

## **Infant speech production acquisition: a sensory-motor approach**

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This research project is on speech acquisition, from babbling to the age of 3 years.

X-ray and acoustic data, available for adults, are being extracted from the Phonetics Institute of Strasbourg's X-ray database. Such data will also be accompanied by MRI recordings, furnished by the Institut de la Communication Parlée in Grenoble, and will serve as indispensable audiovisual reference information in understanding cognitive processes that underlie infant speech production and perception.

Acoustic and video data, acquired from the infants, will subsequently be analysed within knowledge elaborated from the adult database, with necessary normalisation procedures.

Particular attention will be paid to visible (and audible) labial and jaw gestures in order to verify various theories on the emergence of speech, such as the *Frame then Content Theory* formulated by MacNeilage and Davis (1998).

In such a perspective, order of emergence of the different vocalic and consonantal gestures will be analysed and rationalised, when possible, in terms of timing and geometric relations between opening and closing vocal tract configurations.

Finally, perception tests will be carried out so as to investigate the auditory and visual efficiencies of the analysed infant gestures.