ABSTRACT. This paper uses the distribution and interpretation of antonymous adjectives in comparative constructions as an empirical basis to argue that abstract representations of measurement, or ‘degrees’, must be modeled as intervals on a scale, rather than as points, as commonly assumed. I begin by demonstrating that the facts in this domain must be accounted for in terms of the interaction of the semantics of adjectival polarity and the semantics of the comparative, rather than principles governing the (overt) expression of particular types of adjectives in comparatives. I then show that a principled account of the full range of data under consideration can be constructed within a model in which degrees are formalized as intervals on a scale and adjectival polarity is characterized in terms of two structurally distinct and complementary sorts of ‘positive’ and ‘negative’ degrees.

KEY WORDS: antonymy, comparatives, degrees, gradable adjectives, polarity

1. INTRODUCTION

A fundamental problem for the semantic analysis of gradable adjectives like tall, long, and expensive is that many of the sentences in which they occur are vague. (1), for example, could be true in one context and false in another.

(1) The Mars Pathfinder mission was expensive.

In a context in which the discussion includes all objects that have some cost value associated with them, (1) would most likely be judged true, since the cost of sending a spacecraft to Mars is far greater than the cost of most things (e.g., nails, dog food, a used Volvo, etc.). In a context in which
only missions involving interplanetary exploration are salient, however, (1) would probably be judged false, since a unique characteristic of the Mars Pathfinder mission was its low cost compared to other projects involving the exploration of outer space (see Sapir (1944), McConnell-Ginet (1973), Kamp (1975), Klein (1980), Ludlow (1989), Kennedy (1999a) and others for relevant discussion).

What this example shows is that the criteria for deciding whether an utterance of ‘*x is φ*’ is true, where φ is a gradable adjective, may vary according to factors external to the adjective, such as the meaning of x and features of the context of utterance. Determining the truth of ‘*x is φ*’ in a particular context requires figuring out what these criteria are, and then making a judgment of whether *x* ‘counts as’ *φ* in that context. A basic requirement of a semantic analysis of gradable adjectives, then, is to both provide a means of making this judgment, ensuring that sentences like (1) have definite interpretations, and to allow for variability of interpretation across contexts.

One approach to this problem, first formalized in Seuren (1973) and Cresswell (1976) but since adopted in some form by many semantic analyses of gradable adjectives, meets this requirement by constructing an abstract representation of measurement and defining the interpretation of gradable adjectives in terms of this representation (see e.g., Hellan (1981), Hoeksema (1983), von Stechow (1984a,b), Heim (1985), Bierwisch (1989), Pinkal (1989), Moltmann (1992), Gawron (1995), Rullmann (1995), Hendriks (1995), and Kennedy (1999a); see Klein (1991) for general discussion, and see Faller (1998, to appear) for a related approach in terms of vector space semantics (Zwarts (1995), Zwarts and Winter (1997))). This abstract representation, or scale, can be construed as a set of objects under a total ordering, where each object represents a measure, or degree, of ‘φ-ness’.

The introduction of scales and degrees into the ontology makes it possible to analyze predications involving gradable adjectives in terms of relations between objects and degrees on a scale. This analysis in turn provides the basis for an account of vagueness. A sentence of the form ‘*x is φ*’ is taken to mean that the degree to which *x* is *φ* is at least as great as some other degree *d*(φ) on the scale associated with *φ* that identifies a standard for *φ*. The semantic function of the standard-denoting degree is to provide a means of separating those objects

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1 In Cresswell’s analysis, scales are actually constructed out of equivalence classes of objects partially ordered according to some gradable property. For the purposes of the following discussion, we can make the simplifying assumption that degrees are abstract objects that stand in a one-to-one relation with the (totally ordered) set of equivalence classes derived in a Cresswell-style approach (see Klein (1991)).