

## **Stuttering and perturbation of the spatial and temporal organisation of speech**

### **An articulatory and perceptual study**

Perturbation of the speech production-perception system can be induced by « natural » factors, like *hypo-speech* mode (under-articulation) in spontaneous speech, or by an increase of speech rate. Data in the literature show that an increase in speaking rate can have consequences on the semiotic system. It can provoke a compression of the phonetic categories and a *drift* in the temporal domain of observation, without a rupture in the process of communication.

Nevertheless, in some cases of severe stuttering, perturbing linguistic productions, without possibility of compensation, can provoke an emergence of incoherent states and an absence of stability in the global organization of the communication system: the system disintegrates and emergent proprieties lose their linguistic values. Communication then becomes impossible. Consequently, a dysfunction of the system can be observed.

The aim of this research is to examine phonetic sensory and motor efficiencies for four speech production-perception situations:

1. in pathological speech, where productions acquired from stutterers are not viable
  - a) a phonetic category cannot be identified
  - b) there is a confusion of a linguistic contrast
2. in acute stuttering, where productions correspond to acceptable linguistic categories due to immediate motor and sensory adjustments
3. in treated speech, where ancient stutterers who had had a therapy are able to speak fluently control
4. in normal speech, where productions will serve as spatial and temporal motor-sensory “reference” categories

Kinematic and acoustic data will serve to analyse different spatial and timing strategies adopted by normal and pathological subjects.