**The General Theory and Victoria Chick at 80: A Celebration**

**Gustave Tuck Lecture Theatre, University College London**

**Monday 11 July 2016**

***Keynes and Chick and just on time!***

Dear Victoria!

Dear Colleges!

* It is a great honor and pleasure for all of us to be here today!

And it is a unique opportunity to celebrate and to thank you for your incredible efforts in the economics profession.

What is of particular interest today is that we focus on some of the analytical breakthroughs on issues that we share.

I will restrict myself to deal with one of the topics - the concept of time

Let me start by saying a little bit about the philosophy of time, and then something about the Order out of Chaos in Economics. This will be followed by something quite topical for the temporality of the recent crisis and all told with a view to finally say something about the necessity of Post Keynesian theory.

First of all I would like to clarify how critical important your book Macroeconomics after Keynes has been for me and especially your message, that time is the key and that the General Theory is a static model of a dynamic process. Keynes created, as you said in the book, an uneasy compromise between the method of comparative statics and the concerns of process dynamics.

Why is time so important?

In fact, it is easy to see that it's just one of the crucial areas where the Post-Keynesian theory stands out and demonstrates that the relationship between economics and reality should be taken seriously.

And there is a good reason. As stated by Currie and Steedman in their book on Wrestling with time from 1990 :”It is extremely healthy that more and more economists seem to be acknowledging that substantive progress in economic analysis can only come from confronting the formidable difficulties associated with time”.

As you may know, I normally recommend an approach using time logic when confronting economics and the philosophy of time. More precisely I would like to bring Keynes old teacher John Ellis MacTaggart to the forefront and his linear ordering of events in a dynamic A- and a static B-series. According to the A-series, time is very different from the dimension of space. B-Series holds a position, where time is very much like the dimension of space.

So – we have two different approaches to the description of a temporal relationship. A-series is based on time, if any one is itself subject - time from the inside, where one can observe incremental developments, so to speak. B-series is time seen from the outside.

This McTaggart division of life's temporal relation has since manifested itself in two schools - the dynamic conception of time based on the A-series and its tensed theory of time and the static conception of time based on the B-series and a tenseless theory of time. If the language one uses allows for changes in tenses, it is the same as positions in McTaggarts A-series. And theories described, using such language should be an explicit part of Post-Keynesian theory. B-series give a different analysis without tensed facts and this is the kind of analysis is normally presented in mainstream economics. An economic theory that does not make use of the A-series cannot explore an economy in motion. Focus on B-series alone ends up as a static theory.

A basic trend of modern philosophy is the desire to unite the various branches of science’s understanding of time. The idea of this unification tendency is to unite our daily experience of self and the world with our academic theories of nature and man. In the second half of this-century a more general concept of time has been developed and implemented at the interface between physics, chemistry and biology within the framework of the so-called theories of "self-organization". According to the proponents of the new view, this allows it to overcome the old duality between natural and historical time.

One of the advocates is Ilya Prigogine.

As you say in your article Order out of Chaos in Economics this contribution from Prigogine (and Stengers) is – I quote: “of vital interest to economists because of the connection of chaos with time. That time only has significance with the introduction of indeterminacy. In deterministic systems time is not essentisal” and another quote:

“The notion of the self-organizing system is a congenial concept to those who see the economy, despite – and even because of – its crisis and transformations, as an evolutionary system with a strong instinct for self-preservation. The “rediscovery of time” which is happening in science is welcome support for those of us who think that the history of the economy, and the history of thought about the economy, have something important to tell us”.

And finally:

“… to wonder at the powerful position occupied in economics by closed, deterministic models … physics moved away from deterministic systems many years ago”.

The point of irreversibility, that you raised, is a milestone in the effort to bring economic science further with the obvious assistance of science as a significant contribution to take the concept of time seriously.

The recent financial and economic crisis should be an eminent example to demonstrate the need for time consciousness and especially the relationship between money and time, that is, the increasing importance of the financial industry.

As Sheila Dow and you portrayed it in an article on the present crisis from 2013 the financial system was – I quote – in “Keynes’s times, tightly controlled and quite well behaved. But today the practice of executive remuneration in the form of stock options has increased the focus on the stock price for investment decisions beyond anything Keynes had portrayed in chapter 12 of the GT. The picture is darker for us now than it was for Keynes”.

And you also discussed “the complete disconnection of finance from the real economy and of big business from national and local economies. Predatory capitalism has become the norm, with “bubbles” being created in order to allow those involved in them to gain at the expense of consumers, shareholders and other industries. And some would argue that the financial system has been starving the real economy of funds”, as you both mentioned.

In my opinion, the development of financialization may also lead to another conception of temporality. Money are not made on the stock market by realizing a possibility, but simply by selling an idea as an option. An investment loses all its direction and purpose toward accomplishment and fianzialisialised money is bound to a virtual reality.

Projects that begin with a tangible vision corrode into pieces of artificial game. It is a shift from a world with realizable dreams to at virtual world, constantly chasing its own tail. Time spent on productive work requires linear time, but the financial sector makes money in terms of timing.

Here impermanence offers the best way to understand the economic changes taking place up to the financial and economic crisis. That’s when temporality of work loses its relationship with the temporality of money in the form of burn out.

Thus, the financial economy is on the verge of losing its connection to the rest of the economy. Speculation has now proven to be such a potent force in the currency and equity markets that we would be fools if we ignore this important part of Keynes' analysis. And the General Theory still pertains to an advanced capitalist system. In this relation you have also earlier been working by help from Physics - on the Heisenberg Principle, in which the observer – and here the speculator – influences the outcomes of the experiment.

Generally, however, I believe that further work in Post Keynesian economics can benefit greatly by drawing on the insights of the philosophy of time. This is, in addition to your work, where you have shown that there have also been advances in science when it comes to the time aspect, which are very interesting. I believe these two approaches compliment one another.

So - is there a case for Post- Keynesian economics? Yes, the principle is that the economic system is engaged in a process through actual, irreversible, historical time and the theory should capture this fact.

And you especially, have always been very explicit on the matter of time. Thank you for your persistence in keeping us on track!

***Mogens Ove Madsen***

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