

CHAPTER XII.

Of the Determination of the Legitimate Moods of Syllogism.

Section 599. It will be remembered that there were found to be 64 possible moods, each of which might occur in any of the four figures, giving us altogether 256 possible varieties of syllogism. The task now before us is to determine how many of these combinations of mood and figure are legitimate.

Section 600. By the application of the preceding rules we are enabled to reduce the 64 possible moods to 11 valid ones. This may be done by a longer or a shorter method. The longer method, which is perhaps easier of comprehension, is to write down the 64 possible moods, and then strike out such as violate any of the rules of syllogism.

AAA -AEA- -AIA- -AOA-
-AAE- AEE -AIE- -AOE-
AAI -AEI- AII -AOI-
-AAO- AEO -AIO- AOO

-EAA- -EEA- -EIA- -EOA-
EAE -EEE- -EIE- -EOE-
-EAI- -EEI- -EII- -EOI-
EAO -EEO- EIO -EOO-

[Illustration]

Section 601. The batches which are crossed are those in which the premisses can yield no conclusion at all, owing to their violating Rule 6 or 9; in the rest the premisses are legitimate, but a wrong conclusion is drawn from each of them as are translineated.

Section 602. IEO stands alone, as violating Rule 4. This may require a little explanation.

Since the conclusion is negative, the major term, which is its predicate, must be distributed. But the major premiss, being 1, does not distribute either subject or predicate. Hence IEO must always involve an illicit process of the major.

Section 603. The II moods which have been left valid, after being tested by the syllogistic rules, are as follows--

AAA. AAI. AEE. AEO. AII. AOO.

EAE. EAO. EIO.
IAI.
OAO.

Section 604. We will now arrive at the same result by a shorter and more scientific method. This method consists in first determining what pairs of premisses are valid in accordance with Rules 6 and g, and then examining what conclusions may be legitimately inferred from them in accordance with the other rules of syllogism.

Section 605. The major premiss may be either A, E, I or O. If it is A, the minor also may be either A, E, I or O. If it is E, the minor can only be A or I. If it is I, the minor can only be A or E. If it is O, the minor can only be A. Hence there result 9 valid pairs of premisses.

AA. AE. AI. AO.
EA. EI.
IA. IE.
OA.

Three of these pairs, namely AA, AE, EA, yield two conclusions apiece, one universal and one particular, which do not violate any of the rules of syllogism; one of them, IE, yields no conclusion at all; the remaining five have their conclusion limited to a single proposition, on the principle that the conclusion must follow the weaker part. Hence we arrive at the same result as before, of 11 legitimate moods--

AAA. AAI. AEE. AEO. EAE. EAO.
AII. AOO. EIO. IAI. OAO.