Rosanna Keefe and Peter Smith (editors)
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REVIEW

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A common feature of natural languages, a feature hard to overlook, is the large number of vague terms. In English, for example, terms such as 'old', 'tall', 'smooth', 'bald', 'thin', and so on, are vague. Indeed, the term 'large' in the first sentence above is vague. Vague terms have certain obvious features: they admit borderline cases (Michael Jordan is tall and I am not, but what about those 6 foot guys?), their boundaries are fuzzy (even admitting six-footers as borderline, where is the boundary between the tall and the borderline?) and they can generate paradox (*viz.*, sorites paradoxes: if Jordan is tall, so is the man 1mm shorter; and if *he* is tall, so is the man 1mm shorter than him; and if that third man is tall, then ...; so every man is tall). Vagueness might be seen as a defect of natural languages, as Frege and Russell believed, or it might be taken as simply an essential feature of natural languages, as Dummett, for example, has claimed.

Whether vagueness is to be eliminated from natural languages or is essential to them, the puzzles and challenges raised by vagueness are to be met in a wide variety of philosophical environments. Philosophers of language must, eventually, come to terms with the question of whether or not certain kinds of expressions have vague meanings or have a variety of precise meanings but stand in some vague semantic relation with them. Epistemologists face the issue of whether to assign the apparent vagueness of certain concepts to the concepts themselves (*e.g.*, *old* is an inherently vague concept) or to assign it to us (we are limited in our ability to determine the point of demarcation between what is old and what is not old). Ontologists are challenged by the question of where is vagueness to be located (in objects, in the properties of objects, in us). Logicians must deal with the paradoxes of vagueness (*viz.*, the sorites) and with the problems raised for formal languages that admit

vague expressions (*e.g.*, the preservation of bivalence). Moreover, not only do the issues raised by vagueness have, to speak in terms of epidemiology, a wide range of infection, they have a long history. At least as far back as the third century BCE, Stoic logicians worried about how to determine the truth-value of borderline cases such as 'This man is rich.' In the twentieth century a large number of philosophers addressed the various aspects of vagueness and, in consequence, produced a wide variety of theories intended to tame vagueness. Rosanna Keefe (who more recently has provided her own account of vagueness in *Theories of Vagueness*, Cambridge University Press, 2001) and Peter Smith have collected together in *Vagueness: A Reader* a very valuable group of readings meant to exhibit both the history of philosophical accounts of vagueness and the most important recent theories intended to treat the puzzles and challenges of vagueness.

As editors, Keefe and Smith have made two wise decisions. They have selected and arranged just the right readings in just the right way, and, because of the scope and complexity of issues involving the philosophical treatment of vagueness, they have provided a clear and extensive introductory essay. This introductory essay should be read both initially and then, in sections, along with the subsequent essays. Those essays can be divided into four groups, which might be called Old Classics, Newer Classics, Destined-to-be Classics, and Recent Work on Vague Objects and Identity. This first includes brief accounts of the phenomenon of vagueness from classical sources such as Diogenese Laertius, Galen, and Cicero, as well as pre-1970s papers by Russell, Black, Hempel, and Mehlberg. In the 1970s there was, as the editors point out, an explosion of interest in vagueness resulting in a number of detailed theories. Five of the most important of these constitute the second group: Cargile's epistemic theory of vagueness, Fine's supervaluationist theory, Machina's degree theory, Dummett's paper on Wang's paradox, and Wright's 1976 account of vague predicates. The third group of essays is made up of more recent papers, most of which build upon, extend, or criticize ideas first broached in the 1970s. This includes a 1987 paper by Wright, Williamson's defense of the epistemic theory, Tye's attempt at a three-valued logic for vagueness, Edgington's version of a degree theory, and Sainsbury's critique of the standard theories of vagueness. The final group of essays consists of Gareth Evans's brief note in *Analysis*, in which he argued against the notion of vague objects, David Lewis's defense of Evans's position, and a rejection of that view in a paper by Terence Parsons and Peter Woodruff. As I have already indicated, this selection, and its more or less chronological ordering, is just right. One might quibble that some other essays

on vagueness are left out, but certainly the major and most influential papers are here.

A brief note on the main modern theories is in order. The epistemic theory holds that vague terms are not vague because they signify vague properties but because we just happen to be ignorant about the boundaries of such properties. Vagueness is not to be found in the world; there really is a precise boarder between tall men and nontall men — we simply don't know where it is. The editors' choice of Cargile's "The Sorites Paradox" and Williamson's "Vagueness and Ignorance" are ideal representatives of this theory.

In a few pages of his 1958 *The Reach of Science*, Mehlberg inaugurated the supervaluation theory later developed by van Fraassen and formulated as an account of vagueness by Fine. That excerpt from Mehlberg and Fine's "Vagueness, Truth and Logic," are both included here. The supervaluation theory begins with the recognition that for a given term, T, there are clear cases where 'x is T' is true and other clear cases where 'x is non T' is false, and there are borderline cases where 'x is T' exhibits a truth-value gap. A supervaluation then assigns truth to 'x is T' whenever that sentence is true for all choices of making the boundary between what is T and what is non T precise, false to 'x is T' whenever that sentence is false for all choices of making the boundary between what is T and what is non T precise, and no truth-value to 'x is T' whenever that sentence is true for some such choices and false for others. Vagueness is thus accounted for by means of a nonclassical semantics for the language.

Recently, philosophers who are less sanguine about truth-value gaps have opted for theories that admit either a third value between truth and falsity or an infinite number of truth-values to account for borderline cases. Unlike the supervaluationist, these philosophers have chosen to preserve a standard semantic theory while turning to a nonstandard (either three-valued or fuzzy logic) to account for vagueness. Two of the best examples of such an approach are Machina's "Truth, Belief and Vagueness," and Tye's "Sorites Paradoxes and the Semantics of Vagueness." Both are included here along with a new piece by Edington, "Vagueness by Degrees."

Each of these theories, naturally, has had its critics. The best of these are represented by the papers by Wright, Dummett, and Sainsbury included here. The final section of the collection (the papers by Evans, Lewis, and Parsons and Woodruff) add to the already considerable value of the book. In recent years the question of whether there can be vague objects (thus accounting for vague terms) has moved to center stage in the philosophical discussions of vagueness. Indeed, Parsons and

Woodruff continue to this day to refine and extend their thesis locating indeterminacy in the world, which they began in the late eighties.

Finally, it must be said that it is Keefe and Smith's extensive (nearly 60 pages) introductory essay that makes this collection not only valuable but useful. Virtually every paper in this collection can stand alone as a significant contribution to the work on vagueness; indeed, many of them already have done so for some time. But together they constitute a valuable tool for those who wish to enter the discussion of vagueness or extend the work represented here. Keefe and Smith's essay picks up all the threads of this work, highlights the salient features of each contribution and critique and does so both clearly and concisely. *Vagueness: A Reader* should prove to be an invaluable tool for philosophers of language, logicians, metaphysicians, and linguists.

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