



Felling dates reveal regional variations in European building activity during times of crisis

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Past variations in building activity indirectly reflect historical changes in demography, economics, and social conditions. Construction rate declines are a sensitive indicator for the onset of a crisis as new constructions are dispensable in a time of hardships. However, prior to the eighteenth century variations in European building activity are poorly documented. Fortunately, large datasets of dendrochronologically dated felling dates from historical construction timbers permit the study of past construction rates in time and space. Using close to 50,000 precisely dated construction timber felling-dates, originating from archaeological investigations of buildings across much of central Europe, we recently established a new detailed history of European building activity between 1250 and 1699 (Ljungqvist et al. 2018). This study allowed us to conclude that: (a) lower building activity coincided with periods of more plague outbreaks and/or higher grain prices, (b) the start of the Late Medieval Crisis is evident in a significant decline in construction activity at c. 1300 – thus preceding the Black Death (1346–1353) by five decades, the Great Famine (1315–1322) by two – and lasting till c. 1415, and (c) an unprecedented decline in European building activity occurred during the Thirty Years' War (1618–1648). We demonstrated how the quantitative analysis of construction timber felling dates provides both new insights into periods of crisis and prosperity and help to validate the impacts of past crises recorded in written sources. However, we left the spatial dynamics of past European construction activities to be explored in a future study. Here, we present a geographically much expanded network of felling dates as well as analyse the regional differences in the timing and duration of the Late Medieval Crisis and the regional impacts on building activity of the Thirty Years' War and other major armed conflicts.

Reference:

Ljungqvist, F.C., Tegel, W., Krusic, P.J., Seim, A., Gschwind, F.M., Haneca, K., Herzig, F., Heussner, K.-U., Hofmann, J., Houbrechts, D., Kontic, R., Kyncl, T., Leuschner, H.H., Nicolussi, K., Perrault, C., Pfeifer, K., Schmidhalter, M., Seifert, M., Walder, F., Westphal, T., and Büntgen, U. 2018: Linking European building activity with plague history. *Journal of Archaeological Science*, 98: 81–92.