

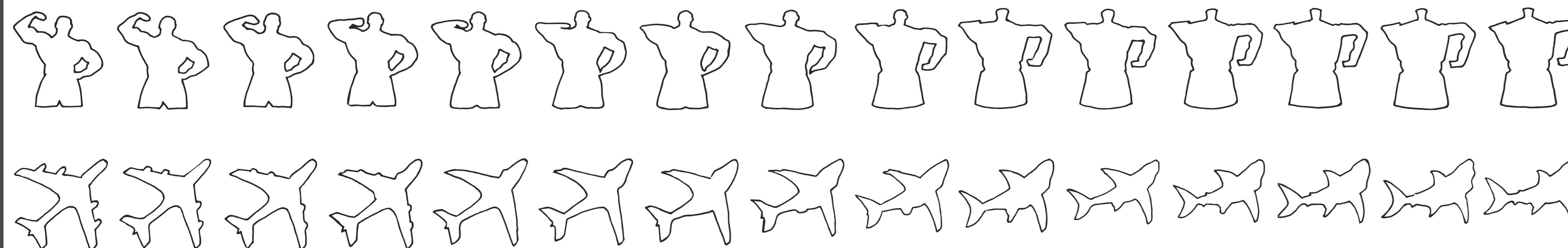
# Normative Data for a Morphing Picture Measure of Updating

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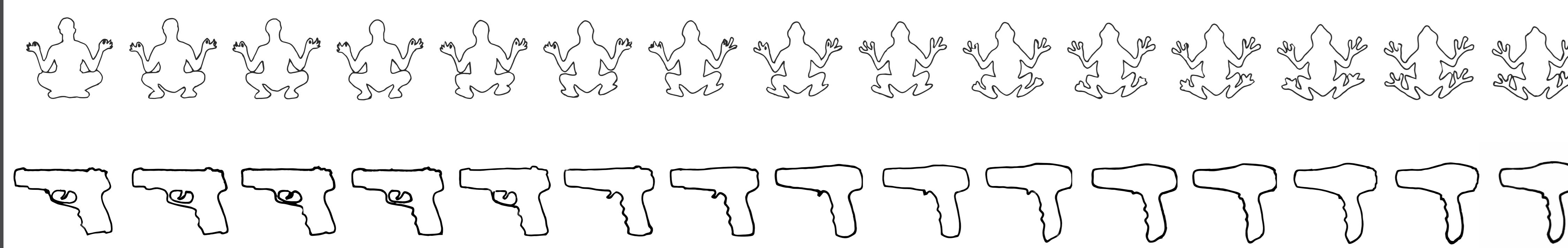
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## Picture morphing task

Switch between categories: (animate - inanimate vs. inanimate - animate)



Switch within categories: (animate - animate vs. inanimate - inanimate)

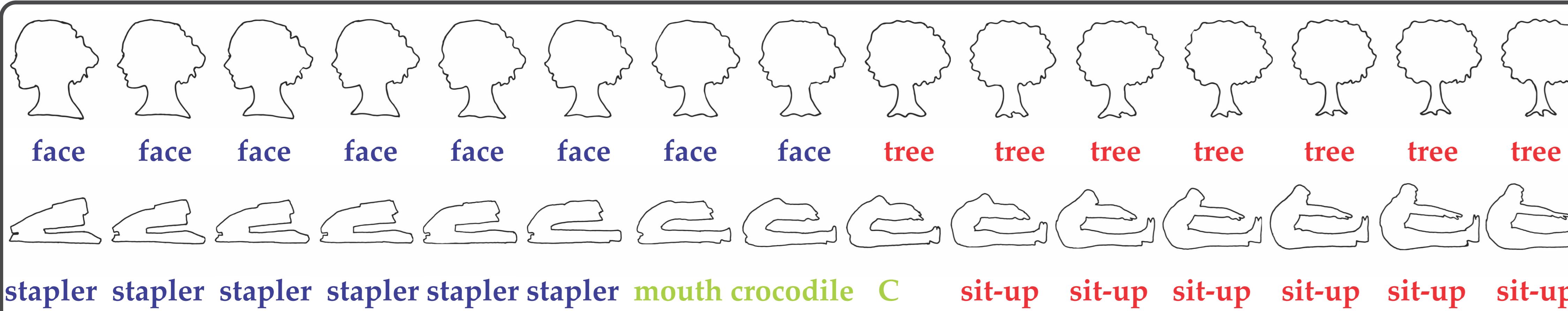


Logic: # of first object reports = measure for updating

## Advantages of the task

- Easy and fast to administer
- Not dependent on Working Memory
- No explicit feedback necessary
- Applicable in vastly different participant populations
- Comparable visual complexity => suitable for neuroimaging studies
- Animate/ Inanimate dissociation: associated brain areas, insight into visual form agnosia, etc.

## Single vs. multiple switch

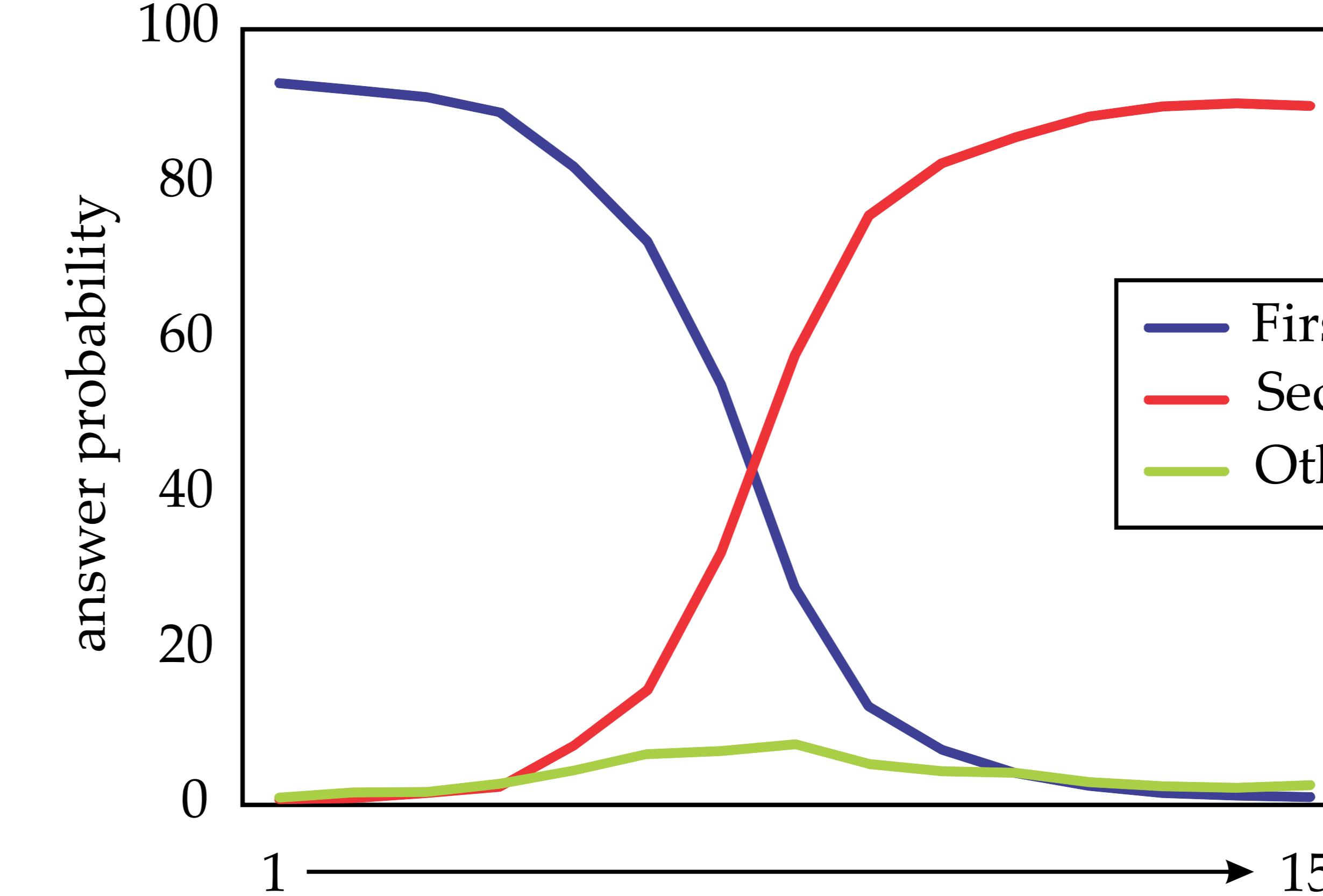


## Design, participants and procedure

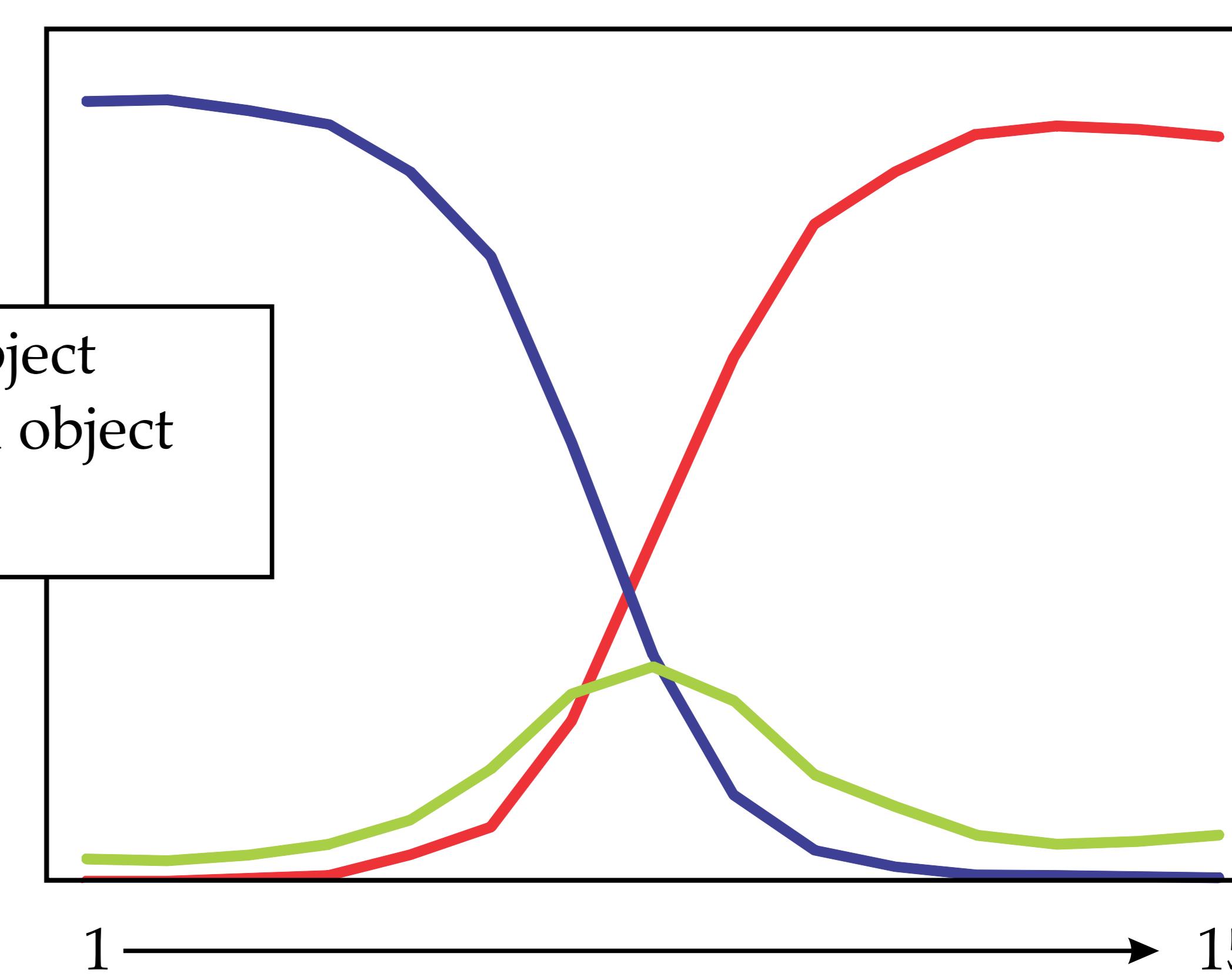
- 40 Sets  
Online study  
Mechanical Turk
- Version 1 (20 Sets):  $\frac{1}{2}$  Obj1 - Obj2: N=53 (34 F); 35.1 (11.7) years  
 $\frac{1}{2}$  Obj2 - Obj1: N=50 (26 F); 35.5 (11.5) years
- Version 2 (20 Sets):  $\frac{1}{2}$  Obj1 - Obj2: N=53 (31 F); 33.8 (10.6) years  
 $\frac{1}{2}$  Obj2 - Obj1: N=45 (28 F); 34.0 (13.1) years

## Probability of first and second object reports

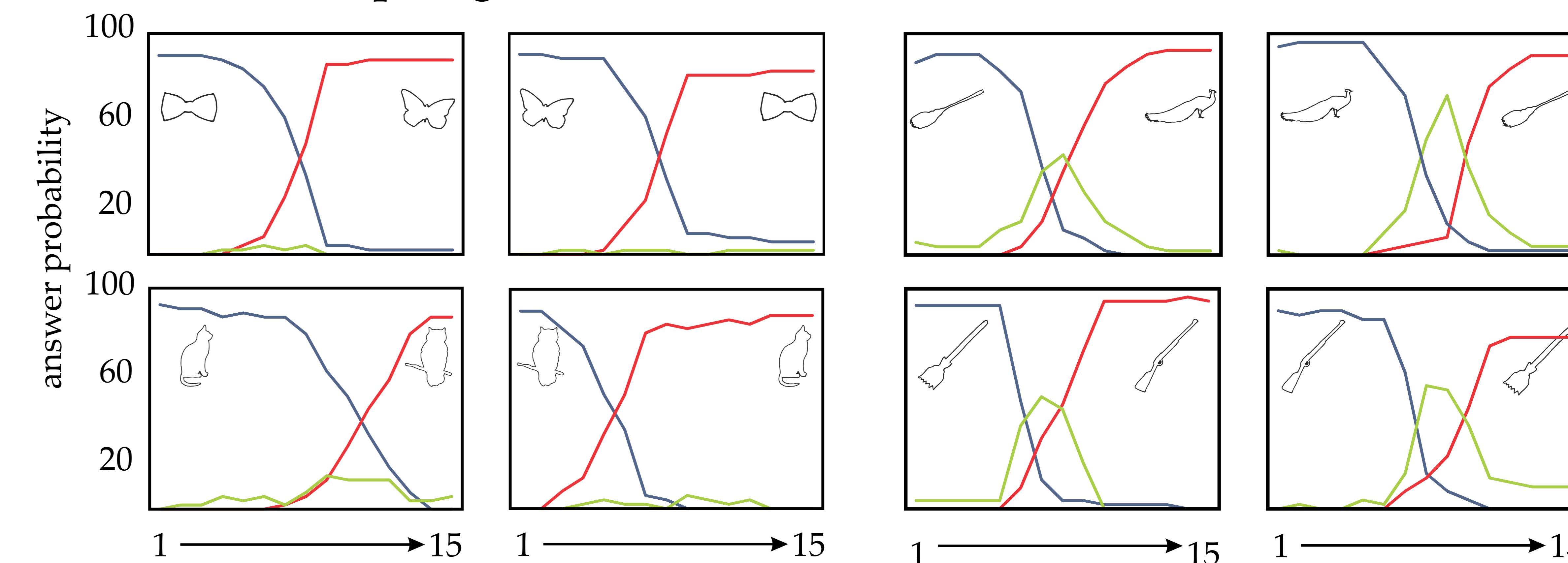
Single switch (26 picture sets)



Multiple switch (13 picture sets)



## Influence of morphing direction on switch



## Updating and the brain: Insula involvement

