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Don Lamberton: a view from the periphery

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It is sometimes said that Don Lamberton was weak on 'standard' microeconomic theory. This was not my experience: he introduced me to some important theoretical developments in the discipline of economics. In my academic career, I have undertaken various studies on issues that interest me, studies which have been influenced by literature brought to my attention by Don Lamberton. My perspective on Don Lamberton is that of, not exactly an outsider, but someone not in the inner circle: my position in the Lambertonian landscape was on the periphery. The paper concludes with some reflections on two issues outside economics.

Introduction

When I returned to The University of Queensland in 1971 as a postgraduate student enrolled in a masters degree, Penguin's *Modern Economics Readings* (a series edited by Brian McCormick) was rolling out, the first volume having been published in 1968. For a small group of postgraduate students on the St Lucia campus, this series was an invaluable resource, allowing us to top up our understanding of the many aspects of economics. We used to read the editor's introduction to each of the volumes eagerly as these offer a survey-type essay on the relevant literature in specific areas. These introductions also provided us with excellent examples of scholarly writing. McCormick managed to secure some of the best thinkers in economics to edit the volumes, including Jagdish Bhagwati, Ralph Turvey, Mark Blaug, Anthony Atkinson, Edmund Phelps, Peter Temin, Nathan Rosenberg, Richard Layard, Geoff Harcourt and Amartya Sen. Another important characteristic (important for poor postgraduate students) was the relatively low price of these volumes, a characteristic of the paperback Penguins. For me, the Penguin series was a very important part of being socialized into the academic world.

The topics in the volumes of the Penguin *Modern Economic Readings* include 'the usual suspects', such as inflation, international trade, money and banking, public finance, monetary theory, monopoly and competition, growth economics, and so on. However, the series was also characterized by titles rather different from the normal economic fare of the late 1960s and early 1970s. These include *Economic Justice, Power in Economics, Wealth, Income and Inequality, the Economics of Education*, and the *Economics of Technological Change*. A particularly unusual title was *Economics of Information and Knowledge: Selected Readings*, edited by one D.M. Lamberton and published in 1971. The volume gives the editor's affiliation as Case Western Reserve University in Cleveland, Ohio. At much the same time, five

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volumes in another series of selected readings, this series entitled *Pelican Readings in Australian Economic Policy*, was being published by Penguin (Australia). One of these volumes was *Industrial Economics: Selected Readings,* also edited by this D.M. Lamberton, and published in 1972.

Much to my surprise, the same D.M. Lamberton had been appointed to a Chair in Economics at The University of Queensland in late 1972 and began teaching in 1973. The editor of these two books of readings (which I had purchased on their publication) was not an American at all, but an Australian economist who was returning home after various experiences in overseas universities. I took the post-graduate course being offered by Don Lamberton in the first semester of 1973.

Some early influences

It is sometimes said that Don Lamberton was weak on conventional economics. To be sure, my first week on his course was filled with the 'new' theory of consumer demand. The reading consisted of the first few chapters of Duncan Ironmonger's book (1972) and two papers by Kelvin Lancaster (1966a, 1966b). I had never heard of this 'new' theory, and it had not appeared in any textbooks. The remainder of the course was concerned with issues more commonly associated with Don Lamberton – knowledge, technology, information, invention, innovation and diffusion – but also included the thinking of Fritz Machlup, Joseph Schumpeter, George Stigler, Everett Rogers, Mark Blaug, George Shackle, George Akerlof, Frederich Hayek, Joseph Stiglitz and – of course – Kenneth Arrow.

The readings and discussions were not always 'high theory'; for example, we covered the practical problem of accounting for quality change in products (e.g. cars having automatic rather than manual transmissions) that are components of Australia's consumer price index. We were also required to read case studies of innovations and their diffusion in Australia. I can remember two of them. One related to the adoption of capital equipment central to the blow moulding of plastic bottles. Such bottles were substitutes for glass and metal containers for dairy products, water, fruit juice, soft drinks and household chemicals. The second case study was of a synthetic product, polypropelene, used in the manufacture of carpets. The new product was a substitute for carpets composed of wool and nylon, it was water-resistant and durable, and it had a lower price than the products it replaced.

At the time, I was working on my thesis, a cost–benefit analysis of the alternative treatments for end-stage renal disease, either haemodialysis (at home or in hospital) or organ donation from cadavers or living donors (Doessel, 1978). Given my exposure to Don-type literature, all that changed was that I described the dialysis therapy as a product innovation and the subsequent development of transplantation as a process innovation.

Some more substantive effects

My next major project was a cost–benefit study of water fluoridation, a preventive oral health process (Doessel, 1979). As an addendum to this study, I collected data on when various communities introduced the process in order to undertake statistical tests on temporal and spatial diffusion (Doessel and Karunaratne, 1980). Subsequently, I returned to empirical measurement of diffusion (Doessel and Strong, 1991).

My next interest was in Cimetidine, a pharmaceutical developed by Smith, Klein and French as an alternative treatment for gastric and duodenal ulcers. (The dominant surgical treatment for such ulcers was, at the time, partial gastrectomy and vagotomy.) Did this new pharmaceutical product, a classic process innovation as described by Blaug (1963), substitute for existing surgical therapy? This question was answered by analyzing time-series Australian data on the surgical procedures, pre- and post-Cimetidine, for both peptic and duodenal ulcers (Doessel and Gammie, 1984, 1985; Doessel and Sams, 1984). These studies were undertaken before intervention analysis had entered the vocabulary of economists.

While reading the pharmaceutical and gastroenterological literature relating to ulcer therapies, I came across some of the literature on fibre-optic endoscopy. Although endoscopes can be used for some minor therapeutic purposes (such as removing obstructions in the oesophagus), their dominant use is in the diagnosis of diseases/conditions of the oesophagus, stomach, duodenum and colon. As such, they are process innovations for barium meal radiology of the upper and lower gastrointestinal tracts.

How could the efficacy or accuracy of these diagnostic therapies be compared? How do we measure accuracy? To answer such questions, I went back to the beginning of the epidemiological literature on diagnosis, to Yerushalmy (1947), who was concerned with evaluating different radiological techniques to detect tuberculosis. It was Yerushalmy who coined the terms 'sensitivity' and 'specifity', still beloved in the health professions. A development of some importance was Vecchio (1966), in which unselected populations were emphasized, a massive contrast to Yerushalmy's 'controlled' populations drawn from the residents of American TB hospitals. Neither of these epidemiological papers addresses the following (economic) questions. What are the outputs of a diagnostic test in medicine? How are the outputs to be measured? How can we compare the efficacy of different diagnostic technologies? Does the ranking of different diagnostic tests depend on the **purpose** of the diagnostic test?

The answer to the first question is that the outputs of a diagnostic test are two pieces of information about disease status, jointly produced by any diagnostic technology. The two pieces of information are measured as two probabilities (taking values between zero and unity). Comparison of different technologies can proceed by locating the two probabilities in a two-dimensional space, and undertaking statistical tests to determine if the two probabilities for each technology are statistically different from the two probabilities for a second (alternative) technology. This two-dimensional space is, in reality, the 'characteristics space' of the 'new' theory of consumer demand. Thus, indifference curves can be drawn in this space to indicate the relative importance of the two measures of diagnostic output. Given that diagnostic tests can be undertaken for three different purposes – **discovery** of disease in a-symptomatic people (screening), **confirmation** of the suspicion of a particular disease, and **exclusion** of a particular disease – the preference map for the characteristics will alter depending on purpose. Thus, the efficacy ranking of different diagnostic technologies may depend on the purpose of the tests.

I wrote all this up, including the relevant algebra and the diagrams, and took the paper to Don for his comments. (He'd let me know when he'd read it.) On both occasions on which we discussed the paper, I was struck by the arrangement of Don's room: he was visible only to those sitting directly opposite him as his desk was piled high with books, more than two feet high. As always, his bookshelves were groaning. At our second meeting, he made a brief comment ('I agree'), and

handed my paper back. There were a few written (cryptic) comments on the manuscript, and he also said something like 'Well done', and 'You must submit it for publication'. The conversation then turned to other issues, whatever happened to be on Don's mind.

I then began the hard slog of estimating empirically the probabilities for three technologies for diagnosing diseases/conditions of the upper gastrointestinal tract (single-contrast barium meal radiology, double-contrast barium meal radiology and fibre-optic endoscopy), and then undertaking the statistical tests to determine if the three points were statistically different. Doessel (1986a) is one of the most satisfying papers I have ever written. Prior to its publication, to the best of my knowledge, there was no economic literature on diagnosis.

An important paper for me was Blaug's survey in *Economica* (Blaug, 1963). It implies that a way to proceed empirically was to treat process innovations as (imperfect) substitutes. Thus, a way to determine the effects of process innovations is to estimate demand equations. Such an approach could shed light on the controversy in the health economics literature surrounding rising health expenditures through time (Doessel, 1986b). A series of empirical papers applying this approach followed. There were papers on the upper gastrointestinal tract employing (Australian) data on pensioners (Doessel, 1987a), health care cardholders (Doessel, 1987b), and people holding private health insurance (Doessel, 1990). In addition, there were empirical results for the lower gastrointestinal tract.

All the studies on fibre-optic endoscopy published between 1983 and 1990 were consolidated into a Ph.D. thesis entitled *Technology and Health Expenditure: An Economic Analysis*. Needless to say, Don Lamberton was my supervisor. Unlike the chiefs of the modern tribe of economists, Don never expected co-authorship of his students' publications (see Lodewijks, 2007). His attitude in this matter was a manifestation of his general ethical stance (see my 'Concluding comments').

Little of my research is core to Don's main interests – information, innovation and technology. Work on intergovernmental relations and equity in natural disaster relief (Butler and Doessel, 1979) is an application of conventional public finance concepts. In like manner, work on various aspects of general practice over many years – with one exception (Connolly and Doessel, 1995) – had no Lambertonian dimensions. Work on the mental health sector over 15 or so years had no information dimensions, with one major exception, an exception captured by the term 'structural imbalance', a term Ruth Williams and I apply to the mental health sector (Doessel *et al.*, 2010).

In the general economy, it is commonplace that some particular relationships characterize particular economic transactions. For instance, there is typically a one-to-one relationship between vegetarians and the purchase of meat: vegetarians do not buy meat. Similarly, people who do not own cars do not buy petrol, and so on. However, the mental health sector is not characterized by such a one-to-one relationship: people who have no manifestation of mental illness **do** consume mental health services. The term we apply to people exhibiting such behaviour is 'met non-need'. This term may sound familiar to some, but it can easily be confused with 'unmet need', a commonly-used expression in the health sector. 'Unmet need' refers to cases in which people have diseases/conditions which are not treated. On the other hand, 'met non-need' refers to people who do not have any mental disorder, but who nonetheless consume mental health services.

It should not be assumed that these two categories have been constructed out of the blue. In fact, they are but two cells from a 2×2 matrix or a contingency table, that standard construct for analyzing certain types of data. Of course, there are two other cells in such a table – those described as 'met need' and 'unmet non-need'. It is possible to quantify the numbers of people who fall into these four categories from published epidemiological surveys undertaken by the Australian Bureau of Statistics (1998). As well as determining the numbers of people with and without mental disorders, such studies also quantify the numbers of people who do, and do not, consume mental health services. By cross-classifying the responses to these two issues, one can form the 2×2 table that throws up the four cells, one of which is 'met non-need'.

Several factors are responsible for this bizarre result, such as the phenomenon described as 'the worried well'. But none answers the fundamental Lamberton question – why? The source of the problem is that mental health practitioners have very poor diagnostic information about their patients' mental health. The mental health sector does not have the industrial structure of the physical health sector, in which various specialties (pathology, radiology, etc.) undertake specific diagnostic procedures, and then pass on this diagnostic information to other medical practitioners, who then implement therapy. This (briefly) is the content of a final paper (yet-to-be-written) on the 'met non-need' 'pathology' in the mental health sector.

My work was clearly influenced by Don Lamberton, but on issues and in sectors of the economy that interest me, particularly the health sector. Some of Don's students followed his interests in the knowledge economy, technological change and innovation, but not me. It may be useful to invoke the centre–periphery dichotomy employed in geography and sociology: there is a core of some particular activity, where the activity is intense, but as one moves away from the centre to the periphery, the volume of activity decreases. My location in the Lambertonian landscape was at the periphery.

Concluding comments

I will conclude these reflections with two comments of a personal kind. Don Lamberton had an inquiring mind, which most people would regard as a commendable attribute. But an inquiring mind is not always a helpful disposition.

My style of work, which I would describe as applied economics, typically involves the collection of large data sets from different sources (often including the Australian Health Insurance Commission/Medicare), and then undertaking statistical/econometric analysis of the collected data. This process is time-consuming and often entails delays of various kinds. For example, Medicare data are surrounded by various privacy/confidentiality constraints, which preclude certain types of analysis and determine what type of data can be employed. After formulating a research question, the next step is to begin negotiations with statisticians in the Commonwealth Department of Health on the level of data disaggregation acceptable to them, given their legal constraints. Delays (up to 12 months) are inevitable because data requests from outside the health bureaucracy are always trumped by demands from within the bureaucracy. Further delays are caused by the time lags associated with releasing disaggregated data from, for example, the five-yearly census.

Once data problems are overcome, the analysis invariably presents a new set of challenges: real world data rarely conform to the ideal data for which statistical/econometric

tests have been formulated. Various econometric 'pathologies' in the data need to be addressed by applying appropriate techniques, otherwise the regression results will be misleading, even wrong. Our contemporary whiz-bang econometric packages are silent on what to do when the battery of diagnostic tests throws up one or more statistical pathologies. At this stage, it's back to reading the econometric literature. In my case, it might take a good two years to find an empirical answer to an information-related question I had previously discussed with Don. My work has always been time consuming and frustrating.

Don, I think, was quite unaware that these nuts and bolts problems are quite normal in the sort of economics I practise. I can remember one occasion when I had just established 'what happened' and told Don the results. His response was, 'Well, the next question is why medical practitioners do that' (Don seized every opportunity to ask the 'why' question). I was not (and still am not) a psychologist and I had neither the resources nor the skill to undertake the sort of survey required to answer Don's 'why' question. Don's response on this occasion was not helpful. But I quibble.

For me, a more important legacy from my interactions with Don Lamberton was unrelated to economics: what was really important for me was observing how a good academic should behave in the various contexts of academic life (formal faculty board meetings, academic seminars and so on). Don showed how to criticize in a constructive way. Universities have in-service training on such topics as effective teaching, how to write research funding applications, and so on. But in all my time in several academic institutions, there has never been a course on how to be a good academic. Maybe the absence of such courses is a manifestation of the contemporary post-modern ethos of the university. How to be a good academic would probably be seen as irrelevant, even silly. But I digress.

I was an undergraduate in the 1960s, and a member of the Newman Society. It was hardly surprising that John Henry Newman's (1852) *The Idea of a University* was brought to my attention, and I read parts of it. For me, this was the source of such terms as 'community of scholars', 'intellectual excellence', 'perfection of the intellect': the university was to give students a 'clear, calm, accurate vision of all things' so they might make good judgments in their post-university life. In other words, the university was to be judged by the mark it left on students' minds. And for me it followed that how teachers were to behave was determined by the aim or purpose of the university, i.e., to nurture the life of the mind.

When I returned to university study in the 1970s, the academic ethos lacked these Newman-type characteristics. There were few academics whose behaviour was worthy of emulation, in my view. However, for me Don Lamberton's appointment created a (small) Newman-type intellectual environment: here was a man for whom the life of the mind mattered. For me, his academic behaviour and disposition were worthy of emulation. In this sense, Don was a throwback to an earlier (and better) conception of purpose, in an earlier era, when universities existed to nurture the life of the mind.

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