How do infants segment scenes?
Can repetition of a novel object on variable backgrounds lead to segmentation?

**Background**

Evidence for novel object segmentation

Some adults can learn to recognize a novel object when:
- Viewed repeatedly against variable static backgrounds
- Texture and shading of object and background identical

**Stimuli & Schematic**

Habitation Paradigm with Looking Times

2 Novel Objects (A & B)
8 Backgrounds
Pre-test order: AB or BA
Post-test order nested: AABAB or BABA
Object & Labeling Phrase: Constant

**Experiment 1**

3D novel objects & variable 2D backgrounds

Segmentation? YES

Recognition, therefore Segmentation when:
2D backgrounds change across trials

But is a variable background necessary?

Or do shading & interposition support segmentation?
7mos but not 5mos sensitive to these depth cues

**Experiment 2**

3D novel objects & constant 2D background

Segmentation? NO

No Recognition/Segmentation when:
2D Background constant across trials

**Conclusions**

5.5mos can use object repetition to segment only when ground varies & not when ground constant

Emergence of past experience cue mere repetition of object on changing ground leads to segmentation

First demonstration that infants can use this cue
Unlike adults they use this cue without explicit instruction and in a single learning experience

**Experiment in progress**

Does repetition of 3D object on variable 3D backgrounds support segmentation?

Segmentation? NO

Displays dimmer
Eliminated > 2x N as in previous Experiments for fussiness & Failure to habituate

No conclusions possible regarding 3D backgrounds

**References**