Evolutionary Foundations of Economic Science - How Can Scientists Study Evolving Economic Doctrines from the Last Centuries?

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Abstract:

This lecture will be a summary of my forthcoming book titled:

*Evolutionary Foundations of Economic Science*

How Can Scientists Study Evolving Economic Doctrines from the Last Centuries?

Series: Evolutionary Economics and Social Complexity Science, Vol. 1


This book aims to explain briefly the essential features of the founding theories of economics, and compare them with later theories developed to address inconsistencies in outcomes. The earlier stages of this book are focused on the economic ideas and theories developed mainly between the 1930s and 1950s, because their emergence bred what were effectively new branches of economics. Over time, these economic theories have been gradually updated, but this updating has not necessarily addressed their theoretical difficulties. Roughly speaking, the updates converged towards behavioral science without eliminating the essential problems behind the theories. The idea of bounded rationality was a typical concern of these revisions. With universal rationality, then the core of the theory remained. The ideas of systems science were therefore increasingly less associated with this revisionist economic theory. However, even as these updates were being proposed, the world was dramatically changing. To use my favorite phrase, a recent car like “google car” with an adaptive cruising system is loosing a traditional idea of car. A modern air fighter is no longer an air fighter in the sense that stability is no longer part of its structural design. The control of modern vehicles is becoming further removed from human input. This also applies to the market. The revisionist approach therefore does not fully describe the essential transformations emerging in the world.
For these reasons, I have preferred in this book to describe an alternative analytical framework in the interdisciplinary field of socio-econophysics and sociodynamics. It targets a set of branching or critical points separating the previous framework from the new one. Arthur (2009) used the term “re-domaining” when he referred to technological innovations. Here, we are trying to re-domain economic theories to fit a new social system. Major technological innovations not only accompany economic and market changes but also alter their meaning. In particular, the evolution of trading technology has changed the meaning of the phrase “invisible hand”. At the end of the last century, the advent of socio-econophysics was decisive in the emergence of a new economic science. This coincided with a change in the economy and the market, which begged a re-domaining of economic science. For the future, many scientists outside traditional economics are now joining together to develop new ideas such as power law distribution, and network analysis. However, the more diverse the backgrounds of economic scientists, the fewer common views they will share, potentially expanding economic terminologies. This book may help to mitigate any conflicts.

To achieve this, I believed that it was important to position and select the classical and essential topics in economic science. The behavioral interpretations in the standard approach rather twisted the economic view to fit a very limited range of interests. In any retrospection of classical doctrines, even a short one, the ideas of production, consumption, distribution, and the market must be included. Without these, no discussion of economic theory is possible. Unfortunately, in the 1980s, such a synthesis suddenly disappeared from standard economics teaching, so I am attempting here to resurrect this view. I am convinced that economic science needs the theory of production and consumption as its first stage.