

## ALGORITHMIC RIVALS: DO THEY POSE A THREAT TO SCIENTIFIC REALISM?

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*Abstract.* André Kukla (1994; 1996; 1998; 2000) argues that there is no reason why propositional structures mechanically generated from given theories should be denied the status of genuine scientific theories. He indicates that such constructs are empirically adequate and truth-evaluable and asks for the reasons why these are ignored in scientific practice. I undertake to offer some decisive reasons: first, I argue that, unlike genuine theories, algorithmic rivals contravene to a proper conception of physical causation; and secondly, that they are parasitic upon the theories from which they are generated. These arguments disqualify algorithmic rivals from the epistemic competition. Thus, one direct way toward establishing the underdetermination of theory choice by evidence is rebuked.

*Keywords:* scientific realism, algorithmic rivals, epistemic competition.

### I. INTRODUCTION

One of the most frequently raised arguments against scientific realism is the underdetermination argument, which consists of the following two theses:

- (1) The empirical equivalence thesis (EE): for any given theory, there is an indefinite number of empirically equivalent rivals.
- (2) The underdetermination thesis (UD): any theory T is radically underdetermined, because no possible evidence could justify it over its empirically equivalent rivals.

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