

Stephen Shennan. *The First Farmers of Europe: An Evolutionary Perspective* (Cambridge: Cambridge University Press, 2018, 266pp., 80 figs, pbk, ISBN 978-1-11084-2292-5)

*The First Farmers of Europe* by Stephen Shennan is a highly recommended read for those interested in gathering an updated, though not neutral, vision of the origins and spread of farming societies in Europe. Potential readers include all those wishing to have a global overview of a very complex and controversial process that transformed Europe forever. Eastern immigrants bringing a new way of life peopled Europe. As Shennan shows, they interbred genetically and culturally with local hunter-gatherers some generations after their arrival to the new land. A good array of intellectually restless readers will appreciate this thrilling book: archaeology students and professionals, of course, but also sociologists, anthropologists, economists, and, in general, those people (perhaps even politicians) interested in better understanding the European past for disentangling its future.

Specialists in the period will find the text stimulating, as it integrates many new sources of information that are thoughtfully managed in order to sustain a classic theory: the origins of farming and its transfer to Europe are basically a story of successful demographic expansion. The theoretical basis of Shennan's interpretative framework, based on evolutionary demography theory, is explained in Chapter 1 ('Introduction: Population, Resources, and Life Histories'). The Malthusian proposal on the tendency of human populations to quick demographic growth in contexts of optimal resource availability is combined with Boserup's theory on the positive role of population growth in leading to economic shift. The triggering factor of farming origins would have been shifts in Near Eastern human

populations towards sedentism and extension of food sources (Broad Spectrum Revolution, see Flannery, 1969) during the Epipaleolithic. Sedentism promoted higher fertility rates and, consequently, population growth. This increase in population is tested through the analysis of calibrated summed probability distributions of radiocarbon dates as proxies for population increase/drop, a technique that is profusely used in the book. While this method provides reasonable and interesting data for the European Neolithic, results for the Near East are, in my opinion, more problematic (see also a broader criticism in Contreras & Meadows, 2014). For example, the claim of a population plateau suggested for the period between 10,300 and 9500 BP in the Middle Euphrates (p. 44) is difficult to accept, as in that period important sites such as Tell Halula, Akarçay Tepe, and Abu Hureyra are occupied. Maybe, as the author acknowledges, considering the size of sites in the calculations could provide more reliable results.

According to the author, the Neolithic Revolution would have enhanced the effects of the Epipaleolithic Broad Spectrum Revolution. Agriculture, livestock, and living in sedentary villages brought about what Bocquet-Appel (2011) has called the Neolithic Demographic Transition, the high-fertility high-mortality pattern characteristic of agrarian societies, which began with the transition to farming. Increased female fertility was due to positive shift in energy inputs, because of reduced mobility and more caloric diets from cultivated crops. The increase in fertility would have compensated growing mortality caused by lower rates of infant

care and increasing infectious diseases associated with sedentary life and closer contact with animals. Demographic growth generated the critical social mass necessary for developing all the economic, social, and symbolic aspects of the new way of life.

Demographic explanations for the origins of farming have the advantage of using a powerful biological argument. However, if growing sedentism and more varied and caloric diets triggered the demographic transition, what caused the changes in economic and settling habits? The author indicates that this was caused by the decline, “for whatever reason”, in low-density mobile animal resources (p. 207). However, if the broad-spectrum diet was set from the Glacial Maximum, why were farming origins delayed? The author argues that this was because agriculture was impossible during the Pleistocene, as the weather was too fluctuant. Shennan defends a protracted model of farming origins, whose roots should be sought at least 13,000 years ago, when population started to increase. As a corollary, plant cultivation, animal herding, and the domestication of both are reduced to strategies for coping with previous population increase, fueling the process of transition instead of originating it. This paradox would be solved if cultivation had started earlier than is commonly accepted, as was suggested for the Epipaleolithic period in Abu Hureyra (Hillman, 2000).

Though the author stresses the biological and reproductive aspects of farming origins, he does not avoid considering the outstanding symbolism documented in sites like Gobekli Tepe, Nevali Çori, and Jerf el Ahmar, from the second half of the twelfth millennium BP. He points out that all these symbolic displays appeared after 1500 years of population increase, which is, in his opinion, the real motor of the cultural shift. Thus, monuments, sculptures, modelled skulls, and other ritual

paraphernalia are considered byproducts of the shift. The role of all this creative activity was, according to Shennan, generating a kind of ideological superstructure intended for the maintenance of social cohesion. Without this complex institutional and symbolic dimension, social groups would have split, especially taking into account that farming was probably associated with the development of private property rights and social differentiation. However, one important question remains unanswered: why was it so important for them to stay together? In contrast, it is interesting to consider that migrating groups peopling Europe split easily.

Once the transition to farming is well established in the Near East in Chapter 2, its expansion westwards is dealt with in Chapter 3. The first occupation of Cyprus is presented here as the precocious stage of this expansion. The island was first populated by hunter-gatherers around 12,500 BP. It continued to be visited and inhabited by groups who were becoming farmers, who travelled from the continent during the whole process of transition. Because of this, specialists in the period and area tend to consider Cyprus as part of the nuclear area where the transition to farming took place (Peltenburg, 2004; Vigne et al., 2012). It is generally assumed that the expansion westwards began at the end of the tenth millennium BP when farming was well established in the Near East. This difference in interpretation is not anecdotic, as the important discoveries in Cyprus suggest that migration of whole groups and distant interactions between Neolithic communities including the exchange of cultivars and livestock were mechanisms explaining the transition to farming in the Near East (Ibáñez et al., 2018).

Chapter 3 starts with an evaluation of the wave of advance theory. The author stresses that genetic information has

confirmed the demic diffusion of the Neolithic into Europe. Further modelling of the expansion adding new variables trying to better match the radiocarbon data with mathematical simulations would probably face a problem of equifinality. Shennan points out that it is now evident that the regular advance of the farming frontier does not fit well with archaeological information, proposing a leapfrog expansion model including some long-distance movements (pp. 76–77). This fat-tailed distribution is thought to be present along the westward expansion. Shennan's analysis of the first expansion in Western Anatolia and the Aegean shows two interesting and intriguing aspects. Firstly, it seems to be a 'simultaneous' process, as chronologies at the east and west ends of the expansion area are very similar. Secondly, two routes of spread are identified: one terrestrial from central Anatolia towards the north-west, the other maritime from the southern Anatolian coast to the south-west. Both lines show cultural particularities, which were transmitted by migrants to following generations. Does not this model look like a small version of the process of the spread of farming across Europe at a continental level during the following centuries?

The description of the Neolithic expansion in Central Europe (Chapter 4), is especially appealing. The details of the information gathered by scholars summarized by an expert such as Shennan results in a vivid reconstruction of the settling and life of the pioneers who occupied the loess plains up to the Paris basin. The author narrates the LBK demographic expansion in areas devoid of Mesolithic occupation, starting around 7400 BP. A cultural drift taking place west of the Carpathians would have generated a successful adaptation model that spread to the west very quickly. Long distance dispersal followed by short-distance infilling

characterized a process of expansion that is difficult to explain only in economic terms. Here the author timidly mentions the hypothesis of the existence of an expansionist ethos contributing to the long march westward (p. 88).

The Mediterranean way of farming expansion is described in Chapter 5 as a maritime migration along the Tyrrhenian and the Adriatic coasts first, and along the Gulf of Lyon shortly afterwards from the beginning of the eighth millennium BP. These seafaring migrants reached the central Portuguese shores before 7300 BP. Genetic studies detect a certain degree of admixture with hunter-gatherers, though when and where this interbreeding took place is still not clear.

In Chapter 6, the seventh millennium BP is discussed as a period of important but poorly understood phenomena. The internal colonization of the areas not occupied during the first wave takes place, including the incorporation of hunter-gatherer populations to the new way of life. Landscape monumentality, comprising megaliths and enclosures, suggests the appearance of individuals or institutions who were able to concentrate considerable workforce.

The expansion of farming in Scandinavia, Britain, and Ireland is discussed in Chapters 7 and 8. These regions document a similar spread pattern, coinciding with a period of climatic warming from 6000 BP. A quick expansion of farming groups led to a demographic boom followed by a population decline at the end of the sixth millennium BP. Monumentality and social competition were elements of these farming groups, as is the case in other areas of contemporaneous Europe.

The concluding Chapter 9 summarizes the main points of Shennan's narrative for the origin of farming and its expansion into Europe. In his view, demographic

increase is the crucial factor explaining farming origins and spread. Genetic data indicate that this spread into Europe was the result of demic expansion. Farming provoked changes in the property system, allowing the development of private or corporate interests feeding into social competition, the concentration of power, and violence. The migration westwards was carried out by small groups of autonomous households bearing a conservative cultural package. This package was a simplified and stereotyped version of the Near Eastern cultural achievements, and was transmitted from generation to generation during the diaspora. The pattern of spread consisted of periods of stasis followed by phases of quick migration, characterized as a long distant dispersal followed by short-distance infilling. Local hunter-gatherers had a marginal role in the first farming expansion, though they later intermixed with the already settled farmers. The farmers' arrival provoked a population boom that was followed by periods of bust, a model of boom-bust that must be further explored and explained by future research.

Overall, this book offers a remarkable wealth of updated information which is well-articulated in a coherent explanation that will surely stimulate new research about the Neolithic in Europe and the Near East. The stress on the demographic factor and the secondary role attributed to social and symbolic aspects will without doubt promote some criticism. In this context, it seems legitimate to ask whether the demographic growth was the consequence rather than the cause of the transition to farming. Population increase was surely a necessary element of the equation. However, demographic growth is a social choice, since, to a certain extent, population increase can be limited or stimulated. Because of this, social structures and ideology should be a substantial part of any

fine-grained explanation of farming origins and spread.

Finally, I would like to encourage reading and consulting this book more than once, as previously unnoticed ideas and details will surely emerge through further engagements. Possibly, this is due to the author's successful approach in mixing handbook- and personal-style writing, delivering a masterpiece full of facts and ideas.

## REFERENCES

- Bar-Yosef, O. 1998. The Natufian Culture in the Levant, Threshold to the Origins of Agriculture. *Evolutionary Anthropology*, 6, 159–177. doi: [https://doi.org/10.1002/\(SICI\)1520-6505\(1998\)6:5<159::AID-EVAN4>3.0.CO;2-7](https://doi.org/10.1002/(SICI)1520-6505(1998)6:5<159::AID-EVAN4>3.0.CO;2-7)
- Bocquet-Appel, J.-P. 2011. When the World's Population Took Off: The Springboard of the Neolithic Demographic Transition. *Science*, 333: 560. doi: <https://doi.org/10.1126/science.1208880>
- Contreras, D.A. & Meadows, J. 2014. Summed Radiocarbon Calibrations as a Population Proxy: A Critical Evaluation Using a Realistic Simulation Approach. *Journal of Archaeological Science*, 52: 591–608. doi: <https://doi.org/10.1016/j.jas.2014.05.030>
- Flannery, K. 1969. Origins and Ecological Effects of Early Domestication in Iran and the Near East. In: P.J. Ucko. & G.W. Dimblebt, eds. *The Domestication and Exploitation of Plants and Animals*. London: Gerald Duckworth & Co., pp. 73–100.
- Goring-Morris, A.N. & Belfer-Cohen, A. 2008. A Roof Over One's Head: Developments in Near Eastern Residential Architecture across the Epipalaeolithic-Neolithic Transition. In: J.-P. Bocquet-Appel & O. Bar-Yosef, eds., *The Neolithic Demographic Transition and its Consequences*. Dordrecht: Springer, pp. 239–86.
- Hillman, G.C. 2000. Abu Hureyra 1: The Epipalaeolithic. In: A.M.T. Moore, G.C. Hillman & A.J. Legge, eds., *Village on the Euphrates*. Oxford: Oxford University Press, pp. 327–99.

- Ibáñez, J.J., González-Urquijo, J.E., Teira-Mayolini, L.C. & Lazuén, T. 2018. The Emergence of the Neolithic in the Near East: A Protracted and Multi-Regional model. *Quaternary International*, 470: 226–52. doi: <https://doi.org/10.1016/j.quaint.2017.09.040>
- Peltenburg, E. 2004. Cyprus: A Regional Component of the Levantine PPN. *Neolithic: The Newsletter of Southwest Asian Neolithic Research*, 1(4): 3–7.
- Vigne, J.-D., Briois, F., Zazzo, A., Willcox, G., Cucchia, T., Thiebault, S. et al. 2012. First Wave of Cultivators Spread to Cyprus at Least 10,600 y ago. *PNAS*, 109: 8445–49. doi: <https://doi.org/10.1073/pnas.1201693109>

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Penny Bickle, Vicki Cummings, Daniela Hofmann and Joshua Pollard, eds. *The Neolithic of Europe: Papers in Honour of Alasdair Whittle* (Oxford: Oxbow Books, 2017, 313pp. 143 figs, 10 tables, hbk, ISBN 978-1-78570-654-7)

Alasdair Whittle is one of the most prominent European archaeologists. His outstanding contributions to the prehistory of Britain and Hungary, as well as his substantial research on chronology, enclosures, and farming in Neolithic Europe, make him one of the rare figures in archaeology whose depth of knowledge is matched by his breadth of interests. This breadth gave rise to his monumental work on Neolithic Europe (Whittle, 1996), still one of the most widely appreciated publications in the study of the first farming societies. He has often been awarded for his achievements and many of his colleagues have praised the impact he has had on European archaeology. It was thus only a matter of time before a publication appeared to honour his work and his contribution to the study of prehistoric societies.

This moment came when a few of Whittle's collaborators and former students decided to make a surprise for him on the occasion of his retirement, resulting in this wonderfully prepared edited book, which brings together many authors and topics associated with his research

interests. It is entitled *The Neolithic of Europe* in apparent reference to Whittle's colossal book *Europe in the Neolithic*, that puts forward his knowledge on a broad geographical scale. Consequently, this publication—edited by Penny Bickle, Vicki Cummings, Daniela Hofmann, and Joshua Pollard—aims to bring many European regions together in one place and to assert some of their features in the Neolithic. Such an approach is always risky as it is hard to make a consistent geographical overview of a continent—and to cover the entire spectrum of farming economy, chronology, landscape, architecture, crafts, representations, rituals, and society among many others—all in a few hundred pages. Therefore, the volume focuses on those topics most closely related to Alasdair Whittle's work. Geographically it covers the majority of European regions, from the British-Irish Isles to the Mediterranean, although some are missing, such as Scandinavia.

Thematically, the chapters primarily deal with architecture (Chs 2, 4, 6, 10, and 15), burials (Chs 5, 6, 11, and 16), tells (Chs 3, 4, and 6), enclosures (Chs 6,