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## CogSci 2020 Papers - submission 2000

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### Submissions

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### Type of Submission

Paper (six pages)

### Marr Prize

First author is a student

### Modeling Prizes

Applied Model

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I don't want to apply for a Travel Grant

### Full Title of Submission

The latent factor structure of developmental change in early childhood

### Short Title

Factor structure of developmental change

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## Abstract

Piaget proposed that development proceeded in stages; more recently researchers have proposed modular theories in which different abilities develop on their own timetable. Despite the abundance of theory, there is little empirical work on the structure of developmental changes in early childhood. We investigate this question using a large dataset of parent-reported developmental milestones. We compare a variety of factor-analytic item response theory models and find that variation in development from birth to 55 months of age is best described by a model with three distinct dimensions. We also find evidence that dimensionality increases across age, with the youngest children described by a two-factor model. These results provide a model-based method for linking holistic descriptions of early development to basic theoretical questions about the nature of change in childhood.

## Key words

child development; milestones; item response theory; model comparison

## The Document

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