[F07] Production and perception of vowel categories. René Carré¹, Willy Serniclaes² & Egidio Marsico³. ¹ENST-CNRS, Paris, ²LEAPLE CNRS, Villejuif, ³DDL-CNRS, Lyon, France. [Full Paper Available on CD]

It is well known that isolated vowel perception is non-categorical: “if we conceive of a continuum between the ideals of categorical perception and continuous perception, we find that stop consonants are closer to the categorical ideal and vowels are closer to the continuum ideal” (Repp, et al., 1979). But, such a statement was based on perceptual tests with stable vowels and mainly for vowel continua located on the [ai] trajectory. In a preceding study (Carré, 2004), the area function space and the corresponding acoustic space were already shown to be dynamically structured following the predictions of the DRM model of speech production. Privileged formant trajectories were as follows: [ai], [ay], [au] for the [a, e, e, i] [a, ø, O, y] and [a, o, o, u] vowel sets respectively. The present study examines further evidence in support of the DRM model, based on data pertaining to the production and perception French vowels. Results will be discussed in terms of vowel representation as sub-products of vowel-to-vowel trajectories.