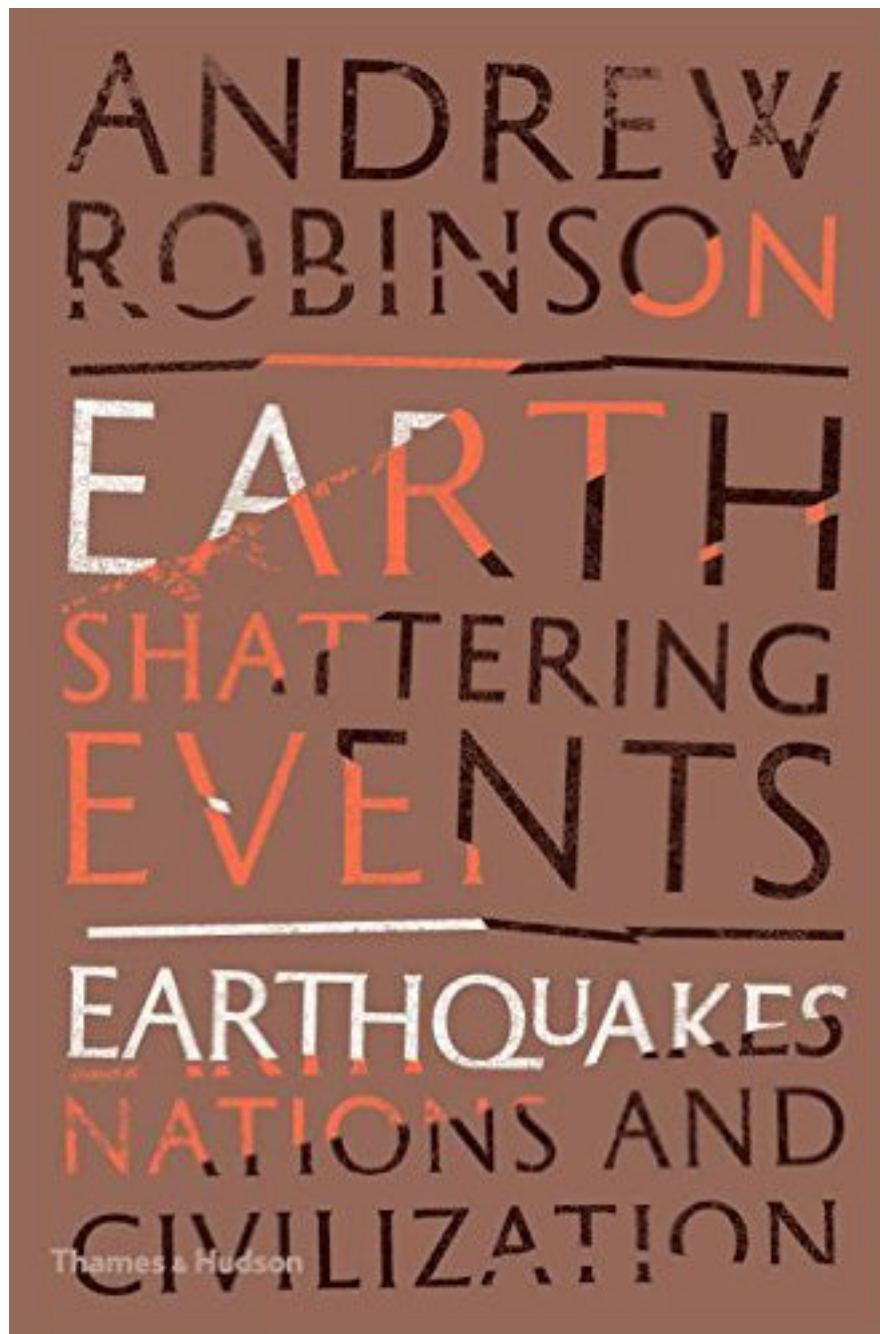


Seismic shifts in history

Physics World reviews *Earth-Shattering Events: Earthquakes, Nations and Civilization* by Andrew Robinson

In 132 AD the Chinese court mathematician and astronomer Zhang Heng ordered the construction of a curious instrument. The device (now sadly lost) incorporated eight dragon heads, eight squatting toads and a set of heavy brass balls. Its purpose was earthquake detection: distant tremors would cause one or more balls to fall from the dragons into the open mouths of the toads, creating a noise that would alert the authorities and (in theory) indicate the direction of the shaking. The story of Heng's seismometer is one of many gems in Andrew Robinson's book *Earth-Shattering Events: Earthquakes, Nations and Civilization*. The book is organized as a series of case studies on specific earthquakes, from the 1755 shock that devastated Lisbon, Portugal to the 2011 Tōhoku earthquake off Japan's north-east coast. In each case, Robinson – a veteran author equally at home with history and science – draws on previously published accounts to summarize what happened, and to analyse the earthquake's effect on the country that experienced it. Individually, these case studies make vivid reading, and collectively they tell a fascinating story about how seismology developed as a science. However, the author's broader goal is to explain how earthquakes have influenced the course of human history, and occasionally, this ambitious effort leads him – if you'll pardon the pun – onto shakier ground. One of Robinson's arguments is that historians and archaeologists tend to ignore or downplay the role that earthquakes play in initiating political change. Yet as his own case studies show, even when major tremors do spark significant changes (and they often don't), the nature of those changes is highly dependent on long-term sociopolitical trends. With such weak evidence of causality and few clear rules, it's hardly surprising that historians prefer to focus on other things (including, of course, long-term sociopolitical trends). The bottom line is that if predicting earthquakes is hard, predicting their effects on the grand sweep of history is nigh-on impossible – although as this very entertaining book shows, it can still be interesting to try.



Earth-Shattering Events: Earthquakes, Nations and Civilization

Andrew Robinson

2016 Thames & Hudson £18.95hb 256pp