Semantic Singularities

By Keith Simmons

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25 years after Keith Simmons introduced his contextualist theory of truth in 'Universality and the Liar Paradox' (Simmons, 1993), his new book presents us with an updated generalized theory that has been refined in light of some of the important contributions to the truth-theoretic literature in recent years. Whereas in 1993 Simmons' focus was almost entirely on the truth-theoretic paradoxes, `Semantic Singularities' aims to provide an account of a wide family paradoxes that arise within natural language. The foundations of the theory remain unchanged however, and the theory continues to be based on the Gödelian idea of singularities—for each predicate there are objects that lie outside the range of meaningful applicability—combined with the idea that terms such as 'denotes', 'true', or 'extension' are context-sensitive expressions. In contrast to other contextualist theories Simmons resists any form of cumulative semantic hierarchy, that is, the theory does not attempt to provide hierarchy of ever-increasing interpretations of English. Whilst the introduction of Simmons' particular contextualist solution to paradox is the principal ambition of the book (chapters 1-4, 6 and 7) , `Semantic Singularities' also proposes a classification of the paradoxes (chapters 1 and 5); provides an assessment of some rival theories of truth in light of the revenge paradoxes (chapters 8 and 9) and highlights the specific challenge the semantic paradoxes pose for deflationist accounts of semantic terms (chapter 10). Simmons book is an important contribution to the literature on semantic paradox, covering a wealth of issues. Independently of whether one agrees with Simmons contextualist theory, the book offers a number of important insights and discussions that should be interesting to any researcher interested in the semantic paradoxes.

Simmons is concerned with the semantic paradoxes widely construed. According to Simmons, the distinctive feature of the semantic paradoxes is that they arise within natural language in contrast to paradoxes such as Russell's set-theoretic paradox, which arise in mathematical, or formal languages: natural languages as opposed to mathematical languages are *universal*, that is, ``a natural language has the potential for saying anything that can be said in any language'' (p. 6). The Universality of natural language is key for understanding Simmons' theorizing and remains a theme throughout the book. For example, it underlies Simmons' maxim of *Minimality* according to which ``the application of these semantic expressions [e.g., 'denotes', 'true' or 'extensions'] is to be restricted only where there is reason to do so'' (p. 38). Minimality, in turn, leads to singularity theory and the idea that semantic terms are universally applicable with the exception of some singular points, i.e. singularities, where paradox arises. Arguably, Universality also explains why the reasoning of the revenge paradox has to be accounted for rather than deemed invalid: it seems to present a sound reasoning (at least in some language), so we should be able to spell it out in natural language. This leads to the second component of singularity theory, namely, that the semantic terms under consideration are context sensitive. But Universality in the form of the maxim of Minimality also explains why Simmons resists a cumulative contextualist hierarchy of ever more comprehensive interpretations of the language. According to Simmons there is simply no good reason to think the context-shift in the revenge-theoretic reasoning only amounts to an elimination of singularities and, in

particular, this view is not required for giving a consistent account of the semantic paradoxes.

The burden on singularity theory is then to provide an account of the singularities of a semantic term relative to a specific context. Indeed, Simmons' theory tells us which type of expressions uttered at a particular context cannot be evaluated in a given context of assessment. For example, while the Liar sentence will usually be a singularity of the truth predicate at its context of utterance, it is not a singularity of the truth predicate at a context of assessment which is *reflective* of the initial context of utterance. Rather in this context the Liar sentence is true. The explicit appeal to the context of assessment in Simmons' contextual theory is an important update to the version of the theory in Simmons (1993)—arguably triggered by recent work by Sagi (Sagi, 2017)—and also distinguishes the theory from other contextualist theories in the literature that only appeal to the context of utterance. Simmons takes the appeal to contexts of assessment seriously and argues that expression such as the Liar sentence are *assessment-sensitive*: their semantic value depends on the context of assessment. This seems right, for without a change of the context of utterance we fail to semantically evaluate the Liar sentence in some context of assessment, whilst in other contexts of assessments we can attribute a semantic value to the expression. However, in another sense calling Liar-like expressions assessment-sensitive is, perhaps, unfortunate; after all, we do not ascribe conflicting semantic values to Liar-like expressions, if the expression can be semantically evaluated it will be true – it will never be false. Simmons is aware of this contrast and uses it to resists MacFarlane's argument that "assessment-sensitivity brings with it relativism about truth" (p. 23).

Independent of the particular interpretation of the dependence on the context of assessment in Simmons theory, the principal challenge remains to provide a non-question begging account of the singularities of a semantic term at a particular context, that is, we need to determine what types of expressions uttered at a particular context cannot be evaluated at the context (of assessment) at stake. To answer this question Simmons employs dependence (determination) trees. Simmons uses these trees to provide a stratification of the expressions according their reflective level: roughly, 0-expressions are the grounded expressions in Kripke's sense, that is, expressions whose semantic value at the particular context can be determined by a tree with branches of only finite length. 1-expressions are either 0-expressions or expressions whose dependence tree leads to a loop or an infinite chain of non-reflective expressions. Finally, m-expressions (for m>1) are expressions that are reflective of expressions of the previous level(s). Notice that expressions of level greater 1 in the reflective hierarchy do not comprise expressions of lower levels, that is, an expression that is (only) reflective of a 1-expression will be a 2-expression but not a 3-expression. On the basis of this account Simmons defines pathologicality and subsequently the notion of singularity: an expression of level m is pathological iff its dependence tree is not well-founded in dependence trees of expressions of the previous level(s). The singularities of a semantic term t at a context c are the pathological expressions at the context (of assessment) c. This leave us with the range of meaningful applicability of a semantic term at a context c. (For a detailed presentation of the general theory see chapter 6.)

However, in contrast to other theories Singularity theory does not explicitly provide an interpretation of the semantic term under consideration, which Simmons takes to be an important characteristic of the theory: "singularity theory does not provide a model of English, but a formal, abstract description of the way in which the extension of t depends on context". According to Simmons, this is, at least in parts due to the "relatively meager" resources the theory employs since "nowhere does [the formal language of the singularity theory] utilize a predicate that is coextensive with any occurrence of [the semantic term] t" in its language (cf. p. 190). This claim, however, should be taken with a grain of salt. While it is true that in theorizing about singularities Simmons does not utilize, say, a truth predicate explicitly, Singularity theory may well have the resources for defining a truth predicate. The point is that the theory seems to have the resources for defining the grounded sentences in the sense of Kripke since these seem to coincide, at least prima facie, with the non-pathological 1-expressions (that is the 0-expressions). The latter are definable in Simmons theory and to define the set of grounded sentences we need a principle like Π^1_1-comprehension. But Π^1_1-comprehension is sufficient for defining a Kripkean truth predicate. Moreover, an argument of this kind can be continued along Simmons' reflective hierarchy, which means that a semantic interpretation of the truth predicate relative to a particular context seems well within the reach of Simmons' theory. Admittedly, a proper assessment of the resources required by Singularity theory is very difficult as Simmons is somewhat scarce on the details of the formal theory and rather gives an intuitive procedure or picture than a precise theory. But, independently of the formal details, one may wonder whether it is possible to provide an account of when a certain expression is pathological without, at least implicitly, making assumptions on behalf of the interpretation of the semantic term at stake.

However, focussing the discussion on the resources employed by singularity theory is arguably a red herring. The principal contrast to other proposals is that Simmons does not conceive of Singularity theory as a theory of English qua formal language. Recall that according to Simmons natural languages are universal while formal languages are not: the scope of a semantic term of some formal language is limited to the expressions of the language but there is no such restriction in the case of natural language. That is, "(…) a given occurrence of `denotes' applies to all denoting expressions except its singularities. It applies to any expression in any language, as long as the expression is not identified as a singularity" (p. 193). Singularity theory, as Simmons conceives of it, is not bound by the expressive limitations of a formal language; it applies to English (and other languages) qua natural language. Arguably this feature of the theory blocks so-called second-order revenge paradoxes because it is impossible to go beyond the expressive resources of the language. Conceived in this way Singularity theory provides more of a picture than a precise theory for determining singularities and it is this informal and somewhat open-ended character of the theory that explains why the theory does not provide a full-fledged model of English. But, of course, there is also a price to pay: on this view a precise formal semantic interpretation of English is quite simply out of reach independently of the particular formulation of Singularity theory. Of course, many will find such a conclusion appealing but even for those who don't Simmons' 'Semantic Singularities' should be an interesting read.

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