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Early pottery mobility: The case of early Neolithic Thessaly, Greece

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1. Introduction

The earliest ceramic vessels in Greece have been identified in archaeological layers dated to the initial Neolithic, i.e. the mid-7th millennium BCE, in a series of Neolithic sites in Thessaly (Reingruber, 2008) in central-northern Greece, in the cave of Franchthi in the Peloponnese (Vitelli, 1993b) and in Knossos in Crete (Tomkins and Day, 2001; Tomkins et al., 2004). Recent archaeological field research in northern Greece, and particularly in the region of Macedonia, has brought to light a new series of early Neolithic sites which have yielded dated and contextualized early pottery, currently analysed (Kotsakis, 2014; Maniatis, 2014; Dimoula, in press; Saridaki et al., in press) (Fig. 1).

The presence of baked clay masses or even ceramic sherds in Paleolithic or Mesolithic contexts indicate that ceramic materials were not unknown to the earlier inhabitants of Greece (Galanidou and Perlès, 2003). However, in the subsequent early Neolithic period pottery appears as a fully developed craft, characterized by effective technological choices in all stages of manufacture (Vitelli, 1995). Moreover, there is a complete lack of evidence related to possible experimentations with this innovative then technique. This has led to the assumption that pottery technology was part of the so-called 'Neolithic package', an accumulation of materials, techniques and knowledge, believed to have transferred from the Near East to the Aegean and the Balkans through demic or cultural diffusion (Ammerman and Biagi, 2003). In this context, the common morphological characteristics of pots throughout broad geographic regions are considered as evidence of such processes (Brami and Heyd, 2011).

As a result, research on the early pottery in Greece has been limited in the theoretical and methodological confines of the investigation of its indigenous or not character, which was directly supported by ceramic provenance studies (see Dimoula, 2014: 19–23). Nonetheless, current theoretical reasoning has moved beyond such simplistic or generic schemas in understanding cultural phenomena and interpreting social change and has argued that human or social actions comprise complexities that require refined approaches and methodologies in order to be deciphered through material culture (Hodder, 2012; Dobres, 2010). Much less when approaching the material expressions of societies active in the culturally fluid landscape of the eastern Mediterranean during the 7th millennium BCE (Kotsakis, 2005, 2006, 2008).

In this context, the aim of the study presented in this paper was to re-approach and re-interpret the early Neolithic ceramic assemblages retrieved from a series of sites located in the geographical environment of Thessaly (Dimoula, 2014: 35–38). Most of them are regarded as representing the earliest ceramic vessels in the Aegean, supported by radiocarbon dates (Reingruber and Thissen, 2005; Reingruber, 2009; Facorellis, in press) (Table 1). By implementing the combination of macroscopic examination of pottery and ceramic petrography analysis, the scope of the study was to view this material both on the micro-scale, investigating technological choices throughout pottery production (Gauss and Kiriatzi, 2011), and on the macro-scale, in an attempt to infer on the multifaceted interactions of humans or societies with the environment (Ingold, 2000), on the potential communications between people among sites and regions, as a result of the mobility of people, ideas and primarily artefacts, such as the pots (Knappett, 2011; Broodbank and Kiriatzi, 2014).

2. Materials and methods

The region of Thessaly was designated as a case study, firstly because it has for long been considered as the 'cradle' of the Neolithic in Greece, since some of the earliest in date sites in the Aegean are located there (Theocharis, 1973; Papathanassopoulos, 1996). Secondly, it comprises a well-defined extended lowland geographical landscape, with massifs surrounding two large alluvial basins, where Neolithic activity appears to have been concentrated quite densely. These basins, the eastern and western Thessalian plains, are divided by a series of hills, and are drained by a large river, Peneus, and its tributaries, while there is only one opening to the sea, in the area of the Pagasetic Gulf (Fig. 2).

The pottery assemblages selected for study belong to seven sites. The principal criterion in their selection was the representation of early ceramic assemblages in their archaeological deposits, as defined by the stratigraphic contexts and the typological characteristics of finds, but mainly by radiocarbon dating (Dimoula, 2014: 61–62). These sites are (Fig. 2, Table 1): the cave of Theopetra, located in the northwestern edge of the Thessalian plain, where the transition from the Mesolithic to the Neolithic is represented (Kyparissi-Apostolika, 1999, 2000a, 2000b, 2003); Sesklo in

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Fig. 1. Geographical map of Greece and the Aegean, where the regions mentioned in the text are noted.

the mouth of the Pagasetic Gulf, where initial Neolithic layers where investigated - considered as 'preceramic' in the past (Theocharis, 1967; Wijnen, 1981; Bloedow, 1991); Achilleion in the Karditsa plain (Gimbutas et al., 1989; Björk, 1995); and the tell sites of Argissa Magoula (Milojčić et al., 1962; Reingruber, 2008), Soufli Magoula (Theocharis, 1958), Otzaki Magoula (Milojčić-v. et al., 1971) and Magoula Melissochori (Toufexis, 2001) in the plain of Larisa, all dated in the early Neolithic period. These sites represent different types of habitation, such as caves (Theopetra), flat extended (sectors in Sesklo), but mostly tell settlements.

The methodology applied involves the simultaneous study of pottery from different sites, selected on the basis of specific criteria - temporal and/or regional - both macroscopically and by the application of analytical techniques. In this way it is feasible to apply the same criteria in the study of contemporary sites on an intra-site, intra-regional and inter-regional level. The macroscopic examination included observations on ceramic fabrics, manufacture techniques, vessel shapes, surface treatment, firing and post-depositional effects (Dimoula, 2014: 62–65). These macroscopic observations served as the basis for selecting a number of samples for petrographic analysis (Table 2), representative of the variety of contexts, macroscopic fabrics and wares. Ceramic petrography was preferred as the main analytical method, as it has proven to be the most adequate technique for acquiring information regarding the provenance of the raw material used in ceramic production, but also the technological characteristics of the pots, and it can be well combined with the results of the macroscopic examination (Reedy, 2008; Quinn, 2013). Moreover, since the early Neolithic fabrics are commonly coarse grained, this technique was considered as more efficient for their technological and provenance study, in comparison to the application of geochemical compositional analyses that are also suitable for fine wares (e.g. Kilikoglou et al., 2007). The analytical procedure included the characterization of ceramic fabrics, in terms of inclusions and clay paste, their classification, description and interpretation, following an adopted version of Whitbread's proposed system (Whitbread, 1995), developed and presented by Kiriatzi (Gauss and Kiriatzi, 2011).[1] Supplementary, the samples were subjected to refiring tests, in order to distinguish different clay pastes and slips/paints, by eliminating the effects of fire on the colour of the sherds (Gauss and Kiriatzi, 2011: 70).[2] Finally, in the cases of Theopetra and Sesklo the analysis was complemented by the geological prospection of raw materials (Table 2), clay sediments and rocks, from the vicinities of the sites, which were experimentally processed and studied with the scope of acquiring a better understanding

[1] The pottery samples were prepared in thin sections (30 μm thick) by the technicians of the Laboratory of Mineralogy and Petrology of the School of Geology of the Aristotle University of Thessaloniki, under the supervision of Professor Emeritus Sarantis Dimitriadis. The samples were cut perpendicular to the vessels' walls. The thin sections were studied by the author under the polarizing microscope (Leitz Laborlux 12 POL and Zeiss Axioskop 40 POL) in the Fitch Laboratory of the British School at Athens. The digital images of the samples were taken with a Leica DC300 camera mounted on a Leica MZ9.5 stereomicroscope.

[2] Chips from all pottery samples were refired at 900 °C in oxidizing conditions using the Naberthem L5/P furnace at the Fitch Laboratory of the British School at Athens. This temperature was preferred on the basis of the results of previous analytical studies suggesting that the original firing temperatures of early Neolithic pots did not exceed 850 °C (e.g. Björk, 1995: 68). Maximum temperature was achieved gradually and soaking time was 1 h. Afterwards the furnace was turned off and the samples were left to cool overnight.