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# Conflicting Results for Natural Selection and the New Philosophy of Mechanism

Lucas Matthews\*<sup>1</sup>

<sup>1</sup>University of Utah – United States

## Abstract

Natural selection offers prima facie conflicting results for the New Philosophy of Mechanism (NPM). On one hand, the NPM is often held to an accurate representation of actual scientific practice. Thus Robert Skipper and Roberta Millstein (2005) challenge the NPM on the grounds that it fails to accommodate natural selection, which biologists refer to as a mechanism. On the other hand, the NPM is often held to a claim about the value of mechanistic methodology to successful scientific practice, such as the search for and discovery of mechanisms. Thus, Millstein (2006) appears to strengthen the NPM by arguing that "finding a mechanism is a crucial piece of the natural selection story." To exacerbate the situation, Skipper and Millstein's (2005) contribution has sparked an ongoing debate – the so-called, 'Natural Selection as a Mechanism' debate, which sets the stakes high for an assessment of the NPM against natural selection (Robert Skipper and Roberta Millstein, 2005; Benjamin Barros, 2008; Phyllis McKay Illari and Jon Williamson, 2010; Joyce Havstad, 2011; Jon Matthewson and Bret Calcott, 2011; and Daniel J. Nicholson, 2012). This paper resolves the conflict and argues that the two contributions bear on distinct NPM theses (developed by Arnon Levy, 2012). I argue (1) that Skipper and Millstein (2005) most evidently problematize Causal Mechanism (CM), a metaphysical thesis regarding the causal structure of the natural world and (2) Millstein (2006) bolsters Explanatory Mechanism (EM) and Strategic Mechanism (SM), which represent descriptive and prescriptive theses regarding actual scientific practice. The philosophical upshot recommends an informed perspective for future assessments of the NPM against novel cases of scientific explanation.

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\*Speaker