

THE OCTAGON OF OPPOSITION

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1 *Introduction* The purpose of the octagon of opposition is to show in one diagram the logical relations between the 32 categoricals in standard form (see table in section 3). I have used the octagon of opposition for the past seven years in teaching Aristotelian logic and have found it a useful pedagogical device.¹

2 *History* An octagon of opposition is found in Johnson, but its purpose is to show the relations of independence, and it is not at all clear as to how one is to read the other logical relations.²

3 *The 32 Categoricals* There are eight, non-equivalent categoricals in standard form. The four basic forms: $A\bar{s}p$, $E\bar{s}p$, $I\bar{s}p$, $O\bar{s}p$, and their simple inverses: $A\bar{s}\bar{p}$, $E\bar{s}\bar{p}$, $I\bar{s}\bar{p}$, $O\bar{s}\bar{p}$. Each of these eight categoricals has three equivalent forms, yielding a total of 32 categoricals in standard form.

The 32 Categoricals in Standard Form

$A\bar{s}p$	$E\bar{s}p$	$I\bar{s}p$	$O\bar{s}p$	$A\bar{s}\bar{p}$	$E\bar{s}\bar{p}$	$I\bar{s}\bar{p}$	$O\bar{s}\bar{p}$
$E\bar{s}\bar{p}$	$A\bar{s}\bar{p}$	$O\bar{s}\bar{p}$	$I\bar{s}\bar{p}$	$E\bar{s}p$	$A\bar{s}p$	$O\bar{s}p$	$I\bar{s}p$
$E\bar{p}s$	$A\bar{p}\bar{s}$	$O\bar{p}\bar{s}$	$I\bar{p}s$	$E\bar{p}\bar{s}$	$A\bar{p}s$	$O\bar{p}s$	$I\bar{p}\bar{s}$
$A\bar{p}\bar{s}$	$E\bar{p}s$	$I\bar{p}s$	$O\bar{p}\bar{s}$	$A\bar{p}s$	$E\bar{p}\bar{s}$	$I\bar{p}\bar{s}$	$O\bar{p}s$

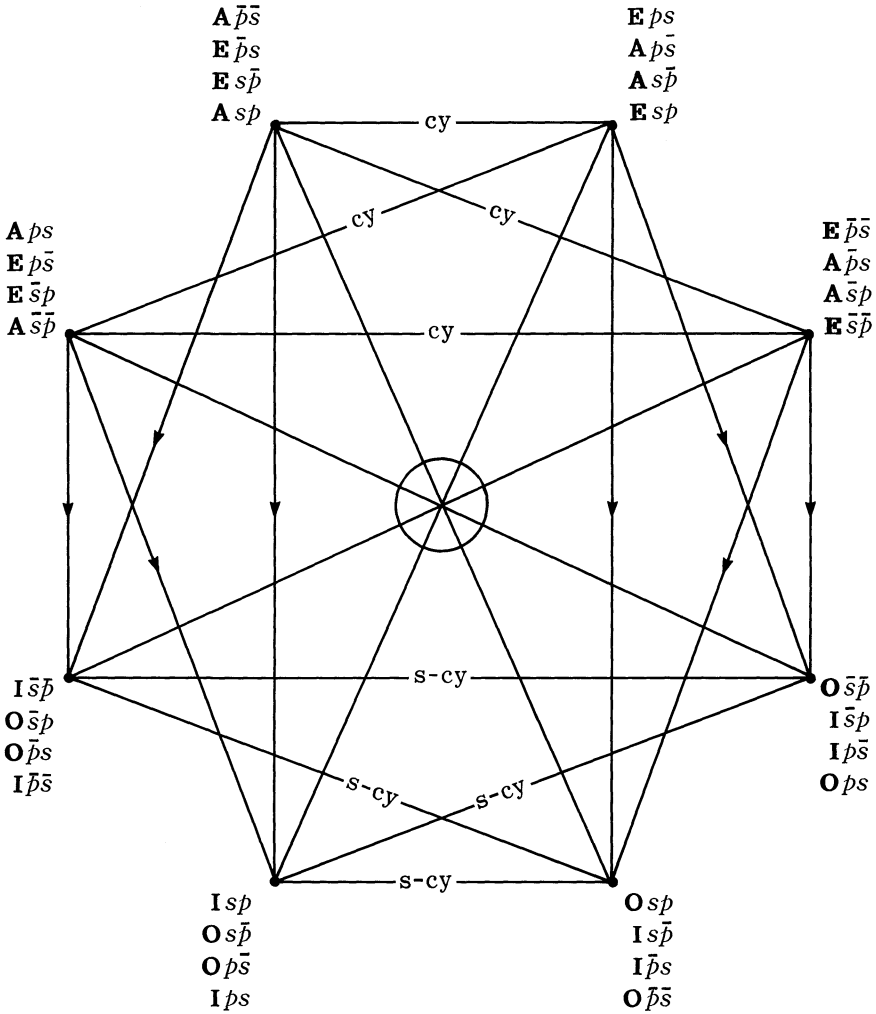
Note: The eight non-equivalent forms are given in the first row. In the octagon of opposition these eight forms will be the ones nearest the eight corners of the octagon. The forms in each column are equivalent to one another.

5 *Additional Remarks* The diagram contains two other true squares of opposition: Taking the forms nearest the corners, $A\bar{s}p$, $E\bar{s}\bar{p}$, $O\bar{s}p$, $I\bar{s}\bar{p}$, and $A\bar{s}\bar{p}$, $E\bar{s}p$, $O\bar{s}\bar{p}$, $I\bar{s}p$.

1. I am indebted to Dr. William T. Parry who made several notational suggestions which improved the readability of the diagram and who suggested the remarks in section 5.

2. W. E. Johnson, *Logic*, Dover Publications, New York (1964), Part 1, p. 142.

4 The Octagon of Opposition



The key to reading the octagon is:

- a. Contrariety: — cy —
- b. Subcontrariety: — s-cy —
- c. Implication: —>—
- d. Contradiction: —○—
- e. Independence: Categorical forms on corners not connected by a straight line are independent of each other.

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