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The emergence of the Neolithic in the Near East: A protracted and multi-regional model

Juan José Ibáñez [a, *], Jesus González-Urquijo [b], Luis Cesar Teira-Mayolini [b], Talía Lazuén [b]

[a] Consejo Superior de Investigaciones Científicas, Instituto Milá y Fontanals, 08001 Barcelona, Spain
[b] Instituto Internacional de Investigaciones Prehistóricas de Cantabria, 39005 Santander, Spain

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ABSTRACT

The spread of the Neolithic from its area of origin in the Fertile Crescent into Europe, North Africa and Central Asia, vast regions with high ecological and geographical disparity, in a relatively short period of time (a little over two millennia) shows the expansive potential of this new way of life. This was possible because a robust and flexible socio-economic system was built during the four millennia in which the transition from hunter-gatherer to farming societies took place. Better knowledge of how the dynamic forces of the Neolithic developed in the Near East is a precondition for understanding the mechanisms and reasons of its successful expansion. During the last decade, thanks to the intensive work carried out by many international research teams, a much better comprehension on how this happened has been gained. The Fertile Crescent now appears to have been the location of a mosaic of groups evolving at different rhythms and creating different cultural patterns, but who were walking in the same direction due to strong currents of interaction existing between distant regions. These synergies, which contributed to the dynamism and resilience of the process, were possible because of the setup of complex exchange networks, the migration of whole communities and the wandering of task groups.

1. Introduction

The Near East, and more specifically the Fertile Crescent, is the area where the economic, social and ideological changes constituting the Neolithic first appeared (Fig. 1). When this metamorphosis was completed, at the end of the 8th millennium BC, the expansion out of its focus of origin began. The analysis of how these changes took place can help us to understand the expansion of the new way of life, as it is in its origin and its early development that the dynamic forces of the process can be best understood.

In this text, we will shed some light on this complex question, citing the information and schemes constructed by the first archeologists working on the subject and incorporating the new information gathered in the last decades. We will discuss how cultural changes leading to the Neolithic took place, identifying the main elements explaining its dynamism. In this special issue, where aspects of how the Neolithic reached the Western Mediterranean and how the new way of life spread in that area are addressed, understanding the origins of the Neolithic and the elements explaining its dynamism represents an appropriate starting point for discussing the main topic of this ensemble of papers.

The known division of the Neolithic transition into Natufian, Pre-Pottery Neolithic A and Pre-Pottery Neolithic B phases is only valid for the Levant. As we aim to avoid a "Levantine bias" in our description of the process and integrate the cultural changes that happened in both the western and eastern wings of the Fertile Crescent, whilst also paying attention to events in the "center of the crescent" (Central Anatolia and SE Turkey) and in Cyprus, we will only use the classic terms (PPNA, PPNB) when we refer to the Levant.

In the Fertile Crescent, three main phases can be distinguished: the Late Epipaleolithic, which corresponds to the last groups of hunter-gatherers in the process of sedentarization, called Natufians in the Levant and Zarzians in the Zagros area, from 12,300–9800 cal BC[1]; the first phase of the Pre-Pottery Neolithic, named A by Kathleen Kenyon, when the first experiences of wild plant

* Corresponding author.
E-mail addresses: ibanezjj@imf.csic.es (J.J. Ibáñez), gonzalje@unican.es (J. González-Urquijo), luis.teira@unican.es (L.C. Teira-Mayolini), lazuent@unican.es (T. Lazuén).

[1] All the dates in this paper are in calendar years BC.

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Fig. 1. Map of the region with the cited sites.

cultivation and animal management took place, from 9800 to 8600 BC; and the second part of the Pre-Pottery Neolithic, named B in the Levant, when plant and animal domesticates appeared. They became the dominant food resources at the end of the period around 7000 BC, when the first pottery appeared in most parts of the Fertile Crescent.

2. The Fertile Crescent: geography and environment

The term *Fertile Crescent* was coined by James Henry Breasted (1865–1935) to refer to the geographical area, with a semi-arc shape, stretching from the Jordan Valley to the Euphrates and Tigris estuary. It includes Israel/Palestine, Lebanon, western Syria (the Levant) in the west, continues across northern Syria and the highland plateau of Anatolia, and then turns southward, east of the Tigris River to the foot of the Zagros Mountains, part of the modern states of Iraq and Iran, to the alluvial plain created by the Tigris and Euphrates (Simmons, 2007) (Fig. 1).

Three main bioclimatic zones are present in this region: the Mediterranean mixed evergreen woodlands and maquis vegetation, in areas receiving 350–1000 mm of annual rainfall, the Irano-Turanian xeromorphic dwarf shrub steppe and steppe forest vegetation, in areas with between 200 and 350 mm of precipitation, and the semi-desertic Saharo-Arabian region, with 50–200 mm of precipitation per year, where vegetation cover becomes very thin and consists mostly of shrubs and herbs (Asouti et al., 2015).

After the Last Glacial Maximum (21,000–17,000 BC), characterized by a dry and cold climate, a period of climatic amelioration followed. The shift towards milder and more humid conditions was progressive and accelerated during the Bølling-Allerød (13,000–11,000 BC), The Mediterranean climatic seasonality, with wet winters and dry summers, was established from 15,000 BC (Issar and Zohar, 2007). The process towards milder and wetter conditions was interrupted by the colder and dryer Younger Dryas period (11,000 to 9500 BC). After that time, the milder Holocene conditions became established, during the Pre-Boreal oscillation, which was characterized by rapid warming, increasing the mean annual temperatures by about 7 °C (Alley, 2000), and higher rainfall rates (Robinson et al., 2006; Weninger et al., 2009). Even if these changes were delayed and not as drastic compared to those experienced in higher latitudes, they surely conditioned the sequence of historical shifts in the region (Bar-Yosef, 2011).

The first phase of the Late Epipaleolithic, corresponding to the Early Natufian in the Levant, developed during the Bølling-Allerød and, its second phase, corresponding to the Late Natufian, during the Younger Dryas. The Preceramic Neolithic, the PPNA in the Levant, started in the late Younger Dryas, but mostly coincided with the Holocene climatic optimum, which surely favored the significant changes that happened in human populations during the Early Neolithic.

3. Becoming peasants

Domestication of plants and animals, understood as the appropriation of a deme up to the point of controlling its

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