

Familiarity with these works would be helpful, but is not essential, for the reader of *Cosmic Pessimism*. At only 55 pages in length, this short booklet serves as a brief summary of Thacker's work on philosophy and pessimism, although not in any systematic way. Somewhere between a best-of album, a series of deleted-scenes, and a new work entirely, the summary offered in *Cosmic Pessimism* is presented in a series of aphorisms, much in the Nietzschean style.

Consequent of its genre, there are no chapters in *Cosmic Pessimism*, but there are frequently occurring visual interventions by New York artist Keith Tilford. These visual accompaniments helpfully punctuate the movement of the text, each one taking the form of a complex ink blot and mutating throughout the work. The booklet revolves around the maxim: "There is no philosophy of pessimism, only the reverse" (1). Quite straightforwardly, pessimism, being the "nightside of thought" and the doom of extreme disenchantment, is the central figure of *Cosmic Pessimism* (3). Brief engagements with themes such as doom ("that all things inevitably come to an end") and gloom ("the stuff of dim, hazy, overcast skies") dot the bleak landscape of the book, leaving readers with little to hang on to should they desire a consistent underlying argument (20). However, that the argument is difficult to fix upon singularly should not be taken as a criticism. Instead, it seems to be part of Thacker's strategy to defeat easy summaries, clear arguments, and careful critiques. Thacker proceeds lyrically, and not argumentatively, although his individual arguments are compellingly drawn from experiences common to any postmodern individual. As well, figures such as Schopenhauer and Nietzsche appear throughout the booklet, alongside Buddhist and Greek terms, and small quotations from lesser studied figures like Lev Shestov and Frogall Dibdin.

In summary—if one can successfully provide a summary of a book that resists summary because of its brevity, and furthermore a summary of a book that is a sort of summary of the author's work to date—it bears keeping in mind the goals of any book review. Having situated the work in relation to others by the same author, and having given interested readers a look into the book itself, there is really not much more to do. This feeling of pointlessness in the face of an artificial conclusion resonates deeply with Thacker's reflections on the nature of books, appropriately found in what could be called his anti-book. Near the end of *Cosmic Pessimism*, he writes (after giving several obscure examples) that there are "works designed for incompleteness—their very existence renders them dubious" (65). This is one of those works, and it is an enlightening look at the darkness of thought.

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### ***Frege on Thinking and Its Epistemic Significance***

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Frege is well known for chastising any attempt to approach questions regarding the nature of logical laws, numbers, and meaning from a psychological standpoint. He looked with despair at the philosophy of logic and mathematics practiced by many of his contemporaries as thoroughly contaminated by psychology. He never ceased to

remind his readers that a Thought (*Gedanke*)—the central notion of his philosophy—is objective, impersonal, and independent of the psychological process of thinking (*Das Denken*). This partially justifies scholars' common stance of concentrating on the nature and role of Thoughts in Frege's philosophy, while downplaying (or altogether ignoring) the notion of thinking. In *Frege on Thinking and Its Epistemic Significance*, Garavaso and Vassallo offer a correction to these standard readings of Frege. Because "Frege paid a lot more attention to thinking, as *das Denken*, than scholars usually assume" (17), "the current mainstream interpretation of his work ... needs to be integrated by an interpretation of the role of thinking in his philosophical views on logic, knowledge, and language" (9). Their book unveils and discusses the importance that 'thinking' plays in these core areas of Frege's philosophy.

In Chapter 2, the authors defend the view that Frege was interested in thinking despite his opposition to various forms of psychologism. While they see Frege as rejecting semantic psychologism (the view that sees ideas or mental images as the meanings of words) and Platonic psychologism (which denies the existence of a third world besides that of physical objects and inner experiences), they concede that Frege endorses a qualified form of logical psychologism (25), because he rejects the idea that logic has nothing to do with the mental process of thinking. Reading Frege as a strong anti-psychologist *vis-à-vis* logic would in fact blur one of the most distinctive features of his conception of logic, namely his idea that logic—although not *descriptive* of thinking processes—has a *normative* role to play for thinking: logic puts forward norms or prescriptions for thinking. The chapter ends with an interesting and original comparison (26-34) between Frege and George Boole on the normative role of logic for thinking and on the relations between logic and language, a comparison that unearths important (but often neglected) similarities between them.

Chapter 3 develops a multifaceted interpretation of Frege's conception of thinking, by distinguishing between "three kinds of thinking: psychological, logical, and logical-psychological" (42-43). Psychological thinking is for Frege—if I interpret correctly—the flow of ideas, feelings, representations, and the like; as such, it is wholly subjective and if we could only think psychologically we would be confined within the boundaries of our inner consciousness. But Frege also discusses, notably in his *Begriffsschrift*, 'pure thinking' [*reine Denken*] or—which seems to amount to the same on the authors' reading—'correct thinking' [*das richtige Denken*], further dubbed 'logical thinking' because it "adheres to the laws of logic" (52). This is objective and sharable because of its independence from psychological factors. This kind of thinking is then contrasted with 'actual' [*wirkliche*] or 'natural' [*natürliche*] thinking, namely thinking as performed by human beings. Our thinking is not pure insofar as it is intertwined with ideas and prone to mistakes. Now, Frege assigns to logic the task of purifying the logical element of thoughts from what is psychological, a task that is accomplished, the authors claim, by "logical-psychological thinking" (56). The way in which the authors present the relation between logical and actual/natural thinking seems problematic, however. While the former "guarantees an optimal epistemic condition, ... it cannot be our thinking" (57), because the latter, as seen, is inextricably bound up with psychological elements. If so, however, it becomes unclear how the former can prescribe "the rules for the latter" (25); if logical thinking is in principle unachievable by us, then logic cannot have any real normative role to play for our thinking. However, Frege is clearly convinced that it does.

Chapter 4 addresses Frege's stance on various classical epistemological themes such as scepticism, the sources and definition of knowledge, and the notion of epistemic justification. Garavaso and Vassallo connect these themes to the notion of thinking, thus showing that thinking has in Frege an important epistemic dimension. Just to mention the first theme: Frege rejects the sceptical view that we cannot have knowledge of anything outside the range of our immediate experience by resorting to the objectivity and mind-independence of thoughts; by making us *grasp* thoughts, thinking allows us to gain knowledge of external reality. The authors' aim is not to show that Frege's epistemological views are successful, but more modestly to show (and they do so convincingly) that he "had wide ranging epistemological views" (64), something which has not always been appreciated by scholars.

Chapter 5 argues that for Frege "language plays a necessary epistemic role both in expressing thoughts and in directing thinking" (85); the former role is justified by Frege's idea that "[l]anguage plays a necessary function ... in representing and expressing thoughts in such a way that humans may be able to grasp them" (102), while the latter by the fact that *Das Denken*—in its diverse forms (logical, actual, etc.)—is tied in direct ways to the language employed in the process of thinking" (90).

The authors' interpretation of Frege is in my view balanced and largely correct, although also somewhat speculative in places (an example is their discussion of Frege's notion of 'reason' on pages 57 and 69); also, it could have occasionally benefited by further elaboration and discussion (for example when the authors attempt to reconcile Frege's context and compositionality principles on pages 100 to 101). While Frege's views on thinking are sometimes presented in a more clear-cut way than they appear in Frege's own texts, Garavaso and Vassallo succeed in bringing to light the importance that these often neglected views have in fundamental areas of Frege's philosophy. Because of this, *Frege on Thinking and Its Epistemic Significance* provides a valuable and much needed addition to the critical literature on Frege.

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### ***Aristotle's Physics: A Critical Guide***

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MARISKA LEUNISSEN, Ed.

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Mariska Leunissen recently published *Explanation and Teleology in Aristotle's Science of Nature* (2010). Aristotle's study of the natural world plays an important role in his philosophical thought. He was highly interested in notions such as motion, causation, place, time, and teleology, and his reflections on these concepts are collected in his *Physics*, a treatise of eight books. In this edited volume, Leunissen brings together research that takes into account recent changes in the field of Aristotelian studies. The volume does not focus on the history, unity, or structure of Aristotle's *Physics*. Rather, each of the chapters engages with recent changes in Aristotelian scholarship by either reassessing key concepts of Aristotle's natural philosophy, reconstructing Aristotle's methods for the study of nature, or determining the boundaries of Aristotle's natural philosophy.