

phases. It is not, however, in the definition given by Valerius Flaccus,* but in the zoological writings of Aristotle, that the word *history* presents itself as an exposition of the results of experience and observation. The physical description of the word by Pliny the elder bears the title of *Natural History*, while in the letters of his nephew it is designated by the nobler term of *History of Nature*. The earlier Greek historians did not separate the descriptions of countries from the narrative of events of which they had been the theater. With these writers, physical geography and history were long intimately associated, and remained simply but elegantly blended until the period of the development of political interests, when the agitation in which the lives of men were passed caused the geographical portion to be banished from the history of nations, and raised into an independent science.

It remains to be considered whether, by the operation of thought, we may hope to reduce the immense diversity of phenomena comprised by the Cosmos to the unity of a principle, and the evidence afforded by rational truths. In the present state of empirical knowledge, we can scarcely flatter ourselves with such a hope. Experimental sciences, based on the observation of the external world, can not aspire to completeness; the nature of things, and the imperfection of our organs, are alike opposed to it. We shall never succeed in exhausting the immeasurable riches of nature; and no generation of men will ever have cause to boast of having comprehended the total aggregation of phenomena. It is only by distributing them into groups that we have been able, in the case of a few, to discover the empire of certain natural laws, grand and simple as nature itself. The extent of this empire will no doubt increase in proportion as physical sciences are more perfectly developed. Striking proofs of this advancement have been made manifest in our own day, in the phenomena of electro-magnetism, the propagation of luminous waves and radiating heat. In the same manner, the fruitful doctrine of evolution shows us how, in organic development, all that is formed is sketched out beforehand, and how the tissues of vegetable and animal matter uniformly arise from the multiplication and transformation of cells.

The generalization of laws, which, being at first bounded by narrow limits, had been applied solely to isolated groups of phenomena, acquires in time more marked gradations, and gains in extent and certainty as long as the process of reason-

* Aul. Gell., *Noct. Att.*, v., 18.