**Supplementary Figure 4.** Two modes of synapse formation by spine growth

a, A new spine (green) can grow towards an axon (blue) to make a synapse, resulting in a single-synapse bouton.
b, New spines often grow towards existing boutons, occupied by another spine (grey), resulting in multi-synapse boutons. The multi-synaptic state of the bouton could be transient. Spine maturation involves increases in spine volume, synapse (red) formation, and later the acquisition of SER (yellow).