

CONTEXT LOGIC I:
FUNDAMENTAL CONCEPTS, NOTATIONS, AND
DERIVED NOTIONS

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INTRODUCTION

The objective of this first paper* on the construction of a formal system for denoting and connoting context is to expand and augment the formal properties of a context operator introduced in [1], which models context transformations. Formally, such a representation allows one to keep track of "implications in context," "substitutions in context," and "contextual shifts." As was shown in [1], the context operator provides a strategy whereby we can develop the formal properties of intensionality and extensionality [2]. By extensionality we denote sets and connote the relativity of members of sets. By intensionality we denote structure of sets and connote elements of sets.

We will show in a subsequent paper that context, along with the intension-extension integration it generates, is the basis of a construction of a theory of sets that embraces the sense of Cantor's original definition of a "set" as a comprehension (concatenation) of definite distinct objects of our intuition into a whole. The inferential process of comprehending into a whole constructs a "set" and not merely determines the objects involved. We shall obtain a "setless" set theory, which means that the *comprehension within a context is primitive* and out of this will arise the concept of "set."

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