



## Editorial

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# From Anatolia to Algarve: Assessing the Early Stages of Neolithisation Processes in Europe

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**Abstract:** The introduction and spread of the Neolithic “way of life” in Europe was a process that took several millennia, followed by different rhythms and displayed singularities in each geographic area. It was therefore a very complex phenomenon that, despite highly significant advances in research in recent decades, is yet to be fully understood. To deepen our understanding of the very early stages of the introduction of herding and agriculture throughout the Old Continent, the 1st Conference on the Early Neolithic of Europe was organised in Barcelona on 6–8 November 2019. The conference was a great success with more than 200 participants, creating a stimulating arena to discuss and debate, exclusively, the transition to the Neolithic in Europe. This special issue brings together 52 of the contributions presented in Barcelona, offering an interesting overview of the current state of research across Europe, from the Anatolia to the Algarve, highlighting the geographical, chronological and socioeconomic diversity of the transformation processes involved in the Neolithisation of Europe and providing useful starting points for future research.

**Keywords:** Early Neolithic, Neolithisation, Europe, Neolithic package

## 1 Introduction

The study of the origins and consolidation of farming in the Near East and its subsequent diffusion throughout the western Mediterranean basin and continental Europe in the ninth–fifth millennia cal. BC represents a major field of research within Earth, Environmental and Social Sciences. The first reason is that the Neolithic was a period of crucial change that irrevocably altered both social interaction between and within communities (new settlement patterns, increasing sedentarisation and territoriality, complex exchange networks, etc.) and the relationship of people with the natural world. In this sense, some authors

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consider it the beginning of an increasing process of environmentally transformative use of landscapes and long-term alteration of global patterns of biodiversity, ecosystem functioning and climate (e.g. Stephens *et al.*, 2019). Others list agriculture in the top five human developments with the greatest impact on the planet's biosphere, together with the use of fire, language, the emergence of states and the more recent use of fossil fuels (e.g. Takács-Sánta, 2004). Another factor to consider is that the emergence of farming societies in the Levantine region of southwest Asia around 11000 cal. BC constitutes the earliest of a series of independent centres of domestication of plants and animals that emerged in different parts of the world during a relatively short period of time between 12000 and 2000 years ago (e.g. Bar-Yosef, 2017). Moreover, it was in the Levant that many of the most economically significant animal (goat, sheep, cattle and pig) and plant (einkorn, emmer, barley, lentil, chickpea and fava bean) species for humanity were domesticated, species that remain important even in today's economy. Accordingly, the dissemination of Neolithic innovations and movement of domesticated plants and animals from the Levant into Anatolia and, subsequently, through continental Europe and the Mediterranean basin constitutes the first case in the world of the wide-scale diffusion of the new way of life out of the innovation area.

Given the above-mentioned uniqueness of both processes, the emergence and adoption of plant farming and animal husbandry in the Near East and the Neolithisation of the Old Continent have benefitted from intense and continued research since the early 20th century, when the term "Neolithic Revolution" was coined (Childe, 1936), with a series of major contributions from both Near Eastern and European prehistorians, which have, interestingly, approached the topic through very different perspectives and disciplines (e.g. Ammerman & Cavalli-Sforza, 1971, 1984; Arbuckle *et al.*, 2014; Bar-Yosef & Belfer-Cohen, 1989; Bocquet-Appel & Bar-Yosef, 2008; Cauvin, 1994; Cavalli-Sforza, Menozzi, & Piazza, 1993, 1994; Chikhi, Destro-Bisol, Bertorelle, Pascali, & Barbujani, 1998; Childe, 1968; Clark, 1965; Colledge, Conolly, & Shennan, 2004; Gronenborn, 1999; Hodder, 1990; Lev-Yadun, Gopher, & Abbo, 2000; Özdoğan, 1997, 2011; Perlès, 2001; Pinhasi, Thomas, Hofreiter, Currat, & Burger, 2012; Rowley-Conwy, 2011; Simmons, 2007; Vigne *et al.*, 2012; Willcox, 2013; Zeder, 2008; Zilhão, 2011).

Several decades of intense research, and sometimes also intense debates (e.g. "colonisation" vs "indigenism"), have improved our understanding and come to a broad consensus about the major aspects of the Neolithisation process/es in Europe. In this sense, there is an agreement that the diffusion of Neolithic innovations across Europe, from the Aegean to Britain, took about 2500 years (6500–4000 cal. BC), with some regions being reached a little later, around 3500 cal. BC (e.g. the Baltic region) and yet others with a significant delay (e.g. the Pannonian plain). It is equally agreed that no independent domestication of animals or plants took place in Neolithic Europe. Accordingly, all Neolithic crops and domesticated animals circulating in Europe were originally domesticated in southwest Asia and, second, they did not arrive by means of trade or exchange but by the initial migration or the colonisation of farmers and shepherds from the Near East via Western Anatolia, in many cases coexisting and interacting with local Mesolithic groups. In the initial stages (from the Levant to Central Anatolia and then to southeast Europe), people and domestic animals and plants moved along different land routes as well as by sailing along the Mediterranean shores westward. The diffusion of Neolithic innovations generally took place in a "leap-frog" pattern, prioritising fertile alluvial soils and bypassing mountainous areas. It is also widely agreed that communities migrating from the Near East introduced not only domesticated species (although this was a major element) but also a set of technologies, symbolic behaviours and beliefs, often referred to as the "Neolithic Package," combining the reality and ideology of the subsistence economy, with the greater symbolic value given to domesticated resources than to those from the natural or wild environment. However, it is also generally accepted that not all the elements of the "Neolithic Package" are always found in the different regions of Europe during the early stages of the Neolithisation process and that significant regional variability sometimes includes the exploitation of wild resources, depending on the environmental variability.

In conclusion, archaeological research has produced a vast amount of data to understand to a certain extent both the broad picture of the Neolithisation process in Europe and its regional and local variations. However, studies have also highlighted greater complexity of the historical process of the spread of farming than hitherto considered and identified a plethora of regional, sub-regional and local scenarios taking place within the main westwards diffusion. This increasing diversity is yet to be fully defined, understood and

incorporated into the main picture as a key element to refine our understanding of the Neolithisation processes at all scales (from continental to local) and be able to answer key questions that are still debated or unanswered. Some of these are the number, nature, rhythm and speed and scales of the agricultural wave/s of advance and their corresponding chronological aspects, the possibility of reverse movements, the relative degrees of demic and cultural diffusion, the percentage of contribution of early Near Eastern farmers to the European gene pool, the interaction with (and contribution of) Mesolithic populations in the development of the early stages of the Neolithisation in regions where they coexisted, the identification of the area in the Near East from which the initial spread began, redefinition of the “Neolithic Package” in each geographic area and a long etcetera. Because of this and given the need for a specific international academic forum in which to debate, exchange, discuss, integrate and synthesise at micro-regional, regional and continental scales, the increasing and increasingly complex data, the Archaeology of Social Dynamics<sup>1</sup> Research Unit of the Spanish National Research Council in Barcelona (CSIC) resolved to organise the “1st Conference on the Early Neolithic of Europe” (Figure 1), exclusively devoted to the study of the early stages of Neolithisation in the continent and neighbouring regions.



**Figure 1:** Organising Committee of the 1st Conference on the Early Neolithic of Europe at the Editorial CSIC<sup>2</sup> stand during the meeting.

## 2 The 1st Conference on the Early Neolithic of Europe (ENE-2019)

The ENE-2019 conference took place in the Museu Marítim<sup>3</sup> in Barcelona on 6–8 November 2019 (Figure 2). The meeting was preceded on the 5th November afternoon by a seminar “Sea and Navigation in Neolithic Times” with two guest speakers: Catherine Perlès<sup>4</sup> (Université Paris Nanterre, France) and Mario Mineo<sup>5</sup>

<sup>1</sup> Archaeology of Social Dynamics (ASD) is a research Unit of the Spanish National Research Council (CSIC) hosted at the Mila y Fontanals Institute (IMF-CSIC, Barcelona), which is recognised and funded by the Departament de Cultura of the Generalitat de Catalunya (SGR-2017-995). <https://www.asd-csic.es/>.

<sup>2</sup> <https://www.csic.es/en/science-and-society/editorial-csic>.

<sup>3</sup> The Maritime Museum of Barcelona is a space for interpreting and sharing Catalan maritime culture in a way that is innovative, participative and in touch with society and the country through research, conservation and the protection of our heritage. It seeks to be a point of reference for Mediterranean maritime culture, open and accessible to society as a whole, an entity that works in cooperation with people and organisations. Given the Mediterranean accent on the topic of the ENE-2019 Conference and the confluent objectives of the Museu Marítim and the CSIC, collaboration was established between the two institutions for the celebration of the meeting.

<sup>4</sup> Title: “Neolithic and the Sea.”

<sup>5</sup> Title: “Sea as a pathway of spread of Neolithic populations in the Mediterranean: La Marmotta (Italy), a village on the edge of the agricultural frontier.”





**Figure 2:** Inauguration of the meeting by the authorities (b), keynote lecture of the “Neolithic spread and supraregional interactions” session by Catherine Perlès (a) and oral presentation by Bogdana Milic in the parallel session “Technological processes” chaired by A. van Gijn (c).

(Museo Delle Civiltà/Museo Nazionale Preistorico Etnografico “L. Pigorini,” Italy), which ended with a reception in the Museu Marítim.

The meeting was organised in nine thematic sessions, some occupying a full day and others a half day, and each one introduced by a short keynote lecture from a member of the Scientific Committee that chaired the session:

- Neolithic spread and supra-regional interactions (Chair: Catherine Perlès, Université Paris Nanterre, France).
- Chronology and modelling (Chair: Stephen Shennan, University College London, United Kingdom).
- Human–environment interaction (Chair: Jean-François Berger, Université Lumière Lyon, France).
- Population characteristics and dynamics (Chair: Mattias Jakobsson, Uppsala Universitet, Sweden).
- Territory and settlement (Chair: Daniela Hofmann, University of Hamburg, Germany).
- Subsistence (Chair: Sarah McClure, University of California, Santa Barbara, USA).
- Technological processes (Chair: Annelou van Gijn, Universiteit Leiden, The Netherlands).
- Funerary practices (Chair: Christian Jeunesse, Université de Strasbourg, France).
- Symbolism (Chair: Goce Naumov, University Goce Delcev, Macedonia).



Given the enthusiastic response to the call for abstracts launched in October 2018 and considering that all participants should be given the possibility to make an oral presentation, it was decided that two sessions would run in parallel for 3 days. In addition, the duration of each communication was reduced from the initial 20 to 12 min.

The Early Neolithic Conference in Barcelona was a great success with more than 200 attendees of all ages, from 27 countries. They gave 116 oral presentations and 45 poster presentations. It was equally satisfying that this wide array of presentations covered almost all the geographic regions of Europe (30 countries), from western Anatolia and the Volga to the Iberian Peninsula and northern Morocco and from Scandinavia to the Mediterranean basin (Figure 3). The topics, scope and chronology of the presentations were also very varied. They ranged from contextualised local case studies to broad multidisciplinary pan-regional/inter-regional syntheses, while the topics varied from subsistence strategies, different aspects of the material culture (e.g. pottery, lithic tools, architecture features) and settlement patterns to funerary practices, to mention only some of them. C. Perlès closed the conference, highlighting the main achievements and novelties, as well as establishing the lines of research that should be consolidated in the near future. In addition, a short review with the main scientific outcomes of the meeting was published soon after the conference, summarising the main results, conclusions and novelties of the studies presented during the meeting and, second, the new perspectives of Neolithic research in Europe (Perlès, 2020).

During the afternoon of the second day of the meeting, a 1:30 h Poster Presentation took place, and in the evening of the same day, all participants were invited to another social event at the Archaeological Museum of Catalonia, which included a guided visit to the permanent exhibition of the Museum and a reception.

The Conference came to a close in the late afternoon of 9th November. It was agreed that the Early Neolithic of Europe Conference should have continuity in the next few years, as a unique tool for exchange of data/ideas and social interaction between scholars to facilitate the study of a process that in the eyes of all attendees is clearly much more complex and varied than hitherto thought. Accordingly, and after consulting with colleagues from different institutions, it was decided that the next meeting would be held in Zagreb (Croatia), in 3–4 years.

In addition, all the conference attendees were given free access to the exhibition “The Neolithic Revolution. La Draga, the hamlet of wonders,”<sup>6</sup> which was displayed at the CSIC Residence of Researchers in Barcelona until 17 November 2019.

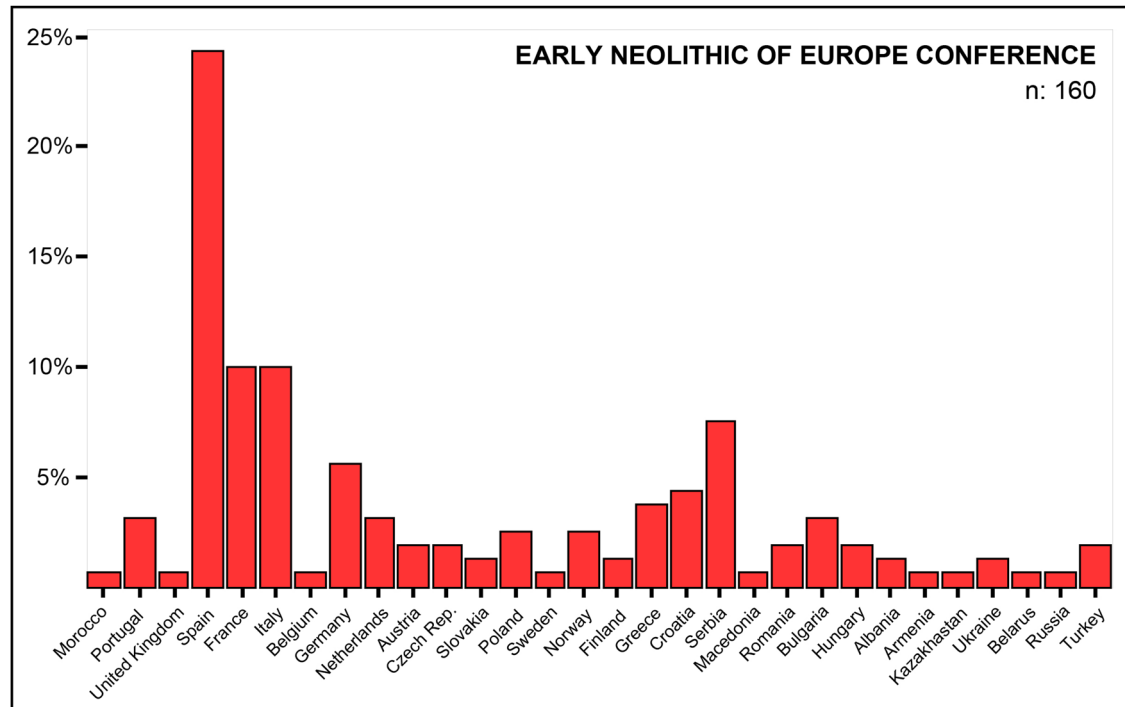
### 3 Publication in *Open Archaeology Journal*

During the preparation of the conference, it was decided that all participants would be given the possibility to publish their contributions as part of the publication process of the conference proceedings. After a meeting with Katarzyna Michalak from *Open Archaeology*, it was decided that the publication of the contributions would take place in that journal, a peer-reviewed open-access journal published by De Gruyter. The characteristics of the journal: open access and a systematised submission method (Editorial Manager) and a strict external peer-review system, guaranteed the high-quality publication of the conference proceedings and the wide free availability and dissemination of the results.

The publication of the conference proceedings has obviously been delayed by the emergence of the COVID-19 pandemic soon after the meeting in Barcelona, affecting both authors and the editors in multiple ways. In certain cases, it has unfortunately impeded the publication of some of the contributions presented at the meeting. However, in spite of all difficulties, a total of 52 articles have been finally published in this journal as a Special Issue titled “The Early Neolithic of Europe,” with most papers appearing in Volume 7, Issue 1 (2021) and a few, including this editorial, in Volume 8, Issue 1 (2022). All of them are available on

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<sup>6</sup> La Draga is a unique waterlogged Early Neolithic site in northern Catalonia (Spain) dating to around 7400 years ago where many well-preserved implements and utensils in wood and other organic matters have been found.



**Figure 3:** Breakdown by countries of the geographical regions covered by both oral and poster presentations given at the Early Neolithic of Europe conference.<sup>7</sup>

the publisher (De Gruyter)'s website (<https://www.degruyter.com/journal/key/opar/7/1/html> and <https://www.degruyter.com/journal/key/opar/8/1/html>).<sup>8</sup> All papers were reviewed by two external referees and in case of strong disagreement between them, two more were contacted.

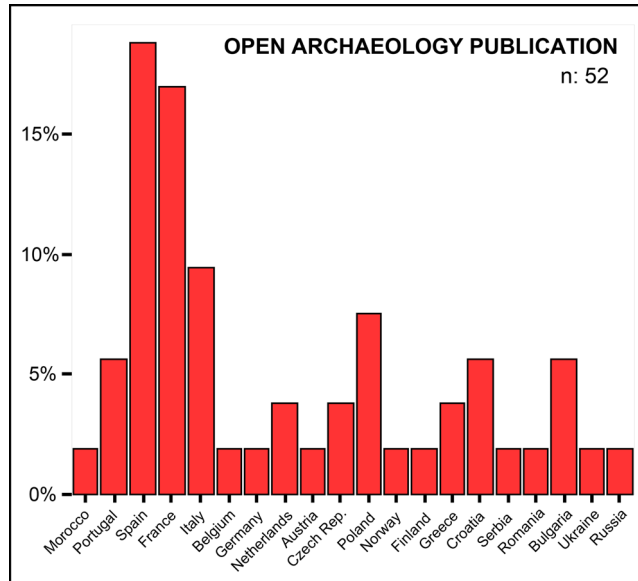
Despite the significant reduction in the number of published contributions compared to the total oral and poster contributions presented at the meeting, the special issue retains both the geographic (20 countries) and thematic diversity that characterised the meeting in Barcelona (Figure 4) and which can be considered one of the main outcomes of the conference and, accordingly, the publication.

## 4 Concluding Remarks

The general feeling during and after the Barcelona meeting is that, with the effort of both organisers and participants in the conference, we had succeeded in creating a most needed and stimulating medium for academic debate and exchange of information between scholars who, given the wide geographical and chronological span of the conference topic (Early Neolithic of Europe) and its complexity and diversity, might not have met (and debated) easily otherwise. Both the presentations and the articles finally published constitute an impressive sum of new data, new approaches, new ideas and, obviously, new problems to solve, which, as already indicated by Perlès (2020) immediately after the conference, indicate a renewed evaluation of the old question of how the complex transformations at the transition from the Mesolithic to the Neolithic in Europe can be explained. In this sense, the presentations and articles highlighted the

<sup>7</sup> In the case of those articles/studies covering wide regions that included more than one country, we have counted only the country better represented (e.g. more sites, larger area, larger assemblages and more samples). In addition, the few theoretical articles not related to any geographical region of Europe, in particular, have not been included in the chart.

<sup>8</sup> See Supplementary Material for the full list of the Special Issue articles, <https://doi.org/10.1515/opar-2022-0234>.



**Figure 4:** Breakdown by countries of the geographical regions covered by the presentations finally published in the journal *Open Archaeology*.<sup>9</sup>

complexity of the processes at work in the spread of the Neolithic “way of life” in Europe as well as the diversity of economic bases, their relationship with the different environments and symbolic behaviour. In fact, there is little doubt that the Neolithisation of Europe is better understood as a process of processes. In addition, the conference and articles have made clear that some of the classic concepts, such as the “Neolithic Package,” should be rethought, deconstructed or, paraphrasing Perlès (2020), “unpacked.” as they can scarcely encompass the rich cultural and economic mosaic revealed by the ever-increasing evidence coming from each corner of the continent. Other concepts, such as the “Wave of Advance” need to be refined and complemented with detailed data from regional and local studies that indicate that, behind the main east–west process of diffusion, lay an extremely complex process involving a series of waves of advance, in several directions, with some gaps (leapfrogging) and some retreats and failures. It is thus clear that the process was not always in all regions the result of a gradual, homogeneous and progressive process. These and other major topics such as the forms of interaction between farmers and hunter-gatherers, the role of local populations in the dissemination of the Neolithic way of life in particular regions or the demic contribution of Near-Eastern colonists to the neolithisation of the continent, were also debated. In this way, the conference generated an overview of the current state of research and provided useful starting points for future research, as these challenging and unanswered questions will continue to be addressed during the next decades, hopefully at the next venues of the Early Neolithic of Europe Conference.

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<sup>9</sup> In the case of those papers/studies covering wide regions that included more than one country, we have counted only the better represented country (e.g. more sites, larger area, larger assemblages and more samples).



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