# Dietary variety and cognitive development in children 4 to 6 years old

Thèse

The aim of this thesis project is to further understand the mechanisms underlying the recognition, learning, and generalization of knowledge in the food domain among children from 4 to 6 years old. Special attention will be paid to the visual properties of foods that may facilitate or, on the contrary, inhibit the categorization abilities of children on which the acceptance of new foods in the mouth depends. From an experimental point of view, we will study the development of the conceptual system associated with food, the food categories, and the links between the maturity of food categorization capacities and the main psychological barriers to a varied diet (notably neophobia and food selectivity). The general hypothesis is that the acceptance of food is conditioned by its recognition. The likelihood of recognizing a food depends on the maturity of the child's food categorization system. In this framework, the variables of interest will, therefore, be as follows: V1: children's performance in food categorization tasks (discrimination or induction task), V2: intensity of food rejections, V3: visual variables shape (typicity of shape, the degree of transformation, the degree of dish's composition).

#### Preview:

To study the links between food variety and conceptual system, before each study, the children's parents will complete a scale measuring the intensity of their child's food rejections. These scores obtained in hetero-evaluation will be used as a predictive measure of children's food rejections. We will use several types of categorization tasks (discrimination, inductive reasoning, including property generalization tasks) whose performances will be compared with each other but also with those of an adult control group. These results will then be exploited to build an "evidence-based" intervention aimed at broadening the child's food repertoire and thus promoting a varied and healthy diet. Depending on the results, this intervention could take the form of a visual exhibition protocol in school canteen or educational tools aimed at enriching the conceptual system of children in the food field. The evaluation of this intervention will involve enriching the variables of interest. Behavioral variables such as choice and actual consumption will be measured.

Supervisor:

Jean-Pierre Thibaut- Jérémie Lafraire

**Graduate School:** 

Dijon. ED ES Environnement Santé

Partners:

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September 14 & 15 2023 3rd edition of the Altered Taste symposium

#### **Institut Paul Bocuse**

Château du Vivier - Ecully - France Tel: +33 (0)4 72 18 02 20 20, place Bellecour - Lyon - France Tel: +33 (0)4 78 37 23 02

#### Contact

Raphaëlle Mouillefarine Partnerships Development Send an email +33 (0)4 26 20 97 63

### Career

- > PhD Position HealthFerm Social Science
- > Social Science Research Scientist F/M
- > PhD Position Computational Neuroscience Cognitive Neuroscience

## Portrait de doctorant

> Damien Foinant