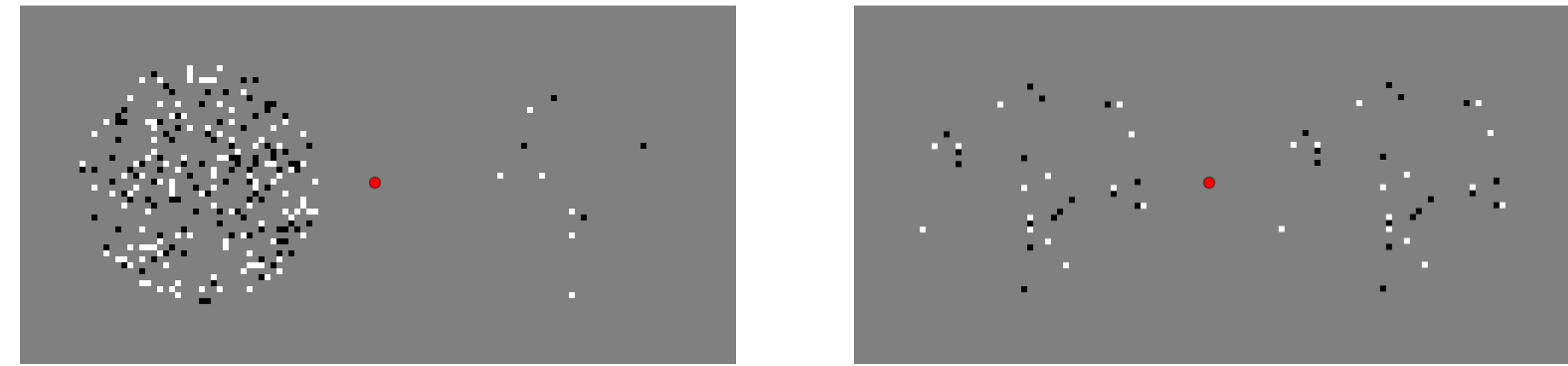


# Number: still a primary visual feature?

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## Significance

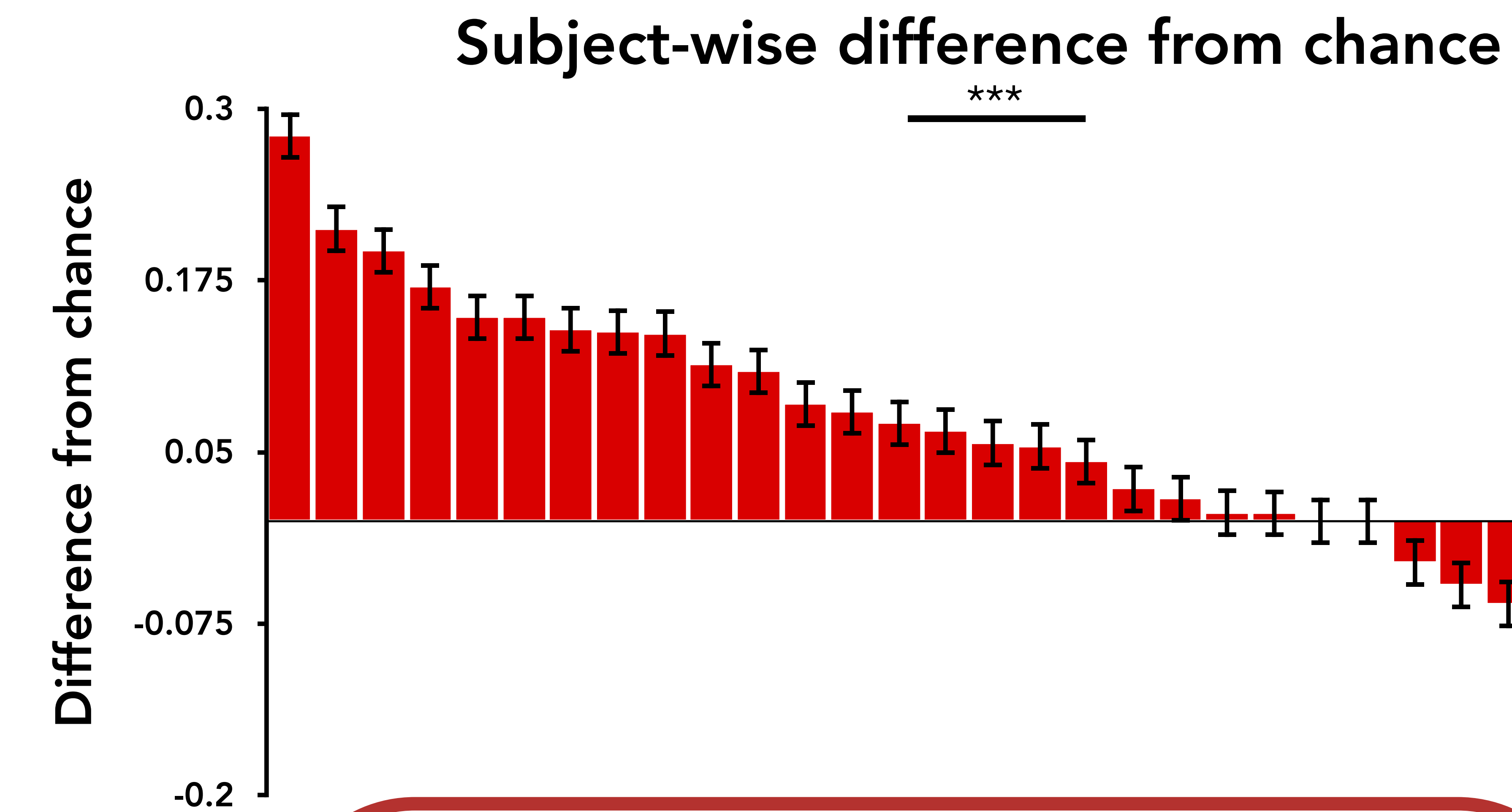
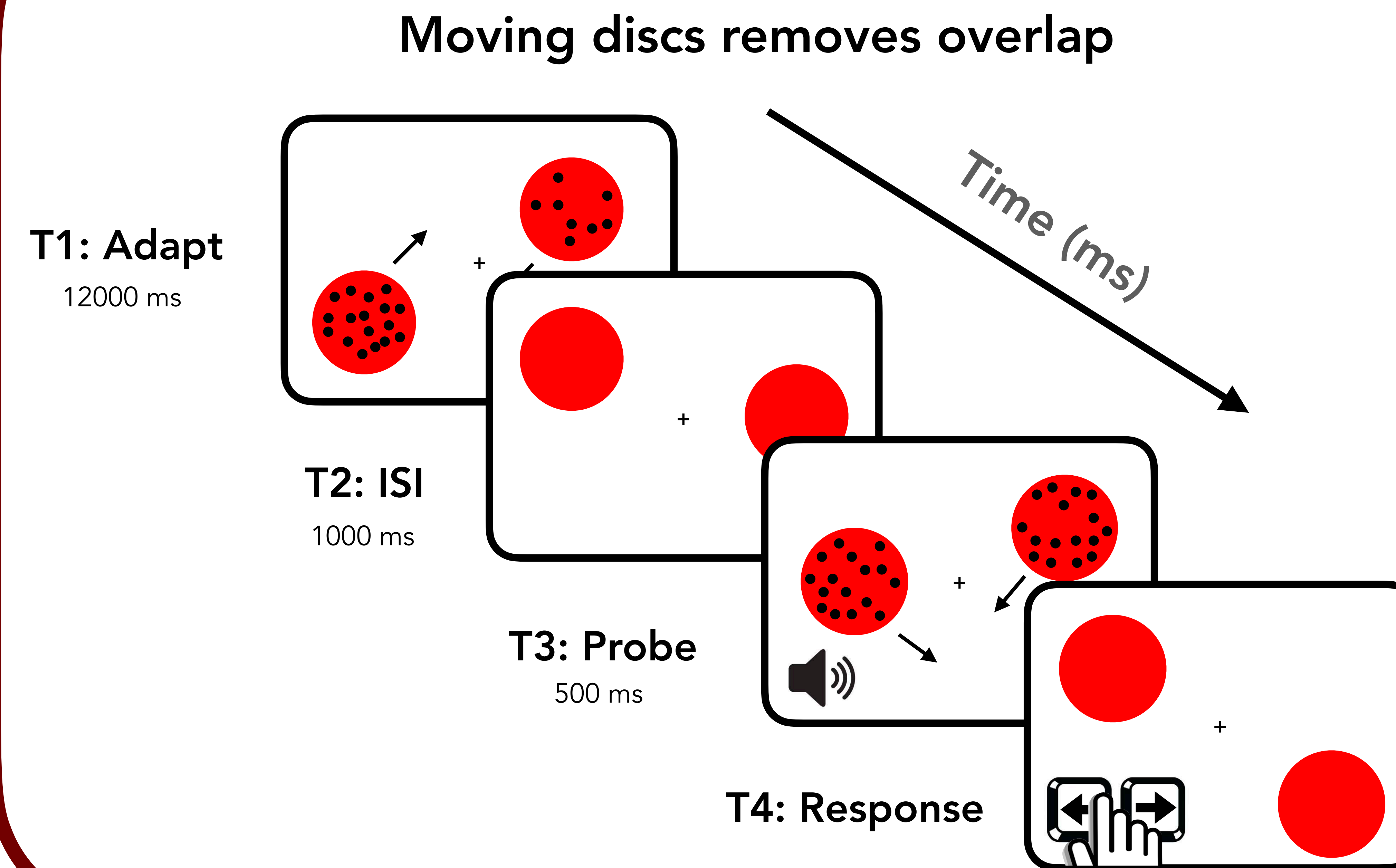
Adaptation is a hallmark of early vision.



Canonical number adaptation demos (e.g. Burr & Ross, 2008) **fail** when adapter and test dots do not spatially overlap (Yousif, Clarke & Brannon, 2024)

Is 'number adaptation' merely  
**spatiotopic attenuation** to  
unchanging information?

## Exp. 1: Motion



Adaptation occurs with no overlap  
between adapter and test

## Conclusions

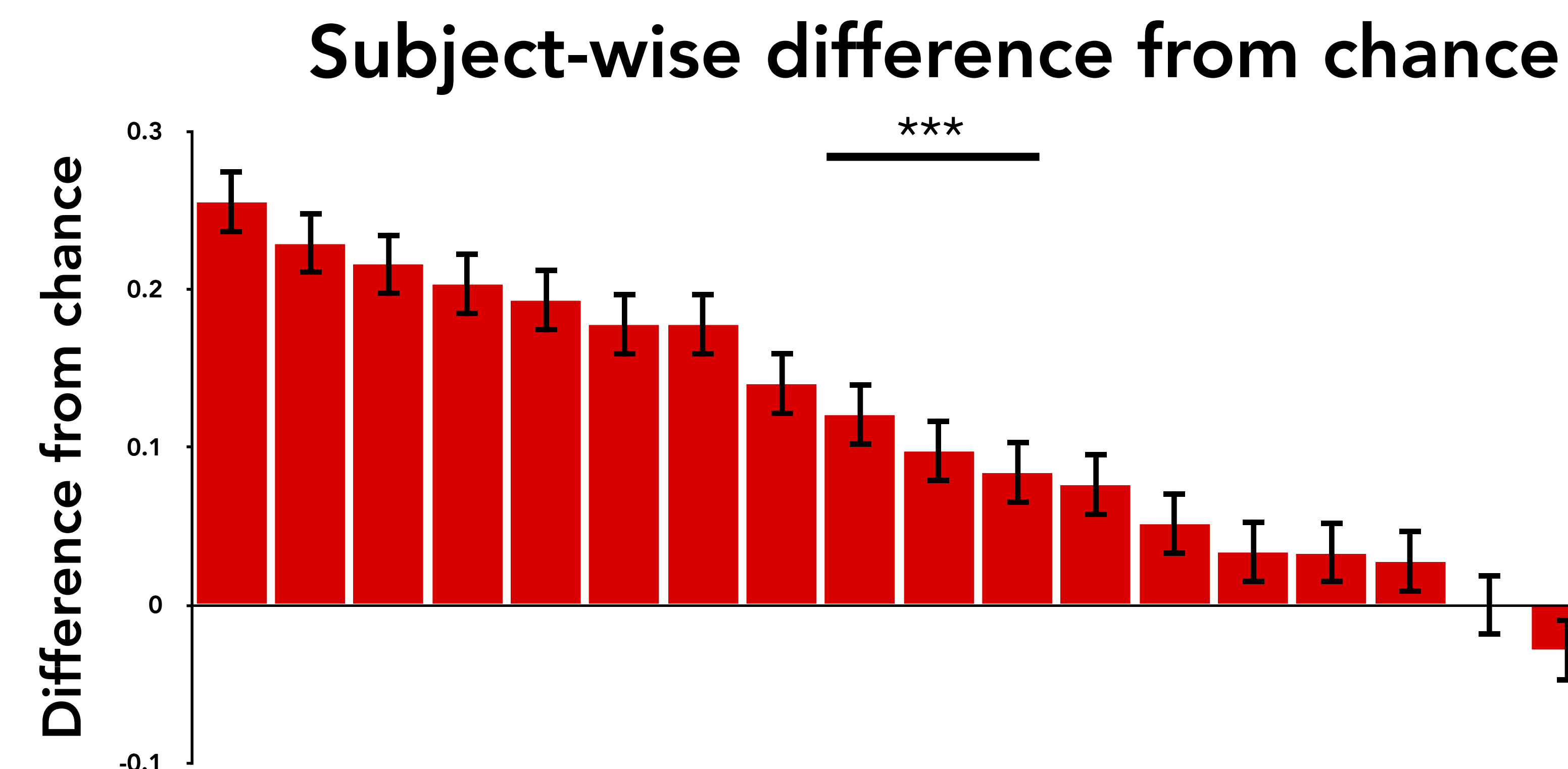
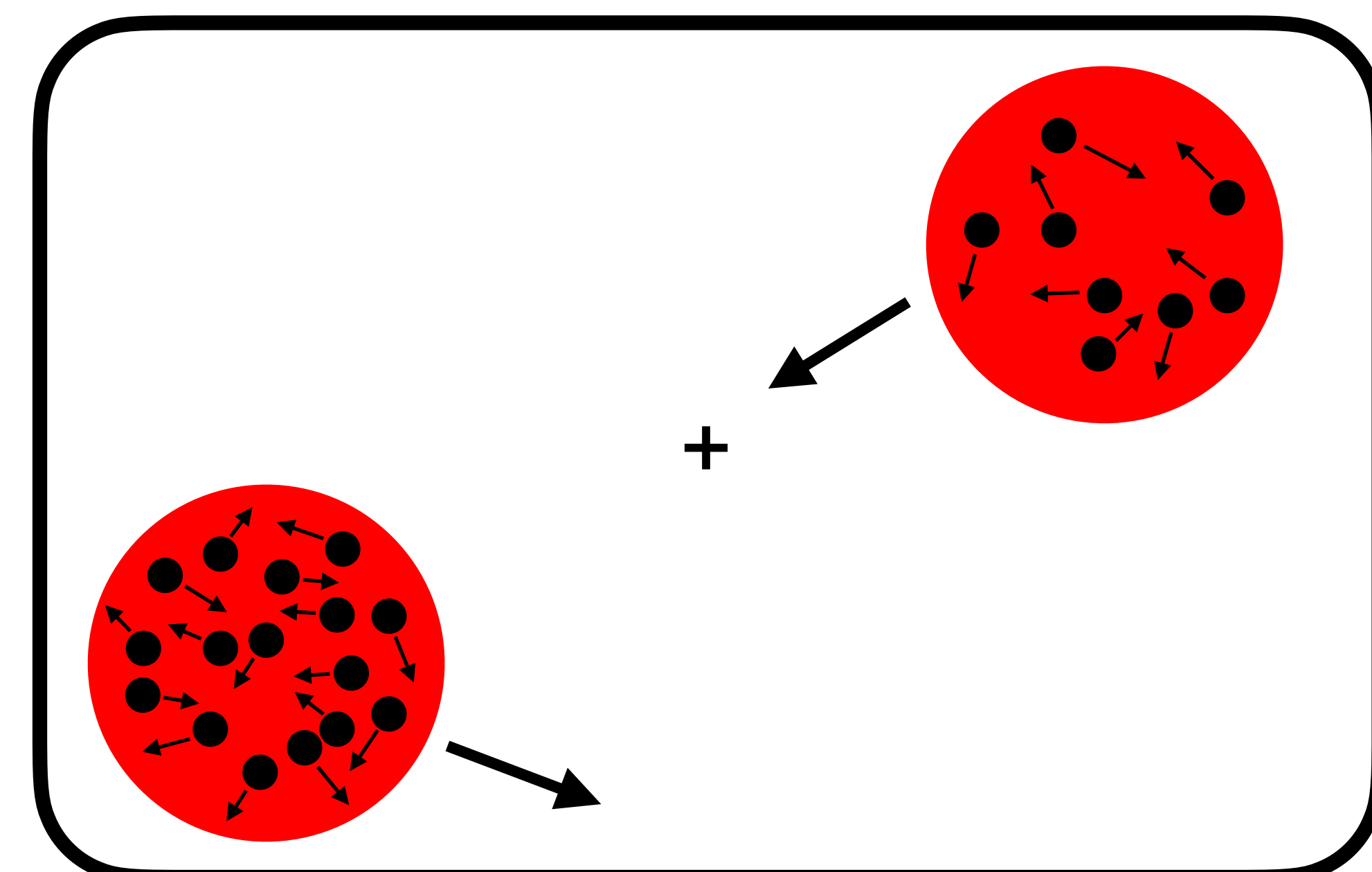
Adaptation effects **persist** despite drastic  
retinotopic and spatiotopic changes

Number adaptation is **not reducible** to  
spatiotopic attenuation to unchanging  
information

**Number may be a primary visual  
feature after all!**

## Exp. 2: More motion!

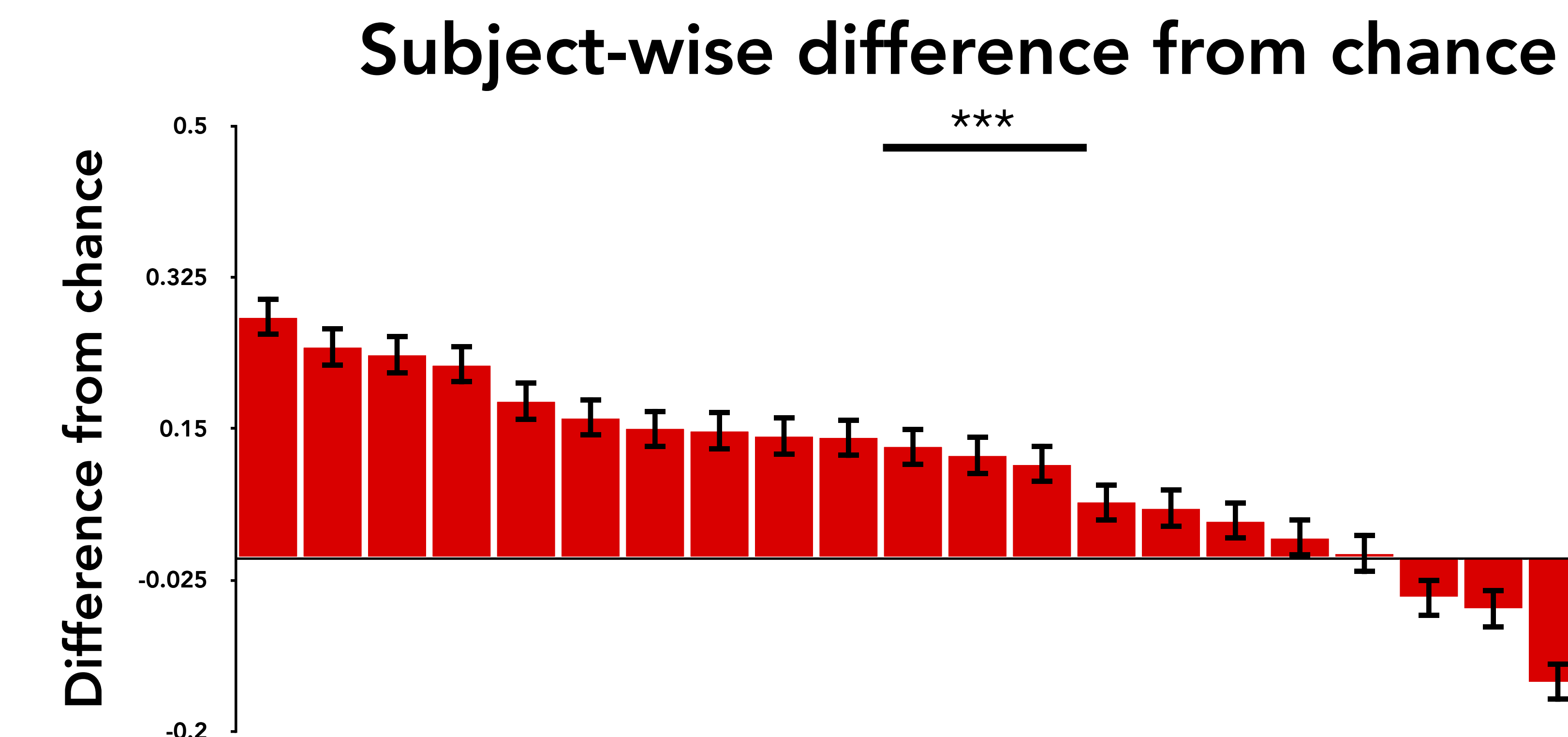
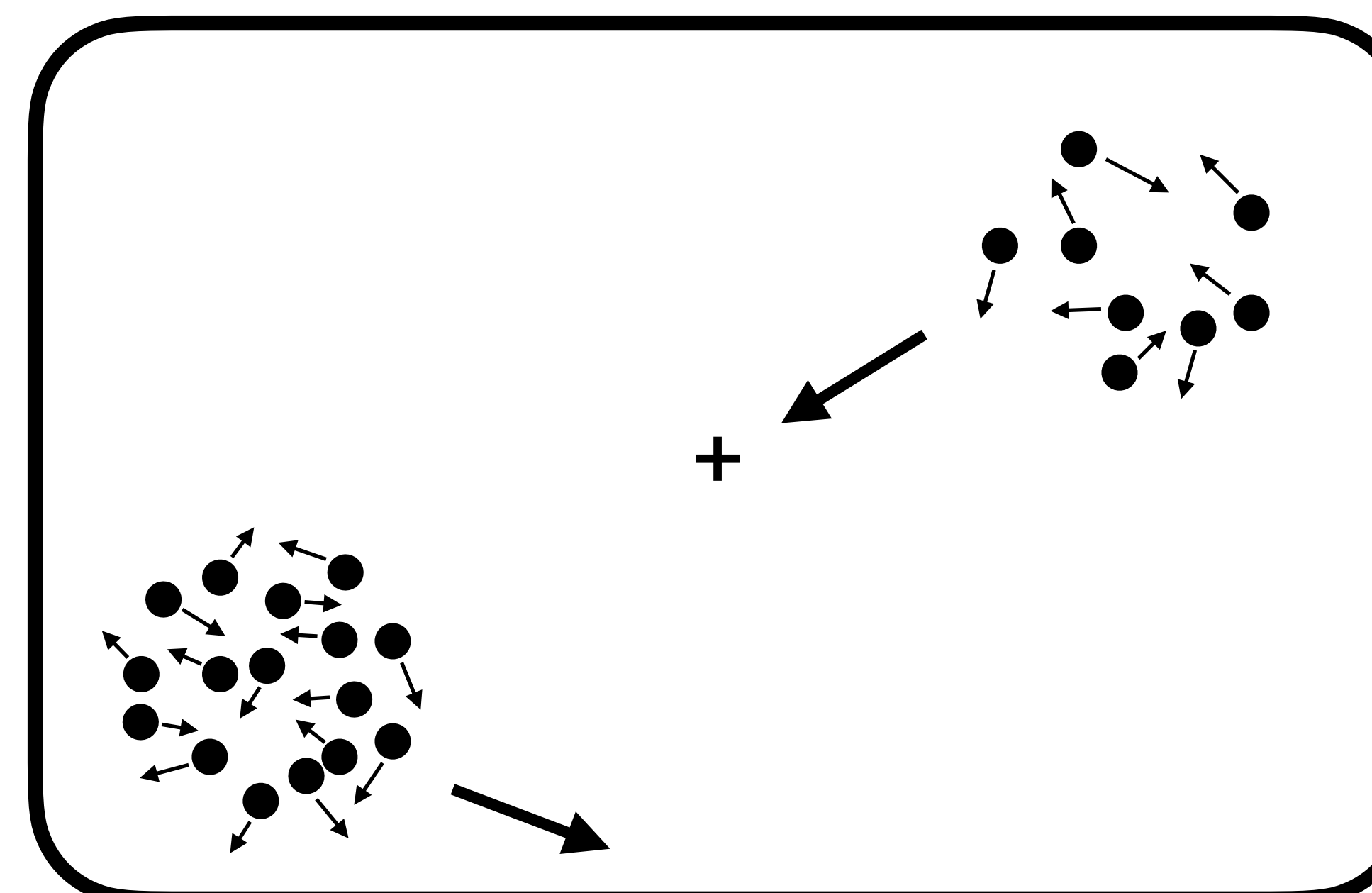
Dot motion within array



Adaptation persists despite **drastic** changes to spatial position.

## Exp. 3: What's an object, anyway?

No discs



**Spatiotemporal continuity** is sufficient to facilitate adaptation.

## What's going on here?

We presented **strong cues to objecthood**:  
the red discs (E1-E2) or spatiotemporally  
continuous dot group movement (E3)

**Object representation** may play a  
previously unknown role in adaptation

Number might be **bound** to objects as  
a **feature**