Abstract: In three experiments, adults attempted to learn words with subordinate-level meanings (dalmatian) by sampling the referent world cross-situationally. Xu & Tenenbaum, 2007 predicted that encountering three uses of a word, each referring to a dalmatian would evoke “suspicious coincidence” inferencing, leading to the subordinate meaning (dalmatian). Exp. 1 found little evidence for this; cross-situational exposure led to a basic-level bias. This bias was unchanged even when the sample was increased to five subordinate exemplars (Exp. 2). Exp. 3 encouraged semantic contrast by simultaneously teaching each subject a word for the subordinate-level and the basic-level category within the same semantic domain (dap=dalmatian; blit=dog). Participants now showed non-basic level learning, but more in line with mutual exclusivity: they may think “dap” means dalmatian but “blit” means all-dogs-except-dalmatians. We conclude that the basic-level interpretation is powerful and cannot be removed by the mere observation of exemplar items over multiple word instances.