

Peter Machamer and J. E. McGuire. *Descartes's Changing Mind*.

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Almost two generations ago J. E. “Ted” McGuire first published his still-seminal work on Newton. Here he remains at the top of his game, presenting with Peter Machamer a comprehensive new interpretation of the mature system of Descartes. Although they work through Cartesian texts chronologically, Machamer and McGuire eschew the sustained reading of entire works, concentrating on juxtaposing passages concerned with metaphysics. Accordingly, they describe *Descartes's Changing Mind* as neither “contextualised history” nor “intellectual biography” (ix). Instead, it offers an intricately constructed, synthetic model of the mature Descartes as a “causalist” of the most systematic type, rather than an occasionalist or merely confused causalist. This purported Cartesian super system is argued to peek out from several portions of the *Meditations*, to mature slowly in parts of the *Replies to Objections*, and only fully to emerge in the *Principles of Philosophy*.

Machamer and McGuire depict the mature Cartesian causalist system as articulated along three axes: The first (chapters 2 and 3) runs from God vertically down to both material bodies and minds via Descartes's brilliant reconstruction of the doctrine of efficient causation of being (*causa secundum esse*), mainly developed out of the admirable late neo-Scholastic Suárez. The second (chapter 4) holds amongst material bodies, with the authors explicating their Descartes by maneuvering brilliantly amongst and beyond the best modern commentators on Cartesian causation, such as Schmaltz, Gabbey and Garber. The third axis (chapter 6) involves the special “substantial union” of each human mind and its unique body in the realms of sensation, emotion, the passions, and their tending, as developed in *Meditation 6*, the correspondence with Elizabeth of Bohemia and the *Passions of the Soul*. The entire causalist system was packaged in what McGuire and Machamer term the mature Descartes's “epistemic stance” (91–110, 134–57, 239–41). This involved

Descartes's "teleological and perspectivalist commitments" to the propositions that human knowledge is relative to what our survival demands and offers sufficient cognitive grasp to allow humans to do what the authors habitually and anachronistically call "science".

Cartesian scholars attuned to intellectual biography or contextualised history, and whose specialties reside in history of medicine, physiology, mathematics, natural philosophy, mechanics, or optics, will be impressed by this ingenious model of the mature Descartes. But, they may well wonder what is the historical point of this elaborate construction, and what insight it offers for their own historical work. After all, few Descartes scholars of historical bent doubt that his intellectual career, beginning in 1618, was characterized by many layers and types of change. Descartes's post-1640 struggles with the mind-body union, and his exploitation of it in the mid- and late '40s as the fulcrum for discussing ethics, psychosomatic medicine, and the nature and control of the passions, are consensually seen as a shifting, unfinished battle, conditioned by threats, opportunities, and concatenating unintended consequences. Machamer and McGuire purposefully ignore Descartes's struggles in the '40s, turning Descartes's conceptual contortions in *Meditation 6* and his later unresolved entanglements about the substantial mind-body union into the very touchstone of the mature "epistemic stance."

For similar reasons, the authors must ignore underlying continuities central to Descartes's corpuscular-mechanical natural philosophy, running from *Le Monde*, his first system in that field, to the *Principles*, his second. The almost complete overthrow of *Le Monde* is central to their view of the *Principles* as the first embodiment of the mature (total philosophical) system of Descartes. But, natural philosophy was the crucial field of activity for Descartes, and notable continuities marked his work. For example, in *Le Monde*, Machamer and McGuire need to see Descartes's corpuscular mechanics as grounded in God's causal activity of conservation rather than instant by instant recreation — the latter's emergence being for them a central plank in the mature system. They

ignore strong evidence that in *Le Monde* Descartes already had a “punctiform dynamics of micro corpuscles”, as Stephen Gaukroger and John Schuster (“The Hydrostatic Paradox and the Origins of Cartesian Dynamics,” *Studies in History and Philosophy of Science* 33 [2002]: 569–70) term it. The action of light was the exemplar for that dynamics. From 1620 Descartes believed he could literally see the instantaneously acting causes at work in well formed geometrical diagrams of sound results in optics (and in hydrostatics!). Here Descartes already had the instantaneous conjunction of cause and effect that Machamer and McGuire claim became essential to Descartes the mature causalist. Similarly, as I have recently shown (“‘Waterworld’: Descartes’ Vortical Celestial Mechanics and Cosmological Optics,” in *The Science of Nature in the Seventeenth Century*, ed. Anstey and Schuster [2005]: 35–79), Descartes’s vortex mechanics, the misunderstood engine room of his natural philosophy, both in *Le Monde* and in the *Principles*, depended upon this same punctiform dynamics. What Descartes did, over time, amid contextual challenges and self generated insights into problems, was variously to elaborate the metaphysics of cause meant to underwrite his punctiform dynamics, without ever announcing closure of the problem.

The kind of change of mind that Machamer and McGuire claim for Descartes can only be detected by synthetic, text hopping exercises aimed at revealing supposedly previously hidden, totalizing systems, not by historical study involving integral and holistic analyses of texts. These are not opposed approaches in some common field of evaluation. They are different scholarly games, serving different groups, values and ends. We may admire achievements in both domains, and seize useful cross-fertilizations; but, it is not advisable to mistake results in the one for results in the other.

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