

## CHAPTER I

### INTRODUCTORY REMARKS

#### Nature and Scope of this Paper

This paper is mainly an attempt to study and evaluate, in the light of modern conception in economic science, the thoughts of a remarkable economist, if not a scientist, Professor William Stanley Jevons, and also to sketch his significance in the history of economic thought.

I shall not deal with the actual content of his economic doctrines in detail, for this is beyond the scope of a paper of this sort. I must admit that this study and evaluation is only a partial one, because the primary sources available to me are by no means complete. However, with the availability of some of his major works and some secondary sources, it is not too difficult to gain an insight into the characteristics of his mind.

Jevons had given serious thought to the methodology of the natural sciences, as it appears in The Principles of Science, but he did not introduce any specific economic method. This is not at all surprising, for he believed that his scientific method, generally

known as the hypothetico-deductive method, is just as relevant for economic inquiry as it is for scientific investigation. I shall devote Chapter II to the exposition of this method, which is, in fact, the central theme in his philosophy of science.

I believe that such a seminal thinker as Jevons would probably have examined any problems in the fields of economics and natural sciences from a definite unified standpoint. There is, undoubtedly, in his conception of its philosophy, a definite relationship between the two. In fact, a great deal of evidence seems to show that some of his views on the nature of science have influenced the form of his economic thinking. In this paper, I shall try to show how some of his ideas on the natural sciences are worked out in the context of his economic method. For this purpose, reference will be made mainly to his Theory of Political Economy, The Principles of Science, and to his fragmentary treatise on The Principles of Economics.

In order that we may appreciate better the characteristics of his mind, it is imperative that I give a short biographical sketch of him, to show how his early intellectual training and experience and his varied interests had assisted to develop his mind and character.

## A Biographical Sketch<sup>1</sup>

Jevons (1835 - 1882) stands chronologically between John Stuart Mill and Alfred Marshall. He is not only an economist, but also a logician, philosopher, statistician, and reformer of a high order.

In the early years, Jevons had concentrated on the natural sciences. He was particularly interested in botany and chemistry at that time. This early experience and interest had greatly influenced his mind and character.

Later, owing to straitened financial circumstances in his family, Jevons had no choice but to accept the offer as an assayer of the mint in Sydney, Australia, thus forcing an interruption of his studies in 1854. The five formative years that followed, however, were filled with sustained mental activity based on empirical and deductive research. He developed a keen interest in meteorology, which involved a great deal of careful observations and analysis of statistical data. His interest in later life in recording the periodicity of the "sun-spot" disturbances and the connection between these and changes in the seasons, the price of corn,

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<sup>1</sup> For more detailed biographical facts on Jevons, see "William Stanley Jevons, (1835 - 1882): Some Biographical Notes," by Mrs. Rosamond Konekamp, in Manchester School of Economic and Social Studies, Vol. 30, 1962, pp. 251 - 273

and commercial crises, was undoubtedly stimulated by these investigations. His first major paper published as a result of this study was called Some Data Concerning the Climates of Australia and New Zealand.

Jevons' other intellectual interests were developing at the same time that he was working in the mint and making weather observations. Presently, he began thinking about political economy. It was because of this interest in economics that he turned his attention from the natural to the moral sciences.

His characteristic switch of interest to economics from the natural sciences had led him to pursue an academic career once again. Being much inspired by De Morgan's<sup>2</sup> mathematics, he went back to University College, London, graduating with a M.A. degree in 1862. It was De Morgan who had influenced greatly his mathematical approach to economics, and probably his whole approach to the subject of scientific method and logic.

Since then, a steady stream of publications,

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A.D. Morgan, (1806-1871), born at Madura, Madras, was the first occupant of the chair of mathematics at University College, London, and held it for more than thirty years. In 1838 De Morgan published his Mathematical Treatise on the Theory of Probabilities, and, subsequently, an Essay on the same subject. In 1847 appeared his Formal Logic. Shortly before his death, he was closely occupied with the question of a Decimal Coinage.

covering a wide range of subjects, bear testimony to his fertile mind. His fortunes were at its lowest ebb during the year which followed his graduation, for he was not successful as a writer. So he finally decided to pursue the "professorial line," as he called it, and in the meantime continued to work on his own research at the British Museum. His work in the mathematical statistics and his various investigations in the field of applied economics were among his greatest contributions.

Apart from his College work, Jevons also devoted himself to elaborating a new logical system, on the basis of George Boole's symbolic logic. His work in this field culminated in the publication of a small volume entitled Pure Logic, in 1870, and also in the perfection of a logic machine, capable of performing certain reasoning process mechanically.

A few years later he summed up and applied the results of his long and severe researches in logic in his far more important book on The Principles of Science, in which he discovered the great and universal principle of all reasoning, namely, The Substitution of Similar. Having satisfied himself about the fundamental importance of this great discovery, he turned back again to complete his Theory of Political Economy.

It is against this background endeavour of Jevons

that his conception of scientific method and economic science need to be appraised.



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