Book Reviews

Simmons, K. 2018. *Semantic Singularities: Paradoxes of Reference, Predication, and Truth*. Oxford—New York: Oxford University Press. 249 pp.
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A resurgence of attention to truth (or at least ‘truth’) has characterized much of the discussion and debate among logicians and analytic philosophers of language during the past thirty or so years. Naturally, paradoxes of the Liar family—and then semantic paradoxes more generally—has been the focus of a good share of that attention. This new book from Keith Simmons is a major contribution to this development, a development to which he himself has contributed in a number of previous works throughout this entire period. *Semantic Singularities* brings together, and in some cases updates, a number of interconnected key ideas found in his previous works.

The book is rich in its deployment of a number of ideas that are related directly or indirectly to its central claim: semantic paradox emanates from the use of semantic expressions (e.g., ‘denotes’, ‘extension’, ‘true’), in certain contexts, contexts in which those expressions fail to be definable (in the way that division by zero, or ‘n/o’, is undefined in mathematics (VII)). Such contexts, where the use of a semantic expression is undefined, does not signify, is pathological (paradox producing), are what Simmons calls *singularities*. A key element of the singularity theory is its *contextualism*, taking the uses of semantic expressions to be pathological or not depending on their context of use (i.e., they are context-sensitive). Additionally, the singularity theory recognizes that semantic paradox is a (rare) feature of natural language, that natural language is semantically closed, universal, (contains its own semantic expressions), and that this means that this leads to so-called revenge paradoxes (more on this below) for which the theory must account (8). The theory is guided by what Simmons calls *minimality*: no restriction should be placed on a semantic expression in order to avoid paradox unless there is a reason to do so (38). Finally, the theory is built with the intention of preserving not only classical logic

but much of our intuitive ways of reasoning when confronted with semantic paradoxes.

Simmons' theory of singularities is a relatively complex machine with a number of moving but intimately connected parts, and he does not shy away from laying out in detail the full inventory, description, and user instructions for all of it. He also spends some time and effort on comparing and critiquing his theory with competing theories, including those similar to his in important respects. All of this requires the reader to be conversant with recent work in paradox theory, truth theory, philosophy of language, and logic. Nonetheless, Simmons is a fairly good guide, explaining in mostly clear and concise language how the many interlocking elements of the singularity theory work.

Briefly, the book is divided into ten chapters, beginning with a short introductory chapter that lays out some of the preliminary essential elements of the singularity theory and signals what lies ahead. The second chapter defends the claim that the semantic expressions are context-sensitive. Chapters 3 and 4 present in detail the concepts of singularity and introduce the notion of minimality. The next chapter shows the theory being applied to more complex paradoxes, such as versions of Russell's paradox and the strengthened liar paradox. Chapter 6 lays out the detailed picture of the singularity theory, and Chapter 7 shows how that theory can be used to analyze a number of other paradoxes. Chapters 8 and 9 deal with alternative ways of addressing revenge paradoxes, first those that are not contextualist theories and then those that are. The final chapter discharges a powerful critique of deflationary truth theories.

After taking care of the essential preliminaries, Simmons uses Chapter 2 to introduce his idea of contextualism, going on then to give a detailed account of just how we intuitively and naturally reason when faced with what we take to be a semantic paradox such as the Liar. This account is important in that it will be relied upon throughout the remainder of the book. It enforces the claim that an adequate theory of semantic paradox must recognize that the risk of encountering such paradoxes arises in our natural language, and that such a theory must comport closely with our intuitive reasoning in such cases. According to Simmons (11–12), our reasoning here involves more than just generating a paradox when confronting certain semantic expressions in use. When we meet, say, the Liar, note that if it is true then it's false, then note that if it is false then it's true, concluding that 'truth' is a pathological semantic expression. However, our reasoning need not stop there. In our initial encounter with the Liar we recognize that the expression 'true' leads to contradiction. To establish this we go on to use that very expression again. Simmons call this step *repetition* (11). Our next step is *rehabilitation*. Here, we reason that

we are able to use the expression 'true' without it being pathological outside of the Liar itself. This is then accounted for by *iteration*, the process whereby we rehabilitate 'true', which can be repeated and thus lead to the contradiction. Notice that in the Liar sentence 'true' is pathological. But further tokens of 'true' used in our reasoning are not pathological. How can these differ in semantic status (the original in the Liar being pathological and subsequent tokens not being pathological)? There has been a shift in *context*.

In the discourse representing our reasoning just now, the context of use of the term 'true' changes at each step. Context depends on previous statements in the discourse and amounts to shared presuppositions. Such presuppositions can come and go during the course of the discourse. Simmons calls a context at a given point in the discourse "*reflective with respect to a given expression* if at that point it is part of the common ground [presuppositions] that the expression is pathological" (17, emphasis in the original). Once we recognize that 'true' is pathological in the Liar, that recognition becomes part of the presuppositions that are then in place when 'true' is repeated in subsequent uses, which makes those new contexts reflective. Thus, "*context acts on content [meaning]*" (12, emphasis in the original). This interaction between content and context is more familiar in the case of the use of a pronoun such as 'I' in the two tokens of its use in 'I am ready to eat' spoken by Sam and 'I don't want to eat yet' in Emma's reply. The process of evaluating the semantic status of a token of an expression depends, then, on whether it is pathological, which, in turn, depends on the presuppositions that apply to its use, which, in turn, and ultimately, depends on the context of its use. Different contexts demand the use of different evaluation schema. Here Simmons goes on to provide a thorough, detailed account of the nature and application of such schema.

It is in Chapters 3 and 4 that Simmons lays out the full idea of semantic singularities. His guiding principle is *Minimalism*, which requires any solution to semantic pathology to force only the least possible conflict with our natural intuitions. It "keeps surprises to a minimum" (39). All numbers can be used as divisors except for one singular case: zero. Analogously, all uses of semantic expressions can be taken as being in perfect order except for those very rare cases in which they occur in non-reflective contexts. Those cases are singularities. "In short, 'denotes' or 'extension' or 'true' trigger a search for reflective status" (44). In contrast to minimalism, solutions that requires a hierarchy of languages introduce a hierarchy of distinct semantic terms and thereby conflicts with our intuitions (contrary to minimality). Simmons writes, "We do not stratify our semantic predicates; rather we identify singularities of a single context-sensitive semantic predicate" (49). He goes on to say that

our logical intuitions about our semantic concepts are almost always correct. It is only in paradoxical contexts that we may mistakenly suppose that certain expressions denote when they do not, or have determinate extension when they do not, or have a truth value when they do not—and in such cases our applications of ‘denotes’ or ‘extension’ or ‘true’ require only *minimal* corrections. [...] *Repetition, rehabilitation, and iteration* indicate that with certain changes of context, our semantic terms shift their extension. But these shifts are kept to a minimum. (50)

Subsequently, in chapter 4, Simmons addresses the question of how to formally identify singularities. He proposes a relatively elaborate scheme that first determines a way to express salient characteristics of a context in the form of tree structures. These can then provide a diagrammatic version that exhibits the pathological status of such contexts. Simmons then urges (63–64) the intuition that our natural language is *semantically universal*, in the Tarskian sense that it can be used to say whatever can be said about its own semantics. “I think that the singularity proposal goes a long way towards accommodating this intuition. An occurrence of [a semantic term] is as close to universal as it can be without contradiction—with the exception of its singularities.” (64)

In Chapter 5, Simmons takes up a number of well-known semantic paradoxes, paradoxes of denotation (Richard’s Paradox, Berry and König’s Paradox), Russell’s Paradox of extension, versions of the Liar, and the Strengthened Liar. His intention is to show how these fare when analyzed by the tools provided by his singularity theory. In addressing the last of these, with reference to the others, he says, “The phenomena of *repetition, rehabilitation, and iteration* have rarely, if ever, been discussed in the cases of denotation and extension. But with truth, things are different. ... Strengthened Liar discourses have provided a major motivation for contextual accounts of truth [...]” (91).

Simmons aims to show, in Chapter 6, that the singularity theory is a general theory. It accounts for all semantic expressions referring to denotation, extension, and truth because it uniformly accounts for all paradoxes resulting from the use of such expressions by revealing singularities. He shows this by introducing the notion of a “reflective hierarchy” (112). Remember that the trees introduced in Chapter 4 are used to determine the pathological status of a context in which a token of a semantic term is used. At the lowest level of the reflective hierarchy are those involving no semantic term. At the next level there *are* such terms, thus they involve trees exhibiting pathology. Reflection of such pathological expressions results in the possibility of an unlimited number of further levels of this hierarchy. Naturally, Simmons wants to block any temptation to think that the reflective hierarchy is a Tarskian hierarchy. The

latter generates new, distinct senses of terms at each meta-linguistic level; the former does not. On the singularity theory, no term is stratified; it is “a single context-sensitive term, whose occurrences all have singularities, and where no occurrence is more comprehensive in scope than another.” (112). This hierarchy preserves the senses of terms (viz., semantic expressions) at all levels while providing a way to identify singularities.

After the theory of semantic singularities has been laid out in detail in the preceding chapter, Chapter 7 returns to the treatment of various semantic paradoxes, going beyond those treated earlier in Chapter 5. Here Simmons considers transfinite paradoxes, the truth-teller, Curry's, and versions of paradoxes previously dealt with, but in which circularity plays no role. In his account of Curry's paradox, Simmons notes that Curry makes use of sentence types (indicated by quotation marks). In contrast, Simmons holds that the singularity theory requires that “the bearers of truth are sentence tokens (or sentence types paired with contexts)” (129, n. 2). More on this later. Yablo's paradox gives him the opportunity to reinforce the notion that a given semantic predicate that occurs in each sentence in the paradoxical sequence has a sense determined by its sentential context (141–144).

Chapters 8 and 9 take on so-called *revenge* paradoxes. One might, as many have, find a way to accommodate simple paradoxes like the Liar. Simmons defangs them by allowing that the semantic terms at the heart of such paradoxes are only pathological in certain contexts. However, once accommodated in this or some other way, paradox returns to have its revenge. A theory that concludes that the Liar, say, has no truth value or has both truth values or has a third truth value, etc., must then face an unending series of pathological cases involving this new semantic term (e.g., ‘truth-valueless’ or ‘both true and false’ or ‘meaningless’). Simmons argues that such theories face the uncomfortable dilemma of choosing between contradiction or “a significant expressive incompleteness” (146). He pays special, close attention to three examples. Kripke's theory of truth (147–151) depends on introducing (into the theory's language) the concepts of grounding and truth value gaps in its attempt to deal with the Liar. But these new semantic concepts are not part of the object language. Field's theory (151–173) differs from Kripke's by introducing a non-classical logic. For Simmons, the result is a theory “too far removed from natural language to come properly to grips with semantic paradox” (156). Kripke's and Field's theories aim to treat revenge while maintaining consistency, which, as Simmons has said, means that expressive incompleteness results. Priest's dialethic theory (173–181) makes a different choice: inconsistency. On this theory, with its paraconsistent logic, the Liar is both true and false, and revenge is tamed, “for what worse could a purported revenge paradox produce than

a contradiction?" (173). Nonetheless, as Simmons argues, the very attempt to tame revenge paradoxes in this way generates new revenge paradoxes.

In Chapter 9, Simmons lays out the case for disarming revenge by using a contextualist theory and then, particularly, the singularity theory. As he sees it, some contextualist theories fail to avoid introducing Tarskian hierarchies when accounting for the shift of the denotation of 'true' from one context to another. Other contextualist theories account for this kind of shift in terms of a shift in quantifier domains (e.g., Glanzberg) or situations (Barwise and Ethchemendy). Yet these kinds of accounts also fail by relying on (non-Tarskian) hierarchies: of propositions dependent on quantifier domains, in the former case, and of situations, in the latter. Simmons goes on to lay out his case for using the singularity theory to engage with revenge. Again, the theory does not require a Tarskian hierarchy of languages and respects minimalism. Thus, "the threat of revenge is handled here by a familiar distinction between languages that contain context-sensitive expressions and those that don't. No new semantic concepts or special machinery is needed" (199).

The final chapter is a fairly powerful rejection of deflationism, especially its disquotational form, where '*s* is true iff *s*' (the definitional schema). One way such a theory copes with semantic expressions when they turn out to be pathological is to say that they are meaningless in ungrounded sentences. But this is incompatible with our natural intuitions governing such expression, which we take to be meaningful. A second way would be to give up classical logic or accept dialethism, in either case leaving truth as nothing more than a disquotational device and having no important conceptual work to do. Finally, a deflationist might restrict the scope of the disquotational schema itself so as to exclude pathological expressions from its range. But this response, and the response of deflationism in general, fails to provide a viable theory of semantic pathology, which exhibits, again, an easy disregard for natural language, which admits expressions that happen to be pathological in exceptional contexts. Simmons then ends his book with relatively brief responses to the prosentential theory of truth and Horwich's minimalist theory. He ends by saying,

According to the singularity theory, we can evaluate pathological expressions, despite their pathology. Ungrounded denoting expressions denote; ungrounded predicates have an extension; ungrounded sentences have a truth value. And, borrowing a term from the correspondence theorist, we can say that the values of these pathological expressions depend on essentially semantic *facts*, including the fact of their own ungroundedness. These facts can be described only in semantic terms. If the singularity theory is right, there is no getting rid of 'denotes', 'extension', 'true', or 'true of'. Our semantical concepts cannot be disquoted away. (233)

Simmons' singularity theory provides an important tool for semantic analysis and he offers a powerful defense of it. Yet, I do have some reservations. Consider the fact that not every term that can be predicated of something said is semantic. Aaron, his hat, and what he just said can all be described as surprising, funny, and provocative. But just *what* did he say? According to Kripke, when it comes to doing "serious work" on truth or semantic paradoxes, "Sentences are the official truth vehicles" (Kripke 1972, 690 n. 1). Simmons agrees: "the bearers of truth are sentence tokens (or sentence types when paired with contexts)" (129 n. 2). Not every philosopher interested in truth and semantic paradoxes agrees, for we could reasonably say that what Aaron just said is a *proposition*, which he expressed by use of his sentence. The difference is important, and it seems that for Simmons the singularity theory works best when it deals with sentences (and other linguistic entities like predicates and referring expression). But he provides no defense of his view, apparently assuming that it is, if not intuitively obvious, at least "official".

Simmons himself has recognized the venerability of an approach to the Liar family that takes the notion of propositions seriously and then simply denies that such sentences express any proposition at all (Simmons 1987, 122). He also considers Glanzberg's similar notion (184–185). Tomson (1962) disarms semantic paradoxes such as the Liar and heterologicality by arguing that they "cannot really be thought to turn on any puzzling or problematic features of the ideas of meaning or truth" (Thomson 1962, 110ff). Such semantic terms are, when used in apparently paradoxical expressions or sentences, simply vacuous, not defined (like division by zero). Tomson points to Ryle's similar approach. Sommers (2015) has shown how Ryle concluded that such paradoxes suffer, not because of any pathology in a semantic expression. In particular, a Liar-like sentence, e.g., 'What I'm now saying is *X*', necessarily generates an infinite regress of what Ryle called "namely-riders" (Ryle 1951, 67–68). Such a sentence mistakenly presupposes that there is some specifiable proposition that it expresses. But, like 'The present King of France is bald', the failure of such a proposition renders it vacuous, inexpressive (expresses no proposition). While Ryle has diagnosed the pathology of the Liar, Sommers goes on from Ryle's initial groundwork to offer a viable solution (in terms of propositions) that highlights the "natural constraints imposed on propositional comments" (Sommers 2015, 22; see also, and appropriately, Simmons 1987).

Finally, I agree with Simmons that an adequate theory of semantic paradox must reserve as much as possible of our ordinary intuitions while keeping as close as possible to the normal use of semantic terms in our natural language. Nonetheless, some defense of this seems to be in order.

This is a rich, sometimes demanding, book, filled with a number of innovative insights that Simmons has been developing over the past years. As I

noted earlier, Simmons' theory is a complex machine with many parts. The brief sketch offered here can hardly do justice to many of its intricate, intriguing details. It provides, at best, a small peek at some of the main cogs and levers. Nonetheless, the question now is: How well does the machine work; how does the theory fair over all? In spite of my few reservations, I believe Simmons succeeds quite well in offering a theory of semantic paradox that is well-motivated, clearly and expertly articulated, and convincing in many of its parts. It is this latest presentation of his singularity theory that should play an especially important role in the on-going debate. I would highly recommend it to researchers and advanced students especially interested in logic, philosophy of logic, and philosophy of language.

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George Englebretsen

Philosophy Department, Faculty of Arts and Science, Bishop's University,
Sherbrooke, Québec, Canada
genglebr@ubishops.ca