INTRODUCTION

- An important aspect of cognitive control is handling distractor conflict (i.e., situations where distractors bias a competing response, Botvinick et al., 2001; Faust & Balota, 2007).
- Conflict Adaptation, a transient reduction of distractor conflict following a conflict trial (Notebaert et al., 2006) may reflect the operation of reactive general cognitive control processes (Botvinick et al., 2001) that operate across a range of distractor conflict tasks, perhaps involving common neural systems in the dorsolateral prefrontal cortex (Li et al., 2004).
- However, conflict adaptation may not occur for trial sequences where the distractor conflict task shifts across two successive trials (Funes, Lupiáñez, & Humphreys, 2010), calling into question the generality of cognitive control processes associated with conflict adaptation effects.
- The present study examines the generality of conflict adaptation by searching for the boundary conditions of conflict adaptation across tasks. We will use 2 tasks that differ in the target decision (i.e., color vs. word identity), but not in location and type of distractors (i.e., flanking words).
- Conflict adaptation effects may also be due, at least in part, to repetition priming of the distractor/target across successive trials (e.g., blue then green on successive trials in a Stroop color naming task, Mayr, Aehl, & Laurey, 2003).
- It is therefore important that conflict adaptation effects be assessed separately for trial sequences where distractors/targets repeat (Repetitions), and do not repeat (Alternations, Notebaert et al., 2006).

Tasks

- A manual Stroop color identification task (Faust et al., 2011) and a matching Eriksen flanker task (Eriksen & Eriksen, 1974) were used.
- 3 colors and names (Red, Green, Blue), 200 ms RSI between trials.
- Proportion of conflict trials High (67%) verses Low (33%) across subjects.
- 2 Trial Sequence Types:
  - Alternation Sequences: Target & distractor do not repeat
  - Repetition Sequences: Target and/or distractor repeat
- Example Stimuli: Color Patch vs. Word Identity Target Decisions

Questions

- Will shifts in task targets (i.e., color vs. word), with constant distractor locations, reduce or eliminate conflict adaptation?
- Will varying control demands (i.e., proportion conflict trials) modulate the robustness of conflict adaptation?

ACKNOWLEDGMENTS

We would like to thank Leslie Cooper, Spencer Fix, Lauren Jacobs, Megan Jordano, & Stefanie Salerno for their help with data collection.