
ISS Forum

The Newsletter of the
International Joseph A. Schumpeter Society

Dear Member of the International
Joseph A. Schumpeter Society,

The year 2000 is almost over and I think I am not exaggerating if I say that the Schumpeter Society can look back on a really successful year.

The peak of the year certainly was the marvelous Schumpeter Conference in Manchester. We dedicate a large part of this Forum to reports on that event. The organizer (and now former ISS-president), J. Stanley Metcalfe, summarizes his impressions. Let me thank the local organizers for their extraordinary efforts in both scientific and in social respect: Stan, you really did a brilliant job!

Those who attended the Schumpeter Prize banquet will remember Kurt Dopfer's speech. We are reprinting his sparkling words here as they remind us of one of the highlights of the conference.

Retrospection is one thing but looking ahead is another, so mark your calendar. The next ISS Conference is tentatively scheduled for March 28-30, 2002 at the University of Florida Conference Center, Gainesville, Florida, USA. Because March 31 is Easter, alternative dates of April 4-6 are also under consideration. Further details will be provided in the next Forum Newsletter.

I have the sad obligation to report the passing away of an outstanding member of the Society. Far too early Ehud Zuscovitch passed away in late July this year. Our condolences are with his widow and his children. To keep his memory alive

we include a very personal obituary by Moshe Justman.

In addition, reports on various activities either initiated and frequented by members of the Society or on activities within the members' range of interest are included, such as the workshop on Knowledge Transfer in Innovation Systems at the MPI in Jena/Germany.

A conference diary covering January 2001 to January 2002 provides information on upcoming events. A further section keeps you updated on the publication activities of the Society's members.

I want to draw your special attention to one of the three calls for papers that we publish in full length in this Forum: The 2nd European Meeting on Applied Evolutionary Economics, 20 - 22 Sept 2001 in Vienna, Austria. This is an initiative of young scientists which is also supported by the Schumpeter Society.

BusinessWeek recently published a commentary on Joseph A. Schumpeter that we reprinted for those of you who missed it by chance or do not have access to the US edition of the BusinessWeek.

Finally, I wish you all the best for the year 2001. May the year 2001 be a successful and healthy one.

Yours
Horst Hanusch

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8th International J. A. Schumpeter Society Conference University of Manchester 28th June – 1st July 2000

The 8th International Conference of the Joseph A Schumpeter Society was organised around the theme “Change Development and Transformation” in order to reflect one of the central themes in Schumpeter’s analysis of modern capitalism. There were 250 registered delegates, from countries as far apart as Australia, New Zealand, South Korea, Japan, Brazil and virtually all the nations of Greater Europe. We also had an average of 14 day delegates attending over the three days of the conference including senior civil servants and industrialists. These figures compare favourably with previous conferences. A total of 118 papers were presented in 31 sessions together with 5 plenary lectures. The conference was extremely fortunate to have scholars of the international standing of Dick Nelson (Columbia) “Bring Institutions into Evolutionary Economic Theory”, Michael Storper, (Paris and UCLA), “The Economic Geography of the Internet Age”, Keith Pavitt (Sussex), “Innovation Routines in the Firm: What Matters and What Stays the Same, and What is Changing”, Paul David (All Souls College and Stanford) “Path Constrained Melioration and the Idea of Evolutionary Processes” and John Sutton (LSE) “Markets and Sub-Markets” to give the plenary lectures. The President gave his Address entitled “Knowledge of Growth and the Growth of Knowledge” prior to the Schumpeter Prize dinner.

A special plenary session to mark the 50th anniversary of Schumpeter’s death was one of the conference highlights. Three representatives of succeeding generations of Schumpeter scholars, Giovanni Dosi (Pisa), Dick Nelson and Wolfgang Stolper provided a memorable discussion of Schumpeter’s ideas and the modern research

agenda. Wolfgang Stolper, who is now in his 90’s, was the only person present who was a student and colleague of Schumpeter in Bonn and subsequently Harvard.

As is traditional with the Society, the papers ranged widely over the conference theme and provided many contrasting approaches to the study of Schumpeterian themes. I was delighted to welcome economic historians, geographers and political scientists to the conference as well as the more economically oriented scholars. I also tried hard, albeit unsuccessfully, to involve some eminent economic sociologists. I was disappointed by this as Schumpeter was much more than an economist in the current sense and this should not be forgotten. It is impossible in this limited space to do justice to the wide range of papers, the different methodologies and the richness of the empirical work reported. However, the table below gives a flavour of the conference with the titles of the sessions and the names of the respective session chairs:

- Institutions & the Transfers of Knowledge – U Witt
- Innovation Finance and Development – H Hanusch
- Innovation and the Firm - J Cantwell
- Institutions and the Growth of Knowledge – R Langlois
- Innovations and Knowledge – Organisations in their Environment – B Loasby
- Innovation in Transformation and Services – I Miles
- Firms & Networks – R Langlois
- Statistical Studies of the Innovation Processes – W Cohen
- Schumpeterian Perspectives of the Develop-

- ment of Capitalism – J S Metcalfe
- Evolutionary Processes: Modelling & Simulating Evolutionary Change – J Foster
- Demand and Consumption in the Innovation Process – P Swann
- Individual Learning and the Organizational Context – B J Loasby
- Growth and Development – D Bosworth
- Innovation Policy in the Knowledge Economy: Evo. & Systems Perspectives – M Teubal
- Industry Studies: Biotechnology – M McKelvey
- Clusters and Industrial Districts: The Economics of Agglomeration – J Howells
- Innovation and Spatial Transformation – R Hudson
- IT Standards, Innovation & Competition– C Antonelli
- Evolutionary Processes Complexity & Modelling – P Pelikan
- Schumpeter & Entrepreneurship – U Cantner
- Evolutionary Economics & Economic History: A Match made in Heaven – J Mokyr
- Industry Dynamics: Entry, Exit & Internationalisation – S Klepper
- Industry Studies of Change and Transformation – P P Saviotti
- The Innovation Process, Empirical Studies – W Cohen
- Chance Necessity & Endogenous Change – J Foster
- Modelling Industrial Transformation – U Witt
- The Transformation of Industries – S Klepper
- Evolutionary Processes: Complexity & Economic Dynamics – D Kash
- Institutions and the Economic Geography of Innovation – R Hudson
- Innovation Policy in the Knowledge Economy – L Georghiou

- The Human Element and the Innovation Process – R Langlois

I cannot let the opportunity pass without thanking the session chairs for their help in selecting the papers. This is a non-trivial task, given that over two hundred papers were submitted for consideration. The proceedings of the conference will be published by Springer Verlag and will contain circa fifteen papers that best reflect the diverse conference themes. There will also be a special issue of the *Journal of Evolutionary Economics* to mark the conference and this will be focused, I expect, around one theme.

The delegates enjoyed a varied social programme with an opening reception in the Whitworth Art Gallery of the University of Manchester. This was followed by an evening at Capesborne Hall, a traditional English Country House in the heart of Cheshire (falsely rumoured to be the President's weekend retreat) with the entertainment provided by a traditional Lancashire brass band. Delegates were transported by coach and en route were able to observe a village cricket match in progress – a typically English rural scene that goes with the warm beer.

The Schumpeter prize dinner was held in the Whitworth Hall, the grand hall of the University of Manchester on the Friday evening. Once again the Society is very grateful to *Wirtschaftswoche* for their generous sponsorship of this dinner. This is the traditional occasion for the presentation of the Schumpeter Prize, this year being awarded under the careful supervision of Kurt Dopfer who reports on this separately. Brian Loasby of the Univ. of Stirling and Jason Potts of the Univ. of Queensland shared the prize.

For the first time at a Schumpeter conference, a PhD. poster session drew students from many parts of the globe including Malaysia, Brazil,

Sweden and Russia. The prize for the best poster was awarded to Stefano Brusoni from SPRU, Sussex, although the judges thought that all the submissions were of high quality and originality. I very much hope that future Presidents will be able to continue this event and turn it into a tradition.

It would have been impossible to organise the conference without the generous financial support of the sponsors who were ICI plc, the ESRC, the DTI, the University of Manchester, *Wirtschaftswoche* and a private individual. Many people gave a great deal of time and effort to ensuring its success and I particularly want to

thank Sharon Hammond, Professor Horst Hanusch the Secretary General of the Society, and my colleagues in CRIC for their support.

At the end of the conference the Presidency passed to Bob Lanzillotti who will organise the 2002 conference in sunny Florida. It is good to see that the future of the Society is in capable hands and I wish Bob well with the arrangements.

Details of the conference and papers will be kept on the website <http://les.man.ac.uk/cric> until March 2001.

J. Stanley Metcalfe, University of Manchester / UK

Speech at the 7th Schumpeter Prize Banquet, Friday, June 30, Whitworth Hall in Manchester UK

Ladies and Gentlemen,

it is a pleasure to say a few words to you concerning the Schumpeter Prize. When looking for cheap labour, the General Secretary of the Schumpeter Society, Horst Hanusch approached me at our last conference in Vienna, asking whether I would be willing to serve as the Chairman of the Prize Committee of this year's Schumpeter Prize. I gladly accepted this honour. The decision was a simple one since I had no expectations, not even rational ones.

The Schumpeter Prize is awarded every two years in recognition of an outstanding recent scholarly contribution related to Schumpeter's work. It carries a cash award of 10,000.-- Euro, which is sponsored by the German Economics and Business Weekly, *Wirtschaftswoche*. I am glad to announce that Mr. Methfessel and Ms. Wettach from the *Wirtschaftswoche* are here with us and I wish to welcome them most cordially. This welcome is indeed a wholehearted one as I am pleased to be able to tell you that they did not

forget to bring the cheque for 10,000.-- Euro with them. In addition, they agreed to cover the travel expenses of the two prize recipients, not only for the one who comes from Scotland, but also for the one who comes from Australia.

My first task was to set up a Prize Committee. It eventually had ten members including the Society's Chairman and General Secretary as ex officio members. Native language, field of specialisation, country of residence, etc. were some of the criteria applied when setting up the Committee. You might assume that the problem started with setting up the Committee, but it started even before that as two people who were considering submitting a prize entry asked who the members were even before the Committee was set up. This was a great overture and it set the pace for the whole process. I promised to reveal the names after the competition was over. I guess it was never intended to make the Schumpeter Society more secret than freemasonry but for the sake of objectivity it seemed appropriate not to publicize the

names in advance. These were two honourable men, and it is by sheer coincidence that, at this point, a story about Bernard Shaw comes to mind. He once asked a young lady "Would you do it for one million pounds?" and she replied "Well, perhaps". When he asked whether she would do it for one pound, she replied indignantly "Who do you think I am?", which prompted Shaw's reply "I know who you are, we are now only bargaining about the price". I wouldn't have told you this story if I hadn't known you are economists. Anyway, it is time to reveal the names of the members of the Prize Committee. They are, in alphabetical order, - Uwe Cantner, Germany, Elias Dinopoulos, United States, John Foster, Australia, Horst Hanusch (ex officio as General Secretary), Ernst Helmstädter, Germany, Steven Klepper, United States, Stanley Metcalfe (ex officio as President), Pier Paolo Saviotti, France, Kiichiro Yagi and Satoshi Sechiyama (as a team), Japan.

I wish to thank all members of the committee for their great cooperation. What was a potential nightmare turned out to be a pleasurable and, in many ways instructive, experience for which I am grateful. I wish to thank the members of the Prize Committee particularly for the great effort they put into the evaluations. My special thanks go to Horst Hanusch and Stan Metcalfe, who were almost always available, and, in any case, around the clock. They were instrumental in completing the evaluation procedure. I wish also to mention John Foster and Paolo Saviotti on whose wise advice I could always rely. The overall process was itself highly iterative, and I wonder how this could have been handled in the era prior to e-mail.

As you may expect, the main problem of the whole procedure of awarding a prize is first to arrive at acceptable and agreed criteria of evalua-

tion, and second to make the evaluations themselves as objective as possible. As for the second requirement, all you can do is to pray. As for the first, I suggested an evaluation form that had four evaluation criteria. They were first importance of subject for the International Schumpeter Society, second originality, third rigour, and fourth general presentation. The relative weights of the four criteria were taken to be equal. This decision itself provides enough material for an advanced course in philosophy or ethics, but, as economists, we can be simple, and we can divide a number by four. Of course, modern neoclassical welfare economics would have offered a more elegant solution in this case too, taking time t to converge to infinity, but the procedure would then have taken a rather long time. As for the marks, we adopted an index from zero to 100, with 100 representing the olympian heights and 50 referring to entries that were not quite up to the standard for the Prize. Between these came excellent, very good, and up to the standard for the Prize. I asked the members of the Prize Committee to provide a detailed comment in a case where a suggestion for the Prize was a very determined one. I have benefited greatly in this work from my earlier experience as a Chairman of the Prize Committee of the European Association of Evolutionary Political Economy that awards the annual Myrdal and the Kapp Prize, and I wish to thank Geoffrey Hodgson and Angelo Reati particularly for their earlier help when designing the evaluation form. The final decision was taken with utmost care. Walking down Oxford Road, you may have seen the plaque on this building saying that Ernest Lord Rutherford taught physics at Manchester University from 1907-1919. Rutherford was the first physicist to find a way to split the atom. When

asked once, how he found out, Rutherford replied: "I felt it in the urine". The members of the prize committee did not try to split the atom, but I may assure you that nevertheless they might have tried hard.

But let me at this point turn to the true heroes of the Prize, namely the seventy scholars who submitted prize entries. They possibly knew that the number of entries did not fluctuate much over the years and that they could expect to have a one in seventy chance of getting the Prize. We may conjecture that the entrants are high risk takers, but I think that a major reason for submitting an entry was that they thought they had a really important message, and that this should be made known to a wide audience. Many of the entries were outstanding and innovative. The scholars were Schumpeterian entrepreneurs who accepted the risk of innovation, they recombined ideas, shifted the isoquant curves of our knowledge outwards, and headed towards novel approaches and viewpoints in economics. On top of all this, the entries were enormously varied. Variety is the very source of evolution and a given selection process is only as good as the initial variety is from which selection feeds. The entrants had all the trumps in their hands but if everybody has trumps, winning becomes difficult. Selection always leaves behind those who are not selected. And this is the place to apologize for all inadequacies, injustices, errors, and inabilities that may have occurred on the part of the Prize Committee. I should like to take full responsibility for these and humbly accept all your blame. There was a point when I thought that we should give the prize to everybody, later I thought that we should give the prize to only fifteen people, and then to only four people, and finally - on the basis of an ultimative successful collective decision

making effort - only to two. This process of reduction has involved some grave injustices. We know that selection only tells the history of the survivors. However, as you know, Schumpeter himself was an elitist and distributive justice was not one of his major concerns. Anybody submitting a work to a Schumpeter Prize Competition must know Schumpeter's predilections and should not expect much pity, and those who were ignorant were probably in the wrong ball game.

Let me now turn to the winners. I have already mentioned that there are two. A neoclassical economist would inform you at this point that their average age is about fifty. However, as evolutionary economists, we are aware of the perils of misplaced aggregation and representative age, and we know that we must be serious about variety. To be specific, one of the prize recipients is about seventy years old, the other about thirty. One of the criteria for choosing a prize winner is, besides scholarly excellence, the type of signal one wants to give to the outside world, and we thought that this particular combination was an important signal. There were other criteria for signalling, but the main criterion was scholarly excellence. In any case, the decision was not a simple one. However, let me remind you that we could rely on Rutherford's method. If you wish to give your life a kick, ask whether there is a vacancy in next year's Prize Committee.

Ladies and Gentlemen, let us now play the music. The 7th Schumpeter Prize of the year 2000 is awarded jointly to Brian J. Loasby for his book "Knowledge, Institutions and Evolution in Economics. The Graz Schumpeter Lectures" and to Jason Potts for his book "The New Evolutionary Microeconomics. Complexity, Competence, and Adaptive Behaviour". May I ask Brian Loasby and Jason Potts to come forward.

As you know, the Schumpeter Prize carries a sum of 10,000.- Euro. With so much money being awarded, even if shared, one is eager to know more about the prize winners. Knowing how to make so much money by simply writing down ideas must appear attractive to anybody. And the people of the *Wirtschaftswoche* may not only wish to learn why they have actually spent so much money, but they might also be keen to look for further reasons to increase the prize money. Now I give you some indications how you could proceed to make so much money in future. I turn first to Brian Loasby.

Brian J. Loasby, currently an Honorary Professor of Economics at Stirling, is one of the pioneers of evolutionary economics. He has made outstanding contributions to the theory of the organisation of knowledge in the economy and in economics. The wealth of his scholarship is manifest in the trilogy of his books "Choice, Complexity and Ignorance", "The Mind and Method of the Economist" and "Equilibrium and Evolution". The book honoured with this year's Schumpeter Prize builds on this knowledge and offers a thorough investigation into the foundations of human cognition as it helps us understand the role of institutions and the nature of capabilities and skills. It explores in great depth how the limitations of human knowledge create opportunities and problems, how institutions emerge as a way of coping with these, and how they decisively shape economic evolution. Loasby's approach is interdisciplinary in its original classical sense, combining, to echo his beloved Adam Smith, the most distant and dissimilar ideas. Brian Loasby has demonstrated a remarkable ability to integrate the ideas of economists such as Smith, Menger, Marshall, Knight, Shackle, Simon, Penrose,

Richardson, Nelson, and Winter, and he has enriched evolutionary economics with novel insights, useful frames of thought and a corpus of important theoretical propositions.

Jason Potts is currently a lecturer at the University of Queensland in Brisbane, Australia. The prize-honoured book "The New Evolutionary Microeconomics. Complexity, Competence, and Adaptive Behaviour" is a work of unusually broad and highly innovative scholarship. The book charts a research programme for evolutionary economics that encompasses the theory of dynamic efficiency and emergence in markets, a computational model of the learning and interacting agent, a competence-based theory of the firm and the household, and, via a theory of expectations and plans, an agent based foundation of macroeconomics. It offers a fundamental critique of neo-classical microeconomics as well as a proposal for the structure of a new evolutionary theory, convincingly arguing for a radical refocus of microeconomic research toward the evolutionary nature of institutions, preferences, technology and knowledge. Jason Potts provides a superb exposition of the technical points, applying the intuition of a mathematician and the lucidity of a poet. The book represents a contribution that is likely to have its place in a future economics. As Jason Potts was previously a physics major, we can say that it is a good thing that he turned from physics to economics.

Mr. Methfessel from the *Wirtschaftswoche* may conclude from my laudatio that this is enough of a reward. But, of course, it is not quite enough, and I kindly ask him to take the floor.

Kurt Dopfer, St. Gallen /Switzerland

Ehud Zuscovitch (1950-2000) -- In Memoriam

Ehud Zuscovitch, Professor of Economics at Ben-Gurion University, Beersheba, Israel, and Directeur de Recherche in the CNRS, France, died of cancer on Monday, 31 July 2000, five months short of his fiftieth birthday. He is survived by his wife, Michal, daughters Shira, Naomi and Yael, his mother and brother.

Ehud divided his time between two countries. Israeli-born, he passed a fondly remembered childhood in Tel Aviv, followed by army service, marriage to Michal and a short time spent on a kibbutz. After qualifying as a production technician and studying statistics for a year in Tel Aviv, Ehud and Michal moved to Strasbourg where Ehud attended Louis Pasteur University (ULP), acquiring not only an education in economics but also an appreciation of French culture and cuisine. His special talents were soon identified by teachers, later to become colleagues and friends, who saw his potential and drew him into their academic endeavors. Strasbourg offered a combination of abstract contemplation and practical application, and an eclectic mix of theoretical orientations, that suited Ehud perfectly. While engaged in various applied projects through BETA, ULP's economic research center, he completed a magisterial doctorat d'état under the supervision of J.-L. Gaffard that anticipated the subsequent surge of interest in "Schumpeterian economics." A Meso-Economic Approach to Technical Progress, Diffusion of Innovation and Industrial Learning was the cornerstone upon which much of Ehud's later teaching and research rested: innovation, evolution and organizational learning were topics to which he returned again and again, continually finding new insights and perspectives.

Upon graduation, Ehud was invited to remain at ULP as a faculty member — I almost wrote

junior faculty, but the term never really applied to Ehud — where much of his early activity was channeled through BETA, and shaped by its influence. The large-scale interdisciplinary projects in which he took an increasingly central role allowed him to apply an irrepressible intellectual curiosity to concrete empirical investigations on different aspects of the economics of innovation, and to draw from them original insights on fundamental theoretical issues. His success in these efforts capitalized on his comparative advantage in crossing academic boundaries and on his innate ability to communicate effectively with people of diverse backgrounds, an activity in which he took obvious pleasure. As his student and colleague, M. Yildizoglu wrote after his passing, "Everybody remembers him knocking on doors, putting his head in the office and kindly asking, 'Hi, how are you? What are you working on these days?'"

His first large project, on advanced materials, with P. Cohendet and M. Ledoux, resulted in two volumes and a large number of articles and book chapters that demonstrated the economic logic of the development of new materials, and formed the basis of his continued interest in the chemical industry. A second, more quantitative project measured spillovers from the European Space Program and produced another flurry of academic papers with colleagues P. Cohendet, J.-A. Heraud and M. Willinger, and doctoral students, J. Shachar and G. Cohen. Ehud especially enjoyed working with research students and had a natural affinity for mentoring: he offered them a unique combination of encouragement and criticism, a long rope and a watchful eye, and formed close and enduring ties with them.

In Strasbourg, Ehud and Michal's eldest daughter Shira was born, and exactly seven years later, Naomi; and it was there that Max Caramel,

their cat, assumed control of his armchair. Ehud filled their home with his paintings, his music and his books, but the family's roots remained in Israel, and in 1988 he accepted a position in the economics department of Ben-Gurion University in Beersheba. The Zuscovitches made their new home in Omer, a nearby suburb, and after a while Yael was born, at almost precisely the same seven-year interval that separated the births of her elder sisters.

In Beersheba as in Strasbourg Ehud played a central role in the development of the department, almost from day one, serving as Director of the Monaster Center for Economic Research, chair of the graduate studies committee, and an all too brief tenure as department head, cut short by his illness. An academic entrepreneur of the first order, Ehud was constantly involved in developing new projects both in teaching and research. He joined the Industrial Development Group at the Jerusalem Institute for Israel Studies, headed by M. Teubal, where the three of us edited two books on technological infrastructure policy (one also with D. Foray), and collaborated on a number of articles and reports, in various combinations. Ehud's work at this time largely centered on economic networks, generalizing through systematic conceptual analysis his extensive research on new materials and the European Space Program. His work on networks identified the mechanisms of organizational learning, specialization and trust through which they operate, and highlighted their essential role in high-technology industries. He saw them as an intermediate form of economic organization, between markets and hierarchies, in which economic agents cooperate positively.

All the while, Ehud retained his ties to France, often returning for short stays, and advancing to

the position of Directeur de Recherche in the CNRS. During a longer stay he served as director of the economics doctoral program at ULP, and of BETA, initiating and participating in academic initiatives that reinforced BETA's position as a key node of the European network of research centers on the economics of technology, and editing a volume on the subject with P. Llerena. Surprisingly perhaps, he also found a new interest in formal analysis, initiating joint research projects on innovation and industrial organization with his long-time colleague R. Dos Santos, and with X. Yin, a new colleague with whom he published several papers. His last big projects, in Beersheba, again demonstrated his many-faceted personality: an international conference on learning, which he organized with particular flair, bringing together leading mathematical game theorists, economists, behavioral psychologists and biologists from Israel and abroad; and a detailed, quantitative evaluation of Israel's R&D subsidy program, on which we worked together until he fell ill.

A Schumpeterian from first to last, Ehud was a founding member of the International J.A. Schumpeter Society, served on its board for four years, and between 1989-1998 was an associate editor of its *Journal of Evolutionary Economics*. He was a student of innovation as well as an innovator himself (in the Schumpeterian sense), who generally found price taking behavior as less than satisfying, both as an explanation of economic phenomena and as a practical course of action. His view of economic activity was inherently organic: it recognized the importance of the survival instinct, the ability to develop and the role of social ties as key elements of success in economic endeavors as in all human activities. Characteristically, his interest in evolutionary economics led him to a more general interest in evo-

lution, and to a historical perspective on economic behavior that recognized the paramount importance of collective survival as an imperative to which individual utility maximization in the standard neoclassical sense is inherently subsidiary: as he would put it, *être precedes avoir*.

In Beersheba and Strasbourg, Ehud will always be fondly remembered for his unique personal qualities. Wherever he lived he was never foreign but always engaged. Never one to stand on cere-

mony, he could always be counted on for a warm word or sympathetic ear. He was a good person to have in your corner, combining a strong will and sense of purpose with intense loyalties and a kind heart.

The many people whose lives he touched deeply mourn his untimely passing.

May his memory be blessed.

Moshe Justman, Beersheba / Israel

Knowledge Transfer in Innovation Systems

Workshop at the Max Planck Institute, Jena, Germany

August 24-26, 2000

A high level of innovativeness is one of the major assets of firms in the competition with other firms. Knowledge flows are crucial for innovations. Thus, it is important for firms to be able to profit intensively from such flows. Shifting the focus from the single firm to the regional or national level, meaning a regional or national innovation system, the same argument still holds. Knowledge flows within the system are crucial for the competitiveness of such a system. Accordingly, a more detailed understanding of regional and national knowledge flows is necessary for a comprehensive understanding of the differences in competitiveness between regions and nations.

The workshop "Knowledge Transfer in Innovation Systems" brought together different approaches on this topic. The intention was to obtain an overview about current methods, to find possibilities of interactions and synergies between them and to discuss remaining gaps in the literature. Various views and approaches were presented that addressed questions of how to measure knowledge spillovers, of how they influence local economic development, of how institutions

should look like to support their occurrence, and of how they can be understood from a psychological perspective. These questions triggered a lively discussion about the causes of knowledge spillovers and their impact. It became clear that we know much more about their impact than we know about the mechanisms that are responsible for their existence. Due to a lack of respective theories, it is still not entirely clear what measures of knowledge spillovers really reflect. Increased co-operation efforts between theoretically and empirically working economists has been recommended and hopefully some result from this workshop. Besides these general discussions the workshop provided a good overview on the state of art of this research.

David Audretsch (Bloomington, discussant: Silke Stahl-Rolf, Witten/Herdecke) opened the workshop with his talk, addressing the question of how and why knowledge spills over. To answer this question, he presented a study of the career trajectories of founders of start-ups in biotechnology. He identified individuals as the main medium of knowledge spillovers and investigated

where they gather their knowledge and how they use it. To this end, several kinds of career trajectories are distinguished, like "academic" and "pharmaceutical" trajectories, differentiated according to the place where the knowledge was obtained. Then, the aspects that influence the probability to found a start-up are studied. The academic trajectory is of major relevance in this context, while other academic measures, like the number of scientists in the area and the number of citations, seem to play no important role. This talk, however, also made clear that we still know little about the individual flows of knowledge in economic systems. The approach presented makes a first step in this direction.

The talk by Bart Nooteboom (Groningen, discussant: Ulrich Witt, Jena) also focused on the individual as the relevant unit for knowledge spillovers. However, he approached the transfer of knowledge between individuals on a theoretical basis. Referring to cognitive psychology he developed a model to discuss the problems and restrictions of this transfer. The model explicitly includes the processes of perception, interpretation and evaluation as basic elements of the communication of knowledge. It shows that knowledge exchange requires specific investment and that communication results in cumulative returns to scale. This implies that stable contacts allow for a more efficient transfer of knowledge. At the same time, however, such contacts offer a smaller amount of new information because the stocks of information of the involved individuals are already quite similar. It is not yet clear, to what amount contacts have to be changing to obtain an optimal knowledge flow.

The afternoon session of the first day was devoted to regional aspects of knowledge flows. Bart Verspagen (Eindhoven, discussant: Claudia

Werker, Greifswald) presented an empirical study of the aspects that increase knowledge spillovers between firms. To this end, he studied 27 firms in different European countries and the spillovers between them, measured by patent citations. The study shows that technological distance has a significant negative impact on the amount of knowledge spillovers between firms. Geographical distance also has a negative impact, which, however, vanishes if firm dummies are introduced.

Spillovers and geographical distances were the main subject also of the talk by Thomas Brenner (Jena, discussant: Uwe Cantner, Jena). However, the aim of this presentation was to show to what extent knowledge spillovers influence geographic proximity. Thomas Brenner used different spillover matrices from the literature that measure the intensity of knowledge spillovers between industries. After a discussion of these measures, he proposed several methods to measure geographic distance between industries and applied them to Germany. Finally, a comparison of the measures for geographic distance and the amount of knowledge spillovers was presented. Some evidence has been found for the claim that knowledge spillovers cause firms of different industries to be located close to each other.

Jeremy Howells (Manchester) approached the topic of knowledge, innovation and geographic proximity from a theoretical perspective. He discussed the creation of knowledge in a regional context. This discussion was started with a distinction between tacit and codified knowledge. Then, the absorption, sharing and transformation of knowledge as well as learning and the generation of knowledge was discussed. All these aspects influence the innovativeness of firms, and most of them are somehow geographically bounded. Howells gave several examples for the

geographical restriction of information flows, such as geographically restricted search for collaborative partners, shared learning experiences and cultural aspects. He concluded that firms depend very much on the exchange of information with others. This exchange, in turn, depends on their own abilities and on local circumstances.

The second day started with a talk by Dominique Foray (Paris, discussant: Andreas Aulinger, Oldenburg), whose general topic was the impact of institutions on knowledge transfer. More specifically, he discussed the influence of 'open knowledge institutions' on the transfer of knowledge. Open knowledge institutions are institutions that allow for a rapid disclosure of new knowledge and for a circulation of codified and practical knowledge. He based his discussion of such institutions on several case studies on the silk industry in Lyon, the metallurgical industry in Lancashire and the computer operating system LINUX. On the basis of these examples, he discussed the basic ingredients of these systems and their advantages and disadvantages.

Andreas Pyka (Grenoble and Augsburg, discussant: Dirk Fornahl, Jena) also presented case study-based research, specifically a study of biotechnological firms and their co-operations. He first reflected on some stylised facts about the development and changes of networks within these industries. Then, he outlined a simulation model developed to analyse these dynamics which included the dynamics of capabilities, absorptive capacities and decisions as well as knowledge flows. Pyka was able to show that networks evolve in this model which reproduce stylised facts

known from real-world networks. Several characteristics of the resulting networks were studied in detail to show this correspondence.

In the final talk of the workshop, Hariolf Grupp (Karlsruhe, discussant: Christian Zellner, Jena) presented empirical work on patents. On the basis of citations of scientific literature in patents he tracked down the knowledge flows that led to these patents. However, before he presented the results of this study, he discussed the methods that have been used in the literature to analyse knowledge spillovers. Grupp pointed out that fundamental problems exist in measuring knowledge flows, and that none of the methods used sufficiently solves them. He argued that each of these methods measures a different kind of knowledge spillovers, and presented a classification of these. In his study he focused also on one class, namely the spillovers from science to technology. He studied the impact of government subsidies and found, besides many other results, that subsidised firms use scientific knowledge more frequently than other firms.

However, with respect to the topic of the workshop, the most important contribution of Hariolf Grupp was to make clear that we still know little about the detailed mechanisms giving rise to knowledge flows. This result was also supported by other talks. More work is needed that tries to classify the various mechanisms, and more detailed studies on each of these mechanisms are required.

Thomas Brenner, Jena, Germany

Publications

Selected Recent Publications by Members of the ISS

- ARCHIBUGI D., LUNDVALL B.-A. (forthc. Feb. 2001), The Globalizing Learning Economy. Major Socio-Economic Trends and European Innovation Policy, Oxford University Press.
- BRESCHI S., F. MALERBA and L. ORSENIGO (2000), Technological regimes and Schumpeterian patterns of innovation, *The Economic Journal*, Vol. 110, No. 463, April 2000, pp. 388-410.
- CANTNER U., A. PYKA (2000), Investigating innovation strategies in an artificial industry, in: SAVIOTTI, P. P., B. NOOTEBOOM (eds) (2000), Technology and knowledge. From the firm to innovation systems, Ed. Elgar, pp. 17-46.
- CASSON M. (1999), Information and Organization. A New Perspective on the Theory of the Firm, Oxford University Press.
- DOPFER K. (2000), Thorstein Veblens Beitrag zur ökonomischen Theorie, in: K.-D. GRÜSKE (Hrsg.), Kommentarband zum Faksimile Nachdruck der Erstausgabe von Thorstein Veblen: The Theory of the Leisure Class, Düsseldorf: Verlag Wirtschaft und Finanzen, pp. 89-144.
- EDQUIST C. and M. McKELVEY (eds), (2000), „Systems of Innovation: International Competitiveness A two volume Reference Collection“, Edward Elgar.
- EDQUIST C., L. Hommen, and M. McKELVEY, M. (forthcoming 2000), Innovations and Employment in a Systems of Innovation Perspective, Edward Elgar.
- HERRMANN-PILLATH, C. (ed) (2000), Evolution von Wirtschaft und Kultur: Bausteine einer transdisziplinären Methode (The Evolution of Culture and The Economy: Elements of a transdisciplinary approach), Marburg: Metropolis, 2000
- HÖLSCHER J. (ed) (2000), Financial turbulence and capital markets in transition countries, Palgrave Publishers.
- KINGSTON W. (2000), Antibiotics, invention and innovation, *Research Policy* 29 (6), pp. 679-710.
- KWASNICKI W. (2000), Monopoly and perfect competition: there are two sides to every coin, in: SAVIOTTI, P. P., B. NOOTEBOOM (eds) (2000), Technology and knowledge. From the firm to innovation systems, Elgar, pp. 47-79.
- MANSELL R., W. E. STEINMUELLER, (2000), Mobilizing the Information Society. Strategies for Growth and Opportunity, Oxford Univ. Press.
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- McKELVEY M. (2000), Evolutionary Innovation: The Business of Biotechnology (Oxford University Press). Reprinted as paperback.
- McKELVEY M. (forthcoming 2000), Internet Entrepreneurship: Why Linux might beat Microsoft?, in: COOMBS, R., K. GREEN, V. WALSH, A. Richards, (eds). Demand, Markets, Users and Innovation, Edward Elgar.
- McKELVEY M. (forthcoming 2000), The Economic Dynamics of Software: Comparing Microsoft, Netscape and Linux, in: *Economics of Innovation and New Technology*.
- NOOTEBOOM B. (2000), Learning and Innovation in Organizations and Economies, Oxford University Press.

O'SULLIVAN M., (2000), *Contests for Corporate Control. Corporate Governance and Economic Performance in the United States and Germany*, Oxford University Press.

ROSENBERG N (2000), *Schumpeter and the Endogeneity of Technology: Some American Perspectives*, Routledge.

SAVIOTTI P. P., B. NOOTEBOOM (eds) (2000), *Technology and knowledge. From the firm to innovation systems*, Edward Elgar.

SWEDBERG R. (ed) (2000), *Entrepreneurship. A Social Science View*, Oxford University Press.

Conference Diary

Selected conferences from January 2001 to January 2002

January 2001

5-7 Jan, New Orleans, LA, USA

AEA annual meeting, in New Orleans, LA, USA.

Information www.vanderbilt.edu/AEA/anmt.htm

March 2001

15-16 March, Atlanta, GA, USA

The Ninth Annual Symposium of the Society for Nonlinear Dynamics and Econometrics will meet at the Federal Reserve Bank of Atlanta. Topics of interest to the society include both theoretical and empirical studies involving the derivation or application of nonlinear techniques to model, characterize, or forecast dynamic economic phenomena.

Information Gerald P. Dwyer, Jr., SNDE, Research Department, Fed. Res. Bank of Atlanta 104 Marietta Street, NW, Atlanta, GA 30303-2713 U.S.A. E-mail: gdwyer@dwyerecon.com

April 2001

9-11 April, Durham, UK

Annual conference of the Royal Economic Society will be held at the University of Durham.

Information Simon Parker, Department of Economics and Finance, 23/26 Old Elvert, Durham DH1 3HY, E-mail: s.c.parker@durham.ac.uk.

May 2001

11-12 May, Maastricht, The Netherlands

Understanding Skills Obsolence: Theoretical Innovations and Empirical Applications, an international conference jointly organized by ROA, Maastricht and SKOPE,

Information Jasper van Loo & Andries de Grip, Research Centre for Education and the Labour Market (ROA), Maastricht University, PO Box 616, 6200 MD Maastricht, The Netherlands E-mail: j.vanloo@roa.unimaas.nl More information: www.unimaas.nl/~roa

25-27, May, Sønderborg, Denmark

1st Nordic Econometric Meeting. The purpose of the Nordic Econometric Meeting is to stimulate applied and theoretical econometrics research and teaching in the Nordic Countries by 1. inviting a prominent econometrician to give a survey of the research front. 2. providing a forum for dissemination and exchange of new ideas through

presentation and discussion of submitted papers
3. encouraging graduate students to present their research papers and stimulating an interaction between students and senior researchers

Information Kirsten Stentoft, Institut for Økonomi, Aarhus Universitet, Bygning 350, 8000 Århus C, Denmark, E-mail: kstentoft@econ.au.dk

June 2001

7-9 June, Maastricht, The Netherlands

The 6th annual Workshop on Economics with Heterogeneous Interacting Agents will be held in Maastricht, June 7-9, 2001. It is a venue for presentation of the latest results of a wide variety of research that views the economy as a complex system of many, heterogeneous interacting agents. Deadline for submission of abstracts is February 20, 2001. Send one page abstracts to wehia01@merit.unimaas.nl

Information can be obtained from the call for papers below or from: meritbbs.unimaas.nl/WEHIA

12-15 June, Aalborg, Denmark

Nelson and Winter Conference organized by DRUID. It is now almost 20 years since Dick Nelson and Sidney G. Winter published their seminal book „An Evolutionary Theory of Economic Change“. On this occasion DRUID (Danish Research Unit of Industrial Dynamics), in collaboration with the journals *Research Policy* and *Industrial and Corporate Change* is organizing a conference to take place in Aalborg, Denmark, June 12-15, 2001.

Information can be obtained from www.business.auc.dk/druid/conferences/nw/ or from the call for papers below.

August 2001

27-30 Aug, Linz, Austria

57th congress of the International Institute of Public Finance. The topic will be Political Economy of Public Finance. There will also be open sessions which may deal with any theme in the field of public economics.

Information Papers and abstracts by 31 Jan 2001 to Stanley Winer, IIPF Congress 2001, Carleton University School of Public Administration, 1125 Colonel By Drive, Ottawa, Canada K1S5B6. E-mail: stan_winer@carleton.ca

30 Aug – 1 Sept, Dublin, Ireland

The European Association for Research in Industrial Economics (E.A.R.I.E.) will hold its 28th Annual Conference in Trinity College, Dublin, Ireland, 30th August – 2nd September 2001.

Deadline for paper submission is 31 Mar 2001.

Information Ciara Whelan, Department of Economics, University College Dublin, Belfield, Dublin 4, Ireland, Email: Ciara.Whelan@ucd.ie

29 Aug – 1 Sept, Lausanne, Switzerland

The 16th annual Congress of the European Economic Association will be held at the Université de Lausanne, Switzerland from 29 August to 1 September 2001. Deadline for the submission of abstracts 15 Mar 2001.

Information ESEM & EEA, P.O.Box 1726, CH-1211 Geneva, Switzerland, E-mail : info@esem-eea.ch, <http://www.eeassoc.org/>

September 2001

20-22 Sept, Vienna, Austria

2nd European Meeting on Applied Evolutionary Economics - An Initiative of Young Scientists supported by the International Joseph A. Schumpeter Society

Information and call for paper see below.

20-22 Sept, Oxford, UK

Fourth conference of the European Historical Economics Society to be held at Merton College, Oxford. The theme will be long term changes in the European economies. Proposals for papers should be sent to James Foreman-Peck, HM Treasury, Parliament Street, London SW1PP 3AG. E-mail: james.forman-peck@hm-treasury.gov.uk
Information Elvira Ryan, St Anthony's College, Oxford OX2 6JF. E-mail: secretary@lac.ox.ac.uk.

November 2001

2 Nov, New York, NY, USA

Productivity Growth: A New Era? The surge in productivity growth in recent years has raised the question of whether we are in a new economic era, and in particular what sustainable growth rates for the United States and other advanced countries look like now and in the near future. The Federal Reserve Bank of New York will sponsor a conference on productivity growth to be held November 2, 2001, at the Federal Reserve Bank of New York. The goal of the conference is to understand better what has occurred over the past 5-10 years in the arena of technological progress, and what is likely to transpire in the decade to come. Deadline for submission 15 Jan 2001.

Information James Kahn, Domestic Research, 3rd Floor, Federal Reserve Bank of New York, 33 Liberty Street New York, NY 10045-0001 USA

Call for Papers

2nd European Meeting on Applied Evolutionary Economics
An Initiative of Young Scientists supported by the International Joseph A. Schumpeter Society

Vienna / Austria 20 - 22 September 2001

Conference Aims Evolutionary economics has become a major framework for the understanding of modern knowledge-based economies. Issues of technological development, industrial dynamics, networking and firm behaviour are increasingly analysed as evolutionary processes. At the same time, evolutionary economics provide new models promoting regional development and innovation policies.

A major challenge is to develop systematic methodologies to enhance empirical studies in

evolutionary economics. The objective of the European Meeting on Applied Evolutionary Economics – going to be held for the second time now -- is to get researchers and PhD-students together who are interested in the empirical application of evolutionary economics. Fruitful exchange on latest methods and tools in evolutionary approaches to economic change is anticipated as well as discussion on methodologies related to econometrics, calibrated simulation, artificial economies, laboratory experiments and case study

research.

Conference themes The overall theme of the meeting reads: empirical application of evolutionary economics. The planned conference cover topics, such as:

- Dynamics of Technological Change
Lock-in, variety, product life-cycle thesis, product and process innovation, technological trajectories.
- Industrial Organisation
Innovation and market structure, networking, SME's, finance, corporate governance and innovation, welfare economics, new economy, increasing returns.
- Knowledge and Learning
Competence approaches, routines, heuristic learning, learning-by-doing, tacit and codified knowledge, appropriability and patenting, spillovers, evolution of organisations.
- Technology Policy Models
Regional development, systems of innovation, university-industry-government relations, employment and technology.
- Sustainable Technological Development
(un)Sustainable consumer behaviour, long term development, co-evolution of technology & env.ironm. issues, eco-system management.

This list is by no means exhaustive, rather it is designed to indicate the broad scope of the meeting. The scientific committee encourages the submission of papers devoted to the empirical application of principles of evolutionary economics.

Organisation The meeting will be hosted by the Research Group "Growth and Employment in Europe: Sustainability and Competitiveness" at the Vienna University of Economics and Business Administration and the Department of

Economics of the Vienna University of Economics and Business Administration, both located in Vienna. The meeting will take place from 20 - 22 September 2001. All presentations will be discussed by a senior scholar in the field.

Submission of papers Participants wishing to submit papers are invited to send an extended abstract by email to the conference secretariat. The participants will be chosen on the basis of an extended abstract. The abstract should be at least two pages and at most three pages long. To assure the quality of the selection process, we request the abstract according to the following format: 1. title, 2. theoretical motivation, 3. methods 4. (expected) results. 5. conclusions.

The paper has to be written in English, and should address an empirical question in an evolutionary framework. The length of the paper should not exceed 10,000 words, and should contain an abstract of max. 300 words on page 1.

A limited number of papers will be selected by the scientific committee for oral presentation. Both the paper and abstract of the accepted paper should be sent by email to the local co-ordinator Werner Hölzl. All conference papers will be made available on the internet on the Conference homepage to make the paper accessible prior the conference. The scientific committee considers to edit selected papers as a book and/or as a journal's special issue.

Conference Calendar	
20 May 2001	Extended abstracts due
20 June 2001	Authors notified of the acceptance or rejection of their papers
15 Aug 2001	Full papers due
20-22 Sept 2001	Conference in Vienna

Information J. Hanns PICHLER (Head of Organising Committee), Head of the Department of Economics, Vienna University of Economics and Business Administration.

Werner HÖLZL (Coordinator), Vienna University of Economics and Business Administration, Augasse 2-6, 1090 Vienna, Austria, phone: +43 (1) 31336-5253, fax: +43 (1) 31336-727

E-mail: whoelzl@isis.wu-wien.ac.at

Send papers & abstracts to University of Economics and Business Economics, Department of Political Economy, International economics and Development - EMAEE -

Augasse 2-6, 1090 Vienna, Austria

E-mail: whoelzl@isis.wu-wien.ac.at

Call for Papers Nelson and Winter Conference Aalborg/Denmark June 21-15 2001

It is now almost 20 years since Dick Nelson and Sidney G. Winter published their seminal book „An Evolutionary Theory of Economic Change“. On this occasion DRUID (Danish Research Unit of Industrial Dynamics), in collaboration with the journals *Research Policy* and *Industrial and Corporate Change* is organizing a conference to take place in Aalborg, Denmark, June 12-15, 2001.

The Conference is intended to map theoretical and empirical advances over the last two decades, further contribute with novel insights and stimulate civilized controversies in some of the areas explored by the Nelson and Winter book. The programme will be organized along six themes (in parenthesis some of the scholars who have already committed themselves to deliver a lead paper to the theme).

Theme A Industrial and Market Dynamics (Bo Carlsson, Paul Geroski, Steven Klepper, Franco Malerba, J. Stanley Metcalfe)

Theme B Production and Use of Knowledge (Ed Constant, Paul David, Dominique Foray, Brian J. Loasby, Keith Pavitt, Ed Steinmueller)

Theme C Technical Change, Production Or-

ganisation and the Firm (Esben Sloth Andersen, Benjamin Coriat, Giovanni Dosi, Richard Langlois, Patrick Llerena, Ulrich Witt)

Theme D Routines, Organisational Practises and Strategies (Jens Frøslev Christensen, Nicolai J. Foss, Ove Granstrand, Dan Levinthal, George B. Richardson)

Theme E Growth, Development and Structural Change (Mario Cimoli, Jan Fagerberg, Jorge Katz, Richard Lipsey, Peter Maskell, Lynn Mytelka, Bart Verspagen)

Theme F National Systems of Innovation, Institutions and Public Policies (Robert Boyer, Charles Edquist, Bent Dalum, Bjoern Johnson, David Mowery, Bengt-Åke Lundvall, Keith Smith)

Masahiko Aoki, Richard Nelson, Sidney G. Winter are amongst the participants in the opening or closing sessions.

Both senior and junior scholars are invited to join the event and contribute with a paper to the Conference. In particular, we want to encourage an active participation by young scholars (Ph.D.-students and scholars who finished their Ph.D. less than 5 years ago). Abstracts are to be sent to

the following e-mail address by February 15, 2001 druid-nw2001@business.auc.dk

Since the selection of papers will be based on the abstracts, we would like applicants to send extended abstracts (min. 2 pages) with a full outline of the argument and key references. It should also be indicated whether the proposed paper falls within any of the six themes. By March 15, 2001 the organizing committee will inform the applicants about the acceptance of the paper. Full papers are to be delivered by May 10, 2001. The conference fee is waived for participants whose papers have been accepted. Moreover young scholars whose papers are accepted have the possibility to apply for travel and accomodation support.

The conference is in honour of the work by Nelson and Winter but we do not expect the majority of papers to be explicit comments to their work. Rather we anticipate primarily original contributions, and the conference as a whole is to take stock from different perspectives on the issues raised in their book.

Special issues of Research Policy and Industrial and Corporate Change are planned as well as a book to be published in 2002 to mark the 20th anniversary. After the usual refereeing process the best contributions from younger scholars will be included in these publications together with contributions from senior scholars.

Call for Papers

6th Workshop on Economics with Heterogeneous Interacting Agents

7-9 June , 2001 Maastricht / The Netherlands

The 6th Workshop on Economics with Heterogeneous Interacting Agents will be held in Maastricht, hosted by the Maastricht Economics Research Institute on Innovation and Technology (MERIT) and the International Institute on Infonomics. Previous workshops were hosted by University of Ancona in 1996, 1997 and 1998 and the University of Genoa in 1999, and GREQAM, Marseille in 2000.

Workshop Objectives In recent years there has been a growing body of research aimed at re-visiting the micro-foundations of macro-economic phenomena. The representative agent model, while elegant, versatile, and widely accepted, is now seen to have both theoretical and empirical problems. Its inability to account for variety in behaviour, and the implied anonymity

and homogeneity of its agents have led to a search for new techniques to connect micro behaviour with macro phenomena.

New work emphasizes that in any economy there is a wide variety of agents, and that these agents have particular interaction patterns. Interactions take place both within and outside the market, and the nature of either type of interaction can change depending on the identities of the agents involved. Types, locations, histories etc. of agents can, in different circumstances, affect the way they interact with each other. Economists are now engaged in many efforts to model these sorts of interactions in ways that are both mathematically tractable and empirically robust. In these models the connection between agent behaviour and aggregate outcomes is typically

much more complicated, and complex, than in traditional macro-economic theory. But it is precisely this that makes the models interesting and important. The 6th Workshop on Economics with Heterogeneous Interacting Agents is a venue for presentation of the latest results of a wide variety of research that views the economy as a complex system of many, heterogeneous interacting agents. Research from various related

domains—statistical mechanics, thermodynamics, learning, the theory of self-organising systems -- can all be helpful in developing more satisfactory approaches to macro-econometrics and macro-economic theory. Deadline for submission of abstracts is February 20, 2001. Send one page abstracts to we-hia01@merit.unimaas.nl. Further workshop information is available at meritbbs.unimaas.nl/WEHIA

The Business Week on Joseph A. Schumpeter

The idea that the so called New Economy is a Schumpeterian economy is constantly communicated by the media. No catchword seems too strong a phrase to emphasize the relevance of Schumpeterian idea – Schumpeter is fashionable, Schumpeter is hot.

Recently the Business Week (Dec 11 2000, p 70) published a commentary by Charles Whalen that we want to reprint to document the public interest in Schumpeterian ideas. The Business Week writes: »

Commentary: Today's Hottest Economist Died 50 Years Ago

The world of economics has a new superstar: Joseph A. Schumpeter. Never mind that the Austrian-born Schumpeter has been dead for a half-century, that he was overshadowed while alive by John Maynard Keynes, and that he was famously wrong in predicting that capitalism would become a victim of its own success. Today he's more influential than ever -- because the high-growth, high-risk New Economy is exactly the kind of economy he wanted.

Even people who have never heard of Schumpeter know the phrase he coined: "creative

destruction", the process by which new products and production methods render old ones obsolete. Federal Reserve Chairman Alan Greenspan frequently uses the term. So does Treasury Secretary Lawrence Summers, who in a September speech contrasted Schumpeter's dynamic vision with the equilibrium of Adam Smith's invisible hand. Said Summers: "If the agricultural and industrial economies were Smithian, the new economy is Schumpeterian." The International Schumpeter Society, founded in 1986, has members in 33 countries. FeetBoston Financial Corp. (FBF) has even constructed a "Creative Destruction Index" to score nations according to their affinity for change.

What makes Schumpeter so popular -- especially with free-marketeers -- is that he not only chronicled creative destruction but considered it the source of human progress. He correctly placed technological change at the core of economics. His one flaw was that he occasionally overreached, leaving theories that were incomplete or even inconsistent -- a legacy that scholars continue to battle over even today.

The flamboyant Schumpeter had an unlikely start for a brilliant academic. Born into the de-

clining Austro-Hungarian Empire of 1883, he was educated as a lawyer, not an economist. By age 30, he began saying that his aspiration was to be “Europe’s greatest lover of beautiful women and Europe’s greatest horseman -- and perhaps also the world’s greatest economist.” (He later claimed to have achieved two out of three, without specifying which two.) Schumpeter served as Austria’s finance minister during the ruinous hyperinflation of the early 1920s, then became president of a Viennese bank that soon collapsed. His luck improved when he landed teaching jobs in Bonn and then at Harvard University, where he taught from 1932 until his death in 1950.

New Recipes. Schumpeter realized that growth comes from “creating new recipes,” says Leonard L. Nakamura, economic adviser at the Federal Reserve Bank of Philadelphia. In his best-known work, *Capitalism, Socialism and Democracy*, written in 1942, Schumpeter wrote that technological change “incessantly revolutionizes the economic structure from within.”

While standard theory assumes that an economy grows steadily, Schumpeter argued that short-term booms occur as entrepreneurs gather in “swarms” around new opportunities. He also saw longer booms marked by major clusters of new technologies and industries. His 1939 book, *Business Cycles*, studied the jolts produced by steam power, electrification, and the rise of the automobile. It’s easy to see how the Internet fits that pattern.

The emphasis on the transformative power of technology makes Schumpeter relevant to the New Economy. When labor markets are tight, the standard remedy is to raise interest rates to stave off inflation. But neo-Schumpeterians predict that “if the labor market is tight, firms will invest in new technology and boost the productivity of

labor, instead of raising prices,” says Elias Dinopoulos, a University of Florida economist.

Schumpeter said that competing to out-innovate helps the economy more than competing on price -- and antitrust policy is moving in his direction. The government’s goal in the Microsoft Corp. (MSFT) case was to preserve innovation. “The Microsoft case was about illegal attempts to prevent creative destruction -- about blocking widespread distribution of technologies that the company thought might make Windows obsolete,” says Timothy F. Besnahan, a Stanford University economist and former chief economist of the Justice Dept.’s Antitrust Div.

Right Questions. Schumpeter’s work can be frustratingly ambiguous at times. While he favored free markets, he hinted at the possibility that government could encourage and channel innovation. In his early work he highlighted entrepreneurs and small companies, whereas in his better-known late writing he said that large companies were the main source of innovation. At least, say followers like Steven Klepper, an economist at Carnegie Mellon University, Schumpeter asked the right questions.

Indeed, many economists even forgive Schumpeter for his biggest blunder: the prediction in *Capitalism, Socialism and Democracy* that corporate and government bureaucracies would cause socialism to triumph over capitalism. Says William Milberg, a historian of economic theory at New School University: “Schumpeter’s remarks on the end of capitalism should be read as a warning, not a forecast.”

If anything, Schumpeter’s error came from underestimating the very force that he trumpeted: the innovative power of capitalism. With creative destruction blowing at gale force, this may at last be the Age of Schumpeter. *By Charles J. Whalen* «



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