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**Book review of: Klaas van Berkel, Isaac Beeckman on Matter and Motion: Mechanical Philosophy in the Making (Baltimore: Johns Hopkins University Press, 2013). viii p 266 pp. \$39.95**

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*Isaac Beeckman on Matter and Motion: Mechanical Philosophy in the Making.* Klaas van Berkel.

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In 1983 the Dutch historian of science Klaas van Berkel (nowadays Rudolf Agricola Professor of History at the University of Groningen) finished his PhD dissertation at Utrecht University, entitled *Isaac Beeckman (1588–1637) en de Mechanisering van het Wereldbeeld*. It was an impressive study, presenting the first analysis of the life and work of a Dutch scholar from the early stages of the seventeenth century. Its subject, Isaac Beeckman, left a great manuscript with notes and diary entries from the period of 1604 to 1634. It included innovative thoughts on almost all natural-philosophical issues that were discussed in the early seventeenth century. Beeckman's logbook was filled with observations, experiments, contemplations, drawings, notes of conversations, and letters exchanged with contemporary scholars. During his life, Beeckman developed original ideas about the structure of the universe, based on the concept that all things in the world consisted of matter in motion. It was these ideas that deeply influenced Descartes, and later also Gassendi.

In 1644 Beeckman's brother Abraham posthumously published only a very short selection of the manuscript in the booklet *Mathematico-Physicarum Meditationum, Quaestionum, Solutionum Centuria*. Had this been all, we probably never would have heard much about Beeckman. His major importance only became evident in 1905, after his original notes were discovered in a Dutch library. In the years from 1939 to 1953, the lucky discoverer, Cornelis de Waard, edited and published the *Journal tenu par Isaac Beeckman* in four volumes. Although it was obvious from the earliest moment of discovery of Beeckman's *Journal* that he had been very influential in the development of Descartes's ideas on natural philosophy (the two scholars met in 1618 and stayed in contact after that date), Beeckman's notebook was never studied in full and within its cultural context. Therefore, Van Berkel's 1983 study was welcomed as an important contribution to the history of science. Reviews of the Dutch edition appealed for an English translation, in order to bring Van Berkel's study to the attention of a wider audience. However, one had to wait three decades before this intention was realized.

The advantage of this long delay is that the present English book is much more than a verbatim translation of the 1983 Dutch edition. Thirty years of scholarship has been added to the volume, giving it a deeper understanding of Beeckman's importance. And — according to Van Berkel — this importance is indeed not to be underestimated. In fact, he calls Beeckman “in a way the missing link between artisanal knowledge and mathematical science” (4). As historical scholarship of the past decades has demonstrated, the scientific development of the seventeenth century owes much to the mingling of scholars and craftsmen. Because Beeckman was both a craftsman and a scholar, he can be regarded as a kind of prototype of this mingling, uniting both skills in one person. Educated first as an artisan by his religious father (a candlemaker and a pipelayer), Beeckman went on to Leiden University for a general education in the arts.

In 1610, he became an artisan himself, settling in the city of Zierikzee as a candlemaker and pipelayer. Through this work Beeckman acquired a practical expertise of hydraulics and engineering. However, in 1612 he went to a Protestant university in the French Saumur for an education in theology, being examined by the Dutch church officials the next year. But instead of settling as a Protestant minister, Beeckman continued his artisanal work, in the meantime educating himself in medicine, in which field he obtained a degree in 1618 during a short stay at the University of Caen. Shortly thereafter, Beeckman met Descartes in Breda, in a meeting that started their exchange of ideas on the mechanisms of the natural world. Eventually, Beeckman embarked on a career in education, successively in Utrecht and Rotterdam, and from 1627 onward as rector of the Latin school in Dordrecht, where he died in 1634.

In the present book Van Berkel succeeds in revealing the context as well as the content of Beeckman's life and scholarly work. The background of the young Dutch Republic is sketched as a breeding ground for new ideas. Van Berkel not only sorts out the details of Beeckman's new views regarding natural philosophy; he also demonstrates how intertwined Beeckman's religious convictions and artisanal background were, and how these motives and skills were a prerequisite for the development of his philosophy. He also analyzes the decisive influence on Beeckman's way of reasoning in the educational philosophy of the sixteenth-century French philosopher Peter Ramus, pointing to the Leiden professor Rudolph Snellius as an important source of this Ramist body of thought. In short, Van Berkel's new book is an important contribution to the history of the new science of the seventeenth century, and is a must for every scholar of this period.

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