

two-item set design. In a two-item set design, the design that was used by Jacoby et al. (2003, Experiments 2a, 2b, and 3) and Schmidt and Besner (2008) in formulating the contingency account, a single high contingency response exists for both the mostly congruent and mostly incongruent word sets. In the mostly congruent set, it is the congruent response and in the mostly incongruent set it

- What is a two-item/4-item design? What is a "high contingency response" p. 6

is the incongruent response associated with the opposite color in that set. Contrast this with a four-item set where a single high contingency response option exists for the mostly congruent set but does not exist for the mostly incongruent set. There is no high contingency incongruent response. Rather, there are three equally probable responses on incongruent trials. This means that participants cannot predict with high accuracy the response that is mostly likely on any incongruent trial during a task that employs a four-item set. Given these differences, Bugg and Hutchison pre-

- Why would contingency learning mechanisms dominate only in the two-item set?

Moreover, Blais and Bunge had participants perform the Stroop task while in an fMRI scanner. They found that the anterior cingulate and dorsolateral prefrontal cortex, two regions previously implicated in top-down (e.g., list-wide) control (Botvinick et al., 2001), were selectively activated under conditions where item-specific control was presumed to operate (i.e., in contrasts involving the biased set of items). There were no differences in activation of these regions of interest in contrasts

- What do "contrasts" mean?

Commented [c1]: High contingency just means that it is occurring at a high proportion. It's about "event learning," the idea that the more you see a particular stimulus (an event), the more you overlearn it. So, if something is high contingency, it's more likely to occur, and therefore from a contingency learning account, you might be more likely to learn those kind of S-R pairings instead of stimulus-control pairings.

2 item => RED, GREEN at stimuli
4 item => RED, GREEN, YELLOW, BLUE

Commented [c2]: If it's just RED AND GREEN
When it's incongruent, you know you should respond to the other color

If it's RED BLUE YELLOW AND GREEN and it's incongruent, there's at least 3 other color buttons it could be

Commented [c3]: Incongruent – congruent
Mostly congruent – mostly incongruent

Just means you're comparing 2 variables, essentially; subtracting any variance in behaviour you observe due to one variable from the variance observed via the other