**INTRODUCTION**

Analogy reasoning is a key driver of cognitive development and is strongly related to academic achievement. Successful analogical reasoning requires abstracting shared relational features and inhibiting attention towards perceptual and semantic similarities, both of which can be difficult for children.

We investigated the development of analogical reasoning using eye gaze patterns to infer different types of problem solving strategies in children and adults.

**METHODS**

Participants: 21 6-year-olds and 26 adults

Visual propositional analogy task: Which item goes with C the same way that A goes with B?

![Visual propositional analogy task example](A A B C)

- **Semantic lure**: item is related to C in meaning but does not share the A:B relation
- **Perceptual lure**: item is visually similar to C
- **Unrelated lure**: unrelated item
- **Target**: correct response

Each trial contained 4 response choices: A, B, C, and an option represented by a question mark (?). Order of lures was counterbalanced, with B and C appearing equally often in each position.

Eye gaze data collected with an SMI REDn eye tracker at 60Hz.

**RESULTS**

![Graphs and bar charts showing results](http://example.com/results.png)

- **Operationalizing classic analogy strategies based on eye movements**
- **Strategy use differs between children and adults**

**SUMMARY**

Improvements in analogical reasoning performance are related to the use of increasingly efficient strategies. Incorrect responses are more likely to be semantic lures than perceptual lures, but participants make equal numbers of fixations on both lure types. Early search towards semantic lures, but children are less able to inhibit attention towards semantic lures.

Future directions: How do semantic knowledge and inhibitory control contribute to analogical reasoning performance and strategy choice?

**Acknowledgments**

This research was supported by NIH F32HD085736.

**References**


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