The Rise of Paradigmatic Monism and Its Cultural Implications

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In this paper I shall be looking at the state of science before and after the 17th century especially with regard to the question of the nature of scientific knowledge, specifically scientific paradigms. I will argue that some of the major differences between modern science and pre-modern science are due to (i) methodological changes, (ii) the rise of paradigmatic monism in modern science as opposed to paradigmatic pluralism in pre-modern science, (iii) the integration of science with technology after the 17th century. These changes, I maintain, also redefine the role of scientific knowledge in society and culture, and bring in its wake certain problems and challenges, which in turn elicit different types of responses. Pre-modern science, I argue, are admirably suited to play a cultural and religious role, partly because of a lack of a pragmatic criterion of knowledge, and the emphasis on rational coherence. This makes enchantment of nature through science, possible. However, with the further evolution of science, especially the introduction of the experimental method and the emphasis on empiricism in the 17th century, scientific knowledge now has to conform to different criteria of knowledge -pragmatic in part-leading to 'paradigmatic monism' and the consequent loss of enchantment in our conception of nature. The rise of the new science beginning in the 17th century thus brings in its wake a new set of epistemological and cultural challenges which were met with in different ways. I will then comment on the different types of responses made against the rise of the new science.