

CONTEXTUAL GRAMMARS AND LINGUISTIC SEGMENTATION

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In this paper we present some remarks regarding contextual grammars and their capacity to explain speech production.

1 Introduction

Mathematical Linguistic, *as the study of quantitative and formal aspects of language phenomenons* (Marcus et al., 1971), has developed simultaneously in Europe and S.U.A in the late fifties. Traditionally, up to '50s, the approaches used by researchers in investigating the linguistics problems were essentially based on descriptive and structuralist models, and as mathematical tools the quantitative one were predominant. An important year in the development of ML seems to be 1957, when two new paradigms in linguistics appeared concomitant in USA and in Russia : the generative one, proposed by Chomsky (Chomsky, 1957) and the analytical one, introduced in the works of Kolmogorov and Dobrusin (cf. Marcus, 1997). Rather complementary than concurrent, the two new trends involve also different mathematical tools: combinatorics, formal systems and theory of free monoids for generative theory, set theory and binary relations for analytical model. They do not even share common roots: the Indian Panini grammar is the ground of generative strategy, and the analytical models come from structuralism.

On one hand, we can say that the generativism is a breaking from the linguistics of first fifty years of XXth century, while the analytical models continue this tradition. As working strategies, the new tendencies have proposed complementary goals too: while Chomsky tries to obtain well formed strings starting from a set of rules, the others start with some assumed well-formed strings and analyze their structure. The proper developed tools differ in manner: the former uses an external alphabet (external to language), while the later adopts an intrinsic point of view.

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