Cambridge Economics

Cambridge Faculty of Economics
Alumni Newsletter

Welcome from Andrew Harvey

This is the third Alumni newsletter. Having successfully presided over the first two issues, Willy Brown has moved on to higher things. In particular, he is now Chair of the School of the Humanities and Social Sciences.

I have taken over Willy´s role. I was Chair of the Faculty of Economics from 2004 to 2007. In retrospect this seems like a period of relative calm, though it did not always appear so at the time. Last year Willy wrote that budgets will come under ´severe pressure´. This now seems like an understatement as the full consequences of the cuts in government expenditure begin to make themselves felt in the education sector. Cambridge will not escape and there will be even more emphasis on raising money from teaching and research. The Faculty responded last year by changing the structure of the MPhil so as to cater for two groups, one wishing to continue on to a PhD and the other wanting to obtain a Master's qualification. Numbers in the September intake will increase, but not to such an extent that the Cambridge experience is replaced by a production line. In 2012 we will be embarking on a new MPhil in Finance and Economics. This is an exciting project but the Faculty will need to devote resources to it to ensure that a high quality programme is delivered.

The current issue of the newsletter contains articles from some very distinguished alumni. In particular we have a piece from Ken Arrow, who was a visitor here for the year 1963-64. We also have Bill Janeway´s take on the financial crisis. Other alumni may see things from a different perspective, and we´d be delighted to have your thoughts on how it all happened and where we go from here. Of course, reminiscences of Cambridge's past are always welcome.

Finally, please don´t forget our Alumni Weekend event on 24 September. Meet up with old friends and – this is a must if you haven´t seen it before – experience the Phillips machine in action.


Andrew Harvey

Meet Alan Beattie: Dateline Washington DC

Three days into his new posting as the *Financial Times*' International Economy Editor, Alan Beattie (Jesus 1994) is savouring both his dinner and being back in Washington. He is looking forward to being based in the American capital "until the global economy has recovered" – a period he thinks will be at least two years.


Alan Beattie

Like Rome two thousand years ago, Washington remains the focus of international policy analysis, debate and critical comment, even as political and economic activity shifts relentlessly eastward. Alan's interests, responsibilities and reporting will cover the international institutions and organisations that are located in Washington, or meet there regularly – in particular the IMF, World Bank and the G20 group of developed and emerging nations – as well as North American issues. He is already well trained in the political and media ways inside the Beltway, having previously served a spell in the *FT*'s Washington bureau.

Alan was the paper's World Trade Editor, based in London, before moving to the US. His career as a journalist with the *FT*, which he joined in 1998, followed two years at the Bank of England, where he worked first on the quarterly Inflation Report ("perfect training for the *FT*") and then on structural market analysis, specialising on labour markets. He sees the need to understand employment and productivity as crucial to all empirical economic analysis, whether macro or micro.

That perspective was nurtured, particularly by Professor Willy Brown, during Alan's time in the Cambridge Economics Faculty. Alan took the MPhil in Economics after having first gained the Diploma. His year was the last to be taught the MPhil in its largely unreconstructed Keynesian form – an experience he values a lot, given his subsequent work and interests. He has benefited, he says, from the breadth of the course's coverage and its empirical relevance. With that in mind, he is encouraged to hear about the new twin-track format for the MPhil in 2010-11 – Economics and Economic Research – which will offer pathways for those wanting a sound grounding in Economics, and those intending to go on to specialist doctoral work.

Alan came to Cambridge from Balliol College, Oxford, where he read History, a discipline that develops narrative skills vital for

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Economics commentators in explaining clearly current issues as well as formulating rigorous and complex economic analysis. The sharpest contrast he notes between History and Economics – at least when he was closely involved with both academic subjects – is that historians, while engaging in lively disputes, are less liable than economists to regard opposing points of view as not just wrong, but actually illegitimate and unworthy of being taught.

In his latest book, *False Economy: A Surprising Economic History of the World*, (Viking, 2009), Alan's insight, incisive analysis and fluent narrative are brought to bear on key global economic issues, including international and urban development, trade and supply chains, natural resources, religion and corruption. He takes issue with the doctrine of economic determinism as an explanation of why countries and regions differ in their patterns of growth and development. As he shows, the reason lies rather in the choices (wise and foolish) that societies and communities make, conditioned by their history.

He finds that, in general, countries which encourage markets and allow them to flourish do better in boosting economic growth and welfare than those which do not. However, the effectiveness of the market mechanism is often impaired by governments' inappropriate interventions and the influence of privileged pressure groups. An intriguing example is the way the unregulated global market reallocates scarce water resources via trade in agricultural products that have different intensities of water absorption as they are grown. Hence, regions that are well endowed with water can trade heavy water-using products (corn and beef) in exchange for less water-dependent ones (vegetables and herbs) from more arid regions. But ill-judged food self-sufficiency programmes, often coupled with powerful farming lobby groups, severely limit this vital process of redistributing "embedded" or "virtual" water.

One chapter on path dependency – representing policy inertia – uses the dead-end evolution of the panda as a metaphor for why failing states are unable to adapt successfully to changed circumstances. Alan poses the question: "Why are pandas so useless?" This is an outrage to someone fresh from visiting Washington's National Zoo, where a family of Chinese pandas is in residence. But yes, pandas do spend most of their time sitting around eating inappropriate food and depending on public subsidies to keep them going. Just wait until Alan starts on academics.

It seems that commentary and analysis will continue to beckon after Alan's current spell in Washington has come to an end. Unlike some other distinguished *FT* writers before him – Nigel Lawson, Ed Balls and Andrew Adonis come to mind – he has no plans to go into politics. Alan says he had more than enough of that in his student days – at Oxford, of course.

Tony Cockerill

Economic History Prize

Dr Danielle van den Heuvel won the International Economic History Association's PhD Dissertation Prize (pre-1800 category) for her thesis 'Women and Entrepreneurship: Female Traders in the Northern Netherlands circa 1580-1815' (Aksant Academic Publishers, 2007).

Dr van den Heuvel was appointed Ottilie Hancock Research Fellow in Modern History at Girton in 2008. Her research interests are primarily in the economic development of early modern Europe.

Sir Richard Stone Annual Lecture

The second in the series of the Centre for Research in Microeconomics (CReMic) Sir Richard Stone Annual Lectures at the University of Cambridge was held recently in the Bateman Auditorium at Gonville and Caius College. The Lecture provides an opportunity for a leading scholar to present and discuss issues of particular current research interest. The Lecture also honours Sir Richard Stone, the founding Director of the Department of Applied Economics at the University of Cambridge.

The second Lecture was entitled 'Natural Forecasting, Asset Pricing, and Macroeconomic Dynamics' and was presented by David Laibson, Harvard College Professor and Robert I Goldman, Professor of Economics at Harvard University. His lecture described a behavioural microfoundation for macro-economic dynamics based on a non-rational form of expectation formation. This specification forms growth expectations as a weighted sum of the rational expectation and an extrapolation from growth in the previous period named a "natural forecast". Setting the weight at zero and unity covers a pure rational expectation formation and a purely natural forecast respectively. In contrast to a model based on pure rational expectations, incorporation of the expectation mechanism into a simple macroeconomic model with a choice of model parameters by calibration is able to account quite successfully for many of the sample autocorrelations found in the data, including the recent turbulent period.

The Lecture for the academic year 2010-11 will be presented by Professor Angus Deaton of Princeton University. For more information, see www.econ.cam.ac.uk/cremic/news/stone.html.

Richard Smith

David Laibson

Family of Richard Stone, faculty and students at the Stone Lecture

Bill Janeway

The Financial Crisis: Causes and Consequences, William Janeway

A tight summary of the sources of the financial crisis that began in 2007 would include ample liquidity available to financial markets and institutions, derived both from easy central bank policies and surplus cash flows of the successfully mercantilist economies of Europe (Germany) and Asia (China); the cessation of regulatory discipline in the United States; the transformation over a generation of both commercial and investment banks into proprietary trading vehicles, supporting and supplemented by the emergence of a "shadow" banking system; and an ideological paradigm that validated these institutional arrangements and offered a toolkit for constructing novel instruments for exploiting it.

The consequences of the crisis rapidly shifted from a complete freeze of financial transactions to the most substantial economic contraction since the 1930s, each on a global scale. Perhaps the most striking aspect of these consequences is that, as late as the fourth quarter of 2008, after the Lehman bankruptcy, the macroeconomic forecasting models promulgated within both public and private sectors still called for real economic growth in 2009. It was as if the world of finance – the banking system, the capital markets, the hedge funds that played between the two – and the so-called real economy inhabited two independent universes.

And, intellectually, so they did…and, to a dangerously great degree, so do they still. In the financial sector, naïve invocation of the Efficient Market Hypothesis (EMH) supported the idea that (a) risk could be quantified as the stable variance of the time series of asset prices and (b) consequently could be measured, monitored and managed. Thus, there was no limit but imagination and salesmanship to the instruments that could be modelled and constructed, priced and sold.

Though the consequences of a generation's work to make EMH and the Rational Expectations Hypothesis (REH) operational were spectacular, the failure of modern macroeconomics has been and threatens to be even more damaging. In both its New-Keynesian and New-Classical modes, modern macro isolates the financial and non-financial sectors from each other. In the world from which it abstracts, of course, the cash flows of the non-financial sectors of the economy can only be generated to the extent that they are funded by extension of credit and access to finance. Contrariwise, the assets of the financial sector are as good as – and no better than – the cash flows generated by the clients and customers they finance.

Today, it is the best of times, but also potentially the worst. At the level of theory, the related disciplines of Economics and Finance have, perforce, rediscovered each other. Many of the components of a reconstructed Financial Economics are in place or, at least in progress, such as financial models with heterogeneous agents who know they cannot know enough, and game theoretic approaches to understanding the dynamics of decision-making under uncertainty. A rigorous re-invention of Keynes' (not "Keynesian") economics can be discerned.

Yet, at the level of practice, there is an embryonic consensus that seems determined to snatch defeat from victory. In the winter of 2008-9, pragmatics trumped dogmatics, when for the first time ever, the governments of the world, from Beijing to Washington, mobilised state credit to offset the collapse in private sector borrowing and spending. Now, politicians and regulators are pre-emptively threatening their constituents with the bogeyman: if state budgets are not cut at once, the capital markets will strike. To invoke financial panic as an instrument for rebalancing the market economy and the state is a dangerous game. To provoke financial panic is a profoundly irresponsible one.

William H. Janeway is Senior Advisor to Warburg Pincus. He is also Chairman of the Board of Cambridge in America, Co-Chair of Cambridge's 800th Anniversary Campaign, and a founder member of the Board of Managers of the Cambridge Endowment for Research in Finance (CERF).

The 19th Silvaplana Workshop in Political Economy

Dr Toke Aidt is this year's organiser of the Silvaplana Workshop in Political Economy that took place in July in the small Swiss town of Silvaplana, located in the middle of the scenic Engadine lake plateau (near St Moritz). The annual workshop brings together 30 established academics and PhD students working in the intersection between economics and political science for academic discussions and exchange of ideas. "The interest in the workshop, which is supported by the European Journal of Political Economy, has been exceptionally strong this year, with about 100 submissions of papers. The programme was very exciting", comments Dr Aidt. He goes on to say that he, in particular, discussed papers on the use of sticks and carrots in the fight against international terrorism; on new perspectives on the so-called resource curse; and the impact that studying economics, as opposed to other disciplines, might have on the belief that voluntary exchange, in fact, makes everyone better off. More information on the workwhop and the presentations can be found at www.econ.cam.ac.uk/silvaplana.

Cambridge economists Toke Aidt, Julia Shvets and Gabriel Leon at the Silvaplana Workshop

Profile: Geoff Harcourt

Talk with Geoff Harcourt, and the pantheon of Cambridge economists – principal amongst them Marshall, Pigou, Robertson, Keynes, both Robinsons, Kahn, Kaldor, Sraffa, Meade, Dobb, Goodwin and Pasinetti – take form again out of the mists of the past. Much of Geoff's work has been spent on studying, critically analysing and communicating the thinking of such eminent economists and the controversies they fuelled.

Geoff, whose emeritus positions include being a Reader in the History of Economic Theory and Fellow of Jesus College in Cambridge, and Professor of Economics in Adelaide University in his native Australia, is a post-Keynesian in both senses: after Keynes and beyond Keynes. The focal points of his wide-ranging research interests and writing are the Cambridge capital controversies; the differences and commonalities of post-Keynesian economics and other paradigms, in particular the neo-classical and Marxist frameworks; post-Keynesian economic policy; and the lives and work of leading economists.

Unfashionably for modern economists who labour within the Research Excellence Framework (REF), much of Geoff's output is in the form of books – single, co-authored, and edited, but he has also published over 240 papers. His latest book, written with Prue Kerr, is entitled *Joan Robinson* (Palgrave Macmillan 2009).

Geoff came to economic theory via applied empirical work. For his undergraduate dissertation at Melbourne University, he studied the financial reserve policies of Australian companies in the theoretical context of Rothschild-type oligopoly. His Master's degree thesis was on income and saving; the work included carrying out a pilot survey of personal saving in Melbourne.

Winning a Melbourne University travelling scholarship brought him to Cambridge in 1955, where he quickly established his credentials and credibility by being shouted at by Nicholas Kaldor, and subsequently being adopted intellectually by Joan Robinson. All of this was helped by his involvement not only in radical economics but also in radical politics, which he continued with anti-Vietnam war activities through the 1960s and 1970s.

Geoff's doctoral thesis was on historical cost accounting and the measurement of company profitability in a period of rapid and sustained inflation, and the implications for pricing, taxation and dividend policies. He was the first to work on data that Ajit Singh and Geoff Whittington used subsequently in their work on company profitability and growth.

Geoff then began life if not in parallel universes certainly in two hemispheres, which he continues to the present day. Appointed to a Lectureship in Economics at Adelaide in 1958, he returned to Cambridge on research leave in 1963 and was "amazed" (he says) to be appointed to a University Lectureship in the Faculty. He took three years' leave of absence without pay from Adelaide, and was elected to a Fellowship at Trinity Hall. After that, having been appointed to a Personal Chair in Adelaide, by the early 1980s he was back in Cambridge again, this time at Jesus College, having had a year (1972-73) as a Visiting Fellow at Clare Hall and seven months in 1980-81 on long-service leave from Adelaide.

Geoff's intellectual and geographical closeness to Joan Robinson, Kaldor, Sraffa and the others has been crucial to his contribution to the understanding and resolution of the controversies about the definition, meaning, measurement and process of accumulation of capital, and the sources of economic growth. His work in these areas connects with one of his abiding post-Keynesian interests – the link between pricing, investment decisions, productivity growth and technical change. It builds on the seminal contribution of another Cambridge-based Australian economist, Wilf Salter, whose untimely death at the early age of 34 robbed economics of an outstanding intellect.

Perhaps reflecting this in part, Geoff's other main strand of work is as the ferryman across the River Styx of Economics. His elegant biographies, reviews and obituaries capture the work and lives of most of the giants (and giantesses) of Cambridge and Australian economics. His emerging ethical and philosophical stance is as a democratic Christian socialist.

Geoff says his interests, in addition to economics, are reading, sport, drawing, politics and – as those who frequent the Faculty coffee room will attest – gossip. Geoff and his wife Joan returned to Australia from Cambridge in July this year to live in Sydney, close to family. Inevitably, Geoff has a post in the Economics Faculty of the University of New South Wales.

Geoff's outstanding achievements have been recognised by a plethora of international honours. But from my own standpoint, his qualities as intellectual mentor and steadfast friend overwhelm them all.

Tony Cockerill

My Cambridge, My Economics, Ravi Kanbur

First, a bit of personal history. I read Economics at Cambridge from 1972-1975; did my DPhil at Oxford under Jim Mirrlees, Amartya Sen, Nick Stern and Joe Stiglitz; returned to teach at Cambridge between 1979 and 1983; then left and wandered around the world (including a stint at the World Bank); and have been at Cornell since 1997.

But wherever I have been, and wherever I am, my economics bears the hallmarks of Cambridge in the 1960s and 1970s. The 1970s because I was there. The 1960s because my teachers at Oxford had been at Cambridge then. Those were heady days. The roll call of Nicholas Kaldor, Richard Stone, James Meade, Joan Robinson, Austin Robinson, Piero Sraffa, Richard Kahn, Frank Hahn, Brian Reddaway, Wynne Godley, David Champernowne – many, if not most of these, lecturing to undergraduates – should be sufficient to make the point. And through these remarkable economists, we undergraduates were able to touch the greats of the inter-war years, including Keynes himself.

What I got from my time at Cambridge, as a student and then as a young member of the Faculty, was the fascination of the interplay between economic theory, economic empirics and economic policy. I still vividly remember the general equilibrium battles between Hahn and Kaldor; the Blue Book empirics of Reddaway (his lectures mean that I can face any set of national accounts tables with confidence); Meade on the theory of international trade, the theory and practice of taxation, and stagflation; and Champernowne on income distribution in his second year statistics lectures. At one point, Champernowne told us that, during the war he had sent a postcard, in response to a question from Meade, with the CES production function written on it ("Fortunately, he kept the card"). I found the same breadth of interest and interaction through my college teachers at Caius – Michael Farrell and Roger Witcomb on Economics and Economic Theory, Iain Macpherson on Economic History. And we did the British Politics

paper with Mr Hyde (I did not know him by any other name). The 1960s and 1970s in Cambridge were also, of course, the time of what seemed then like a battle for the soul of Economics itself. I know now that it wasn't. Not really. This was not the depression of the 1930s, nor even the Thatcherite 1980s, when as a Cambridge lecturer I signed the famous "364 economists" letter criticising the monetarist turn that macroeconomic policy was taking, or even 2008, when the deregulating folly of the previous decade was revealed. But to me, as an undergraduate, the passionate debate among our teachers translated into a passion for economic analysis in the service of public policy – the debates revealing strengths and weaknesses of economics in equal measure.

I return periodically to Cambridge as a visitor, and give some lectures to undergraduates. They are as bright, sharp and committed as ever. What I wish for them, and indeed for Economics undergraduates at Cornell, is the passion for Economics, warts and all, that I got from my Cambridge, which made me the economist I am.

Ravi Kanbur is the TH Lee Professor of World Affairs, International Professor of Applied Economics and Management, and Professor of Economics, Cornell University

Recollections on Cambridge Economics, Kenneth J. Arrow

For the academic year 1963-64, I enjoyed an appointment as Overseas Visiting Fellow at Churchill College. I had been invited at the suggestion of my good friend and great intellectual companion, Frank H. Hahn, Professor of Economics at Cambridge and Fellow of Churchill. The Faculty of Economics and Political Science graciously supplied me with an office at its Sidgwick Avenue locale, and, with it, access to the excellent Marshall Library (in economics).

The Library had a quality absent from the American university libraries I was accustomed to. If I wanted a book, it was always available on the shelf. I soon found out how this was managed. One could take a book out only for two or three days and had to keep it in one's office. On one occasion, I kept the book out one day too many; it was removed from my office and returned to the Library.

Cambridge economics for a period which began considerably earlier than my stay and endured for a considerable time thereafter was marked by internal controversy and by dislike by a major part of the Faculty of current trends in American economics, particularly those associated with Paul Samuelson. (Milton Friedman's views were so completely alien as not to enter into the discussion at all.) This part of the faculty regarded themselves as the true heirs of John Maynard Keynes, defending his views of the economy against the revival of neoclassical economics, particularly in the United States but also among some English economists. The leading figures in this group were such genuinely distinguished economists as Richard Lord Kahn, Joan Robinson, and Nicholas Kaldor. Others who had similar views but were generally less strident included Richard Stone, an outstanding economist who successfully used theoretical constructions as bases for empirical work (especially in the development of national income accounting) and a younger Australian, Geoffrey Harcourt.

I gathered that the differences had come to something of a head with the appointment of James Meade to a Chair in Political Economy. Meade was, with Kahn and Robinson, one of the original disciples of Keynes, but his interests were broader than simply discussion of unemployment. For some reasons not entirely clear to me, his appointment was resented. A "secret seminar" was created to discuss issues, to prevent his attendance. It seemed to me that Meade felt keenly his exclusion and was very hurt.

By the time I arrived, the existence of the "secret seminar" was publicly known, and the term had become something of a joke, but nevertheless Meade did not feel welcome enough to attend.

Joan Robinson was the most vocal of her group. Her early work, which had made her famous, had actually been within the neoclassical tradition, a study of imperfect competition. I had read her work during my graduate student days and had admired it enormously. However, her interests had shifted to the problems introduced by Keynes. She extracted from his work a dislike of the price system as an allocative device (a dislike much stronger than Keynes himself evinced) and acted as a severe critic of the capitalist system. She took most economists to be not merely wrong but deliberate apologists for capitalism. She was very intelligent and, in particular, very quick at throwing insults in a conversation. Her own extension of Keynes's work into a long-term model of the economy seemed to me to be preposterous.

In practical politics, these views took her into some support for the Soviet system but a much deeper and prolonged apologia for Maoism. During my year at Cambridge, I heard her lecture on a then-recent visit to China, whose economic system she praised unreservedly. Among those in the audience was a lecturer in Chinese history, Mrs. Hudson, who, unlike Robinson, could actually speak Chinese, and contradicted Robinson's observations at every turn. Despite my neoclassical orientation, I was treated very politely by Kahn and Robinson and even invited to give the Marshall Lectures. Nicholas Kaldor's views were very similar to Robinson's, but his actions and his interest in genuine discussion could not have been more different. He had become friendly with Frank Hahn and extended that friendship to me, and we had many fruitful interactions.

A senior economist of considerable weight in the history of economic thought who was present at Cambridge then was the rather mysterious (at least to me) Piero Sraffa. He had come to Cambridge as a refugee from fascist Italy and had written a very important paper laying the foundation for imperfect competition. He had evolved a theory of his own about long-run economics, but he was very much a perfectionist, so that it appeared about 30 years after he worked it out. It made something of a splash among Europeans but had little influence in the United States or Great Britain, though some quoted it with high respect. At coffee (a daily ritual at the Faculty), I met him and challenged some of his assumptions. Suddenly the room grew very quiet, an effect rather more than I had intended.

I also met some of the graduate students and junior faculty, James Mirrlees (a subsequent Nobel Laureate), Christopher Bliss, and David Newbery. We had great discussions, from which I learned a lot. Mirrlees was completing his dissertation; since it was very technical, I was asked to be the External Examiner, a task which was very rewarding to me.

My main intention in coming was to work with Frank Hahn, and that was fulfilled beyond my high expectations. We collaborated beautifully, argued incessantly on interesting issues illuminated by general equilibrium theory, and eventually produced (after several more years of correspondence and meetings) a large book which gave us both great satisfaction.

Kenneth J. Arrow is the Joan Kenney Professor of Economics, a Nobel Laureate in Economics, 1972, and Professor of Operations Research, Emeritus, Stanford University

The Marshall Lectures 2009: Drew Fudenberg, Harvard University


Drew Fudenberg

'Learning and Equilibrium in Games' was the subject of this year's Marshall Lectures, and in the intellectual tradition of Alfred Marshall, Professor Drew Fudenberg of Harvard University proved his talents as both researcher and teacher with an elegant and fluent review of the evolution of game theoretic analysis, from its origins before even Cournot and Bertrand, to the very frontiers of our knowledge today. Professor Fudenberg is one of the world's pre-eminent game theorists, and he delivered engrossing lectures on when we might expect observed play in strategic interactions to approximate Nash, or any other notion of equilibrium.

The main theme of the two lectures was to challenge the classic von Neumann-Morgenstern programme that requires players to act rationally, and give their best responses to the actions of their competitors by providing a set of mathematically complete principles which define "rational" behaviour. Professor Fudenberg argued that rationality is neither necessary nor sufficient for Nash equilibrium, and that the expectation that the outcome of games is uniquely predictable is not reasonable. This is because even with the von Neumann-Morgenstern principles, a unique prediction is too much to ask for – the assumption of rational behaviour does little to restrict the possible outcomes, and even the assumption of a "common knowledge of rationality" does not give rise to a unique, unambiguous prediction in games. In consequence, Professor Fudenberg's lectures were based on research conducted by a number of eminent academics and himself to explain how equilibrium predictions could be viewed as the outcome of a long-run adjustment process, where players interact repeatedly and learn from past outcomes. In lively and entertaining lectures that were delivered with erudition, charm, and artistry, he also enabled audience members to experience first-hand how such a process could develop, by having them play against each other in a series of simple games.

The first lecture introduced learning in static simultaneous move games. Starting from the conventional conditions for the Nash equilibrium, in which each player cannot unilaterally improve their position (even when a Pareto optimum is not attained), the capacity to learn means that it no longer holds that a player's adjustment rule will always be a best response to another's adjustment rule. Rather, the pattern of play should be analysed in terms of being "plausible", rather than being "rational". Plausibility, in turn, bears on the belief systems of players, which, in the absence of complete information, suggests that their actions may not be strictly rational in a conventional sense.

Three aspects of belief-based models of game strategies and actions were considered. "Passive learning" refers to situations in which an agent's actions have no impact on their observations. Consequently, a player sees, but does not adjust to, others' strategic behaviour. Parallel to this, "strategic myopia" characterises responses where agents play repeatedly without trying to influence or change the future play of others. But in spite of the restraining influence of these two features, "asymptotic empiricism" leads players' belief systems, via learning, to converge over time. The outcome is a Nash equilibrium without the conventional presumption of rationality, full knowledge, and memory.

In an interesting analogy to mark this year's dual anniversary of Charles Darwin's birth and the publication of *On the Origin of Species*, Professor Fudenberg applied game theoretic principles to the process of evolution to show that the theory of the "fittest" is consistent with stable, but still distinct and diverse, populations. In this context, he also discussed the interesting example of genomic imprinting in biology.

In his second lecture, Professor Fudenberg discussed learning in extensive form games and the equilibrium in this context. In this setup the definition of the Nash equilibrium remains unchanged, but is now applied to strategy profiles and not actions. He then discussed passive learning and how this can lead to "self-confirming equilibrium". Here, agents choose their actions based on the actions of others sequentially. Since in extensive form games with learning, we observe the outcomes of the games played and not strategies or plans of the players, the appropriate equilibrium concept should be self-confirming equilibrium and not Nash equilibrium. Professor Fudenberg discussed various properties of self-confirming equilibrium, including heterogeneous beliefs and learning in the context of off-path play. By way of illustration, he provided examples of multi-armed bandit problems, and experimental evidence on ultimatum bargaining and the centipede game. Subsequently, he discussed how self-confirming equilibrium corresponds to the steady states of learning models.

The core of Professor Fudenberg's thesis is that the kind of equilibrium to expect depends upon what players observe when the game is played. He believes that the nature of the equilibrium should be theorem-driven from assumptions about the learning process and not fixed axiomatically. He suggests that if the players have little prior information about the opponent's payoff and do not experiment very much, then learning theory points to self-confirming equilibria. Furthermore, learning and substantial experimentation with off-path play leads to Nash equilibrium in simultaneous move games, but the analogue for general games is more open. Even in this case, Professor Fudenberg suggests that non-Nash but self-confirming play may persist at least for a while. Finally, Professor Fudenberg explained how his perspectives on equilibrium could provide insights for issues ranging from the durability of Babylonian King Hammurabi's laws, to economic matters including the political economy of tax policy and US monetary policy and inflation in the 1970s and 1980s.

Drew Fudenberg studied Applied Mathematics at Harvard before moving next door to the Massachusetts Institute of Technology (MIT) for his Economics doctorate. Inspired by his reading classes with Eric Maskin, in which he studied models by Maskin, Dasgupta, Spence and others, he became interested in models of patent races, price discrimination and competing markets. Consequently, his initial research was in the applications of game theory to industrial organisation. This led him to work on more theoretical aspects of game theory, and the general themes and principles that recur in

many applications. As opposed to axiomatic approaches in game theory based on the von Neumann and Morgenstern view, Drew became much more interested in how agents learn to arrive at the Nash equilibrium. Having developed frameworks in which learning enables equilibrium to be attained, he sees scope for analysing the causes and consequences of non-equilibrium dynamics. He admits that developing these ideas was not easy and that initially 'This made my head hurt!'

Today, he is interested in questions such as the use of game theory to explain cooperation and mutualisms in biology, and in continuing to develop the theory of repeated games. Drew has also followed closely research in Behavioural Economics that has documented systematic departures from the predictions of standard models.

Following MIT, Drew held a faculty position at the University of California, Berkeley, before returning to a Professorship at MIT, with visiting stints at Stanford University and the University of Toulouse. He moved to Harvard University in 1993, where he is currently the Frederic E Abbe Professor of Economics.

Drew places high value on clarity and accessibility in presenting complex and rigorous analysis. When asked about his own demonstrable skills in this respect, he stresses that they come only with hard work and much practice. His advice to aspiring academic economists is simple: 'Read widely across many fields, be precise, be rigorous, and make an effort to understand the papers you read.' His words are reminiscent of Marshall, who exhorted economists similarly:

'By the fundamental impulses of our nature we all – high and low, learned and unlearned – are in our several degrees constantly striving to understand the courses of human action…And since we must form to ourselves some notions of the tendencies of human action, our choice is between forming those notions carelessly and forming them carefully. The harder the task, the greater the need for steady patient inquiry; for turning to account the experience that has been reaped by the more advanced physical sciences; and for framing as best we can well thought-out estimates, or provisional laws, of the tendencies of human action.' (Marshall 1890)[1].

Drew is an erudite and intuitive game theorist with a passion for precision, exploring the tendencies of human action – Alfred Marshall most certainly would have approved.

Tony Cockerill and Sriya Iyer

[1] Alfred Marshall, *Principles of Economics*, Book I, Chapter III, pages 32-33, *Great Minds Series*, Prometheus Books: New York, 1997, first published in 1890.

My Graduate Experience at Cambridge and Beyond

Having been an undergraduate student at Humboldt University in Berlin, I came to Cambridge in September 2001 to do the MPhil in Economics and then continued to the PhD programme. Since September 2006. I have been an Assistant Professor in the Economics Department at the University of Warwick.

As a PhD student in the Economics Faculty at Cambridge, I was most impressed by the degree of contact and exposure one could get as a graduate student. This was primarily driven by a small group of young faculty members who were running the weekly graduate macro seminar: Petra Geraats (who was also my advisor), Gernot Doppelhofer, Chryssi Giannitsarou and Chris Meissner. Not only did they give us detailed feedback on our papers and presentations, they also gave us the opportunity to engage with external seminar speakers. For example, along with my second advisor, Andrew Harvey, they took me along to various dinners, say, with Steven Durlauf and Hélène Rey. In one year, a group of graduate students went out for lunch with the Marshall lecturer, Olivier Blanchard. I was scheduled for a meeting with Olivier right after lunch, and we decided to have it in the Fitzwilliam Museum. So it became a conversation about Economics in the medieval gallery.

Whilst at Cambridge, I also started my research on international trade costs, which is still one of my research interests today. Why do some countries trade less than others, and what factors impede them? Curiously, hardly any of the faculty at Cambridge were doing research on international trade at the time, but Chris Meissner (who is now at the University of California, Davis) was working on trade in the Gold Standard era. This overlap kick-started a number of research papers on trade costs that Chris and I have written over the years with our co-author David Jacks from Simon Fraser University. We find that trade costs declined considerably faster during the "first wave of globalisation" from 1870–1913 than during the "second wave" from 1950 to today, suggesting that the spread of steamships, railroads and the telegraph had a larger impact on international trade than container shipping and IT communication. I am glad that Cambridge opened up these research opportunities.

Dennis Novy

Staff Comings and Goings

We are pleased to welcome the following people to the Faculty from the Michaelmas Term 2010:

Giancarlo Corsetti (PhD Yale, 1992) from the European University Institute (Florence) will be Professor of Macroeconomics. **Alexei Onatski** (PhD Harvard, 2001) from Columbia University will be University Reader in Econometrics.

Our new University Lecturers are **Aytek Erdil** (PhD Chicago, 2006) from Nuffield College, Oxford; **Elisa Faraglia** (PhD NYU, 2005) from London Business School; **Christoph Vanberg** (PhD Cornell, 2005) from the University of Heidelberg; **Giammario Impullitti** (Ph.D NSU, 2006) from IMT Lucca; and **Robert Ritz** (DPhil Oxford, 2008) from St.Hugh's College, Oxford.

Gary Libecap from the University of California, Santa Barbara will be joining us for one year as the University's prestigious Pitt Professor of American History and Institutions.

Jeremy Edwards has just announced that he is retiring from the Faculty. We thank him for his many outstanding contributions to the Faculty's teaching, research and administration. He will be sorely missed by one and all.

Partha Dasgupta and **David Newbery** are formally retiring from their Professorships, but will both be closely involved in the Faculty in years to come. **Steve Satchell** resigned from the Faculty last year but remains as a Life Fellow of Trinity College. **Tooraj Jamasb** has left to take up a Professorship at Heriot-Watt University, Edinburgh.

We are enormously grateful to all of these faculty members for their remarkable contributions towards sustaining the Faculty's research and teaching programme over several decades.

Obituaries

Wynne Godley: 2 September 1926 – 13 May 2010

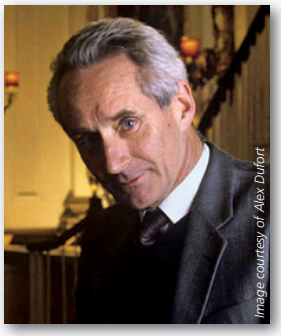


Image courtesy of Alex Dufort

Wynne Godley was the third Director of the Department of Applied Economics (DAE) from 1970-1986 and a Professor in the Faculty from 1980. He was a Fellow of King's College.

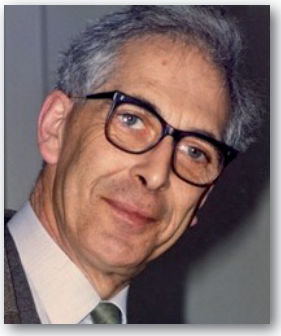
His career straddled the arts, civil service and academia. Educated at Rugby and New College, Oxford, where he read PPE, he first became a professional oboeist, following study at the Paris Conservatoire, and joined the BBC Welsh Orchestra from 1950-1953. But the pressures of orchestral playing became too much, leading him to move to the Economic Section of HM Treasury in 1956, where he remained until he came to Cambridge in 1970, save for a short period with the National Institute for Economic and Social Research (NIESR). His work at the Treasury was initially on the analysis and control of public expenditure and then later on short-term economic forecasting – a policy technique with which he became progressively uncomfortable and critical. He was a leading architect of the surprise devaluation of the pound in 1968.

Godley's move to the DAE was at the instigation of Nicholas Kaldor, where he built a long-term economic forecasting team, the Cambridge Economic Policy Group (CEPG), who developed a model based on the analysis of macroeconomic financial flows and financial sector (im)balances. This work contributed to his persistent and often accurate warnings of the inevitability of financial crashes following periods of unsustainable credit-driven growth. These gloomy predictions earned him the sobriquet of the "Cassandra of the Fens" in the public press, but they led to his partial rehabilitation among mainstream economic policymakers when he was appointed to the Treasury's Panel of Independent Forecasters (the "Six Wise Men") in the wake of the UK's forced exit from the European Monetary System's Exchange Rate Mechanism in 1992.

As part of the CEPG's research, Godley worked with Ken Coutts on the analysis of industrial pricing and with Francis Cripps on UK macroeconomic policy. The policy prescriptions emphasised, firstly, the need for import controls in order to balance demand, output, employment and investment; and, secondly, the importance of active fiscal policy to support monetary measures. While the former is out of fashion, the latter is most certainly not.

Ken Coutts and Tony Cockerill

Robin Matthews: 16 June 1927 – 19 June 2010



Robin Matthews was an Oxford-educated economist who spent most of his academic career as a member of the Cambridge Faculty from the early 1950s onwards. He moved to Oxford to take up the Drummond Professorship from 1965-1975, succeeding John Hicks, and returned to Cambridge as Master of Clare College from1975-1993. In 1980, he succeeded Brian Reddaway as Professor of Political Economy.

Robin returned to the Faculty at the height of Mrs Thatcher's enthusiasm for the monetarist views of Milton Friedman. Eager to ensure that undergraduates should be exposed to all schools of thought, even with those with which he disagreed, he gave a series of lectures which were bluntly entitled Monetarism. These presented a fair-minded, if critical, exposition, remarkable for their prescience in stressing the distinction between the traditionalist views of Friedman himself, and the much more radical position (the precursor of 'New Classical Economics') that was being put forward by Lucas and others.

Amongst Robin's eminent works, many generations of Economics Tripos students will recall his *Cambridge Economics Handbook on The Trade Cycle* (1958), and the famous survey on the theory of economic growth, co-authored with Frank Hahn, which was published in the *Economic Journal* in 1964. A much cited and admired article was his 1968 paper in the *Economic Journal* on why the UK had had full employment since the Second World War. It was a fine example of his ability to combine economic theory with an understanding of historical and political processes. In 1982, he published a major treatise with Charles Feinstein and John Odling-Smee on the causes of growth in the UK from 1856-1973. He described his later empirical work as economic history written in the style of an economist.

Geoff Harcourt, Ken Coutts and William Peterson

New Professorship of Applied Economics

As is apparent throughout this newsletter, our Faculty is renowned for its work in both Theoretical and Applied Economics. To underpin our capacity for applied analysis, we have started to raise funds to endow a new Professorship of Applied Economics.

The Professorship of Applied Economics, currently held by Professor David Newbery FBA, has a long and distinguished history. The Professorship was established in 1988 to attract distinguished candidates for the Directorship of the Department of Applied Economics (DAE), which became vacant on the retirement of Wynne Godley. The Professorship was attached to the Directorship, and after the closure of the DAE, Professor Newbery continued as Professor of Applied Economics.

To continue to build our strength in Applied Economics, this Professorship will enhance the profile of Applied Economics in Cambridge, and will be a magnet for attracting outstanding researchers and teachers who are able to take part in empirical analysis as well as policy development and scrutiny. We interpret "Applied Economics" in very broad terms: of particular interest and importance is the general area of public policy, including health, education, pensions, regulation, macroeconomics, trade and finance.

The Professorship will contribute to Applied Economics teaching on both our graduate and undergraduate programmes, particularly since the Faculty's MPhil Programme is currently undergoing significant expansion. The Professor will also contribute to the undergraduate programme, especially to the teaching of Applied Microeconomics.

We are delighted that two of our distinguished alumni – Andrew Smithers, the eponymous head of the international economics consultancy, and Adair Turner, Chair of the UK's Financial Services Authority – are working with us and the University's Development Office on fundraising plans that seek to ensure permanent funding for this exciting new post.

If you would like to find out more about the Professorship please contact Marie Butcher in the Faculty on 44 (0)1223 335474 or by email at econalum@hermes.cam.ac.uk