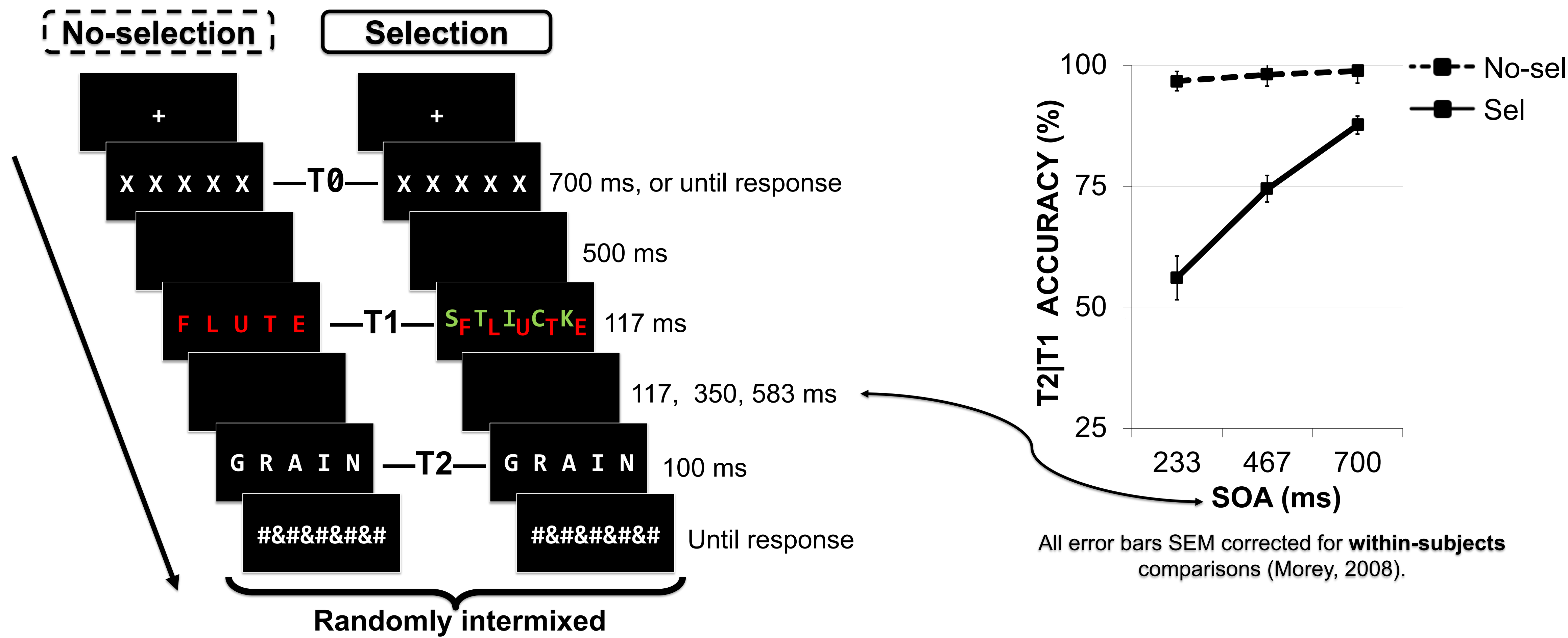


Background

- Different task contexts may lead people to prepare attention in different ways.
- An example of different contexts could be a series of selective attention trials that are mostly incongruent/incompatible vs. mostly congruent/compatible.
- There is debate in the literature about the underlying processes that modulate preparation to attend.^{1,2,3}
- In these experiments, we manipulated preparation using a word naming task prior to each rapid two-target identification trial.

Control: Selective Attention (SA) at T1 Produces Attentional Blink at T2^{4,5}

TASK: Ignore T0. Identify the **red** word (T1) then white word (T2) and report them at end of trial.



- Exp. 1 and 2 used the exact same method as the Control Exp., but we manipulated what appeared at T0, and how people prepared to encode it.

Discussion and References

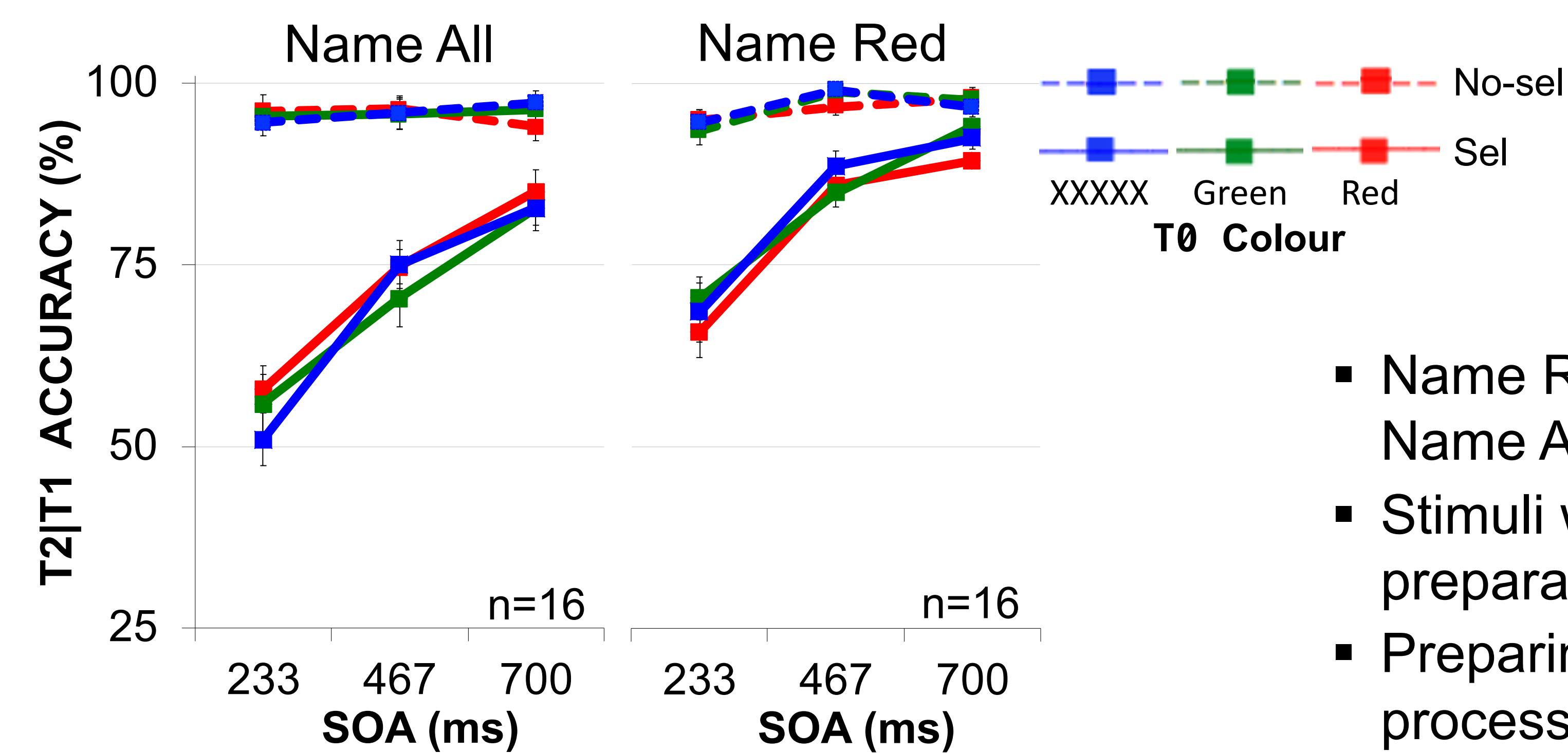
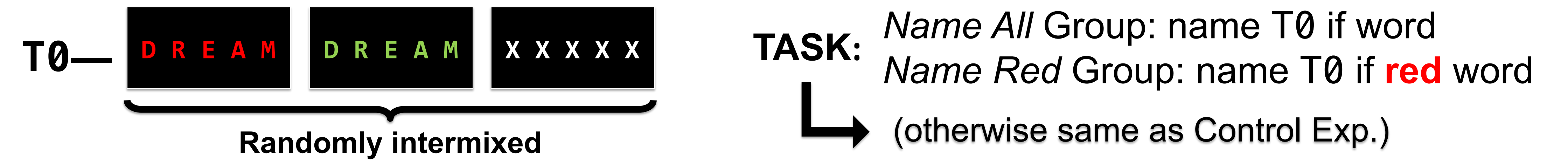
- Preparing to selectively attend to red words can impact the efficiency of SA at a later point in time.
- Preparation may involve preparing a task template (representation) that is subject to associative learning of control states and task context.
- By this view, The effect in Exp. 2. appears to be a result of long-term cumulative learning, where the state of preparation is associated with task context.

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Exp. 1: Selective Preparation for “Red” Impacts Selection Efficiency

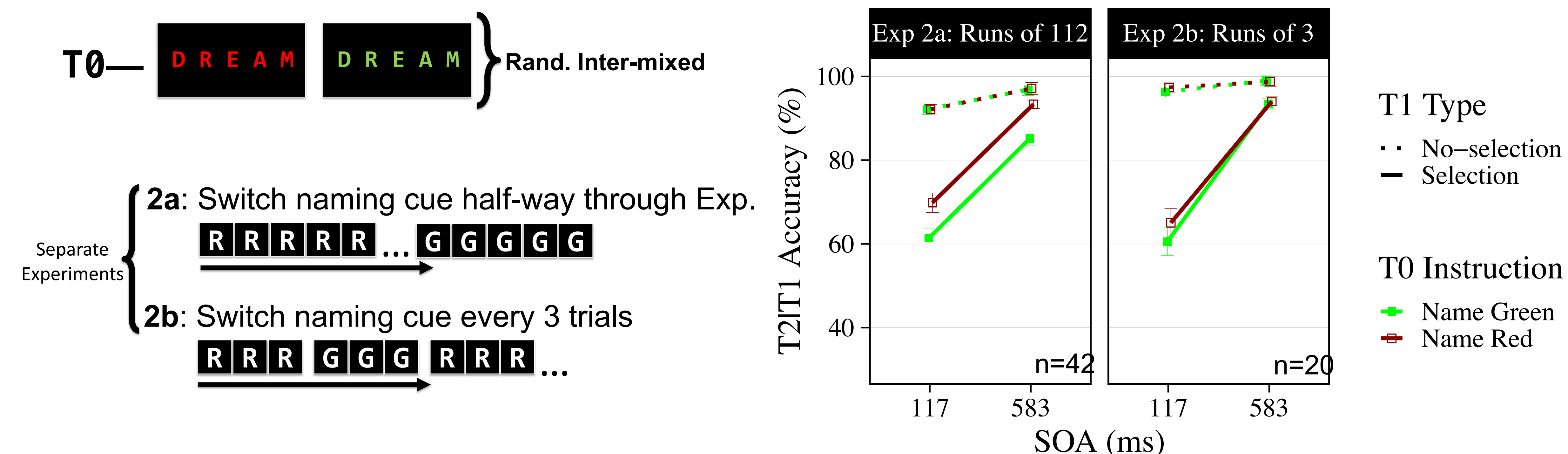
- How does preparation to name a word at T0 impact selection at a later point in time (at T1)?



- Name Red performed substantially better than Name All.
- Stimuli were the same, only difference was preparation set by instructions.
- Preparing for red words at T0 influences SA processes for red words at T1.

Exp. 2: Preparation Effects Reflect Cumulative Learning

- Does the influence of preparation depend on multi-trial learning?
- At start of every trial, Ps were instructed what colour to name at T0 with a cue (R or G).



- Performance differed between Name Red trials and Name Green Trials only when T0 instruction repeated for many trials (3a).
- Preparation effect depends on cumulative experience, reminiscent of selection history effects.⁶