

Kant's Admiration for and Disagreement with Newton

Katherine Dunlop

Kant holds Newton's scientific achievement in the highest esteem, but distances himself from Newton's thought in several respects. As is well-known, Kant rejects Newton's view of space as absolute; this rejection may explain the absence of Newton from Kant's most prominent discussion of physics' attainment of the "sure path" of science. Kant also charges Newton with failing to own up to his own metaphysical commitments regarding the immediacy of attraction and the necessity of attractive force for matter. Kant characterizes Newton's view of space and his matter theory as "mathematical", in contrast to the "metaphysical" approach Kant favors. These labels can be traced to the Leibniz-Clarke correspondence, and Kant appears more firmly committed to his approach in the case of space than of matter. Finally, Kant's engagement with Newton is shown to predate his Critical writings and to extend to Newton's optical and mathematical writings.

Keywords: *Kant, Newton, Space, Matter Theory, Hypotheses.*

1. Introduction

In both pre-Critical and Critical writings, we find Kant praising Newton's scientific achievement in the strongest terms. Kant writes in *Universal Natural History and Theory of the Heavens* (1755) that Newtonian philosophy gives incomparable insights into «the true constitution of the universe on the large scale, the laws of motion, and the internal mechanism of the orbits of all the planets», so that these inquiries into nature have been «resolved» with surpassing «accuracy and certainty» (1:229). And in the *Critique of the Power of Judgment*, Kant tells us that to «adequately come to know [...] organized beings and their internal possibility in accordance with merely mechanical principles of nature» would require «a Newton», who alone could succeed in explaining «even the generation of a blade of grass according to natural laws» (5:400). But as much as Kant admires Newton's theory of motion, his own "foundations" for physics diverge from Newton in ways that seem to reflect an opposing Leibnizian heritage. And on questions of metaphysics, such as the ontology of space and the essence of matter, Kant sharply disagrees with Newton. My aim in this chapter is to give an