# Introduction

**Robert van Rooij**

Vagueness is a pervasive feature of natural language. The philosophical discussion on 'vagueness' concentrates on the notion of 'tolerance'. An expression is vague, or has a tolerant meaning, if it is insensitive to small changes in the objects to which it can be meaningfully predicated. A central philosophical problem is whether vague predicates really give rise to inconsistency, as the Sorites paradox suggests. The discussion of 'vagueness' in linguistics mostly focuses on the interpretation of so-called 'gradable adjectives' and their use in comparatives. Economists have recently 'discovered' vagueness, and try to explain why vagueness is so pervasive in natural languages. This special issue contains five articles that deal with the first two of these issues. As is well-known, there are several types of theories that deal with vagueness: within philosophy supervaluationism has always been very standard, but the epistemic theory has recently gained much popularity as well. Within linguistics there exists a long-standing dispute between degree-based approaches and delineation approaches. It is interesting to see that all these types of approaches are used in the contributions of this special issue, even though the authors don't focus here not on these disputes themselves.

Haim Gaifman's contribution to this special issue concentrates on how to get rid of the Sorites paradox, and is thus more of a philosophical nature. As is well-known, one of the sources of the paradox is the seemingly obvious truth of the following inductive principle: If you call one individual tall, and this individual is not visibly, or significantly, taller than another individual, you have to call the other one tall too. In contrast to almost any other analysis, Gaifman proposes that we should not give up this principle. His new, but still rather natural proposal is to limit the contexts in which one can use a vague predicate like 'tall' appropriately. One can only use such a

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predicate appropriately in a context if there exists in this context a significant gap such that one can clearly partition the individuals in the context by means of the predicate 'tall'. Gaifman's proposes that in all contexts in which 'tall' can be used appropriately, the inductive hypothesis is true. The Sorites paradox does not arise, however, because using 'tall' when explicitly confronted with a set of objects that form a Sorites series is inappropriate. Gaifman develops a contextual logic to account for this, and shows that in terms of it, one can also derive a 'taller than'-order without assuming anything like degrees. Gaifman's paper is already a few years old, and I am very happy that he finally submitted his paper for this special issue.

As indicated above, the epistemic analysis of vagueness, or tolerance, became rather popular recently. The paper of Paul Egre and Dennis Bonnay compares Williamson's well-known epistemic margin of error semantics with two other accounts of vagueness understood as inexact or imprecise knowledge: Halpern's two-dimensional semantics, and what the authors call centered semantics. In this comparison they focus on how the notion of intransitivity of indiscreminability accounts for the analysis of higher-order vagueness. In the second part of their paper, higher-order vagueness is discussed making use of a semantics of degree of clarity inspired by signal detection theory.

Although expressions of many lexical categories are vague, most linguistic research on vagueness concentrates on gradable adjectives like 'tall' and color adjectives like 'red'. There exist two major types of approaches to the analysis of gradable adjectives in linguistics. On one approach—also adopted by Gaifman—, gradable adjectives are simple predicates, but their extension is crucially context dependent. The most popular approach, however, analyses such adjectives as relations between individuals and degrees. These degrees are nothing but measures, which suggests that insights from measure theory are also crucial for the understanding of gradable adjectives. Indeed, this claim is defended forcefully in Galit Sassoon's contribution to this issue. Measure theorists make a distinction between several types of scales (e.g. ordinal, interval, additive), and Sassoon claims that the different properties that these different scales have show up in natural language as well. Perhaps one of the most interesting claims of her paper is that there exists a semantic distinction between positive ('tall') and negative ('short') adjectives, that corresponds to the distinction between an additive scale and an interval scale.

The contribution of Chris Kennedy and Louise McNally concentrates on the semantics of color adjectives. In some recent papers Charles Travis has argued that color adjectives are a threat to standard compositional semantics. The reason is that the truth conditions of a sentence like 'These leaves are green' can depend on the context of utterances. A straightforward reaction would be that the meaning of a color term is context dependent, or even indexical. Kennedy and McNally argue that such an analysis is by itself too liberal, and cannot really explain the correlation between the true-false judgements in Travis's contexts and the presence/absence of gradability. The authors propose, instead, that color words are ambiguous between a classificatory and a gradable interpretation. A classificatory interpretation of 'green' distinguishes, for instance naturally green leaves from painted ones. Whether an objects counts as green, or white, in the gradable reading depends on context in a more standard way. However, this context dependence of color terms comes in two ways: First, for a sheet of paper to count as white its color needs to be closer to the prototypical white things

than for a piece of wine to count as white. Second, for a room to be white, it has to be white inside, whereas for a house to be white, it has to be white outside.

There exists a striking syntactic difference between common nouns like 'bank' on the one hand and adjectives like 'tall' on the other: whereas common nouns combine with a determiner to form a noun phrase, adjectives must be nominalized first, before they can play that role. It has been argued that there corresponds a semantic difference with this syntactic difference: it is in general not determinate how to count things like 'the tall ones' or 'the red ones' (a red grapefruit, for instance, won't have the same color as a red tomato), nor is it determinate how a thing which is tall or is red must be individuated and reidentified. In contrast to what falls under a common noun like 'cat' or 'bank', the general terms 'tall' and 'red' do not by themselves determine units which could underlie the possibility of counting: arbitrary many parts of a red object are red objects again. A similar distinction exists between mass nouns and count nouns. It is standardly assumed that the distinction between mass nouns and count nouns is that only the former are semantically associated with 'stuff' that may be joined or split without changing their nature. But there is a well-known problem with this view: mass nouns like 'furniture' or 'footwear' don't have this property. In his contribution to this special issue, Gennaro Chierchia argues that the mass count distinction is a matter of vagueness. We can count Ns (for any nouns N), whenever we can determine what are the smallest things to which the term N applies. In case this notion of 'smallest things' is too vague (in a particular context) for a particular noun N, we take N to be a mass noun. Because the perceptual abilities of our species are uniform, this explains, according to Chierchia, why 'core' mass nouns are stable across languages. Chierchia makes this suggestion precise making use of data semantics/supervaluationalist framework and argues that his ambiguity thesis affords us a better understanding of the relevant phenomena than other current alternatives.