



BOOK REVIEW

C. Pfister and H. Wanner, *Climate and Society in Europe. The Last Thousand Years*

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Climate and society in Europe is a book that is already an essential milestone in climate historiography for the decades to come. It is the first synthesis since Le Roy Ladurie (1967) to cover the last millennium. Christian Pfister – leader of a whole generation of climate historians – and the well-known climatologist Hans Wanner have combined their skills to write this imposing synthesis richly illustrated, aimed at specialists and the curious public alike. These two experts in the history of the climate, who demonstrate a high degree of scientific seriousness when dealing with the ‘big story’, skilfully keep the reader’s interest alive by telling ‘little stories’ on a more human scale, such as the story of Ötzi, the ‘ice mummy’ (chapter 2).

The two authors, who come from two different scientific cultures, succeed in showing how their specific disciplinary approaches – the social sciences and climatology – reinforce each other to better understand climate change and its consequences on human life. Above all, their synthesis does not seek to circumvent the risks inherent in the history of climate – the risk of climatic determinism – and, on the contrary, shows that while climate does not make history, it is necessary to contextualise the periods studied precisely in all their political, economic, and social complexity to better measure the relative weight of climate on human affairs. The results presented in this book are based on Pfister’s indices (<https://boris.unibe.ch/191962/>), which are available from the year 1000 onwards and enable temperatures to be reconstructed on a seasonal scale. This long-term temperature reconstruction is systematically compared with other series, mainly derived from natural archives, notably on the advance and retreat of major glaciers.

The precision of Pfister’s (seasonal) indices enables this work to clarify the contours of the Little Ice Age (LIA). Winters were rather cold from the year 1000 to 1900. For this season, there is no trace of a Medieval Climate Anomaly. The same applies to summers, which were quite cool during the twelfth century, when the glaciers were advancing. On the other hand, the high frequency of warm summers is clearly noticeable in the thirteenth century: a phenomenon that is unique until the current period of rapid warming, which began after 1988. Between 1314 and 1323, there was a temporary period of cool, wet summers, before warmer summers resumed in 1324.

The Little Ice Age didn't really begin until the 1340s, with two catastrophic summers in 1346 and 1347, on the eve of the Black Death. The frequency of cool springs is remarkable in the fifteenth century. Summer temperatures were more balanced after 1500, with known hot and cold fluctuations appearing on a decadal scale.

The impact of climate on societies is considered in all its complexity, taking into account as many factors as possible, starting with demographic development. Since there is little reliable, serial data prior to the end of the sixteenth century, the argument here is rather speculative – and presented as such – for earlier periods, which does not prevent it from being scientifically rigorous. Impacts that are not climate-related, such as pandemics and epidemics like the plague and wars, are carefully considered. The result of this multifactorial approach is that, from the 1170s onwards, the demographic boom in Europe's population, while evolving in line with the temperatures of the summer half-year, was also based on major land clearance and the introduction of new technologies (the heavy plow, the shoulder collar for horse-drawn plow teams) and farming methods (three-year crop rotation). The end of the demographic boom is very clear in France and Germany around 1300 but does not seem to be related to climate. Historians are still investigating this phenomenon. Between the end of the fifteenth century and the 'hyper-LIA' after 1570, the demographic boom is better documented. During this period, it seems that land clearing and new technologies and farming methods played little or no major role. This suggests – retroactively – that climate may also have been a major factor in the thirteenth-century boom.

The two authors also consider the subsistence crises of the last millennium. Their investigation shows that the Great European Famine of 1315–1317 was triggered by climatic extremes that have not recurred since. In pre-industrial times, social vulnerability, particularly in times of subsistence crises, was exacerbated by the taxation system, i.e. the levying of tithes on gross agricultural production. After 1750, the Agricultural Revolution and its innovations significantly reduced social vulnerability and seem to be at the root of the demographic growth that began in Europe.

The book concludes with a presentation of the trends that have led to the current situation. The authors distinguish between a period of slow warming, from the Belle Epoque to the 1950s, which put an end to the LIA and thus had a rather favourable impact on societies. The current period of rapid warming, on the other hand, was triggered by a wave of cheap oil from the Middle East, which flooded world markets after 1988.

In their book, the authors take a precise and rigorous look at the relative weight of climate on human affairs. They never resort to generalisations or oversimplifications, and show a climate that accompanies, amplifies, or restricts, developments of purely societal origin. Before the Industrial Revolution and the ability to dilute local or regional subsistence crises through larger-scale exchange, pre-industrial societies – agrarian and subsistence economies – were constantly vulnerable to the climate, but without its weight being overwhelming. Today, our societies are faced with a radically different return to vulnerability, which calls into question our energy model and highlights the glaring inequalities in human development.