Here, we use a behavioral measure (visual search) to ask which broad category distinctions guide visual attention in young children.

By adulthood, the broad category dimensions of animacy (animate vs. inanimate) and real-world object size (big-objects vs. small-objects) are rapidly and automatically accessed (Thorpe et al., 1996; Konkle & Oliva, 2012).

Although 9-month-olds are sensitive to the basic distinction between animals and vehicles (McDowall & Mandler, 1998), we know little about how children acquire representations for these dimensions. Here, we use a behavioral measure (visual search) to ask which broad category distinctions guide visual attention in young children.

**Paradigm Logic**

Visual search speeds (reaction times) are driven by perceptual similarity (Duncan & Humphreys, 1989).

Animacy and real-world object size correlate with perceptual features that guide attention in adults. (Long et al., submitted).

**Methods**

Three visual search experiments were conducted using an iPad with 3- and 4-year-olds to test how animacy, real-world object size, and edibility affected visual search speeds.

**Stimuli**: Images from a broad range of familiar basic-level categories were controlled for low-level visual features (luminance, contrast, area, aspect ratio, object extent, and contour variance).

**Task**: Children searched for an exact target among distractors from either the same broad category (‘uniform’, e.g., a shoe among other objects) or from a different broad category (‘mixed’, e.g., a shoe among animals).

**Analyses**: Reaction times from correct trials were analyzed from children who had 5 or more trials in each condition.

**Condition Structure**

**Trial example**

**Results**

**Experiment 1:** Animacy

- **Animacy**: Uniform or Mixed Animacy
- Children were faster at finding targets when distractors differed in animacy.
- Reaction time (ms)

**Experiment 2:** Real-world object size

- **Real-world object size**: Uniform or Mixed Real-world object size
- Children were faster at finding targets when distractors differed in real-world object size.
- Reaction time (ms)

**Experiment 3:** Edibility

- **Edibility**: Uniform or Mixed Edibility
- Children were faster at finding targets when distractors differed in edibility.
- Reaction time (ms)

**Conclusion**

Though animacy, real-world object size, and edibility are all relevant conceptual dimensions, only animacy and real-world object size guided attention during a visual search task in 3- and 4-year-olds.

These results suggest that young children are sensitive to the perceptual features that correlate with animacy and real-world object size.

**References**


