

1. We know there are multiple plasticity mechanisms active all at once. Hebbian plasticity underlies learning, but de-stabilises networks. Homeostatic plasticity ensures that even when learning occurs, the network remains in a stable state
2. Generally, though, when we speak of these, we refer to synaptic plasticity only. But, lots of evidence now confirms that, in fact, structural plasticity is active in the adult brain. So not only are synaptic weights changing, the connectivity of networks is changing too!
3. So, it isn't hard to imagine how if changes in synaptic strengths makes plasticity-stability an issue, how the removal and formation of whole synapses would have a much larger effect to plasticity-stability.
4. For the purpose of our analysis, we do not consider the modulation of synaptic strengths as structural plasticity (even though it is).

1. In the adult brain, now that we have the tech to look in at the microscopic structures that form synapses, we see that these are highly dynamic. They sprout and retract, forming and removing synapses. However, this must happen in a way that the brain remains functional: so, are their Hebbian and Homeostatic components of structural plasticity too?