

Linear episodic chronometry in the macaque medio-posterior parietal cortex

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Introduction

- Neurons in primate **posterior parietal cortex (PPC)** were indicated to mediate event-related memory retrieval and consolidation.
- Nonhuman primate showed capacity of successful **Episodic memory retrieval** in temporal order judgement (TOJ) task with naturalized dynamic videos, but it merely gave the views on behavioral performance.
- Relevant studies demonstrated that monkeys might be able to reconstruct the **temporal order of multiple events**.
- **Video sequence**: the temporal order of videos watching.
- **Video interval**: the interval between two different videos defined by the temporal order.

Objectives

Investigating how PPC neurons deal with multiple events spanning across intertwined episodes.

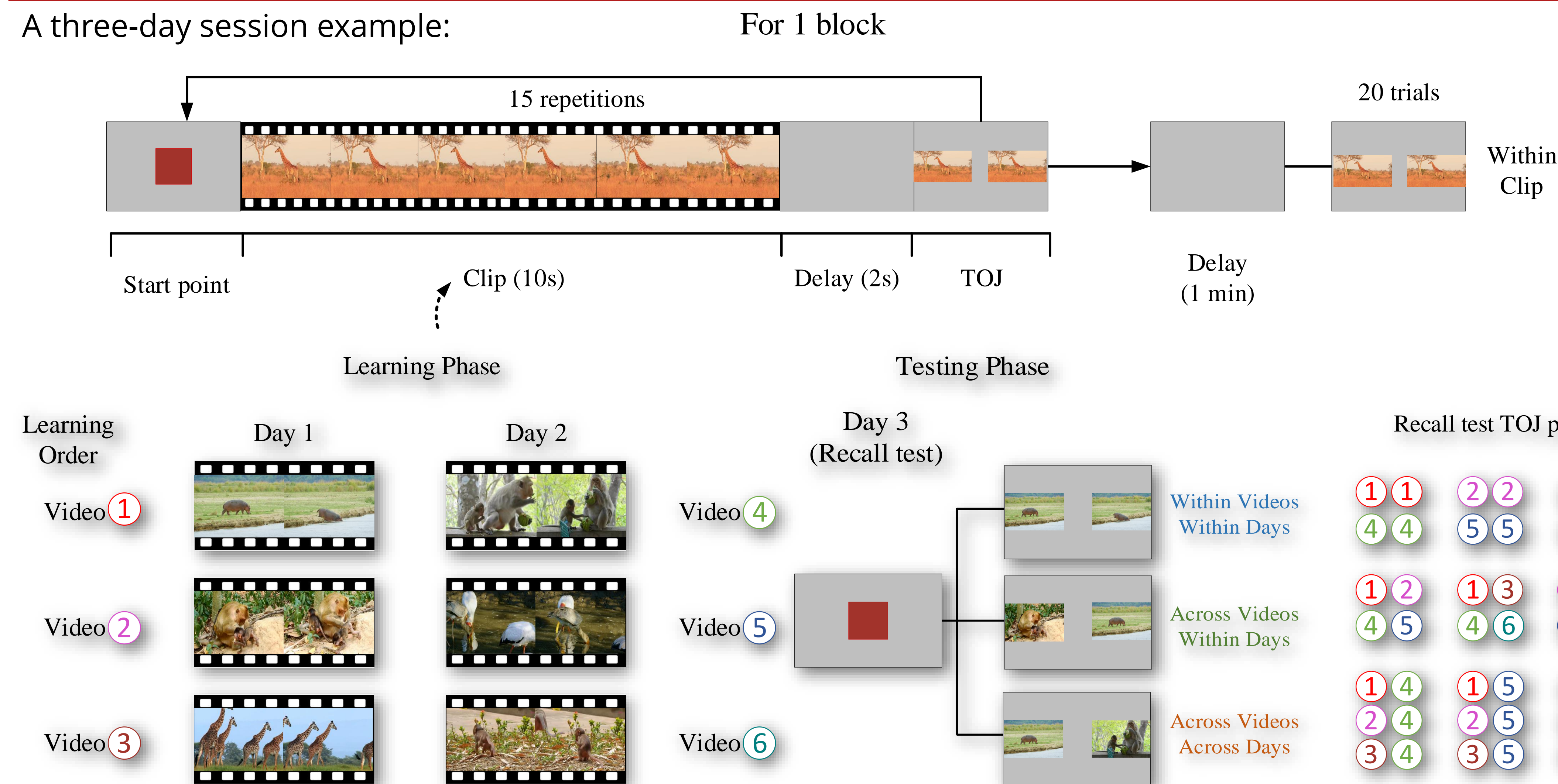
Hypotheses

- Monkeys might construct the videos into a temporal sequence with their temporal order by comparing TOJ on two different videos from different days versus from a single video.
- The PPC neurons participate differently in short- and long-term memory construction.

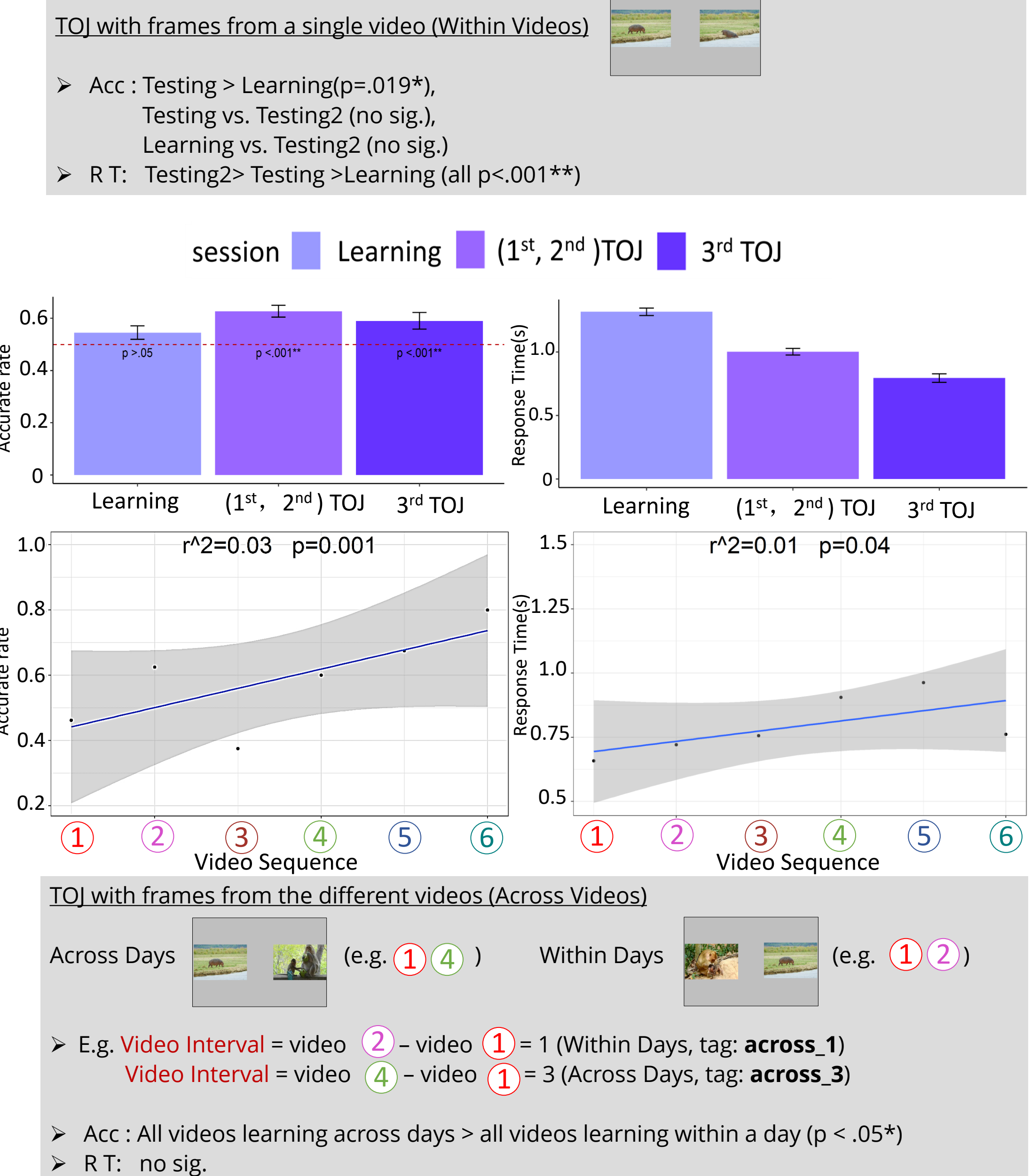
Bibliography

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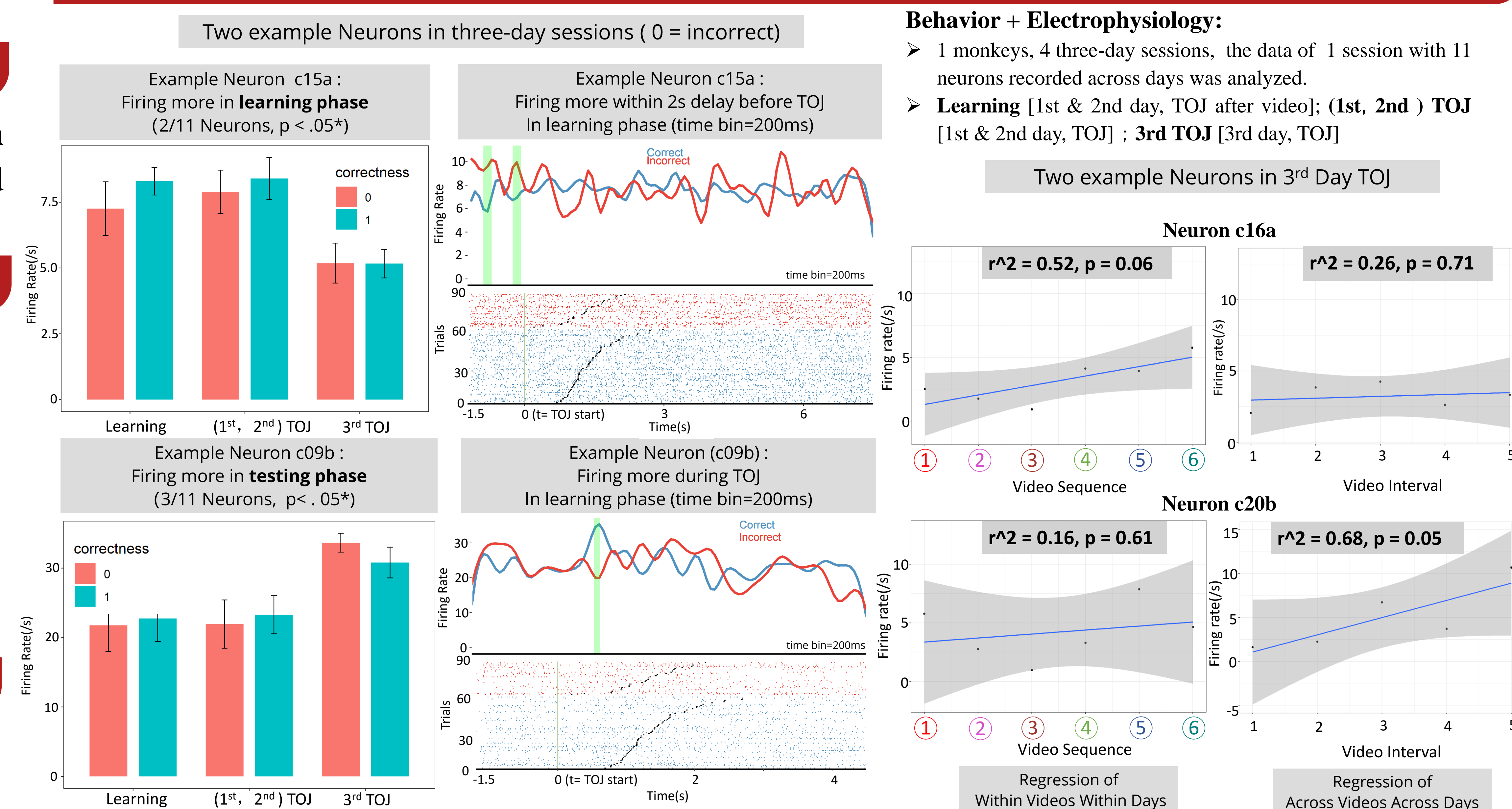
Paradigm



Behavioral Performance



Electrophysiological Result



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Conclusion

- Monkeys are capable of forming an order of multiple-events sequence in a long-time scale, but some information about details in time might be lost.
- There might be two exclusive subsets of PPC neurons take responsibility for episodic memory at different time scales – especially activate for only the learning phase or testing phase.