A Large-scale Experimental Study of English Syllabification

We carried out an large-scale quantitative study in which 4,990 bisyllabic English words were syllabified by an average of 22 subjects each. Words were presented in standard spelling along with a quasi-phonemic transcription of the syllabification options (e.g. *photon:* FOW / TAHN, FOWT / AHN). Test items included words with one to four medial consonants (e.g. *lemon, absent, central, subscribe*), and many of the test words were morphologically complex. We ran a series of multiple regression analyses on the 10,000 resulting responses in order to determine what factors influenced the subject's syllabification preferences, as well as how strongly each factor contributed to the their choices. Multiple regression allows the influence of one factor to be calculated above and beyond that of other factors in the analysis. The results demonstrate that syllable boundaries have a strong tendency to follow morphological boundaries, especially in compound words. In addition, words were divided into syllables in such a way that the resulting syllables begin and end with phonemes that are phonotactically legal in word-initial and word-final positions. Spelling also arose as a factor; responses tended to create syllables that followed orthographic conventions, such as not placing *ck* or *ll* syllable-initially. Together these findings suggest a model in which syllables are made to be as wordlike as possible. However, two phonological influences also played a part. Sonorants were highly likely to be be placed in syllable codas. To a lesser degree, consonants also tended to be drawn into stressed syllables.