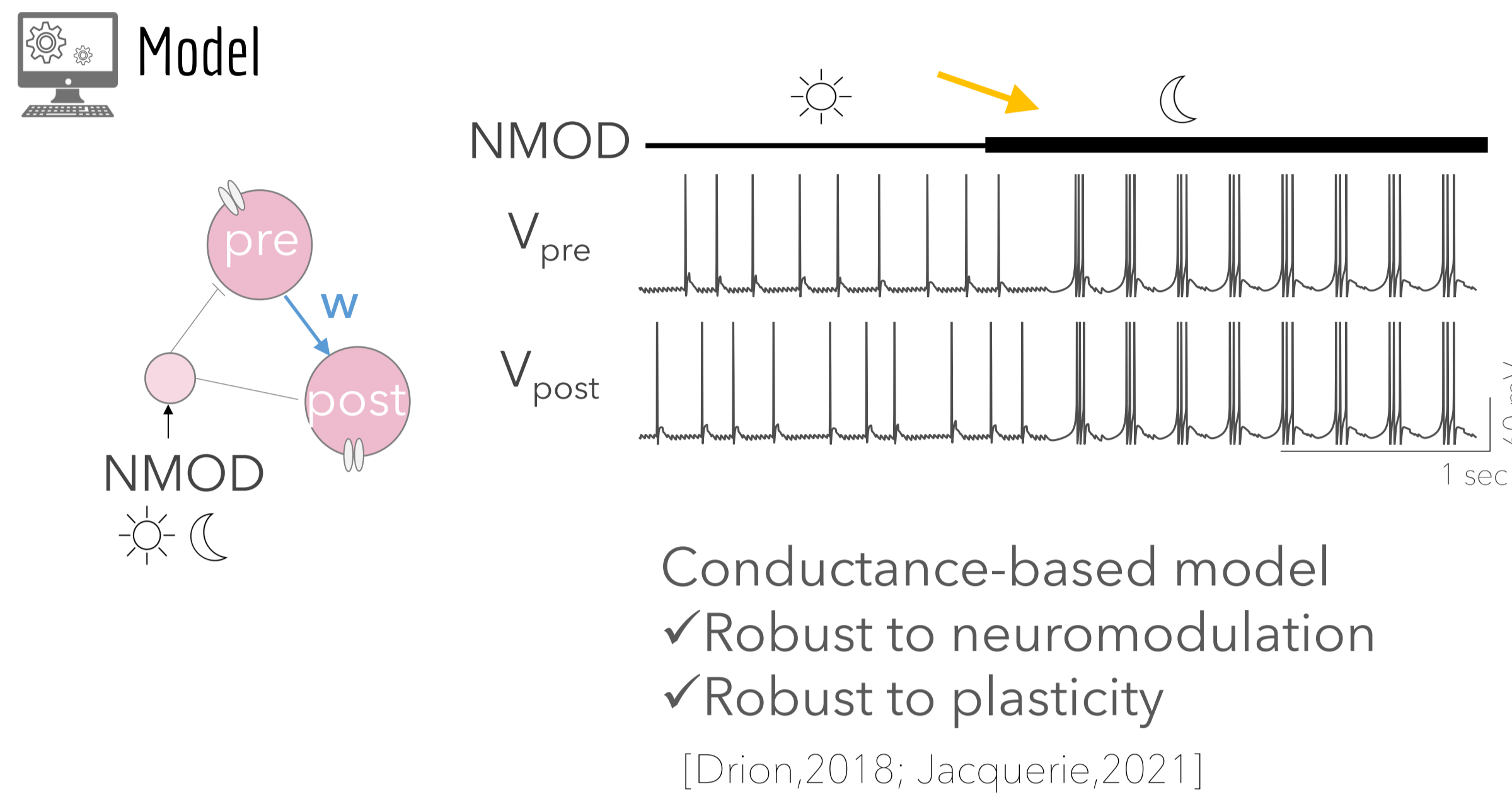
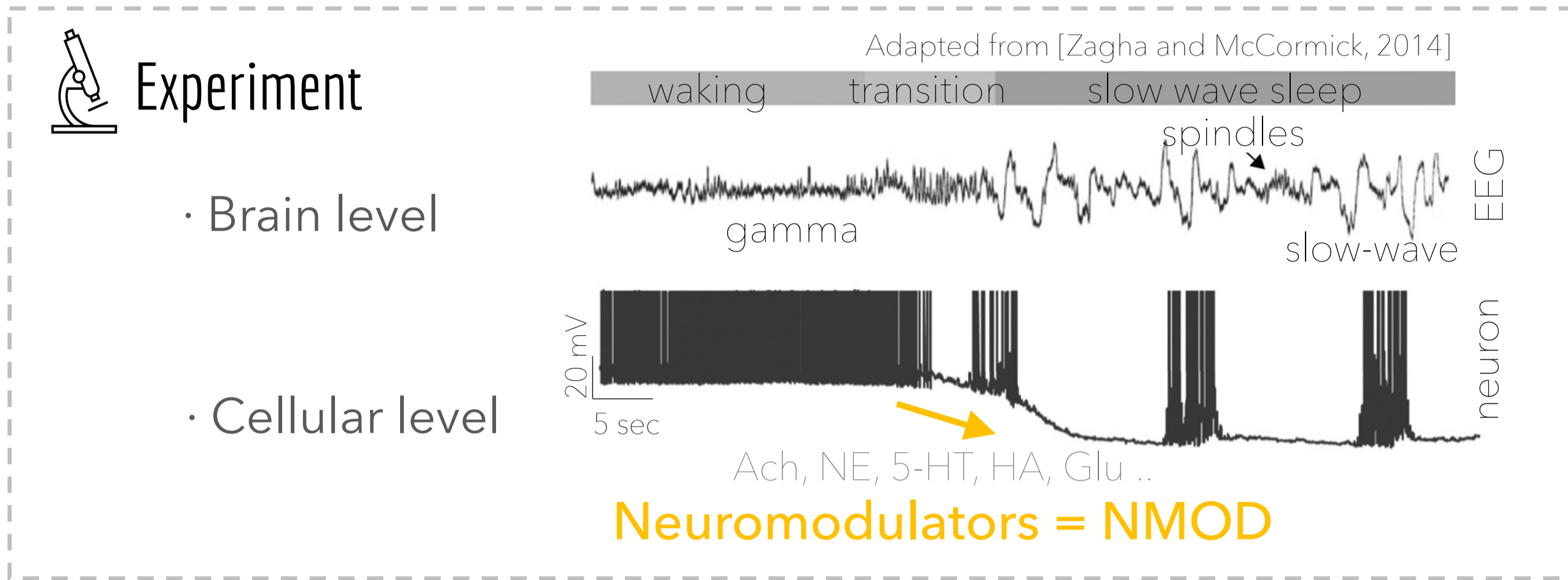
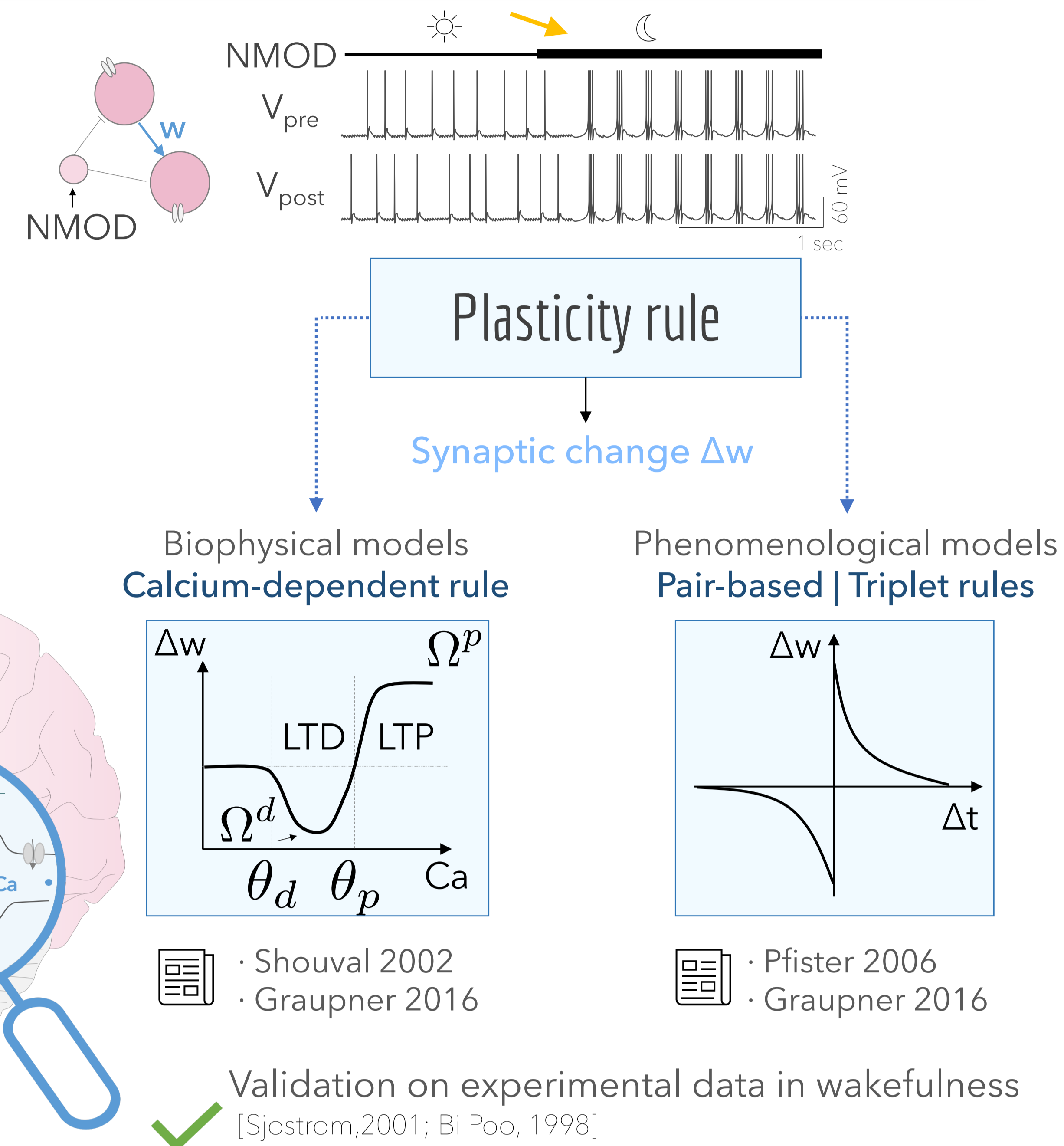




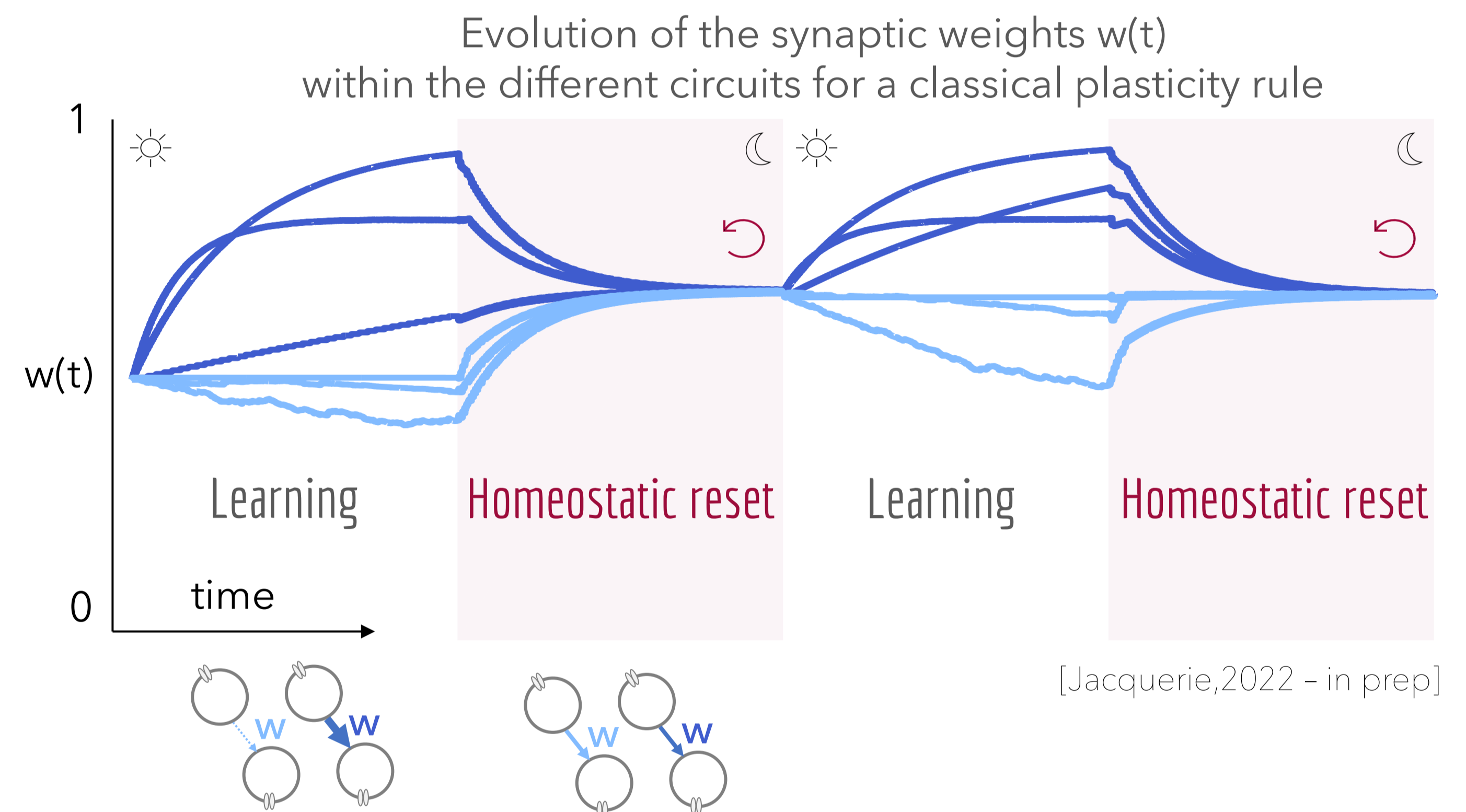
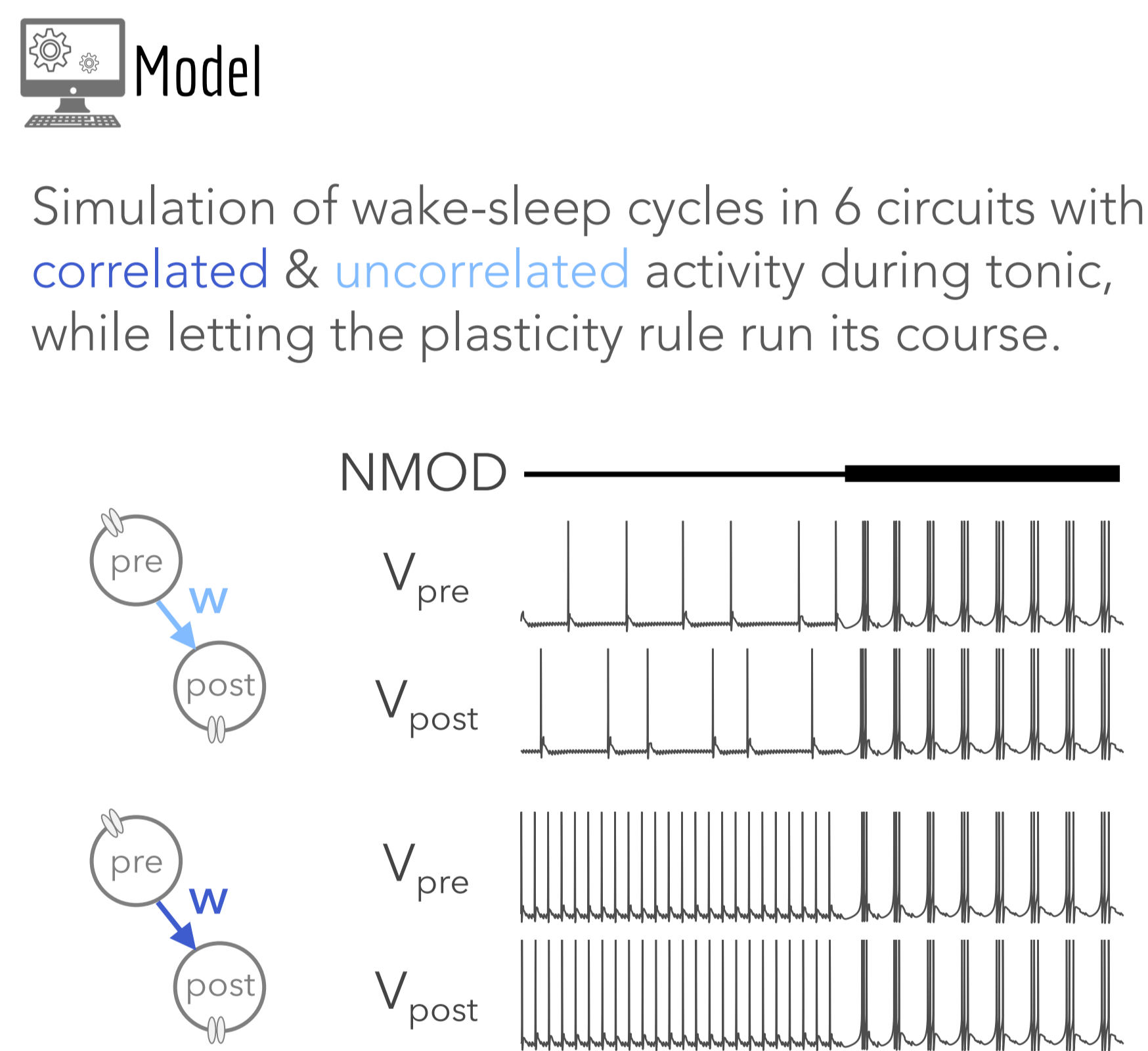
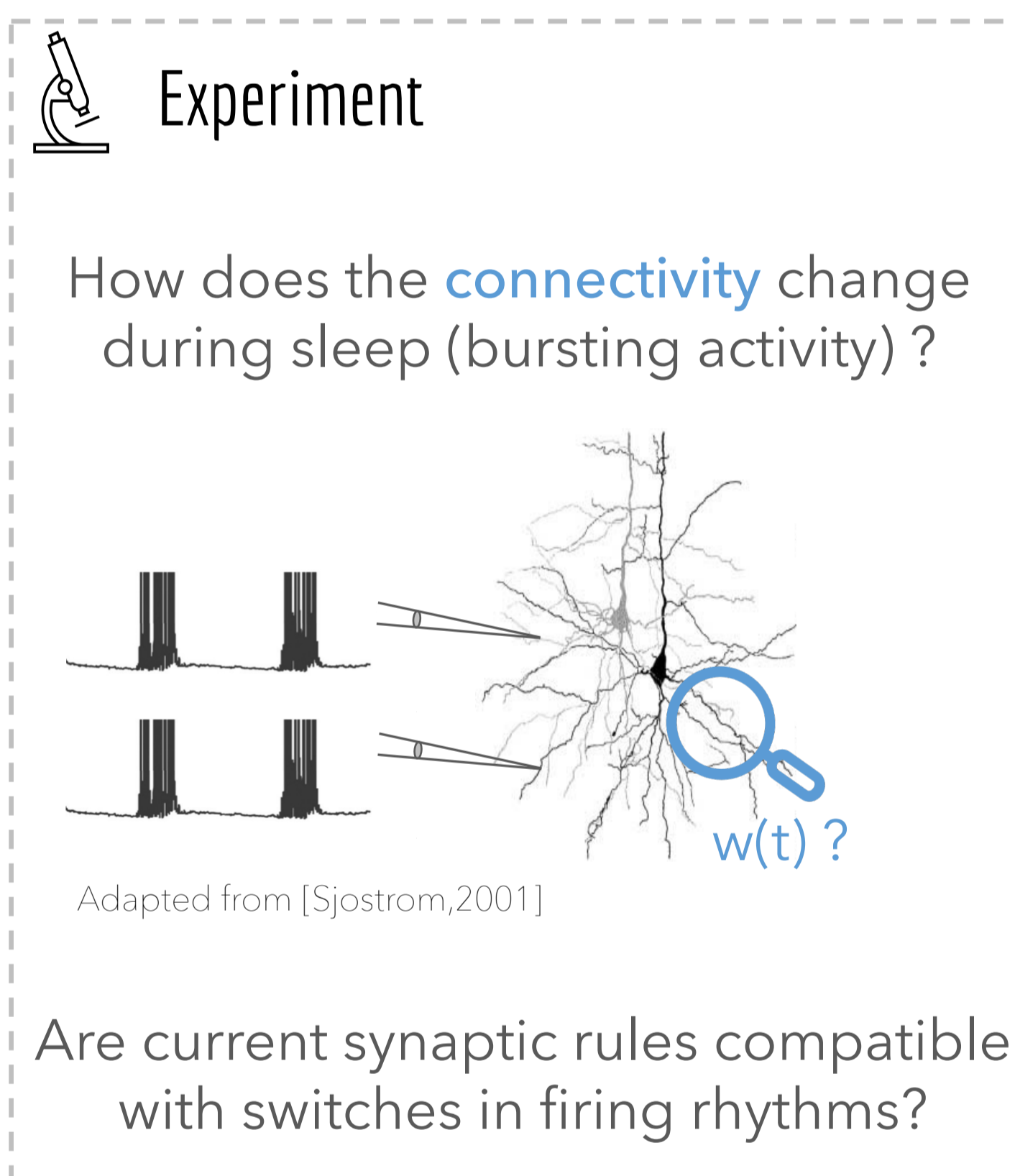
1. Network rhythms during sleep and wakefulness



2. How to model synaptic plasticity?

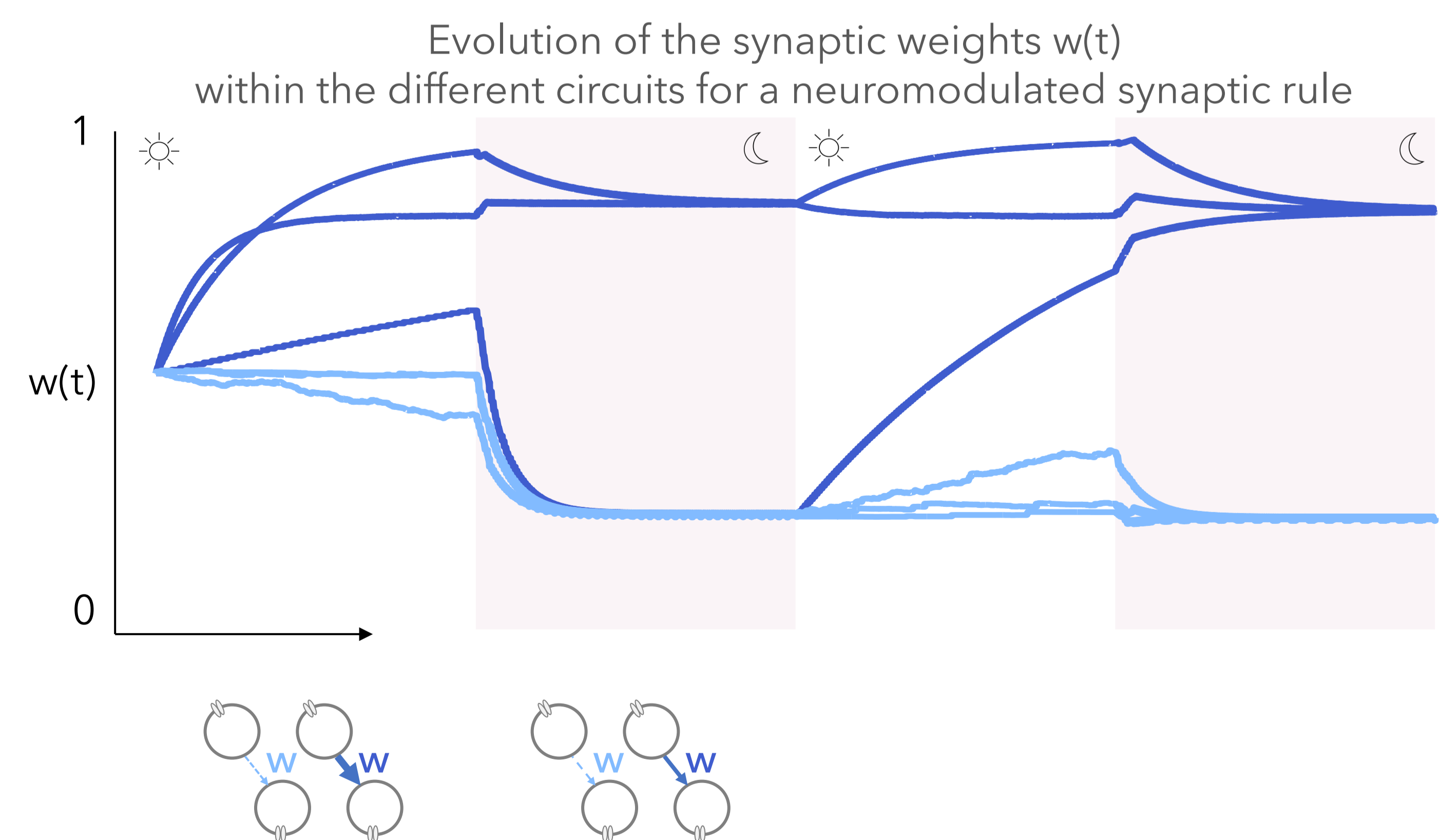


3. Plasticity rules tested during sleep



Conclusion

Whatever we have learnt, the connexion is restored to a given value each night. This phenomenon is called the **homeostatic reset**. This is **not compatible** to **sleep-dependent memory consolidation**.



Conclusion

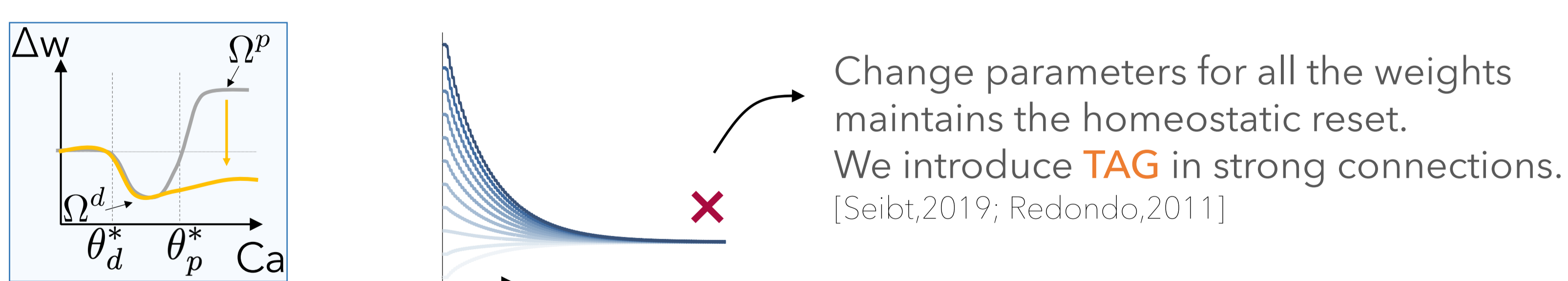
- Neuromodulation alters synaptic plasticity rules between wake state and sleep state. The rules are **state-dependent**.
- The rules need to be **tag-dependent**.
- The homeostatic reset is **exploited** to support sleep-dependent memory consolidation.

4. Adding neuromodulation on plasticity rules

Model

Δw^* → Δw^c

Plasticity rules undergo neuromodulation: Their parameters are modified.



Strong weights are preserved, Weak weights are depressed.

