

Jessica Hale

Title: “The Pre-Socratics: Origins of Philosophy and Science”

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Jessica Hale is currently a senior at IPFW majoring in history. She is presently interning at ARCH Inc., a non-profit organization that advocates for the historic preservation of Fort Wayne and northeast Indiana’s architectural and cultural heritage. After graduation she is preparing to go on to graduate school at the University of Notre Dame. Her primary interests revolve around world history, global affairs, and historic preservation.

Abstract

This research paper examines the significance of the Pre-Socratic philosophers of the 6th and 5th century BCE and looks at the momentous role they played in the development of philosophy and modern science. This work draws upon both primary and secondary sources to present a multi-faceted study of how this group of thinkers set off an intellectual revolution by introducing a new model of inquiry into the world. By examining this intellectual revolution, I clarify the process by articulating some of the most important contributions of influential Pre-Socratic philosophers and demonstrating how their ideas have been further built upon throughout time. Their ideas unleashed a chain reaction into the rational inquiry of nature that was later expanded upon and diversified into other fields of inquiry. By rejecting the attribution of natural phenomena to divine authority and instead basing their theories on natural explanations, the Pre-Socratic philosophers inadvertently invited others to participate in critical discussions about the physical world. Previously the critical discussion of nature was not discussed because the mythological interpretation of nature was dogmatic in character. A myth does not contain any evidence that can be supported or refuted by another’s argument. The postulates presented by the Pre-Socratics allowed others to react against their assumptions which have led to a process of innovation and development of modern science. In order to create an intellectual revolution, this group of thinkers first had to overturn a set of existing beliefs and then replace them with something new.

These ancient Greek philosophers were unique in their tendency to separate the natural world from the supernatural world. Instead, they attempted to explain natural phenomena on their own inherent terms. For example, Thales’ assertion that water was the beginning of all things served as a catalyst to the conception of science. To choose water, which was able to turn into vapor, and exist in gas and solid states was a natural way to overcome the problem of previous cosmologies presented in the works of Hesiod and Homer. Up until this point, traditional cosmologies began with a genealogical series of births to explain the origins of the universe. However, Thales’ postulate was able to overcome something that previous cosmologies were not, the problem of regression into infinity. Where does Hesiod’s Chaos come from? Thales’ explanation overcame Hesiod’s and Homer’s series of births and replaced them with a circle of transformation. While his postulates left many questions with unsatisfactory answers and his theories were soon countered by his successors, the principles behind Thales’ ideas are still accepted today. With each Pre-Socratic philosopher mentioned, this research paper ties together each thinker with a major contribution to science and philosophy. Thales suggested a physical

basis of the world that led to a generalized approach to the problem of change. His assumptions prompted others to ask if there was anything stable in the world and thus inspired the works of Heraclitus, the Pythagoreans', the Eleatic reaction to Ionian philosophy, which in turn led to the reaction of the Atomists and so on. . . This research paper attempts to do justice to each of these ancient Greek philosophers and then explains why each was significant in regards to the historical progress of science.

Bibliographical Note

This paper utilizes to its best abilities both primary and secondary sources. It is important to note, however, that very scant amount of original works written by the Pre-Socratic philosophers has survived. Most of what we know of this group of thinkers comes from Plato, Aristotle, Isocrates, and Diogenes Laertius, all of whom lived after the Pre-Socratics' time and are considered secondary sources. While this paper does analyze some original fragments written by Heraclitus, most of the sources used in this work are secondary and consist of books, academic journals and articles, and other ancient writings.