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SCIENCE, ENERGY AND KNOWLEDGE. AN ANALYSIS OF THE SCIENTIFIC LITERATURE ON THE SYNTHETIC FUELS IN THE 1970S AND 1980S



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Abstract

Research breeds research. When the environment (politics, human and capital resources, and the demand for the good) is right, research activity compounds itself. The growth rate continues until research activity is at the limiting level which its environment can support. However, what influences the work-flow of the research, and what is the limiting level? Does there really exist a breaking point where the scientist gives up discouraged by the surrounding and overwhelming odds? (Clewell, 1963). This study documents the trend of scientific research on synthetic fuels production technologies between 1972 and 1988. The goal is to understand if the environment has really influenced the research; and, whether it is possible to determinate or not a precise breaking point in the flow of the research. The conclusions reached in this thesis are based on the comparison of historical facts through the lens of a bibliographic study on the contemporary technical-scientific literature available from the Department of Energy.

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Airborne Wind Energy (AWE) is a renewable energy technology that uses wind power devices rather than traditional wind turbines that take advantage of the kinetic wind energy, and remain in the air due to aerodynamic forces. This article aims to compare the scientific literature with the patents on wind power with tethered airfoils, to obtain better insights into the literature of this area of knowledge. The method used in this study was a comparative bibliometric analysis, using the Web of Science and Derwent Innovations Index databases, and the Network Analysis Interface for Literature Review software and VosViewer.

Comparing Patent and Scientific Literature in Airborne Wind Energy. *Sustainability*. 2017; 9(6):915. Chicago/Turabian Style. 4 These factors are discussed in T. S. Kuhn, *The Copernican Revolution: Planetary Astronomy in the Development of Western Thought* (Cambridge, Mass., 1957), pp. 122-32, 270-71. Other effects of external intellectual and economic conditions upon substantive scientific development are illustrated in my papers, "Conservation of Energy as an Example of Simultaneous Discovery, *Critical Problems in the History of Science*, ed. Marshall Clagett (Madison, Wis., 1959), pp. 321-56; "Engineering Precedent for the Work of Sadi Carnot," *Archives Internationales d'histoire des sciences*, XIII (1960), 247-5 of cognitive science as we understood it in 1984; second, suggestions for changing the way we do intelligence analysis in light of what the discipline was telling us. As I have indicated, I think the survey section holds up pretty well. to the potential in any of these areas. One has only to think of the emphasis on structured analysis and customer relevance; the attention we devote to scope notes; and the many blogs, the broader platforms such as A-Space and Intellipedia, and the coordination tools such as CIA's POINT. Since I wrote the monograph, however, I have nurtured an idea that I think would move our analysis well beyond these accomplishments.