The structural elements of the prosodic hierarchy and the ways in which phonological generalisations make reference to them are investigated. The different types (categories) of such elements, especially the syllable, are examined more closely. Specifically, the traditional weight dichotomy of ‘heavy’ vs. ‘light’ syllables is shown to be empirically inadequate for the explanation of the diversity of stress systems attested in natural languages. Rejcting functional explanations of syllable weight, this thesis proposes a structure-based alternative within the framework of Optimality Theory. It is demonstrated that grammars may distinguish up to six or more syllable weight categories by means of a small number of ranked and violable constraints. This also accounts for reference to categories of elements other than the syllable. Both prosodic structure and properties of elements, especially segmental sonority, are shown to be factors in distinguishing categories. Here, as well as more generally, the Strict Layering Hypothesis is found to be both too restrictive and empirically inadequate as a constraint on which elements of prosodic structure are available to phonological processes. It is replaced with a more general Prosodic Accessibility Hypothesis, which in effect extends prosodic reference to minimal non-adjacency. This thesis has implications for the study of syllable weight, syllable structure, prosodic categorisation, and the organisation of the grammar.