Successful completion of visual task goals requires the efficient deployment of attention to task-relevant information and ignoring of irrelevant distracting items. A key question, then, is when can the processing of stimuli irrelevant to our current goals be reduced or even prevented. A major theory attempting to answer this question is the theory of perceptual load (Lavie & Tsal, 1994, Lavie, 1995). According to this theory, interference can be avoided only in high perceptual load situations, when target processing exhausts attentional resources. Over the past decade, perceptual load theory has received a great deal of attention and support. In my talk I will present an alternative account to this theory, the Dilution account (Benoni & Tsal, 2010; Tsal & Benoni, 2010), which proposes that: a. Manipulations of perceptual load have been confounded with "dilution" (the inclusion of additional items, capable of diluting distractor processing in high load situations). b. Dilution, not load, is the determining factor in selective attention. c. When dilution is controlled, high perceptual load affects selectivity in the opposite direction, namely, increases distractor interference.