

AS AN EDITORIAL:
GRAMMAR SYSTEMS: WHERE ARE WE?
AND WHERE DO WE GO FROM HERE? ¹

JOZEF KELEMEN

*Department of Applied Informatics, University of Economics
SK-852 35 Bratislava, Slovakia, and
Institute of Computer Science, Silesian University
CZ-746 01 Opava, Czech Republic
e-mail: kelemen@{euba.sk, fpf.slu.cz}*

and

ALICA KELEMENOVÁ

*Institute of Computer Science, Silesian University
CZ-746 01 Opava, Czech Republic
e-mail: kelemenova@fpf.slu.cz*

ABSTRACT

Short summary of main areas influencing the origin and development of grammar systems, and some results achieved in the field are given. A possible way of further development of the field is sketched.

Keywords: Decentralization, formal languages, formal grammars, grammar systems, post-modular systems.

1. From One to Many in Computing

According to the use of computing processors during the history of the electronic age, one can recognize three basic periods of the development of automated computing.

The most generally used concept of any abstract as well as hardwired computational device of the *first period* (fifties and sixties) have been a system based on centralized architecture using only one processor. Computing systems of this period have been built up from components (modules) defined through their functional (input/output) specifications with respect to the functional specification of the whole desired system. The general paradigm of language-theoretic research of this period has been influenced by above described developmental stage of computers, by the corresponding level of

¹Authors' research in grammar systems is sponsored by the grant No. 201/99/1086 of the Grant Agency of Czech Republic.