Laudatio for doctorate honoris causa for professor Arnold Zellner
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By professor Herman K. van Dijk

"Professor Zellner receives the honorary doctorate for his contributions to the econometric analysis of dynamic economic models, especially his contribution to Bayesian econometric analysis"

Let me summarize the work and the approach of professor Zellner in his own words:

Keep It Sophisticatedly Simple: the so-called KISS approach.

What is simple in Zellner's scientific work?
I will illustrate this by listing a few of his ideas:
1. Systems of mathematical equations have been extensively used in the 20-th century to describe economic, sociological and psychological processes. Each of such equations contains usually a disturbance term. Now it is a simple idea to assume that the disturbances in different equations are correlated. Thus a stochastic shock in one equation may affect the disturbances in the other equations. Arnold Zellner proposed the System of Seemingly Unrelated Regression Equations (SURE) and a method to estimate such a system efficiently. This paper appeared in 1962 and is also a reprint of the papers of the Econometric Institute. It is by far the most widely cited paper in our series more than 1400 times.
2. To combine good economic theory with the times series properties of the data is Zellner's motivation to propose the so-called "Structural Econometric Time Series Analysis Approach" (in joint work with Franz Palm).
3. In the nineteen-fifties many models had only a few parameters that were estimated. Tinbergen had, for instance, a famous parameter in the import equation to which he assigned the value 2 *a priori*. Zellner is one of the most active advocates of the approach where one assigns some uncertainty to such *a priori* values of equation system parameters. Next, one uses an optimal information processing rule to combine this prior with the data information. Zellner has consistently promoted the so-called Bayesian approach and generalized in several papers Bayes' optimal information processing rule.
4. Not just uncertainty of parameters is important but model uncertainty plays a major role in applied decision-making. The construction of model probabilities and Bayes factors which deal with such uncertainty constitute a key part of Zellner's work.

Apart from the theoretical work there is a wide range of applications. I just name the following two: (1) Bayesian portfolio analysis which may lead to a better understanding and spread of risk, which is so important for pension funds nowadays and (2) the forecasting of international growth rates of Gross Domestic Products using leading indicators.

What is sophisticated in Zellner's scientific work?
This can be simply stated: Good quality and high level.
Just some numbers: More than 20 books and more than 250 high quality papers have been published by him. In a period of 8 years the amazing number of 8 papers in

Econometrica and 5 papers in JASA were published. (this is equivalent to say at least 13 papers in the Lancet or the New England Journal of Medicine). These papers and books deal with the topics mentioned before but also with such applications as "Economic Aspects of the Pacific Halibut Fishery". Incidentally, I use this opportunity to suggest to our minister of agriculture and to the EU ministers to assign professor Zellner with the task to determine the optimal share for the famous Dutch herring (you all know how much argument there exists on this topic in the EU).

Truly sophisticated in Arnold Zellner's work is his life-long dedication to promote the Bayesian approach to econometrics. His landmark book in 1971 made him the founding father of the Bayesian approach to Econometrics.

Apart from keeping his work sophisticatedly simple he has a tremendous list of **activities for the scientific community:**

1. He is founding editor of Journal of Econometrics, (the leading econometrics journal in the world), and also of Journal of Business and Economic Statistics.
2. Founding father of the International Society of Bayesian Analysis, founding father of the Seminar of Bayesian Inference in Econometrics and Statistics.
3. He served on the board of the National Bureau of Economic Research in the USA and discovered that Alan Greenspan is a Bayesian.
4. He was very active to institute awards for the best doctoral dissertation: there exists now the Savage Award, named after the brilliant statistician Jimmy Savage; and I can add that nowadays there exists the Zellner Award for the best dissertation in Bayesian econometrics and statistics.

Teaching: he continues to teach regularly: I note that in 2003 I met Arnold at a scientific meeting and he informed me that the dean of the Graduate School of Business in Chicago had asked him to teach again a course at the graduate level.

Two personal notes:
Let me end this brief and incomplete summary of his work by two citations: One is personal: I had the pleasure to stay several times at the Zellner home and the Arnold's good morning was always followed by the sentence: "what a wonderful day today to start work". To work on the frontiers of knowledge in an optimistic way is a key element of the Zellner approach to science.

My second remark is a quote from professor sir Clive Granger, (it is a slight variation): A good Bayesian forecast is better than a non-Bayesian forecast which is better than a bad Bayesian forecast. Arnold Zellner's work contributes substantially to good Bayesian forecasting.

Thank you.

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