Abstract: This chapter discusses research on how words that are orthographically (or phonologically) similar to a printed or written word (i.e., its neighbors) influence the speed and accuracy of its encoding. This influence presumably occurs because these neighbors are also activated during the course of its processing and their excitation also influences the encoding of the word actually seen. In the experiments in the past century (mostly on the 70s-90s), the set of a word’s neighbors was posited to be formed by those lexical units differing from the target stimulus by a single letter in a given position (i.e., “one-letter substitution” neighbors like trail and train). More recent evidence has revealed that a better definition of a word’s neighborhood should include lexical units of different length (e.g., trail-rail) and lexical units created by transpositions (e.g., trail and trial). Recently, more comprehensive, combined measures of a word’s neighborhood have been proposed (e.g., N* or OLD20/P-OLD20). The study of a word’s neighborhood in the past decades has revealed that that the activation of neighbors (which may be rival lexical candidates) may interfere with the processing of the target words in word-identification tasks and during sentence reading, supporting the basic claims of interactive activation models (i.e., lexical inhibition at the word level). Finally, I examine some challenges to the current definitions of the sets of word neighborhoods, in particular, needing to include differences between how consonants and vowels are encoded during word processing.