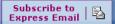


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A weekly briefing on European Research & Innovation

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## **Admiring Neolothic civil planning**

Civic space planning policies and local zoning regulations are about the last thing that one would think of when asked about Neolithic-age Europe.

A recent study, though, says that a roughly equivalent system functioned thousands of years ago and had a significant impact on how and when Europe was settled.

Neus Isern and Joaquim Fort from the University of Girona in Spain studied the expansion of Neolithic populations and how hunter-gatherers eventually transformed into settled farming communities. This transition is important, since it marked the beginning of the Neolithic age.

These days, if someone wants to build a recycling depot or Taiko drum school next to your home, there's probably a



regulation or two controlling how the owner of that property can and cannot use it. There are also mechanisms where you, as a potential neighbour, can object or make your feelings known.

So, what does that have to do with hunter-gatherers who most likely didn't live in a modern duplex or condominium style dwelling? Quite a bit. To understand why, you need to look further back in time.

Agricultural – or Neolithic – economics replaced the Mesolithic social model of hunter-gathering in the Near East about 10,000 years ago. One of the most important socio-economic changes in human history, this shift – known as the Neolithic transition – spread gradually across Europe until it slowed down when more northern latitudes (what is now Scandinavia, the UK and so one) were reached. The researchers looked at available data on how this transition occurred and then constructed a mathematical model.

The study findings confirm archaeological data, which show that the slower northward spread of farming communities was not, as often assumed, the result of crops needing to adapt to chillier climates, but indeed a consequence of the struggle for space with prevalent hunter-gatherer communities. With a little imagination, it's not hard to see how this would have played out.

Take an imaginary couple, Zogg and Wanda Neo. Zogg wants to cut the forest to make a field for growing barley. Maybe later he can even use it as the site for a discount store targeting other middle class, hut-dwelling consumers in the area. Zogg and Wanda's more nomadic neighbour, Ogg Hunt, might object. He wants the land for hunting deer, boar, stoats, goats, shoats and (especially) rabbits. It's not likely that Ogg will go lobby the local city council to oppose Zogg's zoning change request. Instead, he may just drop a rock on Zogg, hoot loudly until he goes away or repeatedly hit him with a stick.

That's an effective barrier to Zogg's business ambitions, and could well be why many parts of northern Europe remained hunter-gatherer societies much longer than places further south.

The researchers' model could have other applications, such as being used for further physical modeling of historical socio-economic transitions. The researchers note that it 'could be applied to many examples of invasion fronts in which the indigenous population and the invasive one compete for space in a single biological niche, both in natural habitats and in microbiological assays'.

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