CHAPTER FIVE

THE CARTESIAN CONTROVERSY:
MAGNIFYING DIVINE WILL

5.1 René Descartes (1596–1650)

While enlisted in the army of Prince Maurice of Orange, the young soldier René Descartes was encouraged by the Reformed mathematician and scientist Isaac Beeckman to express his mathematical genius.\(^1\) Not long after solving complex mathematical problems and developing the basics of analytic geometry, Descartes came to believe that all sciences could be reformed by adapting geometrical or mechanical principles.\(^2\)

Surprisingly, Descartes did not develop his mechanistic worldview primarily by a description of natural phenomena in mathematical formulae and rules, but by deducing a new unified physics from a metaphysical foundation.\(^3\) The knowledge of God and the self, which is central in this metaphysics, results in clear ideas of the mathematical truths, from which the entire physics can be deduced:

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\(^1\) For Descartes' life, see Stephen Gaukroger, *Descartes: an Intellectual Biography* (Oxford, 1995). Present research generally situates Descartes’ central concerns in natural philosophy instead of older interpretations of his philosophy as an epistemological quest for certainty against the skeptics. Consequently, the designation as the father of Modern Philosophy seems a rather post-Kantian reconstruction. Descartes is now often portrayed as one of the great pioneers of the Scientific Revolution of the seventeenth century, although there is a vast difference between his deductive physics and the experimental work of Galileo, Huygens, and Newton.

\(^2\) It is not entirely clear when this conviction took hold, but according to his own *Discourse*, Descartes discerned during the winter of 1619 that he should extend the certainty of geometry to the other sciences, René Descartes, *Oeuvres de Descartes*, ed. Charles Ernest Adam and Paul Tannery, 11 vols., Nouv. ed. (Paris, 1996), 6: 19–21, *The Philosophical Writings of Descartes*, ed. John Cottingham et al., 3 vols. (Cambridge, 1984–91), 1: 119–22. These (Latin/French and English) standard editions of Descartes works are subsequently cited by volume and page number (abbreviating the editors) as AT and CSM(K). The third volume of the *Philosophical Writings* is compiled also by Anthony Kenny; wherefore this part is cited as CSMK.

The only principles that I accept or require in physics are those of geometry and pure mathematics, because all natural phenomena may be explained by their means, and enable us to provide quite certain demonstrations regarding them.4

The mathematical truths lay the foundation of physics and Cartesian metaphysics assures their certainty.5 Elsewhere, Descartes uses the more basic term “eternal truths” and includes logical, metaphysical, physical, and moral principles.6 Generally, all “clear and distinct” truths that are intuitively evident seem to be meant.7

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4 Principles of Philosophy 2.64: AT VIII, p. 78/ CSM I, p. 247. Descartes formulated the same conviction already around 1630 in Le Monde, “But I shall be content with telling you that apart from the three laws I have expounded, I do not wish to suppose any others but those which follow inevitably from the eternal truths on which mathematicians have usually based their most certain and most evident demonstrations,” AT XI, p. 47. The three laws mentioned by Descartes (the law of constancy of motion, the principle of inertia and his fundamental law of impact) are all based upon the immutability of God as first Cause. For the central place of the eternal truths in Descartes’ physics, see Margaret J. Osler, ‘Eternal Truths and the Laws of Nature: The Theological Foundations of Descartes’ Philosophy of Nature,’ Journal of the History of Ideas 46 (1985), 349–62, there 354.

5 The Discourse (1637), Meditations (1641), and Principles (1644) are all characterized by Descartes as metaphysics, although we might easily interpret them (at least the first two) as epistemological rather than ontological treatises. Although Descartes’ extrapolations on divine existence and the nature of the soul are intended to secure the truth of the clear and distinct ideas, this epistemological certainty is secured by metaphysical explorations. Gaukroger acknowledges Descartes’ early work in mathematics and science, but portrays his “metaphysical turn” as a reaction to the 1633 condemnation of Galileo and heliocentrism in general, which greatly shocked Descartes and led him to suppress his own physics, Gaukroger, Descartes (see above, n. 1), p. 292. Yet, Descartes wrote already in 1630 to Mersenne (AT I, pp. 145–6; CSMK, pp. 22–3) that he had begun his studies with the metaphysical task to know God and himself and in this way to found the foundations of his physics. Therefore, I suggest to link his metaphysical interest to his mathematical work, because the metaphysical foundation of his physics is given with eternal mathematical truths. See Descartes’ Letter to Clerselier, 12 January 1646 (AT IX–1, p. 213; CSM I, p. 275): “my critics here conjoin my physics with pure mathematics, which it is my deepest wish my physics should resemble.”

6 In his original physics Le Monde, Descartes seems to acknowledge the eternal truths as an underlying foundation for mathematical truths: “the eternal truths on which mathematicians have usually based their most certain and most evident demonstrations” (AT XI, p. 47). In the Principles of Philosophy, he lists some examples: “the proposition[s] Nothing comes from nothing, it is impossible for the same thing to be and not to be at the same time; What is done cannot be undone; He who thinks cannot but exist while he thinks” (AT VIII, pp. 23–4; CSM I, p. 209). For a complete survey, see Jean-Luc Marion, Sur la théologie blanche de Descartes: analogie, création des vérités éternelles et fondement, 2th ed. [Quadrige 135] (Paris, 1991 [1981]), pp. 270–1.