

an inter-temporal market in which the young borrow and the old dissave (except at the extremes of the life-cycle where both the very young and the very old are helpless). But parents have to be rich enough to make positive transfers and there must be no credit-rationing. More generally inter-generational transfers are made within the family or, politically, through the state. If within the family, they may result from altruism or from exchange or from an implied reciprocity in which a family constitution is followed by each generation. A sanction of some kind is invoked so that the inter-generational bargain is renegotiation proof. Similar considerations apply if the transfers are political and a voting equilibrium is required. Cigno starts with a three-period life cycle and adds fertility to the usual considerations. So, to the first-order conditions determining the rate of return on capital and the inter-temporal pattern of consumption, is added the condition that the marginal social benefit of adding an extra person must equal the marginal social cost. When education is introduced the extra portfolio condition is that the rates of return on investment in physical and in human capital must be the same. Cigno considers, in turn, "real" families as opposed to Becker-Barro families (deriving family constitutions) and a welfare state which pays lump-sum benefits to children and the old, financed by lump-sum taxes on working adults. There are many good things in this chapter which we do not have space to mention here.

As is the case with handbooks of economics this one is not an easy read. But it certainly meets its objective of bringing researchers and teachers up to speed with the state of the subject and will hopefully inspire a few of them to make the breakthroughs required.

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Equilibrium in Economics. Scope and Limits, Valeria Mosini (ed). Routledge, 2007, xxiii + 284 pages.

While the notion of equilibrium is central to economic theorizing, its precise meaning remains elusive. Two attitudes are then possible: one can either forget this elusiveness, or try to address it directly. Most economists content themselves with the former attitude but, fortunately enough, a few others take the other route. This book is an example of the latter case.

The volume is a collection of essays, which started as talks given at the Centre for the Philosophy of the Natural and Social Sciences at the London School of Economics during the academic year 2003–4. Its aim is to compare different views on equilibrium from authors coming from different horizons. Some of them are historians of the hard sciences, some sociologists. Most are economists. After an introduction by Valeria Mosini, the book is organized in three parts. The first one, entitled “The interplay of equilibrium notions between the natural sciences and economics”, comprises three chapters written by historians of science. Chapter 1, authored by Ivor Grattan-Guinness, is entitled “Equilibrium in mechanics and then in economics, 1860–1920: a good source for analogies?”; chapter 2 by Bernadette Bensaude-Vincent and Valeria Mosini, “Between economics and chemistry: Lavoisier’s and Le Chatelier’s notions of equilibrium”; and chapter 3 by Louise Jarvis and Mosini, “The ubiquity of the notion of equilibrium in biology, and its relation with equilibrium in economics”. Part II, “Equilibrium in pre-neoclassical economics” consists of three chapters. Chapter 4, by William Dixon and David Wilson, is entitled “‘Sympathy’, ‘character’ and economic equilibrium”; chapter 5, by Richard van den Berg, “Equilibrium in the French Enlightenment: the case of A. N. Isnard”; and chapter 6, by François Vattin, “Influences on the Economic Theory of A. A. Cournot: mechanics, physics and biology”. Part III, “Equilibrium in present-day economic theory and practice”, the most copious one, comprises seven papers: “Tensions in modern economics: the case of equilibrium analysis” by Tony Lawson; “Equilibrium and problem solving in economics” by Roger Backhouse; “Equilibrium analysis: a middlebrow view” by Warren Samuels; “Equilibrium in economics, stability and stationarity in econometrics” by Jim Thomas; “Equilibrium in economics: some concepts and controversies” by Victoria Chick; “Heavens above: what equilibrium means for economics” by Alan Freeman; and, finally, “The hypostatization of the concept of equilibrium in neoclassical economics” by Andy Denis.

For lack of space, I shall limit myself to commenting on a selection of papers. The first I wish to discuss is Lawson’s. I agree with him that a distinction must be drawn between theoretic propositions (pertaining to the fictive model world) and propositions pertaining to reality, which he calls “ontic”. However, I am unconvinced by the way in which he applies this distinction. For example, discussing general equilibrium theory, he states that the study of the logical existence of an equilibrium solution belongs to the theoretic sphere while that of stability belongs to the ontic sphere. Why? Certainly this was not Walras’ view, although he could have endorsed Lawson distinction. In my view, both topics belong in the theoretic sphere. Lawson is also a fierce opponent of neoclassical economics. For example, he writes that

the limited power of formalistic methods to illuminate social reality, the lack of fit of the former to the latter, necessarily results in mainstream economics inventing a 'reality' of a form that their modelling methods can address (i.e. a world of isolated atomistic individuals possessed, for example, of perfect foresight, or rational expectations, omniscience, pure greed, and so forth) (p. 139).

Lawson supposes that neoclassical economists would protest vehemently against the indictment that neoclassical theory is an invented reality. There are so many different streams of neoclassical economics that no single reaction might be identified, but at least one important group of scholars would definitely be on his side: Lucas and real business cycle theorists. According to Lucas, models are a "mechanical, imitation economy" instead of "a collection of assertions about the behaviour of the actual economy" (1981, p. 272), a statement that comes close to Lawson's preferred view. But these authors depart from Lawson on the matter of whether this is good or bad. What Lawson, a good Marshallian foot soldier, views as a horrible defect is deemed by Lucas to be the only route for constructing solid economic theory! One last remark about Lawson's paper pertains to the claim that neoclassical economics is in an unhealthy state. Thirty years ago this may have been a popular view, but today it sounds rather odd. If there is any sickness, the patient seems totally unaware of her alarming state. For better or worse, neoclassical theory is more triumphant than ever.

Backhouse's essay stands as an exception with respect to the other economic papers of this volume. It presents a balanced defence of equilibrium, which mainstream economists will find agreeable. To Backhouse, general statements of the type "the equilibrium method is flawed, full stop", make no sense. For him, there are as many equilibrium concepts as there are broad types of problems addressed by economists. As a result, the discussion about the validity of the equilibrium notion or the lack thereof must be made case by case in relation to the specific equilibrium concept advanced.

Samuels and Chick, both respected economists, pursue the same goal of trying to put some order in a domain full of intricacies. Trying hard to disentangle these knots they draw some interesting distinctions, but at the end of the day the reader is left to wonder whether he has been much enlightened. Samuels's essay has the merit of putting the works of Lawson, Hahn and Backhouse in perspective. Unfortunately, the reader gradually loses the thread of the argument, the essay becoming too rambling. Chick brings out the plurality of definitions of equilibrium, the different angles from which it can be attacked. But at the end, her verdict of "dissent, disagreement and confusion" leaves the reader in a gloomy mood about the subject.

Finally, a few words about Denis's paper. While I have criticized Lawson for his lack of consideration of the conception of equilibrium in new classical macroeconomics, this criticism cannot be extended to Denis since the main target of his article is Lucas' conception of equilibrium. Tracing Joan Robinson's footsteps, his basic criticism of the neoclassical notion of equilibrium bears on its lack of historical character. He is certainly right in making such an assessment, although his exoneration of Marx and Keynes from this flaw sounds odd to me. Ideally, Denis claims, economics should be based on an equilibrium notion *à la* Prigogyne-Stengers describing a system in a far-from-equilibrium state. Unfortunately, he admits, any such theory is lacking. Denis' next step is twofold. First, he defends the centre of gravitation conception of equilibrium, not because it is dynamic and historical, but as a second best option. Second, he attacks Lucas for exaggerating his claim to have introduced dynamic analysis in macroeconomics, while in fact the approach he inaugurated is hardly truly dynamic:

With the addition of the shocks, change takes place, but no development; it is just the same distribution of events being randomly selected from. The system has been 'dynamised' – time has been impounded. But the time involved is fake time, fictitious time, it is logical time, no historical time. What comes first is equilibrium and process is secondary. We must move between one equilibrium position of the economy and another. But there is no time or reason to the transition and no arrow of time (p. 264).

According to Denis, it is better, more honest, to remain in the static equilibrium conception than to engage in a fake dynamic approach. Lucas' fault is branded as "hypostatisation".

I find this claim quite strange: obviously, we have no historical time in DSGE models, nor do these models encapsulate Prigogyne and Stengers' views. But even if they can be considered half-baked dynamics, is this not better than a totally static equilibrium approach? Are Marx's and Keynes' models (I am not speaking of their meta-theoretical views) more Prigogyne? It is nice to have mavericks in a profession that has become over-conformist but I would prefer it if they developed more robust claims.

Let me now turn to an overall appreciation of this book. The risk of an enterprise where bright people coming from different backgrounds are asked to write on a subject as complex as equilibrium, is that it may result in a kaleidoscopic piece. This is the case for this volume. Having read it, I wonder whether equilibrium is a good subject matter for a collective book. The reason for my disappointment has less to do with the quality of the individual papers than with my impression that bringing them together provides little added value. No cumulative knowledge is gained. Comparing the equilibrium notion in the hard sciences and in economics seems a clever idea. Unfortunately, its implementation leaves the reader – at least me – with the feeling of a missed opportunity. As to the papers

by economists, they are too disparate. Most of them are fiercely anti-neoclassical with the usual worry that what comes under attack is just a straw man.

A final criticism is that most of the papers, except Backhouse's, rest on the view that equilibrium has always been one and the same notion, its basic meaning being that of a state of rest. Mosini states that in the natural sciences "a system is said to be in equilibrium in a given domain when the value of the system's parameters that are relevant to the domain are constant over time" (p. 3). It is taken for granted that the same definition holds for economics. I doubt that this is the case, at the least in the history of macroeconomics, where on the contrary authors such as Lucas and Sargent have argued that a drastic change in the meaning of equilibrium has occurred. In their own words:

In recent years, the meaning of the term *equilibrium* has changed so dramatically that a theorist of the 1930s would not recognize it. An economy following a multivariate stochastic process is now routinely described as being in equilibrium, by which it is meant nothing more than at each point in time, postulates (a) and (b) above are satisfied [that is (a) that markets clear and (b) that agents act in their own self-interest] (1979/ 1994: 15).

In short, most of the contributors, with the exception of Backhouse, seem to have missed the point that the meaning of equilibrium, its epistemological references, has drastically changed over time. What they refer to is the familiar old notion, which may still be around but, for sure, is no longer the only one on stock.

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Egalitarianism: New Essays on the Nature and Value of Equality, Nils Holtug and Kasper Lippert-Rasmussen (eds). Oxford University Press, 2007, xi + 339 pages.

Egalitarianism, broadly conceived, has received a lot of attention during the last thirty years. However, not much consensus has evolved. Instead, the discussion has been divided into a number of sub-issues, which are