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THE TWO LOGICS: TRADITIONAL AND MODERN

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The objective of this paper is to improve our understanding of the relationship between traditional logic—Aristotle's logic of the assertoric syllogism as it has come to be—and modern logic. Let us join the thin ranks of those who still believe that the hope for such an endeavor resides in locating one or more near analogues of the syllogistic structure within the first-order predicate calculus and then analyzing and accounting for it or for them. The search for an analogue begins with the introduction of a set of rules for translating the statement-forms of traditional logic wherein term-variables occur into certain quantified statement-forms of modern logic wherein predicate-variables occur. We shall say that an *analogue*—a *near* analogue unless shown to be *strict*, i.e., such that it meets any additional standards of similitude we may wish to impose—has been discovered when, with each of the valid inference patterns normally included in the traditional system expressed as a compound statement-form with logical connectives, the first-order predicate translation of each is a valid statement-form.

Using '*Asp*' for '*All S is P*,' '*Esp*' for '*No S is P*,' '*Isp*' for '*Some S is P*,' and '*Osp*' for '*Some S is not P*,' the "traditional laws" we must successfully translate are as follows:

Laws of Immediate Inference

Simple Conversion	Conversion *per accidens*
$Esp \equiv Eps$	$Asp \supset Ips$
$Isp \equiv Ips$	$Esp \supset Ops$

Obversion

$Asp \equiv Es\bar{p}$
$Esp \equiv As\bar{p}$
$Isp \equiv Os\bar{p}$
$Osp \equiv Is\bar{p}$

(The Laws of Obverted Conversion, Partial Contraposition, Full Contraposition, Partial Inversion, and Full Inversion are derivative from those listed.)

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