The Cognitive Roots of Adjectival Meaning

In this paper, I illustrate a way that work in cognitive psychology can fruitfully interact with truth-conditional semantics. A widely held view takes the meanings of gradable adjectives to be measure functions, which map objects to degrees on a scale. Scales come equipped with dimensions that fix what the degrees are. Following Bartsch and Vennemann, I observe that this allows dimensions to play the role of lexical roots, that provide the distinctive contents for each lexical entry. I review evidence that the grammar provides a limited range of scale structures, presumably dense linear orderings with a limited range of topological properties. I then turn to how the content of the root can be fixed. In the verbal domain, there is evidence suggesting roots are linked to concepts. In many cases for adjectives, it is not concepts but approximate magnitude representation systems that fix root contents. However, these magnitude representation systems are approximate or analog, and do not provide precise values. I argue that the roots of adjectives like these provide a weak, discrimination-based constraint on a grammatically fixed scale structure. Other adjectives can find concepts to fix roots, which can support a well-known equivalence class construction which can fix precise values on a scale. I conclude that though adjectives have a uniform truth-conditional semantics, they show substantial differences in the cognitive sources of their root meanings. This shows that there are (at least) two sub-classes of adjectives, with roots fixed by different mechanisms and with different degrees of precision, and showing very different cognitive properties.