

GEOLOGY AND HISTORY:DISCUSSION AND TRENDS OF THE PAST. SCIENTIFIC SECRETS OF THE EARTH

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ABSTRACT: Science is no stranger to imperfection. This is not a problem, but a necessary force that inspire scientists to constantly strive for progress. What science has done and continues to do with the power of reason that elevates the human condition, and has contributed to the destruction of superstitions and dogmatism that were deep-rooted in the mind and in popular imagination.

The distinction between historical Science (geology) and ahistorical Science (Physics), has contributed in no small measure to the Copernican revolution, which was not only a breakthrough to a new physical form, but for the understanding of the Earth from the concept of Eratosthenes to Gilbert. Geologists realized that the Earth is much older than Bible indicated, and they thought that geology was much older than modern astronomy, which dates back to the Copernican Revolution, in the mid 16th century. Steno is recognized as the founder of Geology as a historical science. Do we agree that the Copernican Revolution was the beginning of postgreco roman Geology? It is to some extent a matter of discussion.

The development of Geology was joined by the discoveries of territories from the end of the 16th century, which created a new worldview and technological changes in mineralogy, mining and metallurgy. These revolutionary advances impacted the mentality and social behavior in the modern age and in many cases were used to introduce the Baconian theory and then established the philosophical principles of the Enlightenment. The voyages of discovery have been intensively studied by science historians and geographers, but not as much by geology historians. Many of them argue that the voyages of discoveries form an essential episode in the birth of modern geology, although they have not been recognized as such until recently. In particular, these explorations and discoveries show similarity with the plate tectonics revolution, when we evaluate the historical evolution of Geology as a science, but without losing sight that there are differences between them when it comes to studying the periods in which the Earth's history occurred. Differences were accented because those explorations were less familiar to geologists than other scientific revolutions. Before Thomas Kuhn (1970) used the concept of paradigm to explain the progress of the sciences, Alexandre Koyré (1958) argued that the development of science was in a discontinuous form and that the Copernican revolution marked the shift from a closed world to the infinite universe, which was already predicted by Giordano Bruno, in the 16th century. These ideas were used to study the discoveries of New Territories in order to understand the Earth as a whole.