the landscape. Regardless of specific site locations, the evidence in all settlements points to a dynamic and diverse human–landscape interaction, including the deposition into the settlements of materials brought from the landscape (in order to seal buildings or entire habitation phases or to level settlement spaces); the digging of ditches; the strategic location of some settlements; the establishment of burial grounds; and the living in wetlands and marshlands. All this

¹¹ For a detailed discussion of floodplain tells in Thessaly see Souvatzi (in press).

indicates observation and experience concerning the landscape and its impact, a landscape with which people got increasingly involved and which they finally socialised. Engagement with and use of diverse microenvironments is further indicative of knowledge of the landscape and available resources, as in the example of the serpentinites and marbles from the Chassambali hills which were used over a wide area since the EN I.

6 Conclusion

The old and new evidence discussed here calls for a new reading of the EN, with a greater focus on historical context and social agency and less reliance on deeply embedded concepts of diffusionism and evolutionism. The model of one uniform development does not hold in Neolithic Thessaly (or in Greece). The observed diversity in space and time reflects alternative modes of settlement and land use and different modalities of the adoption and meaning of new socioeconomic practices. And although the very beginning of the Neolithic, around 6600 cal BC, is still little known, in a matter of a few centuries, the Neolithic people created a sociocultural space and developed most of the characteristics in its use that continued through the Neolithic. We should not view the earlier part of the Neolithic through the lens of its later part either. It is rather the other way around. Although, naturally, there were various technological changes and improvements over time, the different connections with the physical and social space and the different perceptions of time and continuity which characterise the Greek Neolithic (Souvatzi, 2013, 2020; Toufexis, 2017) have their roots in the EN, as do the building techniques. Enclosures surrounding settlements, which become an almost generalised principle throughout the Neolithic (Toufexis, 2017, p. 362), also appear together with first farming communities. It was the social landscape created by the pioneering farming communities that facilitated the appearance of more permanent tell-settlements, the development of craft specialisation and the creation of dense networks of exchange and communication in later stages of the Neolithic.

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