conceptions of geologists regarding the structure of mountain-systems altered as their knowledge of stratigraphy increased; the stages of progress may be judged by a comparison of the text-books of geology published in the successive decades of the nineteenth century.

The text-books of the Wernerian School were mostly ignorant of the complicated structure of mountain-systems; inclined strata were assumed to have originated in the inclined position. Their teaching on structure was based exclusively upon observations in plains, hill districts, and mines. Geological sections of mountains and plains appear in the work of Conybeare and Phillips, and an ideal section of the earth's crust in Buckland's *Text-book of Geology* (1836) became the model for a number of similar attempts. Lyell's *Principles* and *Elements of Geology*, like the majority of the text-books in the first half of the nineteenth century, treated the structural relations of the earth's crust somewhat meagrely. Naumann, in his *Lehrbuch der Geognosie* (1850), was the first author who devoted a special chapter to "Geo-Tectonics," and he comprised in it practically everything which had been established in this domain of geology.

As the interest in tectonical relations developed, the questions of the earth's configuration began to be studied from a more intelligent standpoint. Previous centuries had offered only speculative literary matter on this subject. Steno certainly had as early as 1669 appreciated the fundamental doctrines of configuration; upon the basis of his own researches in Tuscany, he had explained the forms of mountains and valleys as the results partly of crust compression and fracture, partly of the upheaval of stratified deposits, partly of the accumulation of volcanic material. Descartes, Leibnitz, and Buffon attributed the origin of ocean-basins, continents, and mountain-systems to fracture and wrinkling of the solid crust, and to withdrawal of the surface waters into subterranean cavities. Hooke, Vallisnieri, Lazzaro Moro, Needham, and others thought volcanic forces had upheaved the continents and mountain-systems.

Inthrows, subsidences, wrinkling of the crust in virtue of the earth's contraction, and upheaval by subterranean forces have long been recognised as the principal factors in determining surface conformation, and re-appear in modern theories with various modifications and applications.