Notre Dame Journal of Formal Logic
Volume XII, Number 3, July 1971
NDJFAM

EXAMINATION OF THE AXIOMATIC FOUNDATIONS OF A THEORY OF CHANGE. IV

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*Third Part**

§4

§4. Consistency of the axiomatic system. In order to establish the consistency of our axiom system, it is important to make first the following remarks:

1. The predicate calculus which we have chosen, is consistent. (The proof is given in [13] pp. 93-95.)
2. An expression σ (respectively a set E of expressions) is said to be "satisfiable" if there exists some non-empty domain ω of individuals such that σ (respectively E) is satisfiable in ω.
3. If a predicate calculus is consistent, so is every satisfiable set of expressions.
4. It is then sufficient here to show that there exists a non-empty domain ω of individuals such that the set of our axioms is satisfiable in ω.

The model shall consist of:

I. a) a domain S of individuals for momentaneous subjects. Let R be the following subset of the set of rational numbers:

$$R = \{n \mid n \text{ is a rational number and } 0 \leq n \leq 2\}.$$

Let then

$$S = \{a_i, b_i, c_i\},$$

where $i \in R$ and $\neq a_i, a_j, \neq b_i, b_j, \neq c_i, c_j$, for $i, j \in R$ and $i \neq j$, and

*The first, second, and third parts of this paper appeared in *Notre Dame Journal of Formal Logic*, vol. IX (1968), pp. 371-384, vol. X (1969), pp. 277-284, and vol. X (1969), pp. 385-409, respectively. They will be referred to throughout the remaining parts as [I], [II], and [III]. See additional References given at the end of this part.

Received May 20, 1964