

*"Beeckman's discrete moments and Descartes' disdain"*

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**Abstract:**

Descartes' allusions (in the *Meditations* and the *Principles*) to the individual *moments* of duration has for some years stirred controversy over whether this commits him to a kind of time atomism. In this paper I trace the origins of Descartes' way of treating moments as least intervals of duration to his early collaboration with Isaac Beeckman. Where Beeckman (in 1618) conceived of moments as (mathematically divisible) physical indivisibles, corresponding to the durations of uniform motions between successive impacts on a body by microscopic particles, Descartes was able to give a mathematical treatment of the problem of fall in which moments were rendered mathematical minima of motion that were necessarily devoid of extension. This achievement, coupled with his innovation of conceiving force as instantaneous tendency to motion, subsequently led him to disdain Beeckman's discretist physics with its extended indivisible moments. Nevertheless, I argue, he was not able to eradicate a fundamental tension in his philosophy between force (as a quantity of motion), and force as an instantaneous tendency to motion. For by his principles, action, motion, quantity of motion, and indeed existence, all require some minimal interval of duration. This explains his need to refer to moments as least conceivable parts of duration, and this is what has given rise to the impression that he supposed duration to be composed of such parts, contrary to his commitment to continuous creation.