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Not stages, but variability ranges? Cognitive variability bridging complexity science and 'Piaget's new theory'

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Abstract

Cognitive development has been hypothesised to be stagelike between the ages of 5-8 years (e.g., Piaget). Yet, cognition varies from moment to moment, in every task, for every child. Studies have demonstrated that cognitive variability is non-trivial, non-random, and meaningful, but attempts for systematic and large-scale longitudinal measurements of cognitive variability have scarcely been undertaken. This project's goal is to create a more detailed empirical record and dynamical account of intra-individual variability in cognitive development of children. We aim to do this with a 3-year longitudinal and multimodal data collection starting at 5 years of age. Half-yearly measurements will be complemented with periods of daily measurements. Our ultimate aim is to build a variability corpus in which we can study variability patterns and developmental transitions, and to connect our findings to "Piaget's new theory". Our poster will present our methodology and findings from a pilot study.