(Supplementary Material for 'Career Lessons from Economists' Life Stories:

Brian J Loasby as an Exemplar')

An Interview with Brian J. Loasby

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[After a brief and informal introduction, we asked Loasby whether he considered himself an evolutionary economist.]

Brian J. Loasby (BJL): Obviously I'm an evolutionary economist in some sense but there are lots of different ideas about what should be in evolutionary economics. Dopfer argued about the distinction between biological evolution … and Jack Vromen … Do you know him? … I had the privilege, if you like, of being at his formal examination in Holland, in Amsterdam, where they have these extraordinary rules which make it almost impossible to have a proper examination. The members of the panel take it in turn to ask questions. You ask your question, the candidate responds, and then you go immediately on to the next person of the panel, so there is no continuity in this at all, and also it is precisely one hour; and at the end of an hour an official walk in with a stick, bangs the floor, and that's it! I've done three formal PhD examinations and Jack Vromen was the first one. I did one in Denmark, which was an open conversation one – i.e., 'Let's talk about these problems …' – and the other one in Finland, in Turku, which used to be the Swedish capital of Finland (Finland was part of the Swedish Empire till 1809), directly across from Stockholm. There are actually three universities there. And so the graduation ceremonies were essentially designed so that each university demonstrates that they were superior to the other two. And it was all strictly formal. The [procession] psrty waited outside the door of the big lecture hall and the audience was all gathered from the three universities and everybody looked at the watches and at precisely the hour the doors flung open and the procession came in! When the Russians took over Finland and a part of the post-Napoleonic settlement, they immediately moved the university from Turku, which was much too near to Sweden, to Helsinki and they had to start all over again. Anyway, it was all very interesting.

Félix Fernando Muñoz (FFM): PhDs in Finland were defended in Swedish, and those in Sweden were defended in German at the beginning of the 20th Century. It's very intersting!

BJL: Yes, universities are very odd. All of these are good examples about the insufficiency of rational choice equilibrium explanations of almost anything. Evolution in the sense of the basic idea that people encounter a situation which they are not fully prepared for and then they try to find out some way of reacting to this. Insofar as they are successful, the responses continue and this may generate – indeed, is very likely to generate – consequences that nobody had ever thought of, and they start off all over again. In thinking about this, logically the place to start is by recognizing two issues. One is that the situation is akin to those involving inductive propositions that you could never prove as a general theory, because logically the only way to do it is collect every instance, and the other one is you could never generate a new idea by deduction from an old idea, so there is creativity. The Arrow-Debreu model is a splendid example of somebody inventing a new system to resolve an awkward problem in their kind of equilibrium notion of a system. What would count as an equilibrium? Well, what the Arrow-Debreu system would count as an equilibrium has some very obvious limitations. It is permanently closed. No newcomer can ever enter the system. There are no births. Actually, there are no deaths either, unless they are already fully programmed.

Like most people I guess I'm the product of a particular environment. My hometown was in Northamptonshire, a place called Kettering, and that was important in many ways. It's about as near as you could get to a single class town with 35,000 people in the 1930s–1940s. And it was fortunate, if you likw, in its history: it was the product of the sewing machine revolution. The first sewing machine in the town was installed in 1854 when it was a small town with a

somewhat chequered history. The population was 5,000 in the 1851 Census and got up to 7,000 by 1871 via experimentation with sewing machines. Sewing machines for quite a long time were all hand machines, had no power at all, and even when you start applying power you don't really need that much power. What you got in sowing machine factories was a housing with a quite low power machine at one end and a rod extending way down the factory, with individual machines being hooked up to this when you wanted them, and they could then be taken home. One of the consequences of this is that the capital required to get into the business was quite small and in fact the help given by the American company that mechanized sewing was one of the early examples of primary innovation coming from the States in the 1850s and the United Sewing Machine Company had a policy of leasing machines, which made it even better. You didn't actually need very much money to get into the business.

My postgraduate work was actually looking at the history of the town and it was very much a bottom-up thing. In the shoe trade, which was over half the industrial employment, through the 1970s to then 2000s. In the shoe trade, almost all the manufacturers were begun by people whoat had either worked as salesmen or as what were known in the trade as 'clickers' – the people who cut out the top pieces of the shoes. Now this is not an apprentice trade, but it is a skilled trade, if you think about it. You work with animal schemes, with awkward shapes, and the quality of the leather is not uniform. And if you think about shoes, there are bits of the uppers that are very much on show and other bits that are not, so a good clicker is the one who manages to use almost all the skin and have best quality leather for the bits that need the best and if you know that, that's not a bad basis for setting up a business. What you know is most of what the basic requirements for success are, the other one being knowing the markets. Almost all people started that way.

So, most jobs were what you would call semi-skiled and there was not a traditional kind of class structure. My father was a clicker and a chief in the union in the firm that he worked for. And he knew the founders of the business. As a relatively senior trade union man, he knew a *lot* of people. I found it very easy to get around and talk to the people ruuning the family firms. Most of them knew who he was, and it was very nice and straightforward. There was thus very rapid growth, between 1871 and 2000 the population quadrupled, and then it stopped. Why did it stop? Because the transformation from the local craftsmen to the factory system had come to an end. And the total employment in shoe making had gone down by about 15% even when the population in Great Britain had grown quite a lot over this time. But it didn't cause any crisis. What happened is that the town had grown by in-migration, and the in-migration simply stopped. So, we didn't actually have a post-growth depression. It's a very nice example of an evolution, with very few casualties along the way.

Carolina Cañibano (CC): And how did the people working in the industry re-adapt? Did they move to other activities?

BJL: No. The growth stopped but it didn't reverse. Very few people lost their jobs. And as they retired their jobs ceased. One of the things that happened in the inter-war years was a drastic fall in the size of families. My family is an example. My grandparents on both sides each had five children. None of the next generation had more than two. And that simplified things, thouoogh how far it was the result of careful family planning, I am not qualified to say! At the grammar school that I went to, most of them were single children like myself. Hardly any had more than one sibling. As far as I know, none of them had more than two. Over half were singles.

As it happens, my wife and I are both products of ccounty grammar schools, hers was in Yorkshire and mine was in Northamptonshire. And we both got to Cambridge basically because there were people at our schools who knew how to do this. I was helped in my case by the fact that in the college I went to (Emmanuel College) had a senior tutor who was himself a product of a ccounty grammar school in Lincolnahire. A lot of the people at the college came from similar sorts of backgrounds as I, which made life easy. I think we all looked at King's [College] as being the exact opposite of Emmanuel: the best public-school people went to King's; the grammar school people went to Emmanuel. It was all very straightforward. You didn't have to work very much – well, you had to work but it was not a struggle – as the school was adapted to the system and Emmanuel was one of the group of colleges who had entrance exams which were based on the standard high school certificate programme, whereas at King's it would not be a single-subject, public school-based kind of examination. So, the thing was designed to match the grammar school system. I don't think it was a regime that could have lasted indefinitely. The idea of expanding the number of grammar schools now is I think a very dodgy one, but [back then, the country grammr school system] worked very well for a lot of people.

Anyway, I had a chance to stay on after my undergraduate course. I had learned to write the sort of exams, the sort of papers, answers that people wanted. The kind of dominant things at the time I was there were the Keynesian revolution and the imperfect competition revolution. I was fairly happy with the Keynesian revolution but, because of my industrial background, I was interested in how industry worked, and Keynes was not really terribly interested in how industry worked. And what I knew was that what I was being told about imperfect competition was nothing to do with how industry worked. But I didn't know what theory you should have in its place. So, I had to find a research project which enabled me to dodge all the questions. So, it was a straight economic history thing. Studying the town of

Kettering, its development. It was a good preparation for becoming an evolutionary econmist. I had no research career in mind. It was a chance of staying in Cambridge for three more years, which was fun, if I didn't have to pay for it. And I was actually interested in the history of the town. Oh, one of the things I discovered going through Census records of towns across the country, was that, if you look at the shoe-making towns in the late 19th /early 20th century, something like 60% of the houses were six rooms and up. In the UK as a whole, this percentage was less than 20%. It was a deep cut. We actually lived on what eventually turned out to be a long road of the houses (there must have been as many as 300), which was built up over quite a long period from about the early 1870s onwards. We were about two–thirds of the way along. And you could walk along that road and observe the slow evolution. Right at the beginning the houses were right on the pavement and then you get space between you and the window just set back, and then that gradually gets a bit further, and then you get a little railing at the front, and a bit of grass, and then you get the bay windows, simple block bay windows, in fact in the block of houses were we lived, it was between two streets and there were two blocks of houses and they are perceptively different. The bay windows are much more elaborate in the set of houses that we lived in than in the other one. I don't think that anybody has ever written anything on this extraordinary contrast between the shoe-making towns [and average UK towns). Obviously, it has a lot to do with the fact that these houses were built in the 1870s and more in the 1880s, more in the 1890s, and more in the 1900s. But it was something worth noting. Way after the war, into the 1950s–1960s, you get pictures of the London east end where it's just incredible, with no houses anywhere like those in any of the shoe-making towns. There may be some thesis there that somebody should look at.

The town's second industry, clothing, was much bigger than any of the rest. This was another sewing-machine industry. The other thing about the town was the 'co-op.', the

cooperative movement. One of Marshal's students, C. R. Fay, wrote something about this,[1] and he actually mentioned Kettering as the Mecca of the cooperative movement. It was based on the retail society, the success of the cooperative movement.

[With Loasby's postgraduate research having focused on industrial development, it is not surprising that one of his early jobs, prior to moving to the University of Stirling in 1967, was as a Bournvill Reseach Fellow at the University of Birmingham from 1958–1961, studying the impact of regional development policies on the location decisions of firms. Under the policies in the UK at the time, firms could only expand into new premises if they had been granted Industrial Development Certificates, but these were very difficult to obtain unless they were willing to have premises in 'Development Areas', i.e., declining areas in the UK periphery, asway from the south-east and midlands of England. After a pause in the interview, he resumed his account of what led to his particular 'evolutionary' approach to econmics by talking about this work.]

BJL: Almost all firms – with the exception of half a dozen that said their premises were acceptable – said that 'We have outgrown our existing business. We can't go on growing the business in the premises we are now; we have to go somewhere else.' The thing that had been going on for some time, long enough there were something like 30 firms that had come out

[1] Presumably Loasby is referring to Fay, C. R. (1908). *Co-operation at Home and Abroad. London: P. S. King* (4th edn, 1936). There is a review of the second edition of this book in the *Fconomic Journal, 30*(119, pp. September 1920, pp. 368–370), written by Lionel Smith-Gordon. Kettering Industrial Cooperative Society had grown to have a membership of 39, 000 when it reached its centenary in 1966: see Wakefield, W. A. S. (1966). *KICS 1866-1966: 100 Years of Progress. A Centenary Souvenir of the Kettering Industrial Co-operative Society*. Kettering: Kettering Industrial Co-operative Society.

the other side, had got their Industrial Development Certificates, and were actually still in business. Almost all of them were of the new town sort – only three or four had gone to a Development Area. We asked them, 'What do you think of the result?' They said, 'Marvellous result. Mainly not because it enabled us to expand but because, in thinking about our new premises, we discovered all sorts of ways in which we could become much more efficient.' And most of them went on to say, 'We wouldn't have thought of doing this if we hadn't been going to move. So, what I got from this is a key question, the question of a problem finding: what is it that you think about? And this would have been the most important single thing in my career: thinking about what is it that prompts the problem and how does it get formulated? What do you think the problem is?

So, you are thinking about a sequence. What prompts the problem, how do you formulate it, where do you search, what sort of answers are you looking for, how do you decide what to do about it and how do you implement it? So, this is the kind of process model, which is my sort of evolution, if you like. I don't care very much whether you call it evolution or not, but I am very happy to send articles to the *Journal of Evolutionary Economics*. OK, fine.

After those three years, I had to find something else to do. Lucky, people in the University of Bristol begun to have thoughts about the University getting into management education. This was very debatable. Many universities were wary of management, saying 'No, no, no, we don't want anything to do with that.' People in Bristol asked, 'Is there enough in Management to justify a course in Management?' But they then said, 'I know, what we'll do is to put on short courses for people who are already practising management – practicing managers.' And they had this scheme where you have a month in Bristol, two months back in the firm, and one month back in Bristol. And these two months back in the firm should be primarily engaged in working on a project *for* the firm. It would give the firm

an opportunity of having a focus on something, some of the ‘we must get round to doing this sometime’ kind of thing. Ok, you’ve got two months to get round to doing it! Most of the teaching was to be done by people who were already there because it was not a lot of extra teaching if you just got these two-month slabs. But you also need somebody who can pop up in the few months in between, and I think it was because of my experience talking to people in Birmingham that they thought I would do for one of the two posts, which was specifically for looking after the managers. I hadn’t got much experience teaching, but I had got much more experience talking to managers than almost anyone teaching in Economics departments in universities. So, I got involved with that. It was *not* a successful venture, and after a few years they closed it down.

And what then? Well, luckily, quite a number of people in large companies were getting interested in the idea of business schools. Separate ones — let’s get out of the university and have business schools. Some of them were working for large organisations and had lots of money and they were prepared to put some money behind this. One of the obvious questions we have in business schools is who is going to teach at these business schools? How do we train these business-school teachers? Aha! There is something called the Harvard Business School in the States, which in those days had been running, for about 12 years, a one-year international teachers’ programme. Right, this is what we will do we’ll fund a group of people to go from Britain to spend a year going to the international teachers’ programme. That seemed to me to be a good idea, and I applied, along with lots of other people. Dead silence. Oh, that didn’t work, then, did it? And then I got a letter saying come to London and we’ll explain what haa happened. What had happened was that. in addition to the people they were going to fund, an ADL (Arthur D. Little) Fellowship was being created

The original Arthur D. Little was one of the founders of chemical engineering. If you think about it, once you start building large chemical plants, your experience in building

ordinary manufacturing plants is not all that relevant: funny things happen in chemical processes that don't happen in engineering processes, making cotton and clothes, and so on. In rhw late 19th century, chemical engineering was becoming a big business and not many people knew what to do about it, so Arthur D. Little, who was himself a very good chemical engineer, set up a consultancy and it became a very large consultancy. Then, much later, some of the people who were hiring Little for technical consultancy said, 'We are a bit worried about how to sell this stuff, you know. We would like a bit of management consultancy about this but we don't think that regular management consultants understand chemical engineering enough to be able to do a good job.' So Little actually introduced a subsidiary part of their business which was a business consultancy. I think that what then happened (I'm not absolutely certain about this) is that, not surprisingly, since they were based in Cambridge Massachusetts, on the other side of the river from the Harvard Business School, they hired people from Harvard Business School. Well, why wouldn't you, once you are setting up a business consultancy to augment your chemical engineering consultancy? I think that, as a result, the man running this school, got to hear about these fellows who were being sent from Britain and said, 'I know: we will help one of these; we'll fund a separate one' and for some reason I got picked for this.

It was significantly different [from being in the international teachers' programme] because it had three components. One component was part-time attendance on the international teachers' program, which meant you got a flavour of it but you clearly didn't get the whole thing. The second was part-time attendance at MIT. I was thus a part time student at Harvard and MIT at the same time. I believe this is technically impossible, but they fixed it and it was very illuminating because they had totally different ideas about what was involved in management education, and particularly the MIT, were greatly constrained by the design of the system. The first year at Harvard was a standard program, everybody did the same

thing, in blocks of 30–40 people, so you were with the same people all the time, moving from subject to subject and that makes the integration of subjects much much easier. At MIT there were lists of courses and you built up a program with various courses, so you attend a course and some of the people there you will never see in any other course that you attend. So, you can't discuss the relevance of some other course with the one that you are attending, it's a mess. And some of the people at MIT were very well aware of this and of the consequences. One of them said, 'What we discovered is that five years after graduation our best graduates are working for Harvard graduates as their technical assistants'. For MIT, which had claims to be the finest university in the United States – Paul Samuelson's University, but Paul Samuelson never understood what was going on. So, this was very, very educational, to look at these things together.

The other thing, the third part, was actually working with A. D. Little, on projects and going round talking to them. And there the great thing was the contrast with the standard consultancy, where there are the principaks who go out and talk to the bosses and decide that they'll do a project. There is then a class of project leaders who will be assigned a task and they will select the consultants and it's a very clear chain. Little was not at all like that. There were about 50 people – it was not a large unit – and anybody was free to negotiate and try and set up a project, with certain constraints. One obvious constraint was that you couldn't have two people from Littles turning up at the same firm arguing with each other about what the project should do. So, once somebody had done this, he was going to be the project leader. And he would put the project together and put the team together. Nobody was obliged to accept an invitation to work on the team. But you could see how the motivation worked. If you are going to be the leader you ought to be the sort of leader people will want to work for. Also, you've got to be prepared to work for other people on other projects because the . the way that things worked meant that there were quite often periods during which data was

being collected when nothing much was happening. So typically, you would be working on four or five projects at the same time, with different statuses in all of them. So, this was a very interesting way of running the business.

Quite soon after I arrived there, they hired another member of staff who came from a convnetional consultancy business. By this point, I had learnt how Little worked and it was a very good fellowship because I could go round and talk to anybody. The man they had hired had an office diagonally across from mine. I noticed he came in there in the morning, sat there and I thought 'I wonder if he understands' so I went and talked to him. He didn't understand; he was sitting there waiting to be assigned a job and this was one of the great highlights of my life: I had never been in the consultancy business and I knew how this one worked, whereas the man who had spent all his time in the consultancy business didn't! And the reason I understood it basically was because of an Edinburgh sociologist called Tom Burns who had written a book talking about organic and mechanical systems.[2] Thr orgsnic system explained Little's way of operating. An economist thinking of sociologists as the experts on this may seem unusual, but it was fascinating.

It was the most important year of my life because I learnt to see the signigicance of the differences between systems and the way they operate and what they can produce. Harvard could do things that MIT couldn't. MIT could do things that Harvard couldn't. Harvard was terrible at teaching techniques. They didn't believe in techniques. So, this whole idea of thinking about what people decide they want to pay attention to and how they going to do it is something that has been with me ever since. And that ideas and the A. D. Little Fellowship trip are what brought me to Stirling.

[2] Loasbu is referring to T. Burn and G. M. Stalker (1961) *The Management of Innovation*. London: Tavistock Publishing.

Specifically, I received a message from the advisor to foreign students at MIT asking me to call him and see him. MIT got lots of foreign students and visiors coming from all over Europe and someone had to look after them, the advisor. One of the jobs of the advisor to foreign students was to see that these important people were properly treated. He asked me to go and see him. Why did he want to see me? Well, he had found a problem caused by the various arrangements I was under. The funding was from Arthur D. Little and being commercially minded, they wanted this to be tax deductible – why not? – and that entailed that I went to America on a business visitor's visa instead of a student visa. The advisor for student hads noticed this and wondered, 'Who is this odd person?' So he asked me to explain all this to him and we got on very nicely. And then, he said, 'You know, I spend a lot of my time entertaining these people. Given what you are interested in, your contacts with business and so on, we might find it mutually convenient if you took a share in this entertaining. We'll pay for your meals, and so on.' So, I met quite a number of people there. And one of the pairs that I met were a couple of people from ICI (Imperial Chemical Industries) and British Nylon Spinners. British Nylon Spinners was a joint subsidiary of Courtaulds that came from the traditional side and ICI were like Dupont who got into synthetic fibres. We sat and we were talking and the man from ICI said, 'You know, what I would like would be to have somebody who would come and spend a month following me around and would then tell me, at the end of the month, what I really ought to be thinking about that has never occurred to me to think about.' So, I said, 'I'd like to do that.' He said, 'Get in touch with me when you come back and we'll do it.' I should also mention that the head of the business school at MIT at that time was a man called Bill Pounds who had come from Carnegie (home to Cyert and March and all that) and he had written a paper which he called 'The process of problem finding' which fitted in very well with what I was talking about earlier about interviewing businesspeople in

Birmingham, i.e., finding the problem, thinking they had a problem of space but they really had a problem of efficiency.

The man from ICI was Charles Suckling.[3] A lot of people have been very influential in my work, but he has been the most influential of all, because he was continually concerned about what ought we to be thinking about. Among other things, he got interested in architecture. What generates problems if you are designing a building; is there anything here that helps. What generates problems if you are developing a new chemical and trying to put it on the market? In particular, what are the intersections that have to be managed? Again: what should we be thinking about?

So, eventually I came back and got in touch, went up to [ICI's plamt at] Runcorn, supposedly to arrange to spend a month with Charles Suckling, and I was introduced by him to a man called Frank Bradbury, a colleague of his who had just been appointed Professor of Industrial Science at the new University of Stirling. Stirling? What's that? Never heard of it! What was supposedly going to be one of the main focuses of the University of Stirling – this is one of the great failures – was something that was labelled 'technological economics' and it was trying to put together the sciences, economics and operation research. which in those days was a big subject on its own. This was going to be one of the major degree courses. A tripled degree, not a joint degree but a tripled degree. And it had occurred to various people that you had to be very careful choosing your economists. The professor of economics had already been appointed. This was Andrew Bain,[4] a finance man. He was in fact an extremely

[3] For further details of Suckling's career and life, see the Royal Society memorial article, '**Charles Walter Suckling. 24 July 1920—30 October 2013' by M. J. McCann and C. J. Sucling, p**ublished **19 December 2018, available at https://royalsocietypublishing.org/doi/10.1098/rsbm.2018.0025.**

[4] Andrew D. Bain, OBE (born 1936), was Professor of Economics at the University of Stirling, 1967–1977 and subsequently held chairs at the University of Strathclyde (1977–19984) and the University of Glasgow (1984–1999) Although most of his work was indeed on the finance sector, his Cambridge PhD was an econometric analysis of the growth of television ownership in the UK, published as Bain, A., D. (1964). *The Growth of Television Ownership in the United Kingdom since the War: A Lognormal Model (University of Cambridge, Department of Applied Economics Monographs, No. 12)*. Cambridge: Cambridge University Press.

good professor. He ought to have made a much better career for himself than he actually did. I don't know what went wrong. Frank Bradbury had been appointed and was not surprisingly very concerned about finding the right economists for Stirling. Charles Suckling then said to him: 'We might have found you an economist you could to work with.'

So. I had effectively had my first interview for Stirling from the head of the department. In all, I had three interviews. One was with Tom Cottrell, who was the first principal, and the third one with Andrew Bain. The latter was the only time I have been inside the Bank of England, where Andrew was working at that time. Andrew's great skill in the early days of the University was that he was very good at thinking out the implications of every decision that was being made. If we do this or if we let them do this, is this going to be helpful? Or is this going to be hindering? A first-class analytical brain. Frank was extraordinarily good at getting along with people, which was also a very important quality, especially if you've got somebody else that's got the analytical capacity. They were very different in styles and could sometimes 'rub each other up the wrong way', but I think they each realized how important the other one was. This was very much bound up with the original ideas for this University. Cottrell[5] was Professor of Chemistry ad Edinburgh but he had spent time working inside ICI, where one of the members of the [University of Stirling's] court [i.e., the University's governing body] was the head of the newly established corporate-level research section. One of the great problems in the chemical industry is knowing what to do with the research that has done. As we can see from Hounshell and Kenly-Smith's wonderful book on Du Pont,[6] this is aided by being great record keepers, as they were at Du

[5] Tom Cottrell (1923–1973) had worked at ICI's Nobel explosives division, which was located at Ardeer in Scotland, a considerable distance from the Runcorn plant where Loasby was first introduced to Bradbury. Cottrell's time as the founding Principal of the University of Stirling was cut short by his death from a heart attack a few days before his 50th birthday.

[6] Loasby is referring to Hounshell, D.A. and Kelly-Smith, J., Jr (1988). *Science and Corporate Strategy*. Cambridge: Cambridge University Press. He distills lessons from this book in Loasbv, B. J. (1996_. Organization and change at Dupont, 1902–1980. In P. E. Earl (ed.) *Management, Marketing and the Competitive Process* (pp. 112–129). Cheltenham: Edward Elgar.

Pont, where you almost always know why it was that they decided to do what they did, most of which turned out to be very good and some of which turned out to be disastrous. At ICI, when they decided to set up this top-level research, all the researchers had been in the divisions. The man who got this job was very well-aware that this was going to cause problems, because they would clearly invalidate some of the assumptions on which the divisional chairmen worked, so he was very interested in this kind of interaction. [These structire-related issues were also relevant for the technological economics programme at Stirling.]

In the end, parts of it lasted about 20 years, but I think probably we weren't good enough in some ways. It's a bit like MIT and Harvard in a different context. This deep interdisciplinary arrangement doesn't sit comfortably in universities. And you see the reflections of this in economics. What is economics about? [To the mainstream], economics is about rationality, it's not about social interaction: 'Get out of my way, those stupid sociologists! They mess around! *We* do analysis!' The implicit assumption is that we already know what needs to be analysed and where the boundaries are, which is so contrary to the nature of human beings and the limits of each of us'. Most economists never ever write about that or talk about it and are not prepared to do it. One of the things that some of them have against the inclusion of economics is that 'these people are meddling with things that have nothing to do with economics, and we're not sure they should be here. Put them into their own journal and forget about them!'

This might be a kind of answer to the string of questions you wanted to raise. I don't find it at all easy to classify myself. I found the Max Planck Institute in Jena with Ulrich Witt and Manfreed Streit [the founder and first director] very congenial a number of times. … [In terems of where I have got to as an evolutionary economist and how it relates to the MPI's

perspective,] there is a chapter I have written for a forthcoming volume edited by Ulrich Witt and Andreas Chai.[7]'

Every organization has the defects of its virtues. There is always something that doesn't work very well because it doesn't fit with some other things. I have a very unrestricted view of what counts as evolutionary economics; I've never asked myself 'am I doing evolutionary economics?' I don't care if I'm doing it. I'm interested in problems, in thinking about problems. It's certainly a perfectly legitimate question to ask, 'What evolutionary ideas in biology or psychology may be helpful in thinking about economic problems?' I don't think we should close ourselves off and say, 'We are not going to look at that', but you have to be selective, and I have to be more and more selective; I can't concentrate for as long as I used to, amd I don't read as much as I used to.

There's a couple of papers I've published on Coase fairly recently. I keep thinking about Coase, Hayek, and Shackle, all of them in Robbins' LSE in the 1930s. One: how well do they fit with Robbins, and two: why do they apparently have hardly anything to do with each other. Shackle actually went there to work with Hayek but got all enthusiastic about Keynes. In Shackle's on words, he [i.e., Hayek] was the most magnanimous man in the world about this. Shackle was always very gracious, very respectful of other people, a lovely man. There is no reason why you shouldn't come back to Shackle or shouldn't have gone back to Hayek. There is a lot in Hayek which is perfectly compatible with Shackle's ideas about the ways in which things work. Shackle was older than Coase, but he got to LSE in a very roundabout way. Another oddity is that neither Coase nor Shackle should ever have done economics. Coase was interested in History. He missed his first year at the grammar school for an illness. And the rules of that stupid grammar school that he went to said that you

[7] Loasby, B. J. (2018). Missed connections and opportunities forgone: A counterfactual history of twentieth-century economics. In A. Chai & U. Witt (eds) *Understanding Economic Change: Advances in Evolutionary Economics* (pp. 43–80). Cambridge: Cambridge University Press.

couldn't study History if you hadn't done Latin, and if you hadn't done Latin in the first year you couldn't take it up thereafter. So, he had to find something else to do. It wasn't going to be Science. And so it became Business Studies. And that's crucial because, if he had gone to the LSE to read Economics, which he wasn't qualified to do, he would not have encountered, transaction cost issues, foe there is no problem about, no transaction cost problem in economics, certainly in 1930's economics, but if you go to a business school, then you might come across this sort of problem and wonder what you are going to do about it.

One of the striking things, if you got back and read, which I have done recently, Austin Robinson's book on the structure of competitive industry, published in the 1930s,[8] is that there is an awful lot there that is quite close to Coase about what competitive industry is: ongoing competition; it's not a story about equilibrium. That book isn't about equilibrium. It's about continuing search for products and prices and processes and so on, though it isn't written explicitly in that way. It isn't written as a process but clearly is very much influenced by Marshall. Although Austin Robinson doesn't say very much about Marshall. In 1930s, Cambridge, everyone very tired of Marshall and kept him out of the way. [Mashall]'s all fuzzy: he keeps talking about equilibrium but he never really explains what's going on. But what's going on all the time is people changing things! The whole story of the book is about firms doing things differently, which is straightt from Adam Smith.

If you actually read carefully what Adam Smith says about the division of labour, it is not that people have different abilities and you assign them to different tasks; it is that you assigned people to different tasks and they'll develop different abilities, which is not what equilibrium theories are about. And they develop different abilities because they perceive different problems. And with that you go back to his *History of Astronomy*! Which not many

[8] Robinson, E. A. G. (1931). *The Strucure of Competitive Industry*. London: Nisbet & Co.

economists read.[9] The *History of Astronomy* basically is a response to Hume, given the Hume's impossibility theorems: how is it that new ideas come about? There's a classic example, particularly because Newton's reputation in the mid 18th Century, that Astronomy has regressed enormously, how did [this happen]? And Smith goes right back to the beginning, that people like to feel comfortable, they don't like things happening that they can't make sense of. And if they notice something they can't make sense of, then they try to impose some sense on it. And that's what the *History of Astronomy* is all about. People have problems with different bits of the universe out there. What for some people is kind of trivial and won't bother them, we don't really understand but we don't need to, other people *really* wonder, 'Why is that?' 'Can we find some way of explaining?' You know the final sentence of that piece, talking about the supremacy of the system, says Iit is so generally accepted that even I, who have been trying to explain all these successive theories, has attempted to impose a pattern on events. I've been drawn into using language in describing this system as if it were the true system of the universe'. That was written no later than 1759, which was at the date. We know that because there is a reference at the forthcoming forecast return of Halley's comet. It's one of the few things fortunately that Smith didn't have burnt when he knew he was about to die. Great volumes of stuff were burnt. Fortunately, there are two extensive lectures notes on courses that Smith gave in Glasgow which have been edited and published by Andrew Skinner in Glasgow – a great man, Andrew Skinner: we know much more about Smith. Smith had this standard: 'If I haven't really sorted it out and I'll never do it now, get rid of it'. One of these lecture notes has some references to his *History of Astronomy*.

There is another fascinating piece, that Smith did have published in his lifetime and is one of the volumes of the Glasgow edition, on the first formation of languages, which is

[9] Smith, A. ([1795] 1980). The principles which lead and direct philosophican enquiries; illustrated by the history of astronomy. In W. P. D. Wightman (ed.), *Essays on Philosophical Subjects* (pp. 33–105). Oxford: Oxford University Press.

necessarily speculative because you can't imagine somebody sitting down and saying, 'today, I will invent the first word' because if they could say that they would have already invented it! It's an attempt to really explain a kind of obvious problem if you think of it in the abstract, is that the earlier the language, the more highly differentiated it is. Every noun is very different, verbs have many different tenses and voices and moods, and so on. Unlike technology, where you start with very simple things and you get more and more complicated, language goes in the other direction and Smith has this story about this. To begin with, if you just start by giving names to bears or hostile tribes or whatever it is, you've got that word, and then you want to give some more information about them so you tuck different endings on, of whether this is the person that is doing something or it's something being done to or whatever. You make the most of the few words that you have. And things kind of develop that way and you get adjectives following the nouns, etc. And then when you get people from different languages communities together, this all becomes a mess, as you know, as with pidgin English, pidgin Spanish, or whatever, things break down. It's a fascinating little things that Smith got himself interested in.

Adam Smith is easily the most distinguished person ever to write in Economics. I think probably there are more surviving foundational idea in Economics that come from Smith, including the idea that Economics is not purely Economics: for Smith, moral sentiments are an essential part of the working of economic systems. And I think they are. And that's part of evolution, I guess. The writings of many and the talking of many have added great confusion to the subject, right?

I think quite a bit of that is relevant to the question that you asked but not necessarily. I am not terribly interested in formal definitions where, 'To count as evolutionary economics, it has to be this …'. I am very much concerned with the idea of a continuing process. One of

the fascinations in the Frank Hahn piece[10] is that Frank was trying to build up a theory of a continuing process. If you look at it harshly, he didn't actually get all that far. But he was doing better than a lot of the people around him who didn't try to do anything at all.

CC: Independently of whether we call it evolutionary or not, and linking it to many other things you have said, it's partly in your paper on evolutionary concepts: what do you think are the problems, the main problems that are interesting for economists today? Like for example, in the paper you mention the micro-foundations of organisations' capabilities as one of them, or the architecture of systems. What kind of problems should we be looking at today as economists, that maybe people are not looking at particularly?

BJL: I don't know. I think the notion of organization is a very basic idea. An organization is a way of connecting a limited number of elements in a particular fashion. The classic industry case, you know the function, the product area, and that continues to be a pressing problem. Getting the connections between the separate bits right. You know what: it would be nice if somebody would actually take seriously what I mentioned this morning, that almost every firm fails. The Roman Catholic Church is just about hanging on, I think. But it failed a long time ago in the sense that it is not a catholic church in the original meaning of the word catholic you know, all embracing. It might be worth somebody speculating on that. Why is the name of their organization a lie? I wouldn't wanna say that to a catholic, but in the strict sense it is. It's not difficult to see why they don't want others. The other extreme, the non-conformists in Britain in the 19th Century were very proud to call themselves non-conformists or dissenting. It obviously is relevant to the content of the belief of the people. All of these

[10] Hahn, F. H. (1973) *On the Notion of Equilibrium in Economics: An Inaugural Lecture*. Cambridge: Cambridge University Press.

people have certain fundamental things in common, in the nature of God, and Christ and so on. And yet there is one which says there is a single scheme and the others were quite happy that there are lot's of different ones: you know, the Methodists don't reject that they've been Baptists or Congregationists; no fine, lots of them! I don't know that anybody has ever written about this, but it poses some fascinating questions about organisation and the products, what you are actually doing, who do you want to be connected with and who you don't be connected with. I am not suggesting that as a research programme for anybody in this room. But it would make an interesting research programme for somebody somewhere, in a philosophy department for example.

The process of problem finding. You find a problem when there is a mismatch somewhere. Something that doesn't fit. As I was saying earlier, MIT and Harvard have problems. Each has problems which the other one is rather better able to solve. Universities are full of this kind of thing: in gegree programmes, what combinations can be offered, what are the consequences of having all the examinations at the end of the year instead of having them spread. That's a solution to somebody's problems but it creates problems for others. What happens all the time is that people find solutions which create problems for somebody who is outside that system. Don't say there is nothing you could do about that, but it is not a problem that is resolvable because of the limitations of any individual cognitive system and any working group. You would find many instances of this if you went round this department (or division as it is now, for some reason, called). There are some things I just don't have time or ideas to explore, so explore something else. I put up boundaries and explore what's inside; the other way is just to have boundaries and hollow out what is inside.

The best things that we can leave to our successors are unsolved problems. If there weren't any, you wouldn't have jobs. I don't need a job. I am the beneficiary of an extraordinary not very well thought out scheme for cutting university costs in the 1980s, a

scheme of early retirements, a main feacture of which was that you could actually start drawing your pension when you took early retirement. As long as you earn a positive rate of interest, starting your pension 10 years earlier adds up for a considerable benefit. The original scheme had a glaring hole in it which was spotted by people at the Universty of St Andrews, which was there was nothing to prevent people taking early retirement, being immediately reappointed to a new post at a full salary. And St Andrews did this with the chairs of all their faculty boards before anybody in Whitehall noticed. Other places did this in a limited way, rehiring 'retired' staff part-time whose total incomes were then greater than before. (I remember Jack Wiseman {then a professor at the University of York] telling me he had been asked to to this because they did not want to lose his particular capabilities. Of course, this was not what [the government' intended.

I did not accept reappointment. I was doing quite nicely after getting the pension early and it suited the university because Stirling had suffered quite large cuts in its grants and needed to reduce its costs. The University was responsible for paying my salary, but it is not responsible for paying my pension – the universities *collectively* are responsible for paying pensions, via the Universities' Superannuation Scheme into which all universities make contributions on behalf of their staff. If you think about efficient design, you do not wabt something in which everybody has an incentive to put the cost onto everybody else. You could very easily all end up worse than you were before you started. For any one member of this group, deciding 'We are going to be good fellows and we are not going to try to exploit it' could leave them worse off. You can't even say that they would be doing the honourable thing by doing that because decisions made at the top about staff lower down. Universities, the most intelligent people in the country, coming up with an incredibly absurd scheme! But I can't complain. And I can genuinely say that I was benefiting the Department of Economics by taking early retirement.