A role for conflict in segmenting memories
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Introduction
Changes in category and task create separation in memory. (e.g., DuBrow & Davachi, 2013; Polyn et al, 2009).

However, lingering representations can persist across changes to contextualize memories (Chan et al, 2017).

Thus, an outstanding question is what determines when contexts can persist across changes to bind memories.

Here, we investigated whether a dominant task can persist across short, noncompetitive interruptions.

We hypothesized that high conflict would induce segmentation.

Experimental logic and design
Conditions
Low conflict
 indoor/outdoor? male/female?
High conflict
2s 5s 2s...
t ime
72 stims per block

Predictions
Study sequence
2s .5s 2s... 
Recognition priming
Low conflict
Exp 1: pilot version, Exp 2: random group assignment, Exp 3: study time extended to 3s
Exp 1 & 2: 8 study-test rounds, Exp 3: 6 study-test round

References
DuBrow & Davachi (2013). The influence of content boundaries on memory for the sequential order of events. JEP General.

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Effect of prior context
No conflict ANOVA p < .05

Discussion
We found evidence that dominant tasks can persist across interruptions to bind memories together.

However, segmentation occurs when the interruption creates conflict with the dominant task.

Thus, multiple trains of thought may be able to coexist when they do not conflict with each other.

Future fMRI studies will use decoding approaches to track multiple contexts simultaneously to test whether these signals can predict when segmentation does or does not occur.

Primers effects indicate bindning can occur across switches when conflict is low but not high.

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