THE ARISTOTELIANS AND THE “MODERNS”:
HYPOTHESIS AND NATURE

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This paper discusses the continuity-theory as exposed by J. H. Randall in relation to Zabarella and Galileo's works. The privileged position assigned in the history of science to “methodological problems” is also discussed and refuted. Very strong differences between Zabarella’s De rebus naturalibus and the “Moderns” emerge, when the analysis turns to the concepts as nature and world, natural law and natural order, artificial objects and artificial (or constructed) experiments. On these grounds, Bacon and Galileo (as Descartes or Mersenne) developed a new image of science according to which the Aristotelian image of an “hyperinclusive” scientific knowledge is polemically and persistently refuted.

1. - I believe that the so-called historiographic myth of the continuity between the school of Paduan Aristotelians and the science of the “Moderns” does not have an autonomous life. I believe that its acceptance depends upon the preliminary assent to a myth or to a group of myths of much wider range in which the particular myth (as it happens with all myths to be respected) is very well inserted. This much larger philosophical-historiographic myth can be, for the sake of brevity, summarized in the following three propositions:

1) a unitary entity called “Modern science” exists;
2) a method exists (that can be expressed with relative clarity) that would be the method of modern science;
3) this “scientific method” would be the motor or the determining factor of the growth of science.

Usually, and certainly this is Cassirer’s case, the proposition number 1 is made to depend upon the truth of the proposition number 2. On the number 2 all the Neopositivists have insisted, but one can believe in the number 3, as A. Crombie does, and be criticized by Alexander Koyré who, substantially, accepts as valid the number 1 and the number 2.

The combinations are manifold and, most probably, many combinations that now are still only potential will be realized in future. It seems however unquestionable that the great fragility of those three propositions clearly emerges from the work carried out in the last thirty years by the historians of science.

I have dedicated the first paragraph of this paper to the attempt at clearing those three points. I have performed in an extremely concise way, although I am convinced that only if we do not accept as true the three propositions stated, it is possible today to try in a way not altogether traditional to approach the topic of the relation between Aristotelians and the so-called founding fathers of the modern science of nature.

On the first point. What we call “modern science”, though historians of science have with a certain delay become aware of it, is not exhausted in the so-called “classical” sciences: mathematics, astronomy, physics, optics, harmony or mathematical theory of music. It ensues from the interaction (that only in the course of the XIX century had explosive effects) between these sciences, that have behind them an ancient and consolidated tradition, and the new experimental or “baconian” sciences: magnetism, electrology, the study of heat, chemistry, the study of the Earth and of fossils. The so-called “scientific

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