

AXIOMATIC INSCRIPTIONAL SYNTAX

PART I: GENERAL SYNTAX

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Inscriptional syntax is that study of syntax wherein the linguistic entities are studied as inscriptions, *i.e.*, as physical objects and not as abstract entities. In this paper* we shall axiomatize the syntax which is common to all languages, *i.e.*, General Syntax. In *Chapter I* of this paper we elucidate the notion of an inscription, expose some pre-logical assumptions, describe the three primitive terms of inscriptional syntax, and discuss our logical basis (*viz.*, Leśniewski's Ontology). In *Chapter II* we present the axioms for the syntactical system **M**, define the usual notions of general syntax, and prove some typical theorems of general syntax. Our aim is not to obtain new syntactical results, but rather to put the theory of syntax on a secure foundation. Accordingly, we shall only develop system **M** to the point where most syntactical investigations begin. In particular, concatenation is defined in our system, whereas it is usually taken as primitive.

The initial task of syntax is to formulate precise statements of the formative and deductive rules of a particular formal language. After these rules have been stated it is of interest to develop their consequences by proving derived rules and to investigate the interconnections between primitive and derived rules. All of these tasks can be accomplished using system **M**. To support this claim we shall formulate the rule of Protothetic in the second part of this paper.

Introduction. When Frege axiomatized the propositional calculus in his *Begriffsschrift* he realized that the deductive rules could not be expressed in the system itself¹, and so expressed them in ordinary language with the

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