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Changing Employment Patterns and Truncated Development in Australia

I welcome this opportunity to speak to the Royal Society of New South Wales. It seems particularly appropriate to be with you at a time when the Australian Reserve Bank has chosen to commemorate John Tebbutt (1834-1916), a distinguished Fellow of your Society, on the \$100 note, a hopeful augury, as I told the Treasurer, of future support for astronomical ventures.

It is commonplace to say that we live in an era of unprecedented technological, social and cultural change. I am inclined to think that ours is one of the two most rapid periods of change, the other being the three decades of the 'belle époque' before World War I. The French philosopher Charles Péguy argued that 'in the period 1880 to 1913 the world has changed more than in the time since Jesus Christ'.

This period was marked by the development of telephones, electrified cities, motor cars, gramophones, mass circulation papers, X-rays, aircraft and aerial bombardment, not to mention post impressionism, Cubism, jazz, Stravinsky's *Rites of Spring*, quantum theory, relativity ($E = mc^2$) and Sigmund Freud.

I want to begin by talking about the changing patterns of work in Australia and then go on to discuss the Canadian concept of 'truncated development' which seems to be, I regret to say, an appropriate description of our situation.

Australia in my view has gone through a 'post industrial revolution' since the 1960s, with a paradigm shift in employment and trade away from the developmental model of the post-World War II era. In my book *Sleepers Wake*, my essay 'Industry and Development' and in my Labor Economists Lecture 'Technology, Development and Employment', I have discussed these shifts at length.

In *Sleepers*, I set out in an Appendix what I impertinently called 'Jones' Seven Laws'. If I rewrote the book now, I would add an eighth, although in importance I would place it first.

'Employment levels are culturally determined'.

It is the *culture* which determines whether a 16 year old should be at school or in the labour force or whether the appropriate retirement age is 55, 60, 65 or 70. This is not to discount economic factors (which come first in most analyses) and human psychology as well.

However, I would argue that it is postcodes which determine life-styles and life-changes far more than technology. A recent survey by the N.S.W. Education Department indicated a more than 90% retention rate for high school pupils in the Bligh state electorate, including Woollara (2025)

compared to less than 15% in the electorate which includes Broken Hill (2880) – that is of year 1 school entrants, there was a more than 6:1 difference in the numbers who stayed on to Year 12.

Regional, class and ethnic factors are all critical in determining employment aspirations and employment levels.

In “working class” areas it is taken as absolutely axiomatic that the great majority of fifteen to nineteen year olds will be in the labour force competing for work. In “middle class” electorates there are totally different aspirations.

In addition, as Raymond Williams, doyan [*sic*] of English social critics has pointed out we have adopted the very odd principle (that has been built into modern English education) that those who are slowest to learn should have the shortest time to learn, while those who learn quickly will be able to extend the process of learning for as much as a further seven years.

For two hundred years ever since the Industrial Revolution began, we have taught people that life without work is meaningless and when work is withdrawn, not surprisingly, people feel diminished.

“Middle class” people with their adaptability and flexibility, enter the labour force late, often in their 20s, move in and out of careers and localities as easily as they move in and out of marriages, they break the continuity with working holidays and overseas travel, and can leave work early or late as it suits them without worrying too much about whether they will have 35, 40, 45 or 50 years of it. They are generally relaxed about adapting to new technology. People employed in the new ‘Information’ sector are overwhelmingly “middle class”. “Working class” people suffer from considerable cultural rigidity, often being anchored to a particular job type and to a specific region. Home ownership is a factor which ties them to declining regions – ‘Who would buy my house if I move?’, they ask. They often start work at 15, expecting a 50 year end-on stretch (long service leave notwithstanding). They dare not get off the treadmill, even temporarily, for fear of never getting back on. At 65, many self destruct when compulsory exclusion from work means curtailment of income, some loss of life’s purpose and an end to the primary social relationship, often followed by rapid physical deterioration.

Australia’s capacity to adopt and pay for an appropriate range of life and work styles for its people will depend to a large extent on whether we are able to take advantage of development opportunities selectively and quickly.

‘TRUNCATED DEVELOPMENT’ AND THE ‘X’ INDUSTRY

On a recent visit to Canada (January 1984) I was struck by the almost morbid resemblance between many elements of the Canadian and Australian economies: both of us immensely resource-rich, but with the commanding heights of the economy in foreign hands, manufacturing in long-term decline, and reduced share of world markets and a sense of frustration about failure match rates of growth in newly developing nations.

I was grateful to be able to discuss these problems in Ottawa with officers of the Science Council of Canada, the equivalent of ASTEC, and in Montreal with members of the GAMMA institute, a think-tank comprising staff from Montreal, McGill and Concordia Universities and the Ryerson Polytechnic. (GAMMA has some parallels with Melbourne University’s Institute of Applied Economic and Social Research until its recent changes).

Dr. J.M. Gilmour, Director of Research at the Science Council, delivered a valuable paper 'The Industrial Policy Debate in a Resource Hinterland' at a symposium held by the Academy of Technological Sciences in Canberra, October 1981 on 'Manufacturing Resources of Australia (Gilmour 1982), and I draw heavily on it for what follows in the next section.

The Canadians apply the useful term 'truncated development' to describe a superficial, stunted form of industrialisation, characteristic – at least until recently – of their economy and still true of ours. As Gilmour says, after World War II, 'tariffs promoted industrialisation by invitation', but this promoted products rather than indigenous firms and to a large extent foreign factors of production – capital, technology and management – substituted for local ones.

'Truncation occurs when a subsidiary does not carry out all the functions – from original research to marketing – necessary for developing, producing and selling its goods' and also describes the general tendencies of foreign firms to allocate roles to subsidiaries which serve the global interests of the parent, such as limitation to an assigned market.

There are several adverse consequences of truncation:

1. Subsidiaries are unable to initiate new products or develop new markets and are increasingly dependent on the parent. Factors which would encourage innovation, flexibility and producing new products for world markets are almost invariably absent.
2. The diminished structure of subsidiaries makes them dependent on the parent for components, subassemblies, designed, services and finished goods for resale with adverse effects on the balance of payments, significantly reducing the multiplier effects of industrial growth.
3. Foreign owned subsidiaries are constrained from exporting, first because they never intended to do so, and second because they are usually assigned products that have no international sales potential. (In Canada when foreign firms export they are predominantly inter-corporate transfers and not part of free market trading).
4. The range of employment generated in local subsidiaries is limited to management, process work, transport and routine services: there is little if any scope for professional, scientific, assigned and overseas marketing functions.
5. There is a severely dampening effect on technological capacity and innovation. 'Most subsidiaries are technologically dependent, have little or no innovation capability, and are unable to generate products with international sales appeal.' When multinationals transfer technology it is done in such a way that rarely results in a spin-off of technological capability to other local firms. There is no problem with technological transfer – the products of Ford, Hoechst, Union Carbide or ICI are only a telex or telephone call away – but only the branch office benefits directly.

Canada has the reputation for being the only non-banana republic with a higher degree of foreign economic penetration than Australia.

Certainly the percentage of effective foreign ownership in major industries in Australia was extraordinarily high in the last year they were recorded (1972-73) and there is little to suggest that the pattern has changed since then:

Motor Vehicles	99.8%
Plastics	94.3%
Processing aluminium	91.2%

Petroleum	90.8%
Agricultural chemicals	85.7%
Basic chemicals	78.0%
Pharmaceuticals	77.8%
Industrial chemicals	75.2%
Electronics	75.2%
Construction equipment	59.9%

In Canada, as in Australia, classical economists and free-marketeers have blamed the failure of manufacturing on short production runs and sub-optimal production scales and, as Gilmour says, ‘took a theological leap in directly and wholly attributing ... competitive problems to tariff protection’. This was naïve and superficial without considering the basic problem of truncation. To condemn as non-competitive industries in Australia which were explicitly programmed not to compete seems to be as unfair and absurd as insisting that non-vertebrates should show some backbone.

Australia has been consistently decreasing its dependence on tariffs but has been unfairly condemned as hard line because it has been frank about honestly declaring its tariff position. Other countries are notorious for applying non-tariff barriers. Even within the ostensibly free-trade Europe Common Market, the transfer of certain goods from, say, Germany to France can be maddeningly slow, uncertain and frustrating – far more costly than the imposition of a tariff. The problems of placing many of our products in Japan where severe import quotas are imposed are legendary.

In Canada, as in Australia, an alternative economic view to the free-marketeers is being put both inside and outside Government and public service, that of the ‘economic nationalists’ who argued that interventionist policies were needed (before all tariff protection disappeared) to prepare for international competition. This meant combatting the combined impact of high costs, low productivity, general technological weakness, lack of innovation and lack of entrepreneurial initiative.

Gilmour identifies five major areas of concern by Canada’s economic nationalists (and you will judge for yourselves their relevance here):

1. ‘Excessive reliance on development of natural resources is undesirable. The nature of international trade is changing and the areas of Canada’s traditional strength are now facing increasingly sharp competition.
2. ‘Resources are not sufficient to offset deficits in secondary manufactures and services’, and he points to Canada’s total dependence on imported capital equipment in drilling, excavating, mining, oil and gas.
3. ‘The high capital intensive nature of resource extraction present few opportunities for large scale employment growth’ and Canada’s unemployment rate was consistently the highest in the OECD during the 1970s and is higher than Australia’s now.
4. ‘Any shift in demand away from Canada’s export staples or any bottleneck in supply ... would pose a crucial threat to the Canadian economy’.
5. ‘The complement to a large trade surplus in sales is a large deficit in manufactured goods. This is the staple trap ...Canada’s trade surpluses are generally found in those commodities for which the long-run income elasticity of demand is quite low. This means that as foreign incomes grow, demands for those products grow less than in

proportion to income. In contrast, Canada's deficits are in manufactures and service, i.e. items for which the income elasticity of demand is fairly high.

The Canadians have put a heavy emphasis in the last two years in focussing their efforts in a comparatively few areas, applying the 'niche' approach with success. Being part of that enormous North American economic engine can be both a threat and an opportunity. The danger of overlay by their powerful southern neighbour is always present (the analogy of making love to an elephant has often been used) and for a long time Canadians seemed to have a permanent and massive inferiority complex ('Being Canadian means always having to say you're sorry'). On the other hand the sheer size of the North American market – when opportunities open up – and physical ease of penetration make it potentially very lucrative. The Canadians have gained world markets with telecommunications equipment, specialised computer applications, the impressive 'Telidon' on-line data bank, instrumentation and process controls and some space technology.

Bell Canada, Mitel, Northern Telecom, Infomat, Glenayre, Western Research, Bytec-Conterm and many others have internationally recognised brand names – in Australia we have none. It is not that we have a bad reputation in brand name goods – we simply have no reputation at all.

We used to export Australia's Sunshine Harvester – now the brand name belongs to Canada's Massey-Ferguson.

For Australia and Canada there is a need to recognise the changing international environment, and there are penalties for slow learners.

World markets are approaching saturation for a widening range of products of which cars and TV sets are obvious examples and this has been accompanied by the rapid growth in productive capacity from newly industrialised countries – South Korea, Taiwan, Hong Kong, Mexico and Brazil. The large scale aircraft industry appears saturated with only two firms – Boeing and Airbus – still in contention.

There is another factor which deserves notice. I drew attention to it in *Sleepers Wake!* and so does Gilmour 'The occurrence of major product innovations with the power to create large and entirely new markets and industrial branches has been slowing down over the past forty years (in part due to the cyclical nature of innovation) ... The tremendous expansionary benefits from the last great burst of major product innovations ... have been harvested'. As I wrote in *Sleepers*, where is the 'X' industry which some unthinking technological optimists assert will rise in manufacturing in the same way that cars, planes and electrical industries arose in the past? The inventive peak of what I have called the 'Third' Industrial Revolution' occurred between 1942 and 1979, coinciding with the era of full employment. The 1970s marked a significant decline in major discoveries, although many new technological refinements were introduced. In aviation, for example, the jumbo jet dates from 1968 and the supersonic Concorde from 1969: the wide bodied jets of the 1970s were not innovative. In micro-electronics, large scale integrated circuits date from 1969 and the micro-processor from 1971. Magnetic bubble memories were developed in 1966 and the 'Josephson junction' in 1968: since 1970 their capacity has increased enormously, but again few new concepts have emerged. Orbiting space laboratories and communications satellites were put into service in the 1970s based on techniques first used during the space race nearly twenty years earlier. Lasers and radio telescopes were products of the 1960s.

Clearly service employment will continue to be the overwhelming dominant employer for the foreseeable future.

In 1780 John Adams, later to become the second President of the United States wrote these words from Paris to his wife Abigail:

‘I must study politics and war that my sons may have liberty to study mathematics and philosophy. My sons ought to study mathematics and philosophy, geography, natural history, naval architecture, navigation, commerce and agriculture in order to give their children a right to study painting, poetry, music, architecture, statuary, tapestry and porcelain.’

This reflects the concepts of the ‘hierarchy of needs’ which the psychologist Abraham Maslow wrote about in his *Motivation and Personality* and which is abundantly illustrated in the changing nature of our labour force. Humanity starts with basic needs for food, water, shelter and goods on to increasing needs for gourmet cooking, Perrier water, sophisticated and specialised habitations, both stationary and mobile, together with individual demands for information, leisure and culture. We move away from staples towards CD players and Mozart piano concertos.

The option is still open to make the 1980s a creative era in which as Denis Gabor said, Mozartian man (or woman) can evolve.

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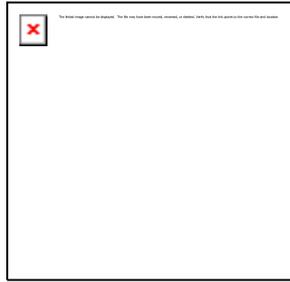
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