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Review of:

Mgr. Jan Čížek, Ph.D., Raně novověká mosaická fyzika a její komeniánští pokračovatelé (habilitation paper, University of Ostrava, Czech Republic)

Jan Čížek's habilitation paper is competently written. It is based on a convincing choice of historical sources, a sound method and rich knowlegde on early modern intellectual history. There is no doubt that it will substantially enrich the scientific discourse.

The **subject** is well defined in both philosophical (theological) and historical terms. Philosophically and theologically, mosaic physics is a theory that deals with the visible world and is derived primarily from biblical sources. In this framework, the visible world can be related to invisible aspects of the world, such as separate substances, and the biblical sources can, to some extent, be subject to allegorical interpretation or correlated with other sources of knowledge, such as natural rationality or sensory experience. Historically, mosaic physics stands as an alternative to Aristotelianism. However, this alternative tends to be more radical rhetorically than conceptually. This definition proves efficient in the analyses brought forward by the author.

Further, the author presents a well-defined *corpus fontium*. 'Early modern mosaic physics' refers to the main works of Francisco Vallés, Lambert Daneau, Levinus Lemnius, Thomas Lydia, Cort Aslakssøn and Otto Casmann, whom the author calls the 'founding fathers'. Their 'Comenius followers' are Jan Amos Comenius, Johannes Bayer and Johannes Sophronius Kozák. While the selection of sources is perfectly clear, this reviewer found it difficult to understand the deeper reasons behind it. Only in the last chapters of the thesis, through the cited sources and research literature, the author's decision became understandable. It was Comenius himself who listed the above mentioned authors as 'founding fathers' of mosaic physics, and his choice was followed by researchers such as Ann Blair (2000) and the author. This pragmatic approach is a good decision, but two points should be considered. First, the Comenian background needs to be made clear at the beginning of the book. Second, it would be helpful to at least mention the further contexts of mosaic physics, i.e. the interferences between theology, secular models of knowledge and physics in the various confessional communities and their academic institutions. The author presents Alsted, but there is more to pondered. Sascha Salatowsky has rightly displayed 'confessional physics' as a major phenomenon appearing in a wide variety of sources, e.g. theological lectures, interpretations of the works of leading authorities of Catholic, Calvinist, Lutheran,

anti-Trinitarian and other churches of the 17th century. Obviously, such a broad context cannot be discussed in a paper dealing specifically with the above-mentioned 'founding fathers' and their Comenian followers. However, given the inclusive title of the book, this context would be worth a few pages in the printed version.

That said, the overall **structure of the book**, as well as the **analytical approach** and **conclusions**, are convincing. The **language** is concise and there are only very few errors (e.g. 'rationatio' instead of 'ratiocinatio', p. 24; 'caussaliter' instead of 'causaliter', p. 33; 'allis' instead of 'aliis', p. 70; superfluous articles before the nouns and some minor grammatical inaccuracies in the German quotations, p. 106). In the **analytical** lawyer, the author compares the main cosmological elements and their roots in the biblical chronology of creation, i.e. the six days mentioned in Genesis. The author builds a clear picture of the similarities and differences between the representatives of Mosaic physics by indicating the main historical sources of these elements (the Bible, Greek natural philosophy, Paracelsian and alchemical thought, early modern natural science). Importantly, the author provides a brief but essential analysis

of the use of Aristotelian motifs in Mosaic physics.

The result allows valuable **conclusions** to be drawn. Among these, this reviewer particularly appreciates the author's cautious approach to the modern dualistic paradigm of science and faith (or science and pseudoscience). This cornerstone of modernity becomes a distortion when applied directly to early modernity. Despite the fact that Popper, Blumenberg, Casirer and others have extensively explained the problem, researchers still tend to underestimate one of the most typical features of early modernity, i.e. the extremely wide range of possible approaches to scientific problems, including biblical literalism, alchemy or poetry. The author rightly stresses that these motifs contributed significantly to the transition from the Aristotelian to the Baconian-Newtonian model of physics. What seems absurd from the point of view of modern science, e.g. the chronology of origin of the elements within the six days of creation, is anything but a simple remnant of 'medieval' biblicism. Rather, it involves a wide range of a priori problems that could not be solved by Aristotelian methods. Mosaic physics both delayed and accelerated the transition to the new paradigms of physics. While opposing 'worldly' physics, it increased the pressure on mixed Aristotelian-Christian physics. Thus, mosaic physics deserves a place not only in the history of the 'dead ends' of early modernity, but also in the history of modernity.

In conclusion, 'Raně novověká mosaická fyzika a její komeniánští pokračovatelé' provides a scientifically sound, well-documented and instructive analysis of one of the essential (if often overlooked) aspects of early modern intellectual history.

awarded the title of 'lecturer' (in Czech language: 'docent').	
Cracow, 4 September 2023	

The book clearly meets the requirements for a habilitation paper, and the author deserves to be