

The Port Royal Logic and its scholastic past

Benjamin D. Hill

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V E R S I O N I N F O R M A T I O N

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Corresponding author: Benjamin D. Hill • bhill28@uwo.ca • Department of Philosophy,
University of Western Ontario

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John N. Martin: The Cartesian semantics of the *Port Royal Logic*. London: Routledge, 2020, 242 pp, \$140 HB

Benjamin Hill

bhill28@uwo.ca

Western University

London, Ontario

Canada

John Martin has been the predominant voice on the *Port Royal Logic* [PRL] in recent years. Between 2011 and 2017, he published several items on various aspects of the semantics of the PRL. Now those publications have been reworked into his excellent book, *The Cartesian Semantics of the Port Royal Logic*.

Martin describes his goal as “to explain why [the PRL’s] semantics should be of interest to modern logicians” (1). He thinks it is of interest to contemporary practitioners because he finds PRL’s truth conditions for categorial propositions to be “recursively sound” (110). Fair enough, but I do not see this as Martin’s most significant contribution. Martin’s analyses do more to reconnect PRL with its medieval and late Scholastic backgrounds—indeed, even the core of the recursively sound truth conditions for categorial propositions are fundamentally Scholastic according to Martin, namely an abstraction that is performed on distributed supposition. This is important push-back against recent interpreters who see PRL as abandoning

the Scholastic past and anticipating modern techniques and positions. These historical theses strike me as the more significant contributions of Martin's book than the theoretical ones.

The text addresses three broad themes. The first, Chapter One, concerns the metaphysics of thought. Because "idea" is a key technical term in PRL, Martin begins by arguing that it involves a de-ontologized, thus non-psychological, conception of intentional content that was rooted in the late Scholastic doctrine of objective being, *esse objective*. This was necessary, claims Martin, to secure a connection to the external world, given Cartesian mind-body dualism, which precluded minds from acquiring material modes. Martin argues that these intentional contents are second-order modes of the mind and because of that they can take on material and mental modes as contents. This claim that intentional contents are second-order modes of the mind strikes me as more dubious than Martin's claim that PRL's conception of idea involves a de-ontologized conception of intentional content, to which I am very sympathetic.

The second theme, discussed in Chapters Two, Three and Four, is logical. Across these chapters Martin provides a formal reconstruction of PRL's truth conditions for categorical propositions. In Chapter Two, Martin explores the "difficult, scattered, and imprecise" (58) texts supporting the thesis that these truth conditions are conceptualized as a correspondence theory in the proper sense. Most important is the connection between the "extension" of an idea, PRL's technical term, and the external world, which track each other because their inclusion and exclusion conditions track one another. This sets up Martin's analysis of PRL's correspondence in which he shows that the extensions and the external world are isomorphic but that their isomorphism is not order preserving, which entails, pace some interpreters, that PRL cannot have anticipated modern Boolean algebra. The final component of Martin's interpretation of PRL's truth conditions for categorical propositions involves showing both that universal terms are

derived via abstraction and that a containment principle developed in PRL is sufficient for determining which syllogistic moods are valid. A Scholastic doctrine lay at the heart of each of Martin's analyses above. Indeed, without acknowledging these Scholastic roots, it would have been impossible to provide the analyses Martin does. For example, in establishing that there are isomorphisms between PRL's extensions of ideas and the mind-independent world, Martin begins with the late Scholastic concept of signification. Martin derives from this the concept of a signification range, which is the set of individual things signified by ideas. This set of things in the world connects with "extensions," which are the sets of ideas that signify only things that the primary idea signifies, also called the idea's inferiors. Take the idea of "essential worker," for example: the inferiors of this idea, i.e., its extension, consist of the set of the idea of nurses, the idea of physicians, the idea of supermarket employees, the idea of restaurant delivery drivers, etc. This partially ordered set is isomorphic with the partially ordered set consisting of nurses, physicians, supermarket employees, restaurant delivery drivers, etc. because "the ordering is determined by the fact that they are defined by their intentional contents" (73), which is also a late scholastic notion as mentioned above.

The final theme, discussed in Chapters Five and Six, is primarily epistemological. Included in this theme are discussions of the methods of analysis and synthesis as well as an account of sensitive knowledge, which according to Martin underpins PRL's conception of contingency. As he did with the previous two themes, Martin finds PRL's account of analysis and synthesis as "fall[ing] squarely with this [late Scholastic] tradition" (162). Chapter Six is essentially a return to the first chapter and its concepts of objective being and intentional content. According to Martin, these concepts lie at the center of PRL's direct realist analysis of sensation and sensitive knowledge. The major semantic thesis that falls out of this account of sensation is

that a restriction needs to be placed on the truth conditions for categorical proposition, namely that terms must carry existential import when dealing with particular truths involving individuals: “All truths are constrained by the structure of ideas . . . , but contingent truths are further constrained by various contingent facts of nature exhibited in the structure of significance ranges and extensions” (193–94).

Given the emphasis on connecting PRL with its Scholastic background, readers might be left wondering what is so Cartesian about PRL’s semantics. The Cartesian aspects lie in the need to adapt the late Scholastic material to the Cartesian dualistic framework. This is an ever-present framework looming over the entire text, and Martin nicely contextualizes Arnauld and Nicole’s use of the late Scholastic material in terms of problems Cartesian dualism poses for it.

Martin’s text is dense and rewards careful and close readings. I recommend it to historians of logic as well as historians of philosophy more broadly. It is an admirably clear and cogent way of effectively utilizing the rigors of modern logic for historical insight.