

## Complexity in phonological systems

Didier Demolin

LPP, Université de Sorbonne nouvelle, Paris 3.

Phonological complexity has been the subject of many discussions for a century. However, even though there is an agreement in seeing phonological systems as complex adaptive systems, we are still far from able to measure phonological complexity. Factors typically considered are the inherent phonetic complexity of elements in a phonological inventory, the role of combinatorial possibilities and the combination of frequency of occurrences of different elements. Coupé et al. (2009) emphasize that a system is said to be complex if it is structured in different levels; if the properties of the global level differs from those of the elements of the basic level and if the systemic properties cannot be derived linearly from the basic ones. Phonetic and phonological systems reflect various types of constraints (biological, cognitive, linguistic and social) but the understanding of their interactions and integration is still quite limited. Taking into account the various levels of phonological systems together, (gestures, features, vowels, consonants, syllable, suprasegments) is a possible way to start evaluating their complexity.

This presentation will also focus on the relation between the number of phonemes in a language and the number of allophones. Do we find more allophones when there is a smaller number of phonemes? Do we have fewer allophones when there are more phonemes? Even if phonological descriptions are not always comparable and have been made at different times, we believe that this is an important study to be undertaken.

Coupé, C., Marsico, E. & Pellegrino, F. (2009). Structural complexity in phonological systems. In Pellegrino, F. Marsico, E., Chitoran, I. Coupé, (Eds.). *Approaches to phonological complexity*. Berlin, Mouton de Gruyter. 141-169.