

Preface to the Special Issue

Prefácio para o Número Especial

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A half century has gone by since Sidney Winter and I began espousing the proposition that the economic activity going on at any time should be understood as the present result of a continuing process of evolutionary economic change, as a frame in a moving picture, rather than a set of economic actions being taken in a neoclassical general equilibrium. Since that time, this point of view largely has been adopted by scholars studying technological innovation and the economic progress that innovation engenders, the structural industrial dynamics associated with innovation, and by many scholars studying and writing about the behavior of firms operating in sectors where innovation is important, and appropriate firm strategies in that context. These are the areas of analysis that Winter and I highlighted in our 1982 book – *An Evolutionary Theory of Economic Change*. And these are the principal topics addressed in the articles in this special issue.

The case I want to argue here is that our understanding of how modern economies work more generally would be significantly enhanced if economists studying a far wider range of topics adopted an evolutionary perspective, with innovation of a wide variety of sorts the principal driving force and also an important aspect of responses to change. Schumpeter of course advocated this point of view, but like Nelson and Winter developed it only for a limited range of economic phenomena. But I want to argue that the way economic activity is organized at any time, the range of outputs being produced and their prices, the distribution of income and wealth, the magnitude and nature of unemployment, the roles of Government in molding economic activity, indeed virtually all the phenomena that economists seek to understand and illuminate, can be best understood when analyzed from an evolutionary perspective. One cannot understand what is going on in these arenas without understanding how the current situation came to be. And prominent among the implications of what is going on at any time is where actions today are leading us to be tomorrow.

I want to call attention here to the fact that this evolutionary orientation to understanding what is going on in an economy certainly is not a new conception. It clearly is the point of view Adam Smith takes in his *Wealth of Nations*; recall that he effectively

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starts his *Wealth of Nations* with his description of technological advance in pin making, but throughout his great book he clearly is picturing an economy undergoing change. Most of the economists we now call “classical” also were oriented to a developing economy. And of course there was Marx. Much of the analysis by economists of this vintage was broadly evolutionary in spirit, but by the time Darwin’s writings were beginning to have a broad impact on thinking generally, neoclassical economics was beginning to emerge, with its focus on equilibrium conditions. Of course there were exceptions, Schumpeter for one, but the notion that the economy was always in the process of changing disappeared from most mainline treatments. It is noteworthy, however, that Alfred Marshall expressed his concern that economic analysis was, unfortunately, too mechanical, and that the future of economics was in economic biology.

Yet as Winter and I have stressed many times, the evolutionary processes molding economic activity and structure (or social institutions, or aspects of culture, or political action and structure) differ in essential ways from evolutionary processes in biology. Although in some ways “routines are like genes”, individuals and organizations are not stuck forever with the ways of doing things they are employing today. Indeed, in most arenas of economic activity the ability of individuals and organizations to learn that what they have been doing no longer yields satisfactory results, or to learn about or conceive a promising alternative, is the heart of the evolutionary process, as contrasted with selection on economic actors (for example firms), although often both processes are at work.

Since its origins in the writings of Adam Smith and his classical followers, economic analysis has stressed the role of goal seeking “rational” behavior on the part of economic actors, and competition among economic units to meet customer demands, at least in arenas of the economy where markets were prevalent, as the key factors explaining the current configuration of economic activity, prices, and structure. Modern evolutionary economics is consistent with this theoretical perspective which, as I have highlighted, was very much there long before modern neoclassical economics, with its commitment to actor “maximization” as its formulation of the meaning of goal seeking “rationality”, and of “equilibrium” as its treatment of the consequences of actor interaction and competition.

The scientific costs of the modern neoclassical formulation include its inability to recognize behaviors that are creative or those that are incompetent, the fact that in virtually all economic sectors there is significant variety among firms some of which are doing well and others poorly, and more generally that the state of affairs is always changing in ways that are not tightly predictable rather than being a tranquil equilibrium. As I noted, an evolutionary perspective, that recognizes centrally all of these features of how economies actually operate, has been adopted in the various arenas of economic research in which the articles in this special issue are concentrated.

But my argument here is that an evolutionary economic perspective is needed more generally in economic analysis. How can one understand the reasons behind poverty, or the very unequal income distribution more generally, unless one recognizes that the economy

is always evolving, driven by innovation which generates creative destruction? How can one understand the current arguments about needed public policies unless one recognizes that much of the debate is regarding arenas of technology and economic activity that have been changing rapidly? Or consider the changing patterns of international trade, and the contentious arguments about what government policies and programs are effective and legitimate in fostering the advantage of national high tech industries. Neoclassical trade theory is blind to all of this.

What I find very interesting is that empirically knowledgeable economists, wrestling with these topics, and writing about them for a sophisticated lay audience, as contrasted with for an academic economics journal, recognize clearly the inadequacy of today's standard mode of economic theorizing, to which they often have been prominent contributors. In their analyses history matters, and often the highlighting of the fact that effective dealing with the problem undoubtedly will require a considerable amount of trial and error learning and course correction, which in my view are hallmarks of an evolutionary perspective on economic activity.

But for the most part their evolutionary perspective is implicit, and not supported or guided by more explicit evolutionary analysis of what is going on. For many of these economists empirical analysis of what is going on is one thing, and economic theorizing is a very different thing. They understand full well that it does not help analysis of the phenomena they are dealing with to assume that all the economic actors involved are rationally doing the best they possibly can, or that the system is in equilibrium so that no participant can do better than they are doing by doing something else. But there is no evolutionary oriented theory concerned with the subject matter they are addressing to help orient their interpretations of what is going on.

The strength of the papers in this special issue testify to the advantages of doing research on topics where there has been considerable evolutionary thinking and theorizing. And the contrast here provides a strong argument for the development of explicit evolutionary thinking regarding a much wider range of topics of interest to economists and other social scientists.