Because words' meanings are reflected in the statistics of their use, learners could discover the meaning of the word "ball" (for instance) by noticing that it often accompanies play with small, round toys. A number of experiments show that humans are sensitive to these statistics, but there is considerable debate about the mechanisms used to track them. Some accounts **hold that we accumulate graded evidence about multiple meanings for each word; others suggest that we maintain only a single hypothesized meaning. We present a unifying model that shows how varying demands on attention and memory can interact with statistical learning to explain the kind of data used to support each previous account.**