Synaptic Plasticity

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In neuroscience, synaptic plasticity is the change in strength of synapses in the brain. A synapse is the entire junction between neurons, including the pre-synaptic neuron's axon terminal, the synaptic cleft, and the dendrite of the post-synaptic neuron, across which communications flow. Synapses are plastic, which in neuroscience doesn't mean what your water bottle is made of. Plastic means able to change.

Synaptic plasticity is the strengthening and weakening of synapses.

There are two types of synaptic plasticity: intrinsic and extrinsic. Intrinsic (or homosynaptic plasticity) is strength change due to the synapse's own activity. Extrinsic (or heterosynaptic plasticity) is strength change due to activity in another synapse or pathway. Synaptic plasticity is important in learning, memory, recall, and retention. More synapses with stronger connections signify a high functioning and more efficient cognitive system for memories and learning.