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The Sources of Scientific Unity in Aristotle's *Meteorologica* I-III

In the *Posterior Analytics* Aristotle articulates two apparently inconsistent views of what constitutes the unity of a scientific subject matter or genus. In the early chapters of the *APo* we find a strict theory according to which the subject term of a demonstrative syllogism alone determines the genus. Anything that is predicated of this term as such will be in its genus and therefore in the science of that subject. A different subject term will form a different subject-genus and a different science. The upshot is that there is one science of triangle and a different science of isosceles triangle. There is, however, a second view, according to which the unity of the science is determined by the principles from which a related set of demonstrative subjects are composed, as for example, different kinds of triangles are generated out of lines and points. These two views are inconsistent unless we understand 'genus' to be 'said in many ways'. Aristotle does not explicitly confront this particular ambiguity either in the *APo* or in his other extended treatments of the subject genus, and so we are left to speculate whether and how he intended to resolve it.

With its limited scope and its self-conscious unity the *Meteorologica* serves as an excellent place to consider Aristotle's scientific practices and their effect on the nature of the subject-genus. In fact, the *Meteorologica* resolves the conflict between the two senses of genus. While each of its many demonstrations draws on explanations coextensive with its subject and thereby adheres to the requirements of the first sense of genus, the whole science draws its principles from a closely circumscribed set, which however extends further than the set of principles necessary for any particular demonstration. This set limits the possible demonstrations in the science and gives the *Meteorologica* its feeling of unity.

Neither these principles nor their mode of unification, however, can make the science one. The unity of the subject is challenged from above and below through the assumption of several principles from other sciences: the ecliptic rotation of the sun, the use of geometrical principles in explanations of halos and rainbows, and psychological principles for color and heat. But the very fact that they are the causes, and the proper causes, of these phenomena, makes them in Aristotle's mind necessary terms in the science. They may, however, only serve as middles and never as subject terms.

The most general description that Aristotle might give to the form of unity which covers all his strategies is the 'pros hen' or 'focal' unity. In every case Aristotle conceives the principles and other terms as definitionally or per se related to a central subject. But even this suggestion does not do full justice to Aristotle's conception, since the per se relations are of significantly different types. In the end, we must accept that though the sources of unity in the *Meteorologica* are mutually consistent, they are themselves multifarious.