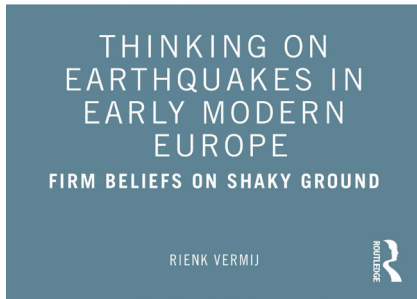


Review

Rienk Vermij, *Thinking on Earthquakes in Early Modern Europe. Firm Beliefs on Shaky Grounds*, London, Routledge, 2020, 266 pp., ISBN 9780367492182.



The early modern Low Countries rarely experienced an earthquake, yet contemporaries eagerly read news about foreign earthquakes. As early as 1542, two pamphlets were published concerning earthquakes in Italy in 1538 and 1542. In 1580, while the northern territories already experienced turbulent times, an earthquake hit this region. Although no pamphlets or other printed news remain, chroniclers frequently mentioned the tremors they felt. Clearly, people were aware of earthquakes, but how did they make sense of them? In his new book, *Thinking on earthquakes in early modern Europe*, Rienk Vermij, professor of the history of science at the University of Oklahoma, has tried to answer this question for early modern Europe. Vermij focuses on knowledge production among scholars, as well as on societal ideas at large. This has resulted in a fascinating study that unearths how contemporaries

felt and thought about earthquakes as well as other natural phenomena.

In his introduction, Vermij explains why earthquakes are worth studying. In contrast with the study of other natural phenomena, the study of earthquakes did not make much progress. Only in the nineteenth century did scholars achieve breakthroughs in this academic field. As Vermij notes, this ‘allows us to study the formation of theories without our view being troubled by notions of “progress”. Earthquakes are therefore ideally suited for a historical case study of knowledge production’ (3). Vermij uses three ideas to underpin his research. First, because he explicitly wants to study knowledge production within its original context, he moves away from the artificial divide between science and religion. He instead coins the term ‘confessionalized science’ to characterise much of the sixteenth and seventeenth century. Secondly, Vermij does not limit his analysis to a ‘discussion of

ideas as they were formulated as a part of some philosophical programme' (4), but includes ideas on earthquakes as they 'were put to use by the clergy in addressing the common populace, in the form of pamphlets, sermons, and histories' (6). Lastly, Vermij discusses the demise of 'confessionalized science', brought about by at least three factors: changing notions of research, changing religious landscapes, and, most important according to Vermij, 'shifting standards of communication among merchants, sailors, administrators, and others' (7).

The book consists of three parts, ordered chronologically. Part one deals with the state of knowledge at the beginning of the sixteenth century, taking into account classical scholarship on earthquakes as well as scholastic studies. Vermij also acknowledges that 'in the end, the notion of earthquakes went back to real experiences and observations; experiences that never failed to make a deep impression' (37), and so he also discusses histories and pamphlets as sources of knowledge. He completes this part with a survey of Renaissance scholarship on earthquakes.

In the book's second part, Vermij's argument really takes off, as he discusses how religion and science were inextricably interwoven in both Protestant and Catholic countries. It is this part that lays the groundwork for the notion of 'confessionalized science'. Vermij starts by highlighting how Protestant thinkers moved away from scholastics and how the 'Protestant Reformation would harness natural learning into the service of the new Churches' (67). However, the emergence of a 'science of signs' could also occur among Catholic scholars. The last three chapters of this part focus on ideas and experiences in society instead of academia. In the sixteenth century, Vermij still sees a clear divide between southern (Catholic) Europe and northern (Protestant) Europe. Italian reactions to the earthquake of Ferrara (1570), for instance, were mostly inspired by humanist thought, while reactions to the earthquakes in the streets of Dover (1580) and Vienna (1590) were essentially religious in nature. Vermij rightfully admits that we also 'have to take into account the difference in genres' (128) of the source materials, since for 1570 he mostly looks at humanist dialogues, while for 1580 and 1590 pamphlets and sermons are more important.

In the book's third and final part, Vermij discusses the decline of this 'confessionalized science' at the end of the seventeenth century. Just as its rise should be understood from its social and political conditions, 'we likewise have to look at this wider context' (157) to understand this next stage. New information from the colonies and new media, such as the newspaper, put the focus on economic and physical outcomes of earthquakes. This development paved the way for the 'new empiricism' in the sciences. Scholars now started collecting data to understand 'the constitution of the earth and the origin of mountains' (167). As the physical world gradually became more important than divine providence, new theories and methods of data collection followed suit. The response in religious circles differed: whereas Jesuits embraced the new ideas without abandoning their religious goals, Protestants were more divided. 'Some enthusiastically embraced the new philosophical ideas, but others tenaciously clung to traditional views' (185). In the course of the eighteenth century, the new 'physico-theology', with its attention to nature as God's creation, took hold in both Catholic and Protestant academic circles. Vermij concludes that as a result of the demise of 'confessionalized science' the reactions to earthquakes became

more fragmented, ranging from orthodox ideas about divine wrath to a focus on facts collected by the new empiricists.

Although the title suggests otherwise, Vermij's work does not focus on earthquakes alone. Instead, he takes into account a wide range of natural phenomena that according to contemporaries were related, grouped together under the name *meteors* and studied by *meteorology*. This included earthquakes and volcanoes, but also comets and visions in the sky. By including these events, Vermij presents a more complete picture of ideas on earthquakes than would otherwise be possible.

Vermij's attention to the political and social use of ideas about earthquakes and related phenomena is fascinating. The different confessional sides appropriated these natural events to strengthen their own ideas, for example by interpreting these events as portents – divine messages about future events. The problem was that in previous centuries scholarship had tried to move away from the study of portents and emphasised the laws of nature. In the early sixteenth century, both Protestants and Catholics searched for a new philosophical framework to explain earthquakes, comets, and other meteors as portents (76). Divine messages could then be interpreted along confessional lines. This perspective – the interpretation of disasters to further one's own agenda – proves fruitful and deserves more attention in disaster studies as well as the history of science.

As far as the Low Countries are concerned, Vermij mentions them only rarely in the first two parts, especially when compared to Germany or Italy. He mostly discusses the Low Countries in the final part of his book, as an explanation for the demise of confessionalized science. Dutch overseas merchants as well as newspapers played an important role. Stories about earthquakes in the newly discovered lands did not fit the existing explanatory framework, partly because these reports were written by merchants rather than clergymen. This resulted in a concern 'with the economic consequences of the event', while they were 'often completely silent about the religious aspects' (159). Moreover, since it was more difficult to highlight human vicissitudes and experiences, reports on earthquakes outside Europe 'focus more on the physical point of view' (161).

This development coincided with the emergence of new forms of print. Merchants and public officials wanted more factual information and so, '[b]y the end of the seventeenth century, there emerged a new print medium to serve their ends: the periodic newspaper' (161). These (mostly Dutch) newspapers created, according to Vermij, 'an image of the world consisting of useful facts, rather than moral and biblical values' (161). That earthquakes were no longer seen through the perspective of providence has more to do with the changing demands of news media than the emergence of new ideas.

The Low Countries are therefore an important part of Vermij's argument. Merchants overseas, their concentration on facts, and the emergence of a non-religious news medium are important developments that led to the demise of confessionalized science. Vermij's perspective could be an innovation for the history of science, but for the history of news it presents some weaknesses. The first has to do with chronology. The newspaper did not arrive at the end but at the beginning of the seventeenth century. Dutch newspapers were published from 1618 onwards, and already in the first half of the seventeenth century they reported on earthquakes and other natural phenomena. Secondly, historians of newspapers have repeatedly shown that newspapers were not neutral, but also foregrounded

beliefs and partisanship in their choice on what to report and on how it was reported.¹ Finally, Vermij seems to attribute to newspapers a leading, if not exclusive role in spreading and explaining the news. This is to ignore that pamphlets and sermons remained important news media, in which religious explanations still dominated – see for example a Dutch pamphlet on the Jamaican earthquake of 1692, *Ampel en breed verhaal van de jongst-gewesene aardbevinge tot Port-Royal in Jamaica*.

In short, Vermij offers a fascinating study on confessionalized science and the study of earthquakes. His sensitivity to the political and social use of earthquake explanations is commendable and a welcome addition to disaster studies. His intention to also look at explanations among the wider populace and his inclusion of different media are innovative for a history of science. However, the dating and reasons for the demise of this confessionalized science lacks refinement that might be offered by historians of news.

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¹ Michiel van Groesen, '(No) News from the Western Front. The Weekly Press of the Low Countries and the Making of Atlantic News', *The Sixteenth Century Journal* 44 (2013/3) 739-760; Helmer Helmers, 'Public Diplomacy in Early Modern Europe. Towards a new history of news', *Media History* 22 (2016/3-4) 401-420.