

Phonological Proclivities across Languages According to the Theory of Phonology as Human Behavior

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The theory of Phonology as Human Behavior (PHB), developed by William Diver and his students of the Columbia school, combines and expands Saussure's concept of sign and system, as well as aspects of the "communication factor" inherent in Prague School phonology with aspects of the "human factor" inherent in Martinet's diachronic phonology. The major parameters of the theory are presented according to the functional semiotic definition of language as a sign system used by human beings to communicate. Language is thus defined in terms of its function as a system of communication that ecologically reflects the characteristics of its users -- human beings. The fundamental axiom underlying the theory is that language represents a struggle between the desire to achieve maximum communication (the communication factor) through the use of minimal effort (the human factor). The major contribution of the theory of PHB is that it provides a "motivation" for the distribution within the speech signal: i.e. it tells us why we produce the phonemes we do and why the distribution of these phonemes within a language is non-random.

In this paper we will examine the phonemic systems of the following languages: Italian, Greek, Lithuanian, Russian, English, Swahili, Guarani, Navajo, Maori, Chinese, Japanese, and Arabic according to the following parameters:

- (1) The number of phonemes in the system.
- (2) The ratio of "easier" versus "more difficult" phonemes in the system.
- (3) The number and kinds of articulators we use in phonetic gestures and processes used to produce the more difficult phonemes.

Our results will show that language in general and phonology in particular can be seen as a min-max struggle: the desire for maximum communication with minimal effort. This principle is evident in the phonemic inventories that languages possess and in the non-random phonotactic distribution of phonemes in languages as well as in their diachronic development.