

A REDUCTION IN NUMBER OF THE POSTULATES
FOR C. I. LEWIS' SYSTEM OF STRICT
IMPLICATION*

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C. I. Lewis assumes the following undefined ideas:

1. Propositions: p, q, r , etc.
2. Negation: $\sim p$.
3. Logical product: pq , or $p \cdot q$.
4. Self-consistency or possibility: $\diamond p$.
5. Logical equivalence: $p = q$.

In terms of the above ideas, he defines implication and equivalence as follows:

$$11.02 \quad p < q \cdot = : \sim \diamond (p \sim q),$$

$$11.03 \quad p = q \cdot = : p < q \cdot q < p.$$

Lewis asserts among others the following symbolic postulates:

$$11.1 \quad pq \cdot < \cdot qp,$$

$$11.2 \quad pq \cdot < \cdot p,$$

$$11.3 \quad p \cdot < \cdot pp,$$

$$11.5 \quad p \cdot < \cdot \sim \sim p,$$

$$11.6 \quad p < q \cdot q < r : < \cdot p < r.$$

He allows the following operations:

Substitution. (a) Either of two equivalent expressions may be substituted for the other. (b) Any proposition, or any expression which has meaning in terms of the undefined ideas, may be substituted for p , or q , or r , etc., in any assumption or established theorem.

Adjunction. If p has been asserted and q has been asserted, then pq may be asserted.

Inference. If p has been asserted and $p < q$ has been asserted, then q may be asserted.

* *Symbolic Logic*, by Lewis and Langford, pp. 123-126.