Brain - Mind - Cognition Online Journal Club
(https://bmcjournalclub.github.io/BMCjournalClub/)

Time: TBC
Venue: https://us05web.zoom.us/j/8823639430?

Reward expectation extinction restructures and degrades CA1 spatial maps through the loss of a dopaminergic reward proximity signal

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Spatial navigation is undoubtedly one of the hottest topics in Cognitive Neuroscience research. The breakthrough in this is the discovery of the place cell - which later turns out to be a Nobel Prize-level discovery. Scientists are now able to identify the activation of place cells in the hippocampus in CA1 is related to a particular place in the outside environment. However, the story does not end here. Recent findings suggest CA1 may also be responsible for time perception, and findings of how cognitive map in bats suggests the possible influence of embodiment. This all suggests the mechanism of CA1 might be much more complicated. Of which, there is one question that is particularly interesting: the remapping of the cognitive map in CA1.

As prior research shows punishment and reward will alter the mapping of CA1, even with no change in the environment. It seems like our cognition of space is somehow related to our internal expectations. In this talk, I will be introducing such a paper that points out this interesting hypothesis: The remapping of the outside environment is correlated to the mental reward expectation.

本次journal club 将会对 “内部预期对CA1位置细胞的认知地图重新映射” 这一内容进行分享

About the speaker

Eric Wang is now an undergraduate student at the Chinese University of Hong Kong. He is now studying Bachelor of Social Science majoring in Psychology and Linguistics. His main research interest is in combining computational methods with behavioral data to investigate our mind and cognition. Most importantly, how does the brain, this matter that weight less than 2kg, give rise to the mind.