AUSTRALIAN HIGHER EDUCATION RECONSTRUCTED?

ANALYSIS OF THE PROPOSALS AND ASSUMPTIONS OF THE DAWKINS GREEN PAPER

Edited by

Grant Harman
&
V. Lynn Meek

Department of Administrative and Higher Education Studies, University of New England, 1988
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Contents

Acknowledgements v
List of Contributors viii

Introduction and Overview 1

Chapter 1
   Address
   by J.S. Dawkins 13

Chapter 2
   The New Challenge for Higher Education:
   Growth, Increased Outputs and New Directions
   by Gregor Ramsey 19

Chapter 3
   Educational Profiles, Funding Levels, and
   Co-ordination
   by Don McNicol 41

Chapter 4
   Analysis of Specific Funding and
   Resource Allocation Proposals
   by Peter Karmel 53

Chapter 5
   Higher Education Demography
   and the Green Paper
   by W.D. Borne 65

Chapter 6
   Flexibility and Future Labour Needs in the Light of
   the Green Paper: a Consideration of the EHW Factor
   by Denis J. Davis 73
**Chapter 7**  
The New Binarism?  
*Staffing Aspects of the Green Paper*  
by Roger Scott

**Chapter 8**  
Economies of Scale  
by C. Watson

**Chapter 9**  
Economies of Scale and National Provision of External Studies  
by Ross Harrold, Warren Musgrave and J. Baldry

**Chapter 10**  
Lessons From Recent Experience With Mergers  
by Grant Harman and V. Lynn Meek

**Chapter 11**  
Amalgamation and the Operation of Multi-Campus Institutions  
by Jillian Maling and Bruce Keeps

**Chapter 12**  
Post-Binary Arrangements and Diversity of Provision  
by P.B. Botsman

**Chapter 13**  
The Management Implications of Change  
by R.B. Cullen

**Chapter 14**  
The Australian Research Council  
by Don Aitkin

**Chapter 15**  
Concluding Remarks  
by Grant Harman and V. Lynn Meek

**References**
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Introduction and Overview

Education should be regarded as an investment which yields direct and significant economic benefits through increasing the skill of the population and through accelerating technological progress. ... Economic growth in Australia is dependent upon a high and advancing level of education.

*Report of the Committee on the Future of Tertiary Education in Australia, 1965*

The winds of change are blowing hard on Australian higher education. In October 1987, after ten years of operation, the Commonwealth Tertiary Education Commission (CTEC) was abolished - with little public debate - and replaced by an advisory body: the National Board for Employment, Education and Training (NBEET). Three months earlier the educational portfolio had been reorganized, creating the Department for Employment, Education and Training (DEET). December 1987 saw the release of the Green Paper on Higher Education - *Higher Education: A Policy Discussion Paper* - in which the government foreshadowed a large scale restructuring of Australian higher education. The first national conference on the Green Paper was held at the University of New England (UNE) on 16-18 February 1988. This volume contains the proceedings of that conference.

The contributors consider the Green Paper and the policies it proposes from various angles. Gregor Ramsey and Don McNicol provide insiders' views on how the new system may (or may not) work. While both contributors are about to change roles*, placing themselves on the receiving end of Commonwealth government policies, their experience with co-ordinating higher education at the national level allows them to provide insights into the future shape of Australian higher education.

Professor Peter Karmel, at the time of the conference just retired from the Vice-Chancellorship of the Australian National University, has never been an outsider to Australian higher education. Although a title he would not claim for himself, Professor Karmel is the "Godfather" of post war Australian higher education. The structure of the new system and how it might be funded is, at the moment, anyone's guess. But no one is better placed than Professor Karmel to speculate on future possibilities and their ramifications.

* Dr Gregor Ramsey is now Director General of the New South Wales Department of Education and Professor Don McNicol is the Vice-Chancellor of UNE.
Not surprisingly, the Minister's paper does not diverge substantially from the philosophy and policies of the Green Paper. But Mr Dawkins does clarify a few of the substantive issues. On the other hand, Dr Davis critically analyses the economic philosophy and assumptions expressed in the Green Paper, and Professor Borrie provides the demographic detail on which to judge whether the government's hope of significant expansion of student numbers is feasible.

Whether or not the binary line truly has been destroyed, Emeritus Professor Scott crossed it when he shifted from being President of the Academic Board at the University of Queensland to Principal of the Canberra College of Advanced Education. His analysis of the impact of the government's proposals on staff profiles, recruitment, renumeration and internal relationships is informed by a dual point-of-view and experience.

The Green Paper has caused all Australian academics and administrators to be concerned with the question of institutional size. Watson and Harrold, Musgrave and Baldry take the government to task over the notion of economies of scale. Professor Watson, in particular, asks, as an outsider, that the government get its argument right and claim educational, not economic, advantages for larger institutional units.

The supposed link between institutional size and the willingness of government to fund an institution for a broad range of teaching and research activities has again placed the question of merger back on the Australian higher educational agenda. Professor Harman and Dr Meek have been researching institutional amalgamation in higher education for some time and draw a few lessons from past mergers that may be applicable to future consolidations (the preferred word for merger used in the Green Paper). Dr Jillian Maling has not only analysed mergers, but lived through amalgamation as a senior administrator. Her description of the difficulties of managing multi-campus institutions should give pause to anyone contemplating merging institutions in dispersed geographical locations merely to increase size.

The Green Paper essentially is about establishing a "unified national system of higher education". But Australia is a political federation, in which the states have the main constitutional responsibility for all forms of education. Dr Botsman does not let the federal government forget about state rights, while Dr Cullen sees that the states also have responsibility for ensuring the quality of higher educational programmes, as well as for funding specific activities to meet particular local needs.

While Professor Don Aitkin did not tell the delegates how to fill out their grant application forms for the Australian Research Council, his chapter charts the possible future direction of research in Australia from the perspective of someone in a position to influence its course. However, as Professor Aitkin admits, his influence is marginal: the structure, character and function of Australian research is determined by the motivations of the researchers themselves in the context of what governments and the community are willing to support.

The Green Paper is about change, and the chapters that constitute this volume are about the intended and unintended consequences of suggested government policies. No contributor has accepted the policies uncritically, but nor has anyone unquest-
The Green Paper has its strengths and weaknesses. Basically, it is a discussion document, leading to a White Paper, about the future of Australian higher education. That means that it is about the future circumstances that the generations to come will have to cope with. Change in a democracy involves dialogue, and if positive outcomes are to be achieved by the government's initiatives, then a dialogue between the academy, government, private enterprise and the community in general must take place. It is in this spirit the present volume is published.

Each chapter in the book contributes to our greater understanding of what the future shape of Australian higher education may look like. But what the reader of any conference proceedings misses is the information exchanged semi-formally during discussion periods and informally at the bar. Leaving aside David Lodge's Small World, it is impossible to document all the dynamics of a conference. However, it may be worthwhile to recount some of the main issues that arose during discussion.

The New Structure. The Green Paper speaks of its suggested changes as a deregulation of higher education, and it talks about enhanced institutional autonomy and a free market. But how "free" will this free higher educational market be when government sets the parameters in which all negotiations will take place? It may be plus ça change, plus c’est la même chose: the substitution of one centrally controlled bureaucratic apparatus for another.

Some participants (Scott in particular) noted that while the abolition of CTEC heralded the end of the binary system as Australians have known it for over 20 years, the Green Paper policies may result in a new "binarism". According to some, the new binarism will differentiate the haves from the have-nots. It will differentiate between institutions reaching the magic figure of 8000 EFSTUs (plus), funded across their full range of teaching and research functions, and smaller institutions funded for teaching only. It will create two classes of academics: highly paid professors in the professional schools and technologies, and more poverty stricken teachers of classics and humanities. It will divide institutions (and faculties within institutions) between those that directly serve the economic recovery of the nation, and those that will have limited resources to comment on the social and cultural consequences of such activity.

If the new binarism results in an economic and status hierarchy between and within institutions, it hardly lays the basis for a unified national system of higher education. The government does not seem to want to adopt the "equal but different" philosophy of the Martin Committee, a philosophy founded on questionable premises anyway.

Others were less pessimistic about future structures. They saw opportunities for significant growth and innovation in the policies of the Green Paper. People thought it likely that a more liberal system of credit transfer would enhance student mobility,
and greater support for staff development was welcomed. They argued that institutions should take more responsibility for charting their future and that restrictions on entrepreneurial activities should be relaxed. Past structures were seen to have supported a false image of Australian higher education. As well as a subordinate position accorded colleges, there always was a hierarchy of institutions amongst both universities and CAEs. There had also been competition for research funding, and a more focussed channelling of scarce resources into research should not to be rejected on principle. The idea that private industry should shoulder a greater financial burden for the support of the research from which it benefits was not questioned. There was some doubt, however, whether industry would come to the party in a big way.

While changes to Australian higher education have been occurring quickly, some questioned whether the pace could be maintained. They noted that the government does not have in place the structures or personnel to manage the new system. The government will need to negotiate educational profiles with individual institutions, while simultaneously working towards regional and national objectives in relation to educational programmes, graduate output and the targeting of research funds. This will be a complicated task indeed.

The expertise developed over many years and available to government for managing the national higher education system was lost with the abolition of CTEC and the scattering of its personnel. The National Board has yet to find its feet, and what the effective relationship will be between NBEET and DEET is not at all clear. In fact, it became clear during discussions, that there is the prospect of a good deal of competition between NBEET and the Department over which body will have the right to negotiate educational profiles and sign higher educational contracts. This competition is more than a demarcation dispute between a government department and a related advisory body. The degree of independence from direct government influence that is to be enjoyed by Australian higher education may be determined by the outcome of the competition.

Most conference participants considered that direct contact between government and higher education institutions ought to be through the Higher Education Council within NBEET. Hopefully, the Higher Education Council will have some staff of its own, and the Chairman will be able to conduct negotiations with institutions and discuss with the Council and the Board the broad allocations, relativities in funding, and so on. This is how commissions/councils of this type traditionally operate. There are strong arguments why the advice of the Council and the Board to government should be made public. Among other things, this will provide the greatest protection for institutions in their dealings with government.

There was some support for the proposition that the exact shape of the new structure mattered less than an emphasis upon quality educational programmes. The system ought to be "programme driven". At present, the quality of some educational programmes is questionable. It was said that educational programmes need to be continually evaluated and adapted if they are to meet student and community needs. If people become fixated on processes - on budgets, territory or autonomy - the goals
of the Green Paper will not be achieved, and there will be need for another confer-
ence in five or six years time to see where things went wrong.

Not only will government take time to build effective structures for long term
planning, but also institutions themselves must now take more responsibility for
planning. Participants noted that Australian higher education institutions have been
particularly weak in relation to planning. The lack of strategic planning evidenced
in universities and colleges in the past was attributed to two main factors: budget
uncertainty and the centralizing influence of CTEC.

In the early part of the 1970s, the triennial submissions, which constituted one of
the many forms of forward planning, were constructed on the expectation of growth.
Some submissions were more realistic than others; some simply were large shopping
lists. Each triennial submission stated the number of students an institution proposed
to enrol, and every institution wanted new buildings. Resources were expanding,
and since people did not know how much money they would have in four or five
years time, they simply asked for the resources to fund every thing on their shopping
list. This was not what one might term "strategic planning".

Since about 1977, funding for higher education has not kept pace with growth in
student numbers. Resources allocated per student - rather more so for colleges -
have fallen significantly. For the first few years after 1977, administrators and aca-
demics thought that this was merely a horror episode which would go away in two or
three years time. They were wedded to the notion that development meant growth in
enrolments, in the number of courses offered, in staffing, and in recurrent funding.
It took institutions, and particularly individual academics, into 1982-83 before they
realized that things were not going to get better.

Institutions now have increased opportunities for strategic planning, so long as
they accept the basic premise that funding is unlikely to increase beyond present
levels. There was a view expressed in the discussions that strategic plans ought to
be in two parts. First, there ought to be a plan that sets out the objectives an insti-
tution hopes to accomplish over the next five years or so, based on the assumption of
a constant level of funds. Second, there ought to be plans which represent major
new developments which require funds of their own.

Of course, planning costs money. There are costs involved in evaluation, in im-
proving the management capacity of academic staff, in general staff development,
and so on. These costs are largely ignored by the Green Paper. On the other hand,
in conducting strategic planning, there is a need for procedures that do not involve
endless discussion. Many of the basic plans need to be generated at the "grass roots"
level, and consultation is necessary. But there have to be limits, and complete
agreement on any plan is impossible. More efficient management structures, and
less time spent in endless committee meetings - "discussing amongst 25 people or
more for hours", as one participant put it "whether the faculty should give Jimmy
Bloggs credit for history I" - could release resources for planning and other activi-
ties.
Higher Education and the Economy. The idea that there is a direct relationship between higher education and economic recovery - between the number of engineers and technologists a society produces and its GDP - was severely questioned. The Green Paper seems to imply that the economic prosperity of such countries as Japan and the U.S.A. is a direct result of their high participation rates in higher education and their number of graduates produced in engineering and the technologies. But "reverse causation" may possibly constitute just as plausible an explanation, i.e., Japan and the U.S.A. have high participation rates in higher education because they have sound and growing economies. Moreover, while the government may shift resources to engineering and the technologies, it has no effective strategies for inducing more students to enrol in these disciplines, nor is government able to guarantee their employment upon graduation. It is important to recall that not many years ago high unemployment rates amongst engineers gained national publicity.

Australian higher education is mostly "student driven". Despite the desire of government to have an engineering led recovery of the economy, if students do not subscribe to that view and vote "with their feet", the government's national priority will count for nothing. Any priority that government decides to set will have only a marginal effect on enrolment patterns in institutions because students, not the institutions, must be persuaded. And students, at times, seem to be remarkably "unpersuadable" by government policy-makers. If an engineering/technologically led economic recovery is somewhat doubtful, it is questionable whether resources should be used to produce more engineering type graduates unless industry is growing and is prepared to take greater responsibility for the effective utilization of graduates.

On the other hand, it appears to be an over-reaction to suppose that government intends to starve to death the humanities and social sciences in order to feed the technologies. It is a question of balance. The Martin Committee, more than twenty years ago, proposed a strengthening of engineering and the technologies, but, in fact, a much greater proportion of growth in higher education numbers since then has occurred in the non-technological subjects. What is required, according to some well-informed people, is the restoration of an equitable balance in the funding of the various major discipline areas.

Many participants were disappointed that the Green Paper took little account of the education of women and their place in the workforce. There is a higher proportion of the 15-64 year old age group in the workforce than ever before, almost wholly resulting from the increase of women in the workforce. But if women are going to have employment across a broad range of occupations there must be significant changes in men's attitudes, women's attitudes and employers' attitudes. This raises the matter of what should be taught in the general education (non-engineering/technology based) area, for the arts, humanities and social sciences play an important part in shaping social attitudes. What is taught through general education subjects largely will determine the type of technology and the type of work strategies that will adopted in the future.
Introduction

The idea of direct linkages between higher education and economic growth has been discredited at least since the 1970s. Thus, it is curious why the economic argument is being used now by the Minister. Possibly, the Minister fears that a bankrupt Australia will be unable to afford an expensive modern system of higher education and that there will have to be a shift of resources away from education. But if this is so, why should we try to expand and change the structure of the system at this time? Why not wait for better times? If the proposed changes are a response to increased demand for more student places, that is another matter. If expansion is to be sought in response to a demographic wave or in response to an increased participation demand, then there is no need for growth to be justified on economic grounds. What should be argued for is social equity and a demographic requirement to provide service.

Consolidations and Numbers. The number of institutional amalgamations suggested since the release of the Green Paper is remarkable indeed. In the light of past experience, a number of the currently proposed mergers make little sense, either on educational grounds or in relation to the rationalization of resources. Some of the proposed mergers seem motivated by the simple desire to form institutional combinations that will achieve the magic figure of 8,000 EFTSUs. Government seems unlikely to favour institutional amalgamations that have little educational rationale or potential for significant financial savings. However, according to the Green Paper, merger will be a prerequisite for many institutions to join the new unified national system of higher education.

Discussion clarified the point that there is neither one type of merger nor one type of multi-campus institution. To some extent, all multi-campus institutions suffer from the "tyranny of distance". But there are various ways of managing multi-campus operations. One of the basic questions to resolve in a multi-campus structure is whether to centralize administration on one campus, or disperse administrative functions amongst the various campuses. Because of the problems of access resulting from the dispersed pattern of Australia's population, educational functions require some duplication in a multi-campus operation.

Clearly, merger is nothing new to the Australian scene. But participants were worried about the destabilizing effect of constant structural change in Australian higher education. The mergers that resulted from the so-called "Razor Gang" of the Fraser government in 1981 caused great upheaval, and many of the current merger proposals are even more extensive in terms of structural realignment. There are even some proposals that mention "de-amalgamation". It was pointed out, however, that all this change might be more apparent than real. By continually shifting the component parts of the system, governments can appear to be doing a great deal to promote change, while in actuality accomplishing very little indeed.

But mergers have several potential advantages. If a small institution is absorbed by a larger one, there are likely to be economies in the administrative overheads, staff costs, student services, maintenance and supervision of the grounds, and so on, if these activities are centralized. There is, in principle, also an advantage in having
a bigger mass of resources to control and distribute. The problem, however, is that when a small unit is joined onto a large unit, it is necessary to "get tough" with the small unit. If the essence of the small unit is preserved, then the possible advantage to be gained through shifting resources may not be realized. In the opinion of some participants, draconian measures are required to secure advantages out of merger.

Mergers also may result in a more rational educational profile by avoiding straight-out duplication of courses. There are plenty of cases where institutions are offering similar courses with small enrolments where it is probably better to offer just one course.

The figures mentioned in the Green Paper regarding viable institutional size seem arbitrary:

To become part of the unified national system institutions should use the following benchmarks for student load:

- 5,000 EFTSU for an institution to have a broad teaching profile with some specialised research activity; and
- 8,000 EFTSU for a relatively comprehensive involvement in teaching and with the resources to undertake research across a significant proportion of its profile. (p. 34)

But it also seems that these numbers, or some variant, will be used to classify institutional functions. The figures stem, to some extent, from the Efficiency and Effectiveness Review. But the Review was talking about criteria for establishing new institutions, with particular reference to the western suburbs of Sydney and the Northern Territory.

As was pointed out, the number of Australian institutions that have a complete profile of educational programmes is very small. Essentially, only the old capital city universities in the major states offer an extensive range of courses in all major professional areas, including medicine, veterinary science, dentistry, agriculture and engineering. Even major research universities like the University of New South Wales and Monash University have a more restricted range of programmes, while the newer universities offer an even more limited range of courses. The leading institutes of technology, though they have a variety of course offerings, similarly, do not cover the full range of major fields. Thus, the idea of an institution covering the complete range of teaching and research functions is quite vague.

There seem to be advantages in institutions, on the whole, being larger. But to produce a series of artificial consolidations just to reach the "magic number" of enrolments makes little sense, particularly when campuses are far apart. Mergers between campuses far apart involve costs: communication, transportation and administrative costs. Where institutions are near neighbours, there may be good sense in amalgamation.

The Green Paper not only proposes to classify institutions according to number of enrolments, but also intends to shift the funding formula towards graduate output rather than student intake. Funding by number of graduates will need to be con-
Introduction

Research. It was believed by many participants that resources for research are likely to be concentrated more in the larger and more powerful institutions. If there is to be increased competition for research money - i.e., if it is not going to be arranged so that everyone gets a share - the great bulk of funds appear likely to go to a limited number of institutions. Allocation of money to research in the past has not been entirely related to institutional size. In terms of ARGC grants, one or two small institutions have attracted more money than some larger institutions. But, in general, the bigger institutions and the older ones have had a stranglehold on competitive research funding. And if more money is devoted to research, the larger institutions are likely to be the beneficiaries, unless some side-conditions are established.

The Green Paper argues for the separation of teaching and research funding. In this sense Australia will move towards the Canadian model, where there is separate funding for teaching and research, and away from the British model where the two activities are inextricably linked.

At present, around 30% of the funding for universities is notionally for research (the actual figure may be smaller). A proportion of this amount will be retained by government for redistribution to those research areas viewed as high priority. There will be a certain amount of "taking from the left pocket to put in the right pocket". However, no one knows at this stage how much will be taken from university recurrent grants for redistribution. A number of participants argued that the universities should be able to retain some of their research loading for the purpose of funding internal initiatives and locally determined research priorities.

Some participants feared that the Australian Research Council (ARC) would ask everyone to do applied research. But it seems that the intention is not to focus on so-called "applied research" per se - it is rather futile to attempt to give precise defini-
tions to applied and basic research anyway. Rather, the ARC will ensure that the fundamental research it funds is related in some sensible way to what earns the country's "bread and butter", to what makes a useful and pleasant society in which to live and to Australia's geo-political situation.

In the past, there has been a good deal of duplication of research activities in Australian universities. If one university starts research in a certain area, there is a tendency for neighbouring universities to follow suit, lest they miss out. The intention of the ARC and the Green Paper is to break this pattern of duplication. The ARC will identify which institutions have the strength to engage in particular kinds of research, and fund them accordingly. Unnecessary duplication will be avoided. Of course, because of Australia's federal system, some duplication will persist since the states will have their own "research barrows" to push.

There was some complaint that a policy of concentrating research funding was inequitable to the general run of academic staff. During discussions it was made clear by Professor Aitkin that the ARC is not interested in the equitable distribution of resources. Universities are about excellence, and if there is not enough money to go around, then the excellent will get it. 1978 was the last year that ARGS was able to say to the Minister that it had funded everyone it thought ought to be funded. By 1988, the ARGS was not funding literally hundreds of people for research it thought merited funding.

The process of establishing national research priorities will be a complicated task. This will depend on dialogue between the ARC, government, industry, institutions and individual researchers. It is hoped that funding for all research will increase, but funding for research in areas of national priority is likely to increase at a faster rate than for "curiosity led" research. But priorities in Australian university research have always been set by academics, not by public servants. The problem is to establish a more orderly mechanism and a more self-conscious one for determining research priorities.

With regard to graduate training - particularly for the Ph.D. - there was some support for the view that Australia should adopt a version of the North American graduate school system. Supporters of this view assume that the British master/apprentice model has long outlived its usefulness and that the heterogeneity of people now attempting higher degrees in Australia means that they are often quite deficient in basic skills. Consequently, a great deal of retraining has to be done since graduate students are often ill-prepared in some areas and require course work. The British graduate model that Australia has adopted relies on very highly trained undergraduates who have specialized in their field from about the age of 15 years. Australia does not have students like that. Moreover, the success rate at the Ph.D. level in Australia is abysmal; why is the country spending so much money on Ph.D. students when about half of them fail to graduate?

Research was also mentioned in a different context. There is a large body of Australian and international literature on the structure and function of higher education. But the Green Paper takes little or no account of this research in advancing many of its policies. In places, it appears that the Green Paper seems to have based
Introduction

policies more on popular community attitudes, even prejudices, than on rational argument and available data. For example, there is no supporting evidence provided for the claim that academic decision-making systems are cumbersome and inefficient. There is no supporting evidence for the statement that larger institutions are more flexible, cost effective and responsive to community needs and demands than smaller ones. There is no reference to the growing body of literature that looks at the complex relationship between higher education and the private sector; and so on. Possibly, if the government is serious about the application of research to pressing national problems, the process should start at home by applying the available research to policy development.

Change seems to be upon Australian higher education. Will we have a new order, or Martin revisited? The Green Paper relies on economic considerations, yet, as John Kenneth Galbraith in The New Industrial State (p.413) notes, a question beyond the reach of economics is "how extensively should education be accommodated to the needs of production as opposed to the needs of enlightenment". Galbraith continues:

Economists in high office regularly warn that economic judgements are not the total judgement on life. This warning having been given, economics is then, routinely, made the final test of public policy. The rate of increase in income and output in National Income and Gross National Product, together with the amount of unemployment, remains the all but exclusive measure of social achievement. This is the modern morality. St. Peter is assumed to ask applicants only what they have done to increase GNP.

Whatever the future order, complacency is not part of it. The conference and the contributions to this volume raise more questions than are answered. But the volume demonstrates that Australian academics, administrators, students and "fellow travellers" are not complacent. They are concerned.
I intend to address some particular issues raised in the Green Paper, and to touch on some of the responses to it.

The high level of participation in this and many other conferences and seminars, together with the dozens of thoughtful and considered responses from both academics and other interested parties, indicates just how seriously the Green Paper proposals are seen to be to the future development of higher education in Australia.

I must say this interest and response is encouraging - I have previously lamented the decline in political and social activism on our campuses. I now note with particular concern that students at the University of East Anglia in the U.K. - once a hotbed of radicalism - recently elected a rat, called Ken, to the presidency of the students association.

Ken stood on policies of free beer and softer toilet paper - clearly a coherent platform. He was then found to be misnamed: in fact he was pregnant. I hope that the phenomenon of electing rats to office does not spread into the parliamentary arena, although there are those who would be unkind enough to suggest that it already has.

In fact, it is interesting to reflect on the political, economic and social circumstances which prevailed when Australian campuses were centres of student dissent. Despite the widespread activism aimed at ending the war in Vietnam - and conscription with it - and eliminating poverty and injustice, students then shared with the rest of the community a fundamental complacency about the economic future of this country. Our assumptions about what was possible have now proved to be ill-founded.

In essence, we thought that we could rely on trading goods in our traditional export industries of mining and agriculture. We failed to develop economically competitive "valued added" industries in services and manufacturing. In education, we failed to place a sufficient premium on knowledge and skills in the sciences, maths, technologies and related disciplines, and failed to nurture and support those able innovators and researchers, whose work, in many cases, found its way overseas due to a lack of interest in Australia.
The central vulnerability of our economy has now been exposed. The need for urgent sustained adjustment and reform is pressing, including reforms in our education and training system. As I pointed out in a recent speech:

Unless the pace of reform is maintained, within a decade we would lose our credentials as a developed, industrialised country. Our choice stands a stark one: we either become a legitimate partner with the rapidly developing countries of our region - or we become an impoverished anachronism, out of place in our own region.

It hardly seems necessary to make the point that while a broadly based, well-developed system of higher education can contribute to economic growth, its very existence is contingent on the growth and strength of the economy. But there are those who seem to believe that higher education institutions will somehow continue to be well resourced, even if the country's economy goes into a tail spin.

Against this realization the Green Paper proposes to give higher education a greater role in the process of economic development and adjustment. It offers sustained growth in graduate numbers to the end of the century, it outlines measures to strengthen institutions, and make them more responsive. It proposes a new relationship between institutions and the Federal Government. It establishes a process for careful and rational consideration of the options for resourcing the required growth. But more than anything, it requires institutions to strengthen and streamline their own decision-making processes.

Why then, are there some who see what by any reasonable test is a pretty attractive package as a threat?

According to one critic, it is because the whole thing is too closely allied with common sense. She claims it is dangerous to trust our common sense as it has little awareness of its own historicity. Well that may be the case, but to most people, common sense is not a bad basis on which to organize one's affairs, and to plan for the future.

What her concern illustrates is lack of understanding about the nature of the relationship between higher education institutions and governments, a relationship which has been a source of tension ever since higher education institutions began to receive a significant proportion of their income through public funding. Some other responses to the Green Paper have reflected this concern.

The OECD publication *Universities under Scrutiny* sets out the dilemma posed by this relationship - in a climate where institutions are being asked to respond to economic imperatives at a time of expenditure restraint - rather well. It states:

All this poses severe problems for policy-makers and institutions alike. Innovation and adaptation to new tasks on the part of what are, *de jure* or *de facto*, largely self-governing institutions are facilitated by conditions of growth and the availability of additional funds. When growth is absent and money short, collegially-governed universities do
Higher education institutions point to the need for autonomy and freedom from political interference, to the need for a detachment from short-term economic and political imperatives, and they demand support for fundamental and long-term research and scholarship (the results of which cannot be quantified or measured in the short-term, or in terms easily understood by the general community). They also stress the essential role played by the arts and humanities in sustaining cultural and philosophical traditions, and in developing new areas of critical thought and discourse.

The Australian Government supports institutions in their view of their essential role. But all governments are increasingly required to scrutinize and justify every area of public expenditure, as they seek to meet the challenges posed by an increasingly harsh and unforgiving world.

The political and economic imperatives which we all have to confront have made explicit the tension which has always been implicit in the relationship between higher education institutions and governments since institutions have been publicly funded. But based on some of the responses to the Green Paper, some people seem to be oblivious to the reality that governments have for many years been involved in issues which go to the heart of the internal administration of institutions. Governments have approved courses - or otherwise. They have funded specific research projects, targeted growth to particular disciplines in accordance with current priorities, considered building programmes and even approved minor works and maintenance. As many of you could testify, the traffic of administrators between higher education institutions and Canberra has probably made some air routes viable, particularly when a previous government took some arbitrary decisions about the future of many institutions.

The Green Paper proposes that a new and more effective relationship should be constructed. It makes an implicit distinction between government interference in the decision-making processes of institutions, and government requiring decisions to be made by institutions, such that they can more quickly and efficiently respond to changing circumstances.

The Green Paper’s proposals reflect the latter approach. A system whereby institutions are funded through a single operating grant on their educational profiles based on what they do, not how they are classified, and which would eliminate the duplication between Federal and state bodies, can hardly be seen as a greater intrusion by the Commonwealth into the autonomy of institutions.

In a climate of fiscal constraint, and with the economic difficulties we are experiencing, governments have a legitimate role in ensuring that broad national priorities are reflected in the activities of higher education institutions. Similar requirements exist in all other areas of public administration, and higher education institutions cannot expect to receive ever-increasing funding in the form of untied and unconditional grants, with the Government merely acting as banker and post office.
A proper balance between institutional accountability and autonomy implies that institutions will need to strengthen their ability to deal effectively with Government. The web of cumbersome decision-making processes prevalent in many institutions will need to be reformed so that institutions can make policy in a timely and decisive fashion, whilst maintaining adequate levels of internal participation and accountability in decision-making.

To accomplish this, the Green Paper proposes that institutions review their management structures. Additional funds may be allocated by the Government to train senior and middle level managers, and for managerial reviews.

Another concern which has been expressed is the process by which national priorities will be determined. These priorities will not be determined through some kind of secretive bureaucratic process. The new National Board of Employment, Education and Training will provide integrated advice across the portfolio, with specialist advice on higher education issues coming from the Higher Education Council.

But higher education has a more significant role to play in this process. In my view, institutions must play an even more vigorous role in shaping and influencing the national agenda and national priorities by providing intellectual leadership, leading and shaping community attitudes through independent and vigorous critical analysis in all matters of public policy and debate.

Indeed, those who hark back nostalgically to a golden age when universities were said to have played that role, unfettered and unconstrained by government, in fact look back on a fairly cozy relationship between universities and successive conservative governments, a relationship based on the same complacent assumptions to which I have referred. At the time - the 1950s and 1960s - when Australia required critical responses, and an alternative vision about this country and its future was sorely needed, all but a few voices in our universities were mute.

Let me now comment on the issue of funding and how this impinges on the relationship between government and institutions. The peak of Federal Government funding for higher education came in 1974 and 1975. Apart from providing a slightly misleading base against which funding levels are now assessed, that period probably misled many institutions in their planning assumptions.

For example, rather than critically scrutinizing their activities and concentrating on their strengths, institutions attempted to maintain all of their activities. Even when courses were not viable, duplication in course provision existed or there was a major over-supply of graduates in particular areas. In fact, where significant adjustments were made, these were usually the result of Government action, such as in teacher education, or through forced amalgamations.

We do not propose to act in such an arbitrary manner. Rather, the Green Paper proposals are designed to develop a climate in higher education in which institutions see changes in their profiles as integral to their regular planning and resource allocation processes. As some factors - such as staffing conditions - are not solely within the power of institutions to determine, the Federal Government will assist them to
implement the required changes through the specific reforms outlined in the Green Paper.

The retention of a certain percentage of base funding each year for re-allocation to institutions on a competitive basis is an integral part of this process. It will help to drive the adjustments which are necessary in the internal profile of institutions.

As a result of decisions taken in the past, essential support services in areas such as libraries and teaching materials have been eroded. Cost reduction measures have been imposed across the board, instead of more fundamental judgements about institutional priorities being made. In fact, many administrators would now probably make different decisions if they had realized earlier that we were never going to return to the levels of annual increases in funding of the mid-1970s. Those increases should be seen as an exception rather than the norm, and certainly not a realistic benchmark against which to measure subsequent Government commitments.

Some commentators have pointed to a decline in grants to higher education as a proportion of GDP, as evidence of a capacity of the Government to increase outlays for higher education. The real decline in funding has been in the capital area, with actual recurrent outlays continuing to increase, although not quite as rapidly as student numbers.

With a strong commitment by this Government to expenditure restraint, significant increases in expenditure on higher education can only be funded through increases in general taxation, or through some contribution by the beneficiaries.

However, the suggestions that some have made that expenditure through Government outlays on higher education should return to the levels of the mid-1970s are fanciful. Not only are they not economically feasible, they are seen by others in the community as selfish, given the pressing demands of other groups, particularly the most disadvantaged, who are most unlikely to participate in higher education to anything like the extent of those who are making these additional claims on Government resources.

The Government has made a commitment to maintain the same real level of expenditure on higher education. But given the substantial personal benefits that accrue to the participants in higher education, and the funding gap of between $900 million and $1.2 billion by 2001 identified in the Green Paper, the work being undertaken by the Wran committee in examining and setting out the available funding options is essential to the outcomes. The Wran committee's considerations, and decisions on them, will determine whether or not the resources will be available to support growth and meet many of the other existing and emerging needs of the system.

If expenditure on higher education as a proportion of GDP is to rise, it is most unlikely to rise through increased Government outlays. Alternative sources of funding must be found, but the case for increasing public outlays will be strengthened by the degree to which institutions respond positively to the proposals in the Green Paper.

The issue of how the necessary revenue is to be raised must be confronted directly by academics, administrators and the governing councils of institutions. After
all, it is funding for institutions themselves which is under debate, not some remote item in the Federal budget. Broadening the funding base of institutions will also enhance their independence and autonomy as they will be less directly reliant on Government for their funding.

Before concluding, let me also emphasize the importance of the proposed intersectoral arrangements involving TAFE. TAFE has an important role to play in providing growth in the higher education system. In many regional and rural areas where access to higher education is limited, arrangements between higher education institutions and TAFE colleges offer significant benefits to local communities. More generally, effective credit transfer arrangements, both between and within the higher education and TAFE sectors, must be instituted to ensure that students can more easily move between institutions. Educational pathways can be matched with the new career structures which are developing in a number of industries.

In summing up, let me reiterate that the Green Paper is essentially about establishing processes and structures whereby administrators and others working in higher education institutions are able to take the necessary and often tough decisions to give their institutions the strength, vigour and flexibility to grow and to contribute to the economic and social well-being and intellectual development of this country.

The Green Paper proposals, and the new portfolio arrangements, are a balanced and measured response to the dilemma posed by the relationship between governments and higher education institutions, having regard on one hand to the traditional role of higher education institutions, and on the other, to the responsibilities of elected governments who fund them.

Academic leaders must be able to relate and respond to the national priorities which governments have a responsibility to determine, but not to impose. Moreover, the entire academic community has a responsibility to help shape those priorities.

Effective internal management is the greatest guarantee of freedom and autonomy higher education institutions can have. The reforms outlined in the Green Paper will enable institutions to grow and respond quickly to changing needs, in a more secure and stable environment.

If, through the process we are currently engaged in, we achieve this outcome we will - together - have achieved a great deal.

Thank you.
2
The New Challenge for Higher Education:
Growth, Increased Outputs and New Directions

Gregor Ramsey

Introduction

I considered beginning by tracing the history and development of the new directions promoted in the Green Paper on Higher Education which we are to discuss; their provenance, if you will. The path would have started perhaps in the sixties - a period of expansion and change in higher education, when its whole purpose and function was under question. We would have paused to contemplate major landmarks like the Martin Report, the Williams Report, the Kirby Report and the Review of Efficiency and Effectiveness in Higher Education. Such a gentle introduction would have nothing to do with putting forward new ideas. Quite the contrary in fact. By recapitulating a history with which we are all familiar, and tracing a logical development from "then" to "now", my purpose would have been to reassure, to demonstrate that these ideologies and demands have not come out of the blue.

Judging by the tone of the debate on the Green Paper, however, the academic community does not feel unduly threatened by the new directions, and such an approach is not necessary. There are some concern and some disagreement certainly, but, with a few minor exceptions, the comments are based on at least an understanding of the Government's purposes and are couched in rational terms. In general, there is a high level of acceptance of the ideas put forward in the Green Paper within the community. One reason for this acceptance is that it is a paper outlining action not, as many reports have been, a review of the existing situation.

In focussing on the Green Paper, this conference aims to:

- provide a forum for informed discussion among leaders of the higher education community and senior people in government;
- evaluate assumptions and data on which proposals for new directions are based;
- critically review key specific proposals for change; and
Definition of Higher Education

The first issue is to define higher education. What do we encompass when we talk about higher education? Higher than what? First, and obviously, it must be higher than that obtained by satisfactorily completing six years of secondary schooling or some other equivalent base. This is easy enough, although such a starting point has implications for the development of undergraduate higher education courses. The twelve years of schooling generally ends with two non-compulsory years which should have a significant "preparation for a future vocation" component, including, of course, preparation for post-school education in all its forms and particularly TAFE and higher education. There are implications, too, for institutions in assessing applicants offering qualifications on "some other equivalent base". The advanced education sector, for example, has had considerable experience already in this because of its high commitment to mature age and part-time students.

Such a definition gives a reasonable starting point for higher education. What about the outcome? What process must the student go through to have experienced higher education? Higher education should be conducted at a significant level and

explore possible implications and likely outcomes of new policy directions.

It is part of the process of developing a policy discussion paper into a Government policy statement. As the Minister for Employment, Education and Training said in the foreword to the Green Paper:

We must ask the institutions themselves what they see as their role in the social, cultural and economic lives of Australians, and ask them to examine how effectively they are discharging their roles. The answers to these questions, and the policies they suggest for the future, can only be satisfactorily resolved through a process of critical assessment and consultation that involves governments, institutions, firms and the broader community working together (p.iv).

What we are involved in is the higher education version of consensus leading to a contract between the Commonwealth Government and the institutions it will fund. The Government is putting forward its objectives for higher education and its ideas on how they may best be achieved. The Government is saying that it is prepared to effect these changes if institutions in their turn implement appropriate changes as well. The questions it is putting to institutions are: "To what extent can we agree on objectives? How can we work together to achieve common goals?"

One of the conference aims is to evaluate the assumptions and data on which the proposed new directions are based. I shall concentrate on those which show a significant change from previous practice or appear to evince opposition.
over a sufficient period of time for the experience to be clearly identifiable and assessable. The person must be changed positively in an academic, vocational and personal sense and that change must be apparent. This is less easy to quantify but fortunately there are now national criteria developed through the Australian Council on Tertiary Awards (ACTA) which define the minimum sufficient period and level as being the equivalent of two years full-time study post-year 12, meeting guidelines set down for an associate diploma. Diplomas and degrees obviously require more time and more depth - the associate diploma constitutes the minimum criterion for what may be defined as higher education.

This definition allows institutions other than existing universities and colleges of advanced education - TAFE colleges, for example - to offer higher education courses, and thus broadens our definition of higher education.

In broadening the definition of higher education, we must also recognize that the clientele is changing. The retention rate to Year 12 is moving towards 55-60 per cent of the age cohort. As the proportion increases, so does the ability range, range of knowledge and breadth of interest of those completing secondary school and wishing to pursue higher education. All students successfully completing secondary schooling surely have an equivalent right to pursue higher education. The benefit brought by a better educated community is sufficient reason in itself. Yet all students wishing to continue education beyond the end of school would neither wish nor have the ability to pursue the same kind of education. Courses which were appropriate when 10% of a cohort went on to higher education are no longer so when the proportion is over 30%. Diversity becomes a key element and more broadly designed courses are essential. As the nature of the student clientele changes, so must the nature of higher education.

Higher Education Institutions

In the past, it was possible to give an institution a label, "university" or "college of advanced education" or "institute of technology" or "TAFE college", and be confident that the label conveyed basic information on that institution's functions, courses and funding source. Whether the concepts conveyed by those labels were in fact universal or appropriate is another question. The concept was there. To some extent it is still there. Higher education institutions are places of high level teaching, scholarship and research, with the overwhelming proportion of their resources devoted to teaching. The former sharp divisions between higher education/non-higher education are considerably blurred, as are those between universities and colleges of advanced education.

This end to sectoral division as a basis for educational planning is merely the continuation of well-established trends. Perhaps a more fundamental change in our concept of the nature of higher education institutions occurs in our assumptions about sources of funding. Traditionally, our higher education institutions were viewed as state institutions which are federally funded and the debate has been about
whether all funding should come from federal sources and what contribution, if any, the states should make to their maintenance and expansion. This approach has produced in institutions an assumption that governments will look after them and maintain them. Too many institutions have watched their funding levels decline over the past decade, made adjustments internally and survived in the vain hope that governments would eventually redress levels of funding. Until comparatively recently, government policies in some instances positively discouraged any signs of initiative or entrepreneurial activity in institutions. The attitude of the Government in the early 1980s towards the marketing of educational services overseas is an example.

It is not surprising, then, that some of the negative reactions to the Green Paper are rooted in the traditional belief that the very existence of a higher education institution means that it has a right to an adequate level of funding from Government. The change to "Green Paper" thinking is akin to that of a parent who says to a child "You don't any longer have a right to board and pocket money. From now on we are going to have a contract whereby I will pay you for doing the jobs I want done." I have sensed a tone of bewilderment in a few articles attacking the Green Paper, a suggestion of "It's not fair - you have changed the rules." Well, yes, the Government is in fact proposing to change the rules. That is what the whole exercise is about. And about time, too, many would say.

So, how shall we now view higher education institutions? One way, which puts them in a more positive light, is to regard them as educational resources from which a range of bodies may wish to buy educational services. While such a perspective has, to an extent, been implicit in the way in which educational institutions have been attracting funds for consultancy and research, it is only recently that such a view has been taken in the offering of courses.

Currently, the Commonwealth is by far the largest "purchaser" of educational services from our higher education institutions, the purpose of which, one assumes, is to meet national needs. Increasingly, though, the states are "buying" places to meet their own needs. Victoria, for example, is funding an additional 1200 places annually. More recently, the advent of overseas students paying full fees is an example of a service being purchased by an individual or an overseas country. Increasingly, the public and private sectors are buying educational services in terms of specially designed courses from our higher education institutions.

In the past it has been up to the Commonwealth to keep all the institutions of higher education viable. To some extent this has meant that the larger, often more entrepreneurial, institutions have been held back to ensure the viability of others. In future a more important criterion will be - does the institution offer courses which someone wants to buy? If an institution does not, and it can find no source of funds, then clearly it will languish, and to my mind deserves so to do.
Funding on Output Measures

Up until now, funding of higher education institutions has been broadly based on input measures - the student load and course mix. Such a funding mechanism is acceptable when institutions are established by a funding authority and expect to be maintained by that authority. Given the changes I have just been discussing, however, funding criteria must also change.

To put it in the simplest term, the Government's aim now is to consider "buying" a number of graduates in specified fields rather than simply to support a student load. When a funding authority wants to purchase a service, then the cost and quality of the output are important factors. This is where fundamental changes to assumptions about the basis of higher education funding must occur. How is this going to affect our thinking? A simple example on the cost of engineering graduates may assist. Engineering has been one of the priority areas for growth at least during the 1985-87 triennium. The CTEC would negotiate with institutions to increase their planning ranges on the understanding that intakes into specified courses, engineering, let us say, would be increased. Recurrent funding to these institutions would also be increased at an appropriate rate from the funds allocated for growth in that year. An advanced education institution might be funded at a rate of about $10,000 a place for undergraduate engineering, while a university might be funded at about $12,000 a place. If engineering intakes are to be increased, clearly, advanced education is cheaper. But if the aim is to produce more engineering graduates, then graduation rates as well as intakes must be taken into account. Using some preliminary findings from the discipline review of engineering, we found that, averaged over seven years, the apparent graduation rate for undergraduate engineering in universities was about 59% whereas for advanced education it was 45%. Does this mean that the university product in the end had a cheaper unit cost? Well, it depends.

Assuming, for the sake of the illustration, that about half the drop-out is in first year and the rest is spread over the rest of the course in both of the sectors, and that the funding rate I have just quoted continued, then the university graduates would have cost the Commonwealth about $62,000 each and the advanced education graduates about $59,000 each: closer than the comparative input measures might have suggested. This is taking apparent graduation rates averaged for each sector. If I chose to look at the university with the highest apparent graduation rate as against the advanced education institution with the lowest rate, assuming funding rates as before, then the university graduate looks like a bargain at about $58,000 while the advanced education graduate has cost the Commonwealth about $70,000.

But this rather simplistic calculation raises as many questions as it answers. If advanced education had been funded at the same level as the university sector, for example, would the apparent graduation rates also have been higher? There are significant variations between institutions with similar intakes and funding levels, there are also some variations between different years at the same institutions. Why? I
wonder how many institutions know what the average cost of one of their graduates really is.

I use the example to show how output funding could change the way we have traditionally thought about financing higher education. It is interesting also because it shows very clearly how important graduation rates are; quite a small change will produce a significant variation in unit cost. If advanced education apparent graduation rates were the same as the university rates in the example I have used, for instance, and the other factors remained the same, the cost per advanced education graduate would have been about $52,000. This would represent a considerable saving, about three-quarters of a million dollars per intake of 100 students into advanced education undergraduate engineering.

A brief discussion of the effect on institutions and their departments or faculties of this proposed shift to output funding may be helpful:

- student failure would become a problem for institutions as well as students.

While I am not suggesting that institutions do not at present care about students who fail, such a change in resource allocation procedures will provide a compelling reason for them to examine their record, improve their selection processes and teaching where this is necessary, and provide bridging and supplementary programmes. In the longer term, institutions may be expected to put more emphasis on teaching skills in recruiting staff than may have happened previously. These are all desirable developments.

Another desirable development is likely to be that:

- appropriate credit will be given for work undertaken elsewhere, to shorten the time students need to spend at the institution.

The most notable features of the present credit transfer arrangements are their ad hoc nature, the problems caused by incompatibility of courses across different institutions and excessive concern with integrity of qualifications. There are joint moves by AVCC and ACDP to resolve some of these, but there is still a long way to go. Institutions need to adopt a more flexible approach; it would be appropriate, for example, for institutions to assume that full credit should be given, at least for previous study in a similar course at any other higher education institution, unless special circumstances exist. At present, most institutions appear to work on the contrary assumption, that is, that the norm is for no credit, or minimal credit, to be given. There is room for further accommodation with TAFE, too, and for the use of provisional credit. After all, any student in the end has to meet the level of performance expected by the institutions to complete the course, whatever the level of credit given.

To end this list - which is by no means complete - of the likely effects of funding institutions on output measures, let me put forward a somewhat controversial suggestion:
To return to the example about the apparent graduation rate in undergraduate engineering courses, I wonder sometimes how seriously institutions take failure rates. Or rather, I wonder about the assumptions that underlie their attitudes. Some institutions seem to be proud of a high failure rate, as if it demonstrates a high academic standard. Since we fail so many and the successful are so few, the argument runs, those who do get through must be the best. I think myself that the high failure rate is just as likely to be related to poor selection procedures, inadequate counselling of applicants before enrolment and bad teaching. So often, too, the failure is in first year. Do first year students always get the best teachers? But in any case, this is not the point I am making: if the courses offered suit the needs of only a small percentage of students, then we need different courses as well to meet the needs of more of the students, in addition to better selection processes.

Quite apart from the distress caused to the students themselves, it is a very wasteful way to pick the brightest students, to fail half of the intake in the first year. Some courses should be designed to suit students who would be likely to fail traditional courses. For example, there is a need for diplomates as well as degree graduates, but in some cases it may be more a question of the nature of the courses and the way in which they are presented.

If we agree with the point I made earlier, namely, that every person satisfactorily completing Year 12 wishing to pursue higher education should be able to do so, then the era of elitism in higher education is over. The clientele for higher education is growing, it has to grow to ensure the nation's economic survival, and this means that we now have to direct our energies towards making higher education appropriate and useful for all who may enter. To make it so, of course, also entails consideration of the students' objectives in studying and of their employability once study is completed.

Participation in Year 12 is climbing throughout Australia. There are many reasons for this: the expanding range of more appropriate Year 12 courses; the change in unemployment benefit arrangements; success of affirmative action measures. So the demand for higher education will increase. The big question is: what effect will this have on "standards"? There is some overseas research evidence that quality does not decline in proportion to the increase in participation - a very encouraging finding!

Also, if the Government does fund higher education by "buying" graduates to meet its own needs and on behalf of other employers to meet the requirements of the marketplace generally, then to represent good value, graduates have to be employable. Cost is not the only criterion; the quality of the product is also important - and quality must be judged not only on what they have learned in a course, but also on how well they perform in their new employment.
Quality in Education

This issue is one which seems to be the subject of some concern and misunderstanding. Although much of the response to the Green Paper has been positive, the concerns expressed appear to centre on perceptions of:

- a threat to the quality of education; and
- an increase in government control over institutions.

First, quality. What do we mean by quality in education? What are the factors which make one institution, course or teacher, of high quality while others are not? I have seen the argument expressed that quality resides only in departments whose staff conduct research and supervise Ph.D. students. There would be many who would disagree with this judgement, including those American Liberal Arts colleges and French Grandes Ecoles which are predominantly dedicated to teaching and also enjoy favourable reputations. In the Australian context, I would argue very strongly that there are many institutions of high quality which do not offer Ph.D. studies and which are not involved in research, at least basic research, to any great extent. We used to call them colleges of advanced education! I simply do not believe that quality is inseparable from research. It never was considered to be so in our universities prior to the 1950s (or to Martin) and it is not so now. Any judgement of the quality of an institution and its products must be based on that institution's function. An institution that defines its purpose as teaching is not to be judged second-rate because it does not conduct basic research. Nor is this a peculiarly Australian view, based on the old, outdated, binary view of higher education. The recent OECD publication, *Universities under Scrutiny*, discusses the relationship between teaching and research:

Policy makers and funding bodies, anxious about the effect of spreading diminishing resources too thin, are increasingly challenging the intimacy and necessity of the research-teaching relationship ... (p.54).

After listing the advantages of research involvement to academics and those claimed for students, the study notes moves in most member countries towards a concentration of research effort such as has already taken place in the United Kingdom.

It is clear that in the face of resource constraints, international competition and the dangers of a slide into mediocrity, actual and potential differences between universities within national systems are today receiving greater emphasis.

All this has led some policy-makers to argue that whilst it may indeed be the case that the role and function of some universities cannot be
fulfilled without research and teaching across a wide disciplinary field remaining in close association, with all the implications this has for academic organization and funding, perhaps not all universities have, or should have, the same role and functions or undertake the same range of research activities. On this view, there is nothing incongruous about using the term "university" to describe an institution devoted almost wholly to teaching, the synthesis and dissemination of existing knowledge, ...

It is also maintained that pressures on academic staff to engage in research, especially in the less prestigious and well-funded institutions, can diminish the attention they are able to give to teaching and its improvement, narrow their interests in ways that reduce their competence in some parts of the courses they teach, and offer a false model to a student body most members of which will not follow an academic career and who will need to apply their hard won knowledge in practical settings (p.56).

My intention is not to enter too deeply into debate on the merits of research. Rather, my concern is to challenge the assumption that quality in higher education means research. Good teaching implies good scholarship - a knowledge and critical examination of what is going on in research in a field, a commitment to the truth, and an ability to stimulate and extend questioning minds.

It may be that there is some confusion between the concept of quality and the concept of excellence. Any judgement of an institution's quality must be made on the basis of its function or purpose. An institution may see one of its primary functions as to train computer engineers, doctors or pig farmers to the level which enables them to enter their chosen vocation and perform well. The quality of such an institution, at least in relation to this function, will depend on how acceptable its graduates are to prospective employers, how successful they are in their work, how successful the institution is in attracting, selecting and retaining suitable students and so on. Excellence is something different. I believe it was my colleague Professor Dick Johnson who said that excellence lies in the exceptional performance of characteristic functions. By definition therefore excellence is confined to a small minority.

Of course there is a fundamental place for excellence in the Australian higher education system. But for excellence rather than quality to be the goal, many are destined to be failures. When some academics oppose the Green Paper proposals on the ground that the quality of education will suffer, I suspect that their concerns are in fact with excellence in scholarship and research. There is no way that every higher education institution can perform at an exceptional level in all fields of scholarship, as indeed OECD countries have already found out. Unfortunately, the academic community tends to view anyone who performs at a level less than the ideal as "not up to scratch" - that is, a failure. A batsman who falls short of Bradman's
skills is hardly a batsman at all in current parlance, and yet the more cricketers we have with a range of skills, the healthier the game is. And so it is with higher education; we need a range of institutions, teachers and courses, some will have a commitment to the highest level of excellence in scholarship, others a similar degree of commitment to effective teaching. All will have the same opportunity to demonstrate the quality of their courses, whether associate diploma or masters degree, and their students will know quality teaching and a quality education when they experience it. They will also know what excellence is, although many of them will experience it by observing how their own personal best relates to the personal best of others, no matter what their sphere of endeavour.

Institutional Autonomy

In the Green Paper context two questions need to be addressed. What does "institutional autonomy" mean? What assumptions underlie the bland statement "higher education institutions have autonomy"? Such words appear frequently in letters prepared by public servants in response to indignant complaints from citizens that such and such an institution has refused to admit them as students or failed to give them credit for studies undertaken elsewhere or in some other way behaved so as to disadvantage those citizens, in their eyes. When the phrase is used in this way, what we mean is that institutions make their own decisions on admission standards and other academic matters. No one has suggested that this fundamental autonomy is in jeopardy. Governments can and do ask institutions to give particular attention to certain groups in the community, disadvantaged students, for example, or candidates for subject areas in which the Government wishes to increase participation, but they do not attempt to dictate to institutions on individual cases or on matters of academic judgement. Institutions are the responsible arbiters in these matters.

It is true that demands for relevance and accountability from higher education institutions have increased over the past twenty years or so. Perhaps to be strictly accurate I should refer specifically to universities at this stage; advanced education institutions have always been expected to be responsive and have had less autonomy in some areas. Colleges of advanced education have been required to submit courses for accreditation by state authorities, for example, whereas universities accredit their own courses. CAEs have been more subject to controls in allocating their resources than have universities. But to stay with universities for the moment, the OECD study, Universities under Scrutiny, documents the increasing demands placed on universities:

... universities in OECD countries today confront common problems which derive from a single central fact: they are being called upon to play an ever more important part in the restructuring and growth of increasingly knowledge-based national economies, at the same time as they are under pressure from cuts in public spending, demographic
downturn, diminished legitimacy, and the consequences of rapid growth in the 1960s and early 1970s, including, in some cases, distorted age profiles of academic staff (p.8).

Most institutions will be able to identify with this situation. We are familiar, too, with the factors cited by the study as components of the pressures for change:

. a larger and more varied student population.

We have only just begun to come to grips with the implications for course and curriculum decisions.

. the rapid pace of scientific and technological development.

To some extent this has increased the demand for career oriented courses of study, vocational education, but at the same time, a tendency to narrow specialization is dangerous, because of likely obsolescence and the inability of such courses to equip graduates with the capacity to deal with rapid change.

. the enhanced importance of innovation and knowledge in modern societies.

Employers place considerable premium on technical expertise and occupational competence, within an educational process which makes employees more adaptable. Learning is expected to be a lifelong enterprise, extending the range of credentials which might be gained.

. the economic importance of a skilled labour force.

This trend has had wide publicity in recent times, and particularly since the Kirby Report where the importance of education and training in the economic health of the country was clearly argued.

In addition to these pressures, Universities under Scrutiny suggests that higher education institutions are also required to accommodate to changing concepts of knowledge, which have arisen from major developments in all discipline areas, not just the sciences. The effect of these developments has included the breakdown of traditional disciplines, the proliferation of specializations and the emergence of "new maps of knowledge". The study stresses, however, that these pressures on higher education institutions are not pressures for them to adopt new and different functions but rather:

... a broadening of the traditional definitions set within a continuum of functions which cut across and break down the categorical distinctions of the past. The range of the continuum in each member country
needs to be viewed within the global context of the entire system of advanced education, which should include the tertiary as well as the upper secondary sectors. Within such a global view, it is the sector as a whole and not necessarily each institution within it, that needs to be able to fill an appropriate range of requirements. Thus, universities need not be identified. Each can find its proper place along the continuum of university functions (p.101).

The study's emphasis on the need for "a high degree of articulation, communication and co-operation" between all elements in the system to facilitate diversity and student mobility reinforces their point (p.101). All institutions need to develop their own mission statements in order to define their position along this continuum of functions for higher education institutions. As the Green Paper says, "the various, diverse roles of institutions will be defined by means of educational profiles which identify their teaching and research strengths and the areas they wish to build on for the future" (p.3). The Green Paper proposes that institutions will be funded in terms of the teaching and research they do, and not on the basis of their classification on one side or the other of the binary divide.

There seems to be a perception that this process will threaten institutional autonomy and increase government control over institutions. How can this be? Once profiles are agreed, the plan is for institutions to receive one operating grant from the Government, covering all activities, except major capital developments. A level of funds based on the resource requirements of the educational profile will provide institutions with a greater degree of autonomy and flexibility than they had under the previous system, which required them to seek approval from Canberra for any number of minor developments. A single operating grant will allow institutions a greater degree of control over their own internal organization and management. The Government has recognized the need to tackle staffing conditions so that institutions can manage their human resources more efficiently.

Is it perhaps the process of negotiating educational profiles that is concerning some institutions? Are they afraid that their perception of their strengths and weaknesses will not be shared by the Government? Or perhaps it is internal dissent that is causing the problem; chief executives will have to make tough judgements and unpopular decisions.

The following is a summary of the basis for the Green Paper's proposals on educational profiles:

- because of the broad range of functions now required of higher education institutions, there must be diversity among institutions;
- not all institutions can perform a full range of functions;
- subject to basic accountability requirements, institutions are best able to manage their affairs without excessive intervention from outside bodies.
Participation and Equity Issues

The economic arguments for increased participation in education and training are by now so well accepted that they need little discussion. They are well summarized in the ASTEC report *Education and National Needs*:

The factors that are increasing the demand for higher levels of education in the workforce are:

- the increasing importance of knowledge-based industries in world trade, and the fundamental importance of skills in creating comparative advantage in these industries;
- the increasing exposure of Australian industry to international competition;
- technological changes affecting the nature of work which necessitate a more flexible workforce with a higher level of conceptual skills; and
- the breaking down of the guild mentality of many skilled occupations enabling skills to be focussed on productivity.

The productivity of the workforce is dependent as much on its skills as it is on investment in physical capital. Australia requires more than an elite of highly skilled people. The level of skills, particularly technological skills, attained by the majority of Australians is central to the nation's industrial competitiveness (p.1).

In general, Australia trails other trading nations not only in overall participation rates but also in the important science and technology subject areas. The assumptions underlying the Green Paper proposals are that, for the national good:

- the level of participation in education and training beyond Year 12 must increase; and
- the proportion of students in science and technology oriented courses must increase.

Note that I do not say that the number of students in arts or liberal studies courses should decrease. There seems to be some fear that the Government will refuse to fund non-scientific courses and research. This is nonsense. The Government is well aware of the importance of non-science education. As the Minister said last September, in *The Challenge for Higher Education in Australia*:

An increased priority for technological studies in higher education will need to be accommodated within an expanding system which protects the important place of the arts, humanities and social sciences. The Government recognizes the essential contribution made by these dis-
ciplines to the quality of our skill base and culture, and will not relinquish its commitment to their support (p.9).

More recently too, the Minister has emphasized the need for more Australians to acquire competence in Asian languages.

What we are working towards is a shift in the balance between arts and science/technology, not a monopoly for one subject or group of subjects. In fact, if we look at the growth in arts related subjects and the growth in science related ones over the past 20 years, the growth in the arts has been more than twice that of the sciences. Did we have the balance right then, or do we now?

How does this affect the principles of equity? I have seen one comment to the effect that the section on equity in the Green Paper "reads like a minority report". This is a complete misunderstanding. As the Green Paper says:

A critical factor in seeking growth in higher education in Australia is to improve the educational opportunities available to those people who have not traditionally participated in the system. The achievement of the scale of growth discussed in the previous chapters will depend on the capacity of the system to broaden the composition of its student group to include these people and to increase their chances of success once in the system (p.21).

Even if the Government were not committed to improving access for under-represented groups for reasons of equity, the cost benefit of so doing would be reason enough. Unskilled jobs are getting fewer and will continue to do so. For those with low skill levels, only training, or re-training, improves their chances of finding productive work and reducing their reliance on social welfare. To take the position of women as an example, as we know, they are relatively disadvantaged in the Australian workforce, which is highly segmented both vertically and horizontally. That is, women are concentrated in a narrow range of "female" occupations and are also under-represented in higher level positions. This is an unsatisfactory situation, not only for individuals, or for women as a group, but for the country as a whole. In order to revitalize the economy and improve productivity, it is essential to make use of the full range of talent available. *Australia Reconstructed*, the Report of the ACTU/TCD Mission to Western Europe suggests that:

In the countries visited by the Mission, the primary aim of training is to promote economic growth. The second aim in Sweden, Norway and Austria is to increase equity by improving the position of particular groups in the labour market and reducing labour market segmentation. The two aims are viewed as integrated and complementary. Equality of opportunity is perceived as not only a worthwhile social objective in its own right but as an essential ingredient to a well-functioning labour market. In these countries the industrial partners agree
that segmentation is a sign of labour market inefficiency because it lays to waste the creative talents of large numbers of workers. Potential productivity gains are thereby lost, and the national skill base left stunted and constrained (p.112).

The Mission found merit in the view taken by Sweden, Norway and Austria and advocated this approach for Australia:

The pursuit of a more skilled labour force should combine both equity and efficiency. To deny equal employment and training opportunities to all reduces the productive efficiency of the workforce (p.121).

Simply in terms of numbers, women are now well-represented in higher education but they are still under-represented in the physical sciences and, particularly, in engineering. In TAFE, women comprise less than half the students in vocational and pre-employment courses, although the proportion of women in these courses has increased from 39 percent in 1981 to 47 percent in 1986.

There are other groups which are still seriously under-represented in higher education, however. If we believe that native ability in our society follows the normal curve, irrespective of socio-economic status, then we must look among the lower socio-economic status groups to find the "latent able" students who are currently missing out on higher education. Students from high socio-economic status groups have a disproportionately high rate of participation. Aborigines and people living in non-metropolitan areas similarly are less likely to undertake non-compulsory education. If we are to capitalise on the ability of these groups, then it is essential that they be attracted into further education by appropriate courses and supported where necessary by bridging or supplementary programmes to improve their chances of success.

This means that some re-thinking is necessary. The traditional higher education courses which were designed generally for upper middle class school leavers, when higher education was an exclusive occupation, cannot be expected to suit the new clientele. There has been a substantial increase in the demands and expectations placed on the higher education system in terms of its scholarly function and its instructional function. So much so that no one institution can fulfil all functions. I expect to see a spectrum of institutions develop, all serving a specific segment of an ever-broadening higher education system.

Entrepreneurship

There is no question but that the current emphasis on institutions developing entrepreneurial attitudes signifies a basic change in Government policy. For example, significant entrepreneurship in actively seeking out full fee paying overseas students with the full support of Government is only about two years old. In the past there
was a feeling, shared by many institutions, that such developments carried a risk to
the quality and integrity of the education system. Some individuals, I suspect, and
perhaps some institutions too, still have this feeling. Although I have not seen the
argument spelt out anywhere in detail, it seems to be based on the assumption that
once institutions or individuals acquire a commercial interest in the delivery of edu-
cational services, then they will be tempted to compromise their academic or intel-
lectual standards if they should conflict with those commercial interests. Alterna-
tively, the belief may be that the very existence of a vested interest is sufficient to
damage the reputation of the institution for academic objectivity and high standards.

Does this reaction arise from the old ideal of the scholar, untouched by vulgar
commercial considerations, uncontaminated by nationalistic constraints and dedi-
cated whole-heartedly to the pursuit of knowledge? Such a way of life is hardly
possible today - was it ever possible for more than a tiny minority? But this does not
mean that the values on which such an ideal is based must necessarily disappear.
Researchers who would not distort their results in order to enhance their scientific
reputations will surely not do so for personal gain either. It seems to me insulting to
suggest that they might; or that institutions might lower their standards to ensure
that paying customers gained the qualification they wanted. Even apart from the
question of virtue, we all know that such tricks will rebound on their perpetrators
sooner or later, and probably sooner.

But perhaps I am wrong about the prevalence of this opposition to en-
trepreneurial activities. The problem may have more to do with perceptions of the
way in which market forces may operate to the disadvantage of minority interest and
non-priority disciplines; no funding for mediaeval history, for example, so that en-
rolments in "useful" Asian languages can be increased, or a lack of support for basic
research in favour of applied research and development to meet immediate commer-
cial demands. The question of research funding is central to the Government's
higher education proposals. There is no doubt that basic research will continue to be
given high priority in the roles of Australia's higher education institutions and that
Australia will continue its pre-eminence in many fields. My own view is that
widening the range of people brought into higher education and focussing more of
our research effort is likely to strengthen rather than weaken the quality of research
in future.

Australia needs to offer a broad range of study areas to prospective students, at
least at immediate post-secondary level. No country with the population of Aus-
tralia, however, can offer every possible specialization at all levels of higher educa-
tion and certainly no such country can do research in all these areas. We cannot be
excellent at everything. And certainly each state cannot. Since I used mediaeval
history as an example, I have to say that while many arts degree courses would have
it as part of an undergraduate programme, this would be specialization I would be
quite happy to see on offer at a post-graduate level at perhaps only one institution,
not because it is of no economic value but because it is not particularly appropriate
for advanced study in Australia, given that any primary source materials would have
to be imported. We will always have to tap, as we always have in the past, into in-
international resources for research, with people going overseas. What we need to encourage are more centres of excellence in those fields we think suitable to attract to Australia the best international minds in that field.

There is, of course, scope for institutions to develop initiatives in areas such as continuing education courses, courses developed and funded in co-operation with industry or the marketing of services overseas and many institutions are already working on some of these without endangering their integrity or reputation. In the foreword to the Green Paper, the Minister called for a change in attitudes, practices and processes in order to improve the nation's prosperity. He asked the community and institutions to define the role of the higher education system in the cultural, social and economic lives of Australians and to examine institutions' performance in that role.

This challenge to us all by the Minister is surely the basis for entrepreneurship, making it an essential component of higher education. It assumes that the educative process is a partnership among the various interest groups, students, staff, employers and the general community if the country is to progress and achieve the growth and development we expect by the end of the century.

Other Issues

I have tried in this paper to examine the assumptions on which the proposals in the Green Paper are based and to discuss in more detail those areas where significant changes are proposed or where there is likely to be misunderstanding or disagreement. It has not been possible to cover all these areas as I would have liked. Some I have only touched on because they are the subject of other papers in this volume; these include:

- growth rates
- structural proposals, including educational profiles
- specific funding proposals
- research
- institutional management

There is one very important issue which I have not dealt with at all and this is usually referred to as "funding the gap". The Commonwealth has established a Committee on Higher Education Funding to advise on possible non-government sources of funding for higher education. Because this Committee has not yet reported, I do not intend taking up the matter in this paper.

One other issue I must raise is that of institutional consolidations. Has anything changed since the last round of mergers in 1982? I think it has - and quite markedly. As the Green Paper points out, it is not the Government's intention to revisit the savage cuts associated with those mergers. The Government recognizes that some assistance is necessary to make consolidations work and has promised to help by:
contributing to early retirement or redundancy schemes;
giving priority in capital programmes to projects which assist consolidation; and
giving special consideration for growth to newly amalgamated institutions.

There is now much more emphasis on the educational advantages of inter-institutional links and more formal consolidations than simply on cost cutting. I believe there is also a greater acceptance now in the system of the benefits of voluntary amalgamations; the Lincoln and La Trobe merger is an obvious example. The state authorities in South Australia and Victoria are looking at options for restructuring their higher education systems in line with the proposals in the Green Paper, and institutions are involved in developing the options. I foresee a much happier outcome from the 1987 Green Paper proposals than from the 1981/82 round of forced amalgamations.

The Future in Perspective

The binary system we had to this point was a direct consequence of the Martin Report. Its strength was that a disparate group of institutions were brought together to form one cohesive sector, giving them a common purpose and common standards under the umbrella title "colleges of advanced education". Universities were separated from all that, and rightly so at that time. But even then there were some institutions that could well have been included in the university system even though they did not then have the title "university".

I am not sure whether Martin, in proposing the binary system, expected such a simplistic category system could last for all time. No such mechanism for categorizing the higher educational affairs of the nation ever could. The binary system could be sustained so long as there were genuinely two funding systems (as represented by the two Commissions, one for each sector) and there was separate legislative authority for the institutions in each of the sectors. The first weakening of the binary system came with the establishment of a single Commission, CTEC, in 1975. The second came in 1985 when the statutory power of the two Councils of the Commission were converted to advisory status, and the funding of all higher education institutions became part of the one system.

As time went by, protected by the integrity of their sector, the academic programmes of the CAEs strengthened, not the least because the university system was preparing more high level academics than their own system needed. Good academics came flooding into advanced education and those in the CAE system had the opportunity to upgrade. The strong national system of accreditation and registration ensured national comparability of standards although the university sector, to its
between the sectors, taking an importance well beyond the traditional role of univer-

damental change in teacher education that occurred, this has left us with a legacy that I hope can be addressed

unfortunately, since the universities stood back from the massive changes in teacher education that occurred, this has left us with a legacy that I hope can be addressed through the consolidations proposed in the Green Paper.

There were many developments in higher education which weakened the binary system, even in terms of the mythological differences between the sectors. Professionals, except for medicine, veterinary science and law, were prepared in both sectors. Some CAEs had merged with universities to form a single institution. One university was formed from a former CAE. The advanced education sector gradually developed research strengths so that by 1987 the only sustainable difference between the university and CAE sectors was that universities received per capita funding for research while CAEs did not. A binary system begun with such a fanfare had been reduced to such a relatively small difference.

This distinction when used as a generalization became invidious, as artificial distinctions always do, and so the "research" difference became the focus for debate between the sectors, taking an importance well beyond the traditional role of universities which had been unashamedly institutions devoted to teaching and scholarship rather than research per se until after the Second World War. In the new order the universities highlighted their research activity because it was the one issue which emphasized their differences from CAEs. The advanced education sector emphasized their growing research capacity because it was the one remaining difference that "netted" them. In both cases it drew the institutions of both sectors away from their prime role as teaching institutions. We heard much about the quality (or lack of it) of research; we heard little about the quality of teaching.

The problem with the binary system was that it did its job of artificially segregating higher education too well. Certainly by 1987 the system lacked flexibility. Universities were (or thought they were) denied the opportunity of continuing to do what they used to do (prior to Martin) very well - offer shorter courses such as associateships and diplomas at undergraduate level, undertake short courses and adult education. Their education drifted inexorably upward. They lost touch with the wider community which always found them a haven for creative dissent. The CAE sector also got caught up in this upward drift because they had to show the world "they were the equivalent of universities". Not that I am particularly against the upward drift, provided it does produce a better educated, more flexible, more adaptable workforce. It is a natural trend in a society which is becoming better educated - and we all know who stands to gain and who to lose when society in general becomes better educated.

Institutions ought to do what they are best suited to do, and be funded for it, and the full role and function of higher education can not be separated into two pieces. Higher education institutions are now to be given the opportunity to spread their
wings - if not funded by the Commonwealth, then by some other agency prepared to pay for what they have to offer. Not all university departments should do research, nor should they all offer Ph.D.s. This is a dilution of scarce resources the country can ill afford. All universities departments, however, should teach well and be engaged in reflective scholarship. Similarly, not to support those departments in CAEs which have the capacity to do high level research, particularly in areas not undertaken in universities, denies opportunities again that the country can ill afford. Of course, all departments in colleges of advanced education should teach well, too.

The binary system, so important for the effective establishment of a national system of higher education in the 1960s, became a factor inhibiting change and the establishment of an appropriate system for the 1990s. The old system of the 1960s had to go. Such a change was on the CTEC agenda "when the time was right". Like a country obtaining self-government from a colonial system of government, or the removal of apartheid of any kind, the time is never right, particularly for those who have most to gain from the existing system. Now is as good a time as any to achieve it, and this was the view of the Government as expressed in the Green Paper.

Even so, we seem to be ending one binary system and creating another - a higher education system and a TAFE system. I am not uncomfortable about this new binary system, at least for the next decade or so. Let us not, however, make the Martin mistake of expecting that it will remain rigidly in concrete for all time. It is a binary system because TAFE is a states system, funded largely by the states while higher education is to be a national system, funded largely by the Commonwealth. They have very different legislative bases, so my criteria for a binary system, namely, separate legislative authorities and separate funding sources, holds. Binary systems cannot be sustained by myths about what one system does or does not do. Only through separate funding and legislative systems can such a binary system be maintained.

I welcome TAFE in the contribution it is expected to make in Green Paper terms to higher education. There is no special magic that plumbers or electricians are prepared in TAFE while nurses, or teachers or radiographers, are prepared in higher education. There is no reason why plumbers and electricians should be denied higher education just because their vocation happens to be in TAFE. Good teaching, good scholarship (and good research dare I say) know no artificial barriers imposed by bureaucrats. We should expect to see good teaching in all sections of post-school education and research in those environments where quality research will flourish. Roll on the new unified national system with its close links with the states TAFE system. The Joint Planning Committees between the Commonwealth and the states proposed in the Green Paper are important agencies in this regard. They, along with the Joint Consultative Committee established under the aegis of NBEET, are essential to achieve the partnership between the Commonwealth and the states so essential to the success of the new system.

The whole process of consultation, both with institutions and with states, is designed to achieve the higher education version of consensus. The Government knows how important it is to have the co-operation of all parties - institutions, states,
industry and the community in general - if higher education is to contribute appropriately to national objectives. We think larger institutions can be more effective, more flexible, and more efficient, but we have learnt that forced mergers are not the best course. We believe that institutions could be more efficiently managed but we know that only institutions themselves can plan and implement the necessary reforms. In other words, the partnership must be a genuine one. The OECD study from which I have quoted earlier, *Universities under Scrutiny*, stresses this point:

> Just as there exists a pervasive similarity of new demands on the university sector in all OECD countries, they also face a similar set of policy issues. Central to these is the recognition of shared interests between governments and universities and the need to establish processes and mechanisms whereby these interests can be discussed and pursued as joint rather than conflictual ventures (p.102).

We stand poised to enter a new era in higher education. Of course the whole future is not clear, but it never is. When a future is unclear the best system to have is one which is flexible, allows both individual and institutional initiative to flourish, with government, community and business support for what it aims to do. I see the Green Paper as beginning such a new era. It will be interesting to see whether it does.
3
Educational Profiles, Funding Levels, and Coordination

Don McNicol

The Green Paper and Previous Policy

When academics present their ideas they put them in the context of previous work on the topic. However, a Minister's policies are almost always represented as radically new and rarely acknowledge anything which went before them. The ideas in the Green Paper on higher education are generally not presented in the context of previous policy, which has caused some alarm to people confronted with so many apparently new ideas. However, a reading of documents such as the Review of Efficiency and Effectiveness in Higher Education, or Volume I of the Commonwealth Tertiary Education Commission's Report for the 1988-90 Triennium, will reveal that many of the policies in the Green Paper are reiterations or extensions of previous policy.

It would therefore be more accurate to characterize the progress of the higher education system as up (or down) a slope, depending on how one feels about policy direction, rather than a great leap forwards (or backwards).

However, there are some areas where the slope is likely to become a little steeper, and one of these is the reclassification of institutions.

When the CTEC wrote its advice for the 1988-90 triennium it anticipated that the binary system would need to be dismantled, and that new funding arrangements for institutions would have to be put in place for 1991-93. This was several steps further than the Efficiency and Effectiveness Review's defence of the status quo, with the exception of one or two concessions to advanced education institutions in the areas of research funding and the training of PhD students. Now it seems certain that the binary system will have vanished by 1989, to be replaced by the "unified national system" described in the Green Paper.

I will try to spell out some of the implications that this system will have for the classification of institutions, for the relationships between them, and for their funding.
How Universities Have Been Funded

Before speculating about the future, a short review of the past is necessary. In the old binary system it was intended that universities be funded more generously than colleges of advanced education. This was to allow universities to fulfil their joint roles of teaching and research.

The decision about how much money to give each university was based, in considerable part, on how many students in a university were enrolled in each of its major discipline areas. Under Karmel in the days of the Universities Commission, data were collected about the costs of teaching students in the various discipline areas such as Arts, Economics, Science, Medicine, etc., and the average cost data for these disciplines formed part of the formula which ensured some rough parity in funding between institutions with different sizes and discipline mixes.

The situation in the advanced education sector has been different. Until recently, the Commonwealth relied heavily on the advice of state co-ordinating authorities about the distribution of funds for advanced education in each state. There was no general funding formula for advanced education institutions, nor was there complete enough data about student load and discipline costs to construct a national formula.

Educational Profiles

It could be said that, up until now, universities have been funded on the basis of an agreed educational profile. Each university has been given a planning band for its student load for a triennium, and the Commonwealth has agreed to fund it for student load falling within that band, taking into account the mix of disciplines which makes up the load. If a university's load exceeds the upper limit of the band, it receives no more money. If load falls below the band, then the university risks losing funds unless it rapidly corrects its under-enrolment.

Previously, when the Government provided funds for new places, the CTEC negotiated the number, type, and price of these places with institutions. There has also been an understanding that universities would not increase enrolments in certain discipline areas, such as medicine, nor would they lengthen courses without the Commission's prior approval.

Thus there has been a tacit recognition by institutions and by the funding agency that each university has a teaching profile, and an implied contract that it would be funded for that profile.

If this description of past practice is correct, then the response to the Green Paper's suggestion that profiles should form the basis for future funding arrangements is surprising. A number of institutions reacted to the suggestion with distrust, expressing the fear that profiles could become a device for coercion by the Commonwealth.
Educational Profiles

Of course that possibility always existed, and no university has ever expected that it had complete freedom to determine its profile of teaching activities. However, the suspicion is not completely irrational.

Ever since the Efficiency and Effectiveness Review, policy advisors and the funding agency have advocated or threatened sterner action to eliminate subjects with very small enrolments, to create concentrations of teaching activity for expensive disciplines, and to shift enrolments to areas deemed to be of highest priority. The Green Paper makes the enactment of those threats appear much closer than ever before.

There is also considerable uncertainty as to who will negotiate the profiles from the Government side of the table. While the CTEC may not have been universally loved, it was a known quantity. It is still not clear whether the new National Board for Employment, Education and Training or officers of the Department of Employment, Education and Training will play the dominant role in negotiating profiles. In either case, the actual people who will be responsible for the negotiations are unknown. Until these uncertainties are resolved, institutions will remain understandably nervous about the profiling exercise.

Uncertainty and suspicion have been increased further by the Green Paper's reference to two apparently different types of educational profile. The first type, referred to in Section 6.3 of the Green Paper, is the "agreed educational profile", which includes not only that part of the general recurrent grant which supports an institution's direct teaching costs, but also its central administrative overheads, minor works, equipment, and the Special Research Grant. However, Section 9.3 states that "Future Commonwealth general research funding will be allocated in accordance with agreed educational profiles which will identify areas of research strength and concentration". The relationship between these two profiles, and how they will be used to jointly determine an institution's general grant is quite obscure. Not unreasonably, many institutions fear that the reference foreshadows another attempt to separate teaching from research costs, a procedure advocated by Treasury and Finance during the Efficiency and Effectiveness Review.

As a member of a Commission which advocated restraint in the inefficient and unnecessary multiplication of course offerings, I find it easy to agree with the Green Paper's suggestions that there be more discipline reviews, that the Key Centre programme be extended to encourage concentration of effort in both teaching and research.

As the future head of an institution, I will not rest easy until I know with whom I will be negotiating the educational profile of my university, and the ground rules by which those negotiations will be carried out. The delay in announcing the final membership of the National Board, and the perpetual shuffling of senior positions in
the Department of Employment, Education and Training, have not increased the confidence of institutions in the bureaucracy's ability to manage the changes which will need to be made quickly in order to determine the profiles and the funds attached to them for the 1989-91 triennium.

I take the reference to profiles, one of which will provide the basis for general funding and the other for general research support, as a sign that Government would like to separately identify teaching and research costs more clearly than before, and that the Australian Research Council is likely to make some contribution to advice on the level of general grants to institutions rather than being restricted to recommending funding for specific programmes. I also infer that neither the authors of the Green Paper, nor any office in DEET, has the slightest clue as to how this partitioning of teaching and research costs could be achieved. While the financial returns from institutions provide useful information about the relative costs of running a faculty of economics as opposed to an engineering school, they do not tell us how those costs can be attributed separately to research and teaching activities. Nor indeed is it possible to discover how much it costs to train, say, a PhD student in chemistry as opposed to an undergraduate in the same discipline.

However, given this reservation about research profiles, and some puzzlement about how they will enter into grant calculations, I support the Green Paper's recommendation that agreed educational profiles form the basis for determining general grants. The overall costs of running an institution are determined, in the main, by the salaries of its academic staff, and these in turn depend on the student load in its various discipline areas. In most universities, the cost of doing research is marginal to this basic teaching cost. Therefore, if student load in an institution's discipline areas carries the greatest weight in determining its general grant, we have gone a fair way to ensuring rough equity in the distribution of resources to institutions.

Comparing Institutions in the New Unified System

In an ideal national system, it should be possible to compare the funding levels of institutions to determine who is relatively better or worse off. The purpose of making such comparisons need not be to maintain funding parity between institutions, but to ensure that any inequities which exist are intentional, and not accidental.

Illustrations of deliberate inequities in the funding of universities are:

- the so-called "baby bonuses" given to new universities during their early periods of growth, which allowed them to cope with the diseconomies associated with small academic departments;
- additional funds for new ventures such as the Graduate School of Management at the University of Melbourne;
- the recognition of the research role of the Institute of Advanced Studies at the ANU.
Accidental inequities have arisen largely as a result of funding additional student load at marginal rates, particularly during the 1982-84 triennium. Generally, those institutions which took the greatest load emerged from that period relatively less well-off than those whose enrolments remained static. A check of funding relativities between universities in 1987 showed that they varied over a range of about -16% to +16% from standard costs.

Section 6.3 of the Green Paper recognizes that accidental inequities need to be corrected, and it also acknowledges that, at present, it is impossible to compare the funding system in 1989-91. This is because there is no adequate data base of financial and student load data from many of the institutions in the present advanced education sector. The major deficiencies are:

- the financial data provided by CAEs is often too unreliable to estimate teaching costs of different disciplines;
- the Equivalent Full-Time Student (EFTS) measure used by CAEs tends to overestimate student load, and the CAE's equivalent Full-Time Student Unit data (which is used to measure load in the universities) is still very unreliable;
- discipline categories for student load and cost data used by CAEs do not correspond sufficiently to those used by universities for valid comparisons of teaching costs to be made;
- there are considerable variations in the sub-categories of disciplines included by different CAEs in the major discipline categories used by the advanced education sector, making comparisons between institutions within the sector of dubious validity.

Until these deficiencies are corrected, and this may not be until the 1991-93 triennium, funding comparisons between institutions will have to be done with great caution, and, as the Green Paper suggests, the best strategy is to group institutions so that like can be compared with like. The unification of the higher education system will therefore not be able to be achieved in the 1989-91 triennium, and will only happen in the triennium after if both the Commonwealth bureaucracy and the institutions make a considerable effort to establish an adequate data base of financial and student load data. Thus, unless the Commonwealth is prepared to make changes to general grants in the absence of reliable information about funding relativities, it will need to delay making major changes to many CAEs until they are in a position to provide the necessary information about their costs and student load.

Competitive Tendering and Funding Equity

At least two triennia would be needed to correct accidental inequities of the order of 16% variations from standard levels in the university system. The magnitude of the variations in the advanced education sector is unknown, but it is not likely to be less
than that for universities. However, other policies enunciated in the Green Paper may make it impossible for the inequities ever to be corrected.

When the CTEC prepared it recommendations for the 1988 grants to universities it decided to make a beginning of correcting the discrepancies which had arisen as a result of marginal funding. The May Economic Statement required that grants be reduced by one per cent, and instead of applying a flat reduction across all institutions, the size of the cut was made proportional to a university's relative funding position.

Subsequently, when the cost of new student load had been added to grants, planning bands had been adjusted, and so-called pipeline costs had been calculated for students enrolled in the previous three years, we recalculated the relativities and discovered that these additions to load and grants had almost completely masked our attempts to modify the relativities.

One of the major themes in the Green Paper is that institutions in the new unified system will be competitive in their bids for funds. The price paid for new places may vary considerably from one institution to another. The amount of additional load gained by an institution may depend more on the price it is prepared to tender rather than considerations of parity between institutions. The effects of vigorous competition are likely to make it impossible to restore parity. In fact, it seems contradictory to simultaneously espouse a policy for correcting funding inequities and one for encouraging competitive tendering for funds and load. In this respect, the Green Paper reveals its multiple authorship, and, as in the case of the Gospels, offers future students of higher education about who wrote which bits. For those who will manage the institutions in the new system, there will be the spice of uncertainty about how the Commonwealth really intends to allot the money. Many CAEs welcomed the end of the binary era because they expected a unified system would make them equal to the universities. Although some institutions may hang a new sign on the gate, the best guess is that the new system advocated in the Green Paper will not produce that hoped-for equality in funding and research capacity.

My personal preference is that equitable funding arrangements should take precedence over a system which relies on the creation of a quasi-market. I am not advocating that all institutions should be made equal, or suggesting that this is even possible. However, it is worth recalling that one of the main virtues of the Commonwealth taking over the responsibility of funding higher education from the states was the commitment to create a national system where a student in Perth, or Townsville, or Hobart, might have the same opportunities for higher education as one in Sydney or Melbourne. I would prefer that worthwhile goal to be pursued rather than to allow Government bureaucrats the pleasure of trying out their favourite free-market economic theories on the higher education system.
Amalgamation of Institutions

One complicating factor for determining educational profiles and funding levels for the 1989-91 triennium is guessing what the institutions themselves will be. Section 5.3 of the Green Paper argues for a system which will have fewer larger institutions, and suggests that members of the unified system should aim to have student loads of at least 5,000 EFTSU if they wish to be funded for a broad teaching profile and some specialized research activity, or in excess of 8,000 EFTSU if they wish to be funded for a broad research profile.

Although the benchmark figures of 5,000 and 8,000 EFTSU are not supported by any data, the general point, that many higher education institutions would be more flexible in their teaching and research if they were larger, is a valid one. In some cases, normal growth in student intakes will bestow this desirable flexibility. In other cases, the same effect can be achieved by amalgamation. There are some urgent candidates for amalgamation, and a number of possible mergers have been suggested. The Green Paper stops short of naming names and so will I. However, it is worth looking at some of the features which might gain Commonwealth approval for plans to amalgamate.

Propinquity offers a compelling case for amalgamation. When two institutions share a common fence line, it is difficult to argue for them to remain administratively and academically separate.

The rationalization of overlapping academic activities, or the complementing of one another's academic programmes, makes amalgamation attractive. The merger of La Trobe University and Lincoln College of Health Sciences gained Commonwealth support as much because of the addition of a professional faculty of health sciences to La Trobe's generalist faculties, as for the potential in running costs and the solving of Lincoln's space problems.

Potential cost savings are also sure to interest the Commonwealth, although the Green Paper acknowledges that these are likely to be achieved only in the longer term. It can only be hoped that the Commonwealth will restrain itself from taking its savings from amalgamations prematurely.

All of these points are so obvious that they ought not be laboured. It is surprising, therefore, that some institutions have become so mesmerized by the 5,000 and 8,000 EFTSU benchmark figures that some quite unusual proposals for amalgamations have been made. Some of these proposals have concerned partners too distant from one another to communicate effectively, or where there are no obvious cost savings or real prospects of integrating academic programmes. Sometimes one is left with the impression of proposals for marriages which will deliberately not be properly consummated, but which are contrivances to deflect the Commonwealth from restricting a teaching or research profile.
Another type of amalgamation proposal which makes me and other Commonwealth advisors uneasy is the one which links several small, geographically-dispersed and rather weak institutions together with the hope that the whole will be stronger than the parts. If some of these plans come to fruition, then Australia may be given a set of first- and second-rate universities to replace the current binary system. In the past the amalgamation of CAEs with their larger and better-funded neighbouring universities has resulted in a stronger and more flexible institution. However, joining two or more institutions, all of them small, and none with a strong research base, is not likely to produce excellence.

Given that the right institutions are amalgamated, and that the Commonwealth does not exact too high a price for them doing so, some of the problems about comparing funding levels which I raised in the previous section should be overcome within a triennium. If all the institutions in the new system have relatively broad profiles and largeish student loads, then it becomes easier to compare them in terms of their funding needs and their performance. Perhaps the most enduring and beneficial effects of the Minister's reforms to the higher education system will be brought about simply by creating a set of larger institutions with more diverse profiles of activity and more flexible budgets. Many of the other reforms asked for in the Green Paper, such as better management, improvements in teaching, and increased responsiveness to the needs of industry and commerce, will come as a result of growth and amalgamation.

One consequence of amalgamations and of the demise of the binary system is that the higher education institutions of the new unified system will offer a wider range of levels of courses than do the present set of institutions. At present, most universities do not offer a range of sub-degree programmes, while CAEs have been prevented from training doctoral students. It is clearly the Government's aim to create institutions which offer programmes ranging from associate diplomas to PhDs. The hope that a student could begin his or her tertiary education in TAFE, and progress to university study with credit given for completed TAFE studies, looks to be a more likely prospect in the new system than in the present one.

**External Studies**

The issue of external studies in the new system deserves special mention. To most institutions, the external operation is an extension of internal teaching, with the external students being taught much the same curriculum, but with differences in its mode of presentation and in support services. In many cases external load has been used to give an institution a viable total load. At present there are some institutions which, if deprived of their external load, would find themselves in a perilous state.

The Green Paper's suggestion that the number of external studies providers be reduced to less than ten signals a change in policy where the efficiency of external studies teaching is of more importance than maintaining load in some of the smaller institutions. There may be an unstated assumption that institutions rendered non-vi-
able by the loss of their external load will be rescued by being amalgamated with other institutions.

It should be fairly clear to a disinterested spectator that external studies provisions in Australia needs some considerable tidying up. The Green Paper observes that 18 institutions offer courses in teacher education and 17 offer courses in business studies. The institutions which offer these programmes usually argue that what they do does not overlap with what anyone else does. Even granted the uniqueness of these programmes (as are all courses offered by academics), one is still entitled to ask whether there is a priority for spending Commonwealth funds on such diversity in such a few areas.

However, it is also fair to ask whether there are significant economies to be gained if, for example, the students in the 17 business studies courses were taught by one, ten, or 17 providers. The greatest cost in external studies teaching, as in the teaching of internal students, is staff time with students, not the time to develop the course, nor the cost of producing materials, nor the cost of administering an institution’s external operation.

It might well be that, even in the absence of convincing evidence that drastic rationalization of external studies would reduce costs without detracting from access and quality, the Commonwealth would be tempted to act tough. The redistribution of external load throughout the system is something which could be done without financial cost to the Commonwealth, whereas moving large numbers of internal students is limited by where the buildings are. Some of the Minister’s advisors would have liked to have wiped the slate clean and started the new system with each institution’s load set to zero. This would have allowed the Commonwealth to renegotiate funding arrangements with the institutions.

In the past student load has grown incrementally, with institutions negotiating with the Commonwealth for new intakes only, but taking growth from previous years into their base load. It is recommended that the major providers be invested with a base load of some 3,000 external students in excess of this load. This suggests that institutions may not be able to increase their external load incrementally, but that increases above the base will form part of a national pool which will have to be bargained for in perpetuity. There is no real justification for this difference in the treatment of growth in internal and external enrolments. Perhaps it is another example of the multiple authorship of the Green Paper when a free marketeer got control of the pen.

The suggestion that provider institutions should seek help from non-providers who have expertise to offer important courses in areas not represented in the provider institution is sensible, so long as this arrangement does not result in inefficiency. It might be that it would be cheaper for the institution with the expertise to run its own external operation, and I would have thought that the Commonwealth would have wished to have compared delivery costs before deciding how the job was to be done.

Institutions will no doubt welcome the Commonwealth’s intention to support mixed-mode operations, and I hope that this means that any institution, regardless of
whether it is an external studies provider, will be able to offer its own programmes to students in its region through TAFE facilities. However, although this policy was supported by CTEC, we should not underestimate the difficulties in implementing it in States where strong union pressure form TAFE teachers will be to keep university and college staff out of TAFE premises.

Finally, may I suggest that Commonwealth funding advisors, the bureaucracy and the Minister should refrain from telling institutions how to teach their courses. The suggestion that students should not be disadvantaged by course requirements, such as the attendance of residential schools, should be lost between the Green Paper and the White Paper. While it is proper for the Commonwealth to express concern that institutions do not place restrictions on their courses which put unfair limits on access, it should be careful about how that concern is voiced. It is also proper for the Commonwealth to commission investigations by experts into academic matters, and then to ask institutions to act on the recommendations of those investigations, as, for example, is done with discipline reviews. However, decisions about course requirements, such as the attendance at residential schools, the completion of laboratory work in science, or the writing of essays in the humanities, are the preserve of academics rather than the bureaucracy which provides the funds.

When Will the Higher Education System Be Unified?

Since the last Federal election an expectation of rapid change in the higher education system has been created. The Prime Minister's decision to reorganize portfolios and public service departments opened the way for the Minister for Employment, Education and Training to reform the advisory structures in his portfolio. Universities and CAEs could see that their turn was coming, and the Green Paper duly arrived.

However, beyond this point things are likely to proceed rather more slowly. Although there will be little difficulty in getting out the White Paper before funding decisions are made for the 1989-91 triennium, there are some matters, vital to the creation of the new system, which cannot be hurried.

The amalgamation of institutions, which I have argued will precipitate some of the greatest changes, requires the consent of state governments and legislative changes by state parliaments. The states are showing no inclination to be hustled by the Commonwealth, and it is doubtful that any amalgamations will have been effected by the time the Commonwealth makes its funding decisions for 1989-91.

The recalculation of grants to institutions must rely on the Commonwealth obtaining adequate student load and financial data from the institutions. Such data may not be available until the end of the triennium.

The final membership of the National Board for Employment, Education and Training has not been determined, and its interim Chairperson and the
Chairperson of the Higher Education Council will soon be leaving it to take other jobs. Meanwhile the leadership of key divisions and branches is in a state of flux. The Minister may find himself lacking policy advisors and experienced programme administrators during the run-up to the budget. He will be unable to devote his time solely to higher education matters during that period, but will have to give increasing attention to the funding of schools.

At this point, then, the year off between triennia looks too short a time to get the new system in place, and we may well find ourselves into 1989 with much the same institutions doing much the same things as they did in 1987. Change, therefore, is likely to be slower and more incremental than many institutions believed, and the majority of the reforms advocated in the Green Paper may not start to have their major effects until the triennium after the next. This is the time-frame proposed in the Green Paper itself, and is probably one in which institutions can accommodate change without chaos.
4
Analysis of Specific Funding and Resource Allocation Proposals
Peter Karmel

My task is to talk about the specific funding and resource allocation proposals in the Green Paper. I shall describe the proposals and make some comments on them. What I am going to do does not go to the heart of the long-term objectives of the Green Paper; but it does deal with practical nuts and bolts implications. I shall address the issues in three sections. First, I shall talk about funding the system as a whole; I shall then look at the funding of individual institutions and I shall end with a few general observations.

The Funding of the System as a Whole

The magnitude of the problem. In 1987 there were approximately 395,000 higher education students and the Green Paper guesses that another 80,000 students were doing at least equivalent two year or longer diploma courses in TAFE. So the magnitude of the figure under discussion is around 475,000 students. These total number of enrolments is producing 78,000 university and CAE graduates a year and perhaps - and this is a guess - 10,000 TAFE higher education graduates. In the year 2001, the Green Paper's target year, if participation rates remain constant, demographic movement will produce an enrolment of 455,000 at universities and CAEs, and perhaps 85,000 in TAFE. These add up to 540,000 enrolments which will result in about 100,000 graduates in the year 2001.

Incidentally, graduate numbers are not all new graduates. Some are Masters or PhDs and some - particularly those completing post-graduate PG1 courses at CAEs - already have gained some form of qualification. There is a good deal of double counting.

Professor Borrie's paper looks at demographic trends in detail. There will be a net increase in the population pool in 2001 compared to 1987, but the numbers in the younger age groups will decline in the mid-1990s, and will not pick up again until later in the period. The Green Paper argues that the target ought to be 125,000 graduates per annum by 2001. This implies an increase in participation of 25% which
will have to come from both younger and older age groups. To yield 125,000 graduates per annum you need 675,000 enrolments (in universities, CAEs and TAFE). This is a 42% increase in enrolments over present levels (an increase of 200,000 students or about 140,000 EFTSUs), of which about 25% would be due to increased participation and the remainder due to demographic effects.

While the overall percentage increase in enrolments looks large, it is equal to only a 2.5% increase per annum. The prospect of getting that growth can be questioned. Professor Borrie takes the view that it probably could be achieved. Others, such as Professor Ken McKinnon, are doubtful whether the levels of retention at school will rise as far as is necessary and whether the transfer rate from school to higher education will be as high as is implied. But I shall accept the assumption of greater growth and the Minister's targets.

It is, of course, possible to raise the level of graduation relative to lower enrolments - or put another way, you could lower enrolments relative to 125,000 graduates per annum - if success rates were improved. The Minister has argued strongly that this ought to be done; after all, only about 60% of the intake end up with degrees. Graduate output could also be increased by reducing the length of courses, as has been argued strongly in the United Kingdom. Whether or not these steps would lead to a decline in quality is something to be debated.

I shall now look at funding the system. First, operating costs. Operating costs are the costs of running the institutions, including purchase of equipment but excluding buildings. Higher education operating costs (excluding the TAFE component) reached their peak of 1.13% of GDP in 1975 - not a high percentage relative to other OECD countries. By 1987 the figure had declined to 0.97% of GDP, which is a decline of about 12% in the resources per enrolment. If operating costs were to increase by 2.5% per annum - which is what would be needed in order to achieve the desired increase in enrolments - and if GDP was to increase by 3.5% per annum (which is not an unreasonable expectation), then the percentage of GDP in the year 2001 being devoted to operating the institutions would, of course, decline because costs would go up at the rate of 2.5% and the GDP at the rate of 3.5%. The percentage of GDP devoted to operating higher education would fall to 0.85% and Mr Keating, Senator Walsh and Mr Dawkins would be only too delighted. If one takes the view, however, that a 3.5% increase in GDP is an over-optimistic projection and that a 2.5% increase is closer to the mark, then the relative cost of running higher education in 2001 would be equal to that at present, i.e., 0.97% of GDP.

From the point of view of the total impact of expenditure on the budget, there is no reason why the Commonwealth Government could not fund reasonably comfortably the increase in numbers, at least as far as operating expenditure is concerned. But the Government is determined to cut government spending as much as it can, and sees education, especially higher education, as a soft spot in the budget. This is connected with the complex problem of trying to correct the balance of payments. Wages will have to be prevented from rising too rapidly. Tax reduction is a necessary trade-off to achieve this. Tax reduction means reduced government spending if the budget deficit is not to grow. Control of the budget deficit is essential if business
confidence is to be maintained. The dilemma which the Government faces is that its economic objectives impact on the budget in a way which is bound to affect all social expenditure. It is important to realize that this lies behind the figuring.

I do not think that in relation to GDP there is any real problem about funding the expansion. In Australia we should be prepared to tolerate more taxation, not less. We are not a highly taxed country. But there is no way we can increase taxation without triggering demands for higher wages and scaring the business community.

Capital expenditure has been left out of the calculation so far. If we are to raise the number of student enrolments to the level that the Government wishes, we will need to provide places for 200,000 more students (or 140,000 EFTSUs). Our institutions, as we are all aware, are full now; some of them are more than full. Expansion means capital expenditure.

Taking the figure of $10,000 a student place for capital - a conservative estimate - and an increase of 140,000 EFTSUs, we would require over the whole period approximately $1,400 million for capital works, or $100 million a year. At present we are spending $80 million or so a year on capital. Capital expenditure as a percentage of GDP was 0.234% in 1975 (or about $400 million a year); by 1987 this had fallen dramatically to 0.033% of GDP. The $1400 million capital expenditure ($100 million per year) needed to fund the increase in student places, would result in an increase to 0.044% of GDP for capital if GDP goes up by 3.5% per annum; if GDP goes up only by 2.5% per annum, capital expenditure would rise to 0.050% of GDP by the year 2001.

- Adding operating and capital costs together, the total in 1975 was 1.36% of GDP devoted to higher education. By 1987 this had declined to 1.00%. The total for the year 2001, assuming a 3.5% per annum increase in GDP, would be 0.89% of GDP. If the rate of growth in GDP is only 2.5% per annum, operating and capital costs of higher education will amount to 1.02% of GDP.

Thus, from the point of view of expenditure in relation to the size of the economy, there really is not a serious problem. The problem of keeping costs down stems much more from the total budgetary problem in relation to the economic situation. We could have all the Minister's proposed expansion and barely affect the proportion of our total annual output devoted to education.

Sources of Funding. So much for the magnitude of the problem. Where then are we going to obtain the funds for the 200,000 additional enrolments? The Green Paper has a number of suggestions. In his September statement, which preceded the writing of the Green Paper, the Minister indicated that the funds for the increase in numbers could not be provided by the Commonwealth. This was a categorical statement to make people think about alternative sources of funding. The Green Paper, however, is not so categorical. On page 80 the Green Paper states "the case for increased government spending will be strengthened to the extent that other parties to the higher education system [that is, ourselves as members of the institutions] agree to implement structural changes and other reforms now required". It is easy to see what this means. The Minister is saying that if he is able to go to Cabinet and say
"they are pulling their socks up, they have got rid of tenure, they are terminating appointments, they are being flexible, they are shifting resources", he will be in a stronger position to argue for funds for expansion. I believe that there will be extra government money for expansion. But the Minister is also saying that he must bring about institutional change, and find other sources of funds as well as Government grants.

There is a reference in the Green Paper to state funding. But the possibility of the states coming back into the field in a big way is dismissed. The Minister says that funding higher education cannot be handed over to the states because this would be in conflict with the pursuit of national objectives; there is a national policy on education and therefore it has to be nationally funded. The theme of the paper is that education is to be an instrument for economic growth, both in terms of improving the skills of the workforce and in terms of research and development. The Minister does, however, point out that states may choose to fund additional places, as Victoria has done.

The second alternative source of funding is from the private sector. A list is given in the Green Paper: endowments, donations, bequests, and commercial operations, including consulting and contracting performed through the consulting companies of institutions. The possibility of making money out of full fee paying overseas students is mentioned, as is running seminars, short courses and conferences. Charging fees to Australian students for special courses, like the MBA, is put forward as a possibility. The University of Melbourne is presently running a special MBA course at something like $18,000 a year, which is being supported by employers. Joint arrangements with employers, as is happening with information sciences at several institutions, and private universities are mentioned. But these are clearly marginal. There is no pretence in the Green Paper that large funds will be forthcoming from these sources. It is also important to emphasize that these funds tend to be tied to particular projects or particular courses or given for particular purposes; they do not provide money for the ordinary purposes of running institutions.

There is also the question of financial savings through structural reform. Perhaps institutions can be made more efficient by graduating more people through shortening courses or reducing failure rates. More pointedly, there is listed in the Green Paper, and discussed in some detail, a whole range of institutional and systemic structural reforms. On the institutional side, reference is made to strategic planning: the articulation of objectives, the design of strategies to meet the objectives, the evaluation of performance in meeting the objectives, and the feedback of the evaluation to produce modified strategies. Improved decision-making, including giving more power to chief executives to make quick decisions, is emphasized. Institutions should improve their management skills, particularly those of middle management including the heads of academic departments. The better use of capital facilities, year round operations, summer terms and so on are also mentioned as possible internal institutional reforms.
At the systemic level, reformed conditions of employment involving changes to
tenure arrangements, changes to promotional arrangements, changes to rates of pay -
incentives, carrots and sticks - form an important part of the Government's policies.

The consolidation of institutions to meet minimum size limits, which have been
stated quite arbitrarily, will supposedly reduce costs, increase the flexibility of the
use of resources and eliminate unnecessary duplication. Savings are to be achieved
by the rationalization of Ph.D. programmes so that so many Ph.D. students will no
longer be studying in groups of only several students. Ph.D. programmes are to be
concentrated in particular institutions. Minimum class size is mentioned, as are ra-
tionalization of specialist courses, rationalization of external studies, and improved
credit transfer.

However, the Green Paper does not assume that these reforms will result in a big
yield of financial savings in the short-term; it sees the possibility of improvements
in efficiency in the longer term. The Green Paper assumes little additional resources
from the private sources that I mentioned earlier or from the state governments or
from internal reforms. It is driven, therefore, to consider personal funding: from
students, parents and graduates. The Commonwealth has appointed a committee
chaired by Neville Wran to investigate this. This committee is looking at fees, loans,
graduate taxes, cost recovery through the taxation system and so on. Various
schemes are possible. For example, fees could be charged. A fairly high discount
could be given students who pay cash; if they elect to defer payment, it could be re-
covered through the tax system. I think it is likely that something like this will
emerge from that committee. The committee may be looking for something like
10% to 15% of operating expenditure to be raised in this way.

Funding Individual Institutions

Triennial Funding. I now turn from funding the system as a whole to funding indi-
vidual institutions. First, it is intended that triennial funding will be resumed from
1989 onwards. There will be, for each institution, a guaranteed base level funding.
This will be for operating grants for 3 years ahead and the funding is to be consistent
with agreed educational profiles, which I shall mention in a moment. The triennium
will be a rolling one. What is intended is that in each budget there will be figures for
three years ahead. The first year figure will be a firm allocation. For example, in
August of this year, base level funding will be announced for 1989, 1990 and 1991.
Institutions will receive the 1989 budget because that relates to the immediate fol-
lowing year. Funding for other years is said to be guaranteed. In the following year
there will be a new third year, which may reflect changes in the profile. The original
grants for the second and third years (which are now the first and second years of the
new triennium) may be increased to cover new projects or expanded student num-
bers; it is not intended that they be reduced.

During the late 1970s when the triennial arrangements were suspended, CTEC
was given indicative figures for forward planning, which were said to be minimum
ones. A firm total figure was given for one year, and it was announced that a further 1.5% or 2% increase would be forthcoming in the following 2 years. The planning figures were always abrogated. I remain skeptical about rolling triennia. In principle they sound rational, but negotiations are reopened every year. In this situation, can guarantees really be given?

There are other problems associated with a rolling triennium. It is true that with a fixed triennium, towards the end of the triennium planning becomes difficult. But with a fixed triennium you can plan with confidence for 3 year periods. The workload for the government authorities and for the institutions will be very high with a rolling triennium, because negotiations will occur every year. With a fixed triennium the planning effort can be concentrated and it comes around only every third year.

Guaranteed base level funding does not include provision for the expansion of enrolments. This will be determined annually. Sometime in the middle of this year the amount of money available for funding extra students next year will be determined. There will then be negotiations with institutions to place those students. This is somewhat similar to what has, in fact, been happening in recent years with CTEC. It is apparently intended to go to tender for these extra students. As far as the extra students are concerned there will, of course, be a comparatively small lead time in providing for them. That will not matter for small numbers, but it will be difficult for substantial expansion.

There was some talk at one stage of tendering for the total number of student places. This is not likely to work because students do not readily move between institutions or areas. If there is tendering for all student places, what would happen to an institution that did not succeed in winning an appropriate mix of tenders? It would simply have empty places. And what happens if an institution is allocated many more students than it can actually cope with? Tendering is only a possibility at the margin. Also, there is a risk with tendering that the lowest tenders will set the rate which will be offered in subsequent years. The process is one, not unnaturally, of trying to find the lowest rate at which institutions will supply services. In this process, an important question is: how will quality be controlled?

With regard to capital funding, there will be probably a triennial capital programme of a similar kind to the present one where new projects are announced each year.

Educational Profiles. A key element in the proposed new arrangements is the notion of educational profiles. The guaranteed base level funding for operating grants will be provided as a contract between the Commonwealth and the institution. The institution will contract with the Government to sell it certain educational services and the contract will cover the educational profile of the institution. The educational profile may include the fields of study for teaching, the load of students in each of these main fields, the targets for graduates and research involvement. An institution may say, for example: "we will put a lot of effort into research in the biological sciences but we will not worry too much about law and economics". The contract will
also cover the institution's commitment to internal reform. For example, an institution may say: "we will reduce the number of committees and the size of committees. We will take action to increase opportunities for aboriginal students and women and increase enrolments in engineering". The contract will indicate the extent to which the institution is sensitive to national priorities.

Questions arise. The profiles could easily become enormously complex. The negotiation of the profile between, presumably, the Vice-Chancellor or Principal, on the one hand, and somebody from within the Ministry, on the other, could be very difficult. Alternatively, the educational profiles may simply be very broad statements of a kind that could be covered in several pages. That is what they will have to be in the first year if the system is to function.

When the educational profile of the University of New England is being negotiated it will not be a matter of merely agreeing that what that University proposes to do is sensible. The Government's negotiator will have to keep in mind what is going on in the other 64 institutions. The outputs of all the institutions have to be integrated across the whole system. The Government's negotiator is interested not merely in what happens at New England, but in producing 125,000 graduates. Presumably, they will want so many graduates in engineering and applied sciences, and so many in social sciences and humanities, so many accountants, economists and so on. Moreover, state and regional balances will have to be watched. It adds up to a complex and difficult task. Anybody who has worked in any of the tertiary education commissions knows that it takes a lot of hard work, experience and skill to produce a sensible result for the system as a whole. The methods employed in the past were not highly sophisticated, but experience, sense and sensitivity were used; the results were, in my opinion, by no means bad. For example, a major reallocation of resources away from teacher education to applied science and commerce was achieved rapidly and effectively in the mid-1970s. Annual negotiations of the kind envisaged will be an extremely complex task, particularly when inexperienced and transient public servants may be involved.

The most difficult task will be getting research priorities straight. We are told that no institution will be funded to do research across the whole range of its activities. There is nothing wrong with that, in principle, but how will an institution decide on which of its activities it will concentrate? Heads of institutions have a fair idea of which departments are most active in research. But there might be an inactive department that has one or two very good people in it. Leaving that aside, for the moment, there is the question of the definition of field. Broad definitions, like "biological sciences" cover enormous fields. How are we to express our priorities? Are we going to express them in narrower terms, for example, molecular biology or genetic engineering or bio-technology? That has not been thought out. When it comes to indicating fields of concentration, an institution could readily specify a range of centres of concentrated research effort. But general priorities will be much more difficult. Will an institution say that it will provide research infrastructure for this range of activities but not for that? This will have to be done for 65 institutions between now and next September - the mind boggles!
I would like to make one final point about the funding of individual institutions. The Green Paper comments on the level of their funds. It is pointed out that the funding of individual institutions varies in its apparent generosity by considerable margins. "Preliminary data reveal that at present the relative funding base of institutions varies by anything up to 35 per cent" (p.44). It is suggested there will be a move towards equalizing funding among institutions. Those institutions that have been relatively generously funded will be encouraged to take more students in order to reduce their funds per student. Some of these institutions may be ones that can easily find more students, but there may be others that will not be able, readily, to expand student numbers. I can see some difficulty there. The Green Paper itself says that there will be great practical difficulties in achieving a complete equalization. It goes on to say that it envisages 1% per annum of total funds will be redirected during the coming triennium. That would be a move in the direction of equalization of funding, but, of course, it is only a comparatively small move.

The Green Paper also suggests that in the next triennium research funds will be redirected towards more competitive funding. In 1988, $5 million worth of university funds were pulled out and will be used to support some additional key centres and special research centres, which may be located in both universities and colleges. Five million dollars is not a huge amount out of total university grants of about $1,200 million. But a figure of $50 million is mentioned on p. 68 of the Green Paper as a possible target to work towards (about 4% of university recurrent funding). That would, it says, double the amount of competitive funding from the Commonwealth. That figure is related to the figures mentioned in the ASTEC Report on research funding.

However, any major reallocation of funds in the short run is not possible. Some of the institutions would have great difficulty in carrying on. Probably one ought to assume that for 1989 most institutions can rely on getting the same amount of money as in 1988, perhaps minus 1%. From 1992 onwards, however, it is proposed to reserve, each year, 2.5% per annum of recurrent funds for selective allocation, to be "determined competitively on the basis of institutional capacity to respond to Commonwealth objectives in teaching and research". This is clearly a system of sticks and carrots. If you agree to do this and this, you will get some extra money. If you put more effort into a particular line, you will get some extra money. And if you do not do this, of course, you will be deprived of money. In principle, this is not all that different from some of the things that happened in the past, except that the Green Paper's proposals institutionalize what have been relatively marginal negotiations between government authorities and individual institutions.

How will institutions cope if they do not, on average, get most of their money back? I guess most institutions will produce ideas which will attract their 2.5% back. If they do not, they will obviously be in considerable difficulties; 2.5% per annum accumulates rapidly into a substantial slice of resources.

It is also the case that an institution can opt out. But if it opts out it will face a gradually declining grant, presumably at the rate of 2.5% per annum, and will have to recover that, presumably, by charging fees. There are a few institutions that could
Funding & Resource Allocation

It is important to emphasize that, although there are signs that on many issues the Government has made up its mind, the Green Paper is not the final word. To some extent, it represents an ambit claim. It may very well be toned down somewhat in its final version.

I shall now talk for a few moments about research. As mentioned above, no institution will be guaranteed funding for research across all fields of study. Those institutions with around 5,000 EFTSUs may undertake some specialized research activity; those with 8,000 or more EFTSUs may undertake research across a significant proportion of their profile. These are arbitrary limits and there will be many problems in implementing them. We do not know what will emerge in the White Paper. It is important to emphasize that, although there are signs that on many issues the Government has made up its mind, the Green Paper is not the final word. To some extent, it represents an ambit claim. It may very well be toned down somewhat in its final version.

I mentioned earlier the enormous difficulty that institutions will have in prioritizing their research profiles. I have little difficulty in imagining a meeting of a Faculty of Arts in which there are 20 departments and the Faculty is told (who will be brave enough?) that only 10 of them can undertake research. Of course, they will come to absolutely no conclusion. The Green Paper presumably envisages that the Vice-Chancellor will make a decision. He will want to move on pretty rapidly, I should imagine! On the other hand, institutions could come to a conclusion about giving emphasis to particular activities, for example, a research centre in aboriginal linguistics, or in forestry management. It is when you exclude academics from research that you will get into trouble.

There will certainly be a greater emphasis on competition for grants and a greater emphasis on research targets. The priority areas will be identified by the Australia Research Council. People talk about national objectives - national priorities - as if it is obvious what they are. But of course, they are the objectives as interpreted by the political party in power. It is not at all obvious what national objectives are. No doubt it is possible for people to say that certain areas are more important to be working in than others, and that is certainly what the ARC will be doing.

I mentioned earlier that some funds have already been redistributed to ARC - $5 million this year - and there seems to be an intention to redistribute about $50 million in total. I do not know how this relates to the differential in funding between universities and CAEs. Supposedly, we will have a unified system. I want you to note that the word is UNIFIED not UNITARY. At present there is about a 20% funding differential between universities and CAEs. The extra money received by universities is used for libraries, research infrastructure, more support staff and more senior academic staff. There appears to be no intention of reallocating all this, al-
though $50 million of it may be put into the pot to be competed for. Of this most will almost certainly go back to the universities. But it will go back not as free money but as money dedicated to particular research projects.

The so-called indirect research supported in universities by CTEC's general recurrent grants is put in the Green Paper as $437 million in 1985. This is more than the differential funding between universities and CAEs so that there is something buried in college funding which is equivalent to this, although it is never identified.

Observations

In conclusion, I want to make several observations. I have tried to describe what seem to me to be the practical consequences of the Green Paper. Although I have been critical of some of the proposed policies, my criticism of the Green Paper is, very largely, a criticism of methodology, not of objectives.

One thing that should be remembered is that the operating grants will continue to be block grants. The staffing arrangements and the detail of resource allocation will be left to institutions. There is quite a point made of this; it is consistent with the notion of freeing up the institutions. But there is a qualification. The exercise of autonomy will have to be (and I quote) "consistent with the goals established in the educational profile". This implies some kind of monitoring arrangement. I do not know how this will operate; it is not clear that there will be appropriate machinery. The machinery that existed, CTEC, has been demolished. We cannot tell at this stage just how free institutions will be because we do not know the degree of detail in the contract which sets out the profile.

There will be difficult nuts and bolts administrative problems in agreeing on the profiles, writing the contracts, and determining the expansion of student numbers, annually, for 65 institutions, while at the same time integrating the outputs of graduates and enrolments by field of study across Australia so as to have some relationship with manpower needs, bearing in mind State interests, considerations of equity and the whole geographical and regional spread of the institutions.

It will serve little purpose to offer 500 more places at the Riverina College if the demand is in Brisbane. Australian students are relatively immobile, and even if they were mobile, there are significant costs in their moving. The British run an expensive and elitist system of higher education with a relatively low rate of participation, largely because students do not stay in their home towns. I am strongly in favour of increased student mobility, even enforcing mobility for graduate students. But for undergraduates, if the demand is in Brisbane the places ought to be in Brisbane.

A key question is: will there be machinery adequate to handle the complex negotiations involved in agreeing on educational profiles? Elaborate machinery has been proposed: there will be the Minister, the Department, and the National Board of Employment, Education and Training. Under the last body there will be a Higher Education Council, a Schools Council, a Training and Skills Council and a Research Council. Alongside these there will be a Commonwealth-State Consultative Com-
mittee and eight joint planning committees for the six states and the two territories. This structure replaces one which was not as elaborate but which worked well. Much of the expertise that was built up over the years in CTEC has now been dispersed. Incidentally, one important advantage of consolidation is that the Common-wealth would clearly much prefer to deal with 30 institutions rather than 65.

In my view, institutions are foolish to rush into consolidation proposals on the basis of the Green Paper without giving very careful thought to all the pluses and minuses. There are some pluses. I was party to the consolidations of the 1980s so I can hardly be too critical. But some of the proposals that have come forward recently are artificial in the extreme. They seem predicated on the belief that bigger is better and that an institution will become a university, if only it is large enough. But such changes will fool nobody.

Another difficulty in determining profiles is that they will be the result of isolated negotiations. CTEC, even allowing for its alleged faults, did have a concern for balanced development and ensured that there were relatively balanced grants within different classes of institutions. With contracts being dealt with on an individual basis there will be room for favouritism, for the exercise of political influence, for lower level officers trying to interpret the minds of their seniors. I wonder how much confidence there will be in that system when it gets going. To have confidence in a system, it must be an open system. If the negotiations are to be in the hands of the Higher Education Council of NBEET, its reports ought to be public, and the reasons for its decisions ought to be stated in the same degree of detail as was customary for CTEC and its predecessors.

I mentioned earlier that I believed that the unified system is not intended to be a unitary system. Indeed, it is going to become an increasingly differentiated system. And there is no point in it unless it becomes MORE differentiated than the present system. Such increasing differentiation is probably the strongest argument in favour of getting rid of the binary line. The use of the word "unified" will mean that each institution in the system will get involved in the same kind of processes and the same kind of contracts. But the content will be very different.

The funding arrangements which are suggested seem to involve what I would call central government funding with light control. They do not involve a shift to a market model. In another paper*, I have talked about different models through which government may exercise its role. There I referred to central government funding with light or heavy control. Whether the Green Paper will produce light or heavy control remains to be seen.

The arrangements as set out in the Paper emphasize national objectives, national priorities, planning, co-ordination - the word "co-ordination" crops up a number of times - balanced development. On the other hand, phrases from the market place are also used. The paper talks about contracts, tenders, incentives, competition. Clearly, the idea of the contract is that the government will buy education services from the institutions; and whether there are 65 or 30 institutions, there will be com-

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petition. They will be selling services and the price will settle, in theory, at a certain level. However, the market will not really be competitive; there will be only one buyer. It will be what economists call a monopsonistic situation. Of course, if the sellers come together to form a cartel there will be bi-lateral monopoly, and an indeterminate result! In fact, the proposed arrangements do not move far in the direction of a market orientation. The notion of selling educational services at full cost, which has been advocated by some market economists, is absent. Nevertheless, some of the words from the market's vocabulary are there. Thus, the Green Paper embraces two points of view: the one emphasizes national objectives and planning, the other competition and deregulation. It is not obvious how readily these can be reconciled.

The Paper attaches much importance to structural reform and improvements in the internal management of institutions. I must say that, personally, I very much favour most of the reforms suggested in the Paper. What concerns me is the interface between the institutions and the funding authority. This needs to be resolved in a way which will preserve for the institution sufficient autonomy to pursue its internal mission relating to the preservation, transmission and extension of knowledge, while responding adequately to the external pressures which arise from national needs and the fact that it is funded by the community. We have to get the right balance between the internal mission and external pressures.
The Green Paper works to the base provided by the Australian Bureau of Statistics (ABS) projections made in 1984, which allowed for the continuation of approximately present levels of mortality and fertility and an inflow of 50,000 net immigration per annum to 1989 and thereafter of 100,000 until 2001. These assumptions appear reasonable. Certainly, given the current age structure of the population, considerable growth to the century's end seems inevitable and the present government seems set on pushing immigration hard, so a net gain per annum of 100,000 immigrants is in line with Labor policy and within reach of the even higher levels of 130,000 per annum which the business community seems to be wanting.

These assumptions would yield a population of around 19.3 million by the end of the century, about 3 million up on the present total. This growth would be a considerable achievement; but if Australians continue to prefer a family size averaging only about 2 children per couple, the natural increase factor of our growth will be running out of puff by the end of the century because of the changing age-composition of the population, marked primarily by a low proportion of juveniles age 0-14 years and a rising proportion above both reproductive and working ages - the dreaded "ageing" effect which is causing governments and others so much concern.

Now this "ageing" process is often interpreted as a sort of demographic disease which is about to overwhelm us, when really it has been going on for a long time and will continue to go on in the future so long as we crave longevity and controlled fertility - and I hold that the two are interrelated as to cause and effect. If "ageing" has to be prevented, the best way to achieve this end would be to cut the expectation of life from its present level of about 78 years to about 50 years (or the 1900 level) and bribe young couples to have four children. What ageing is likely to mean for Australia is illustrated in the profiles of the present and projected population of Australia given in the figure below. The vital point to realize is that our population at the moment is in a most abnormal situation (because of the baby boom of the 1960s) and is on the way towards a more normal one, at least in demographic terms.
Continuing in this reflective mood, compare the present situation with the past. The Green Paper argues that the Australian position regarding the number attending higher educational institutions compares very badly in the OECD league, although it admits that, because of variations in institutional and training practices, international comparisons are difficult to interpret. Look briefly, however, at Australia's past and see what has been achieved.

The Green Paper (p.115) states that there were 393,700 higher education students enrolled at 19 universities and 40 CAEs in Australia in 1987. About 229,000, or 58% of these were young people aged 15-24 years; a further 125,000 or 32% were aged 25-39 years; and the remaining 39,000 or 11% were of middle to old age, 40-64 years (see Table 1).

Table 1
1987 Enrolments in Higher Education

<table>
<thead>
<tr>
<th>Age Group</th>
<th>17-24</th>
<th>25-39</th>
<th>40-64</th>
<th>All Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers</td>
<td>229,000</td>
<td>125,000</td>
<td>39,000</td>
<td>394,000</td>
</tr>
<tr>
<td>Distribution %</td>
<td>58</td>
<td>31</td>
<td>11</td>
<td>100</td>
</tr>
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</table>
My impression that these were unexpectedly high figures and implied a quite revolutionary change within about a demographic generation, was soon confirmed. The final *Supplementary Report* of the National Population Inquiry, issued in 1978, (p.93), described the "Educational Shock Waves" that had hit Australia between 1947 and 1976. Thus:

1. Primary Enrolment: 1947: 788,000  
   1966: 1,577,000  
   % increase: 100
2. Secondary Enrolments: 1954: 457,000  
   1971: 1,111,000  
   % increase: 241
3. Universities 1961: 58,000  
   1976: 154,000  
   % increase: 265
4. CAEs 1968: 50,000  (mostly teachers college students)  
   1976: 135,000  
   % increase: 270

What a revolution! The Primary increase reflected the baby boom. The Secondary increase was associated with rising participation rates, which however were beginning to slow down by 1971 and which have, unfortunately, not increased as much as desired since then. The University increase came from some rise in participation rates, but to a greater degree from the extended range of ages of students attending universities - the mature-age students. The CAEs offered a wholly new prospect and were the success story of the revolution. Some fell by the wayside or were amalgamated with larger institutions, but over 40 viable colleges remained and clearly were supplying a long felt need in vocational training of a type that could not be met by the traditional Technical Colleges, which became the TAFE institutions.

If further evidence is needed of the extent of these successive educational shock-waves it can be succinctly illustrated by some simple statistics. In 1951, the nine universities of Australia enrolled 27,000 students: in 1977 universities and colleges enrolled 298,000 students: almost an eleven-fold increase, compared with only a doubling of the national population.

This astonishing increase was the result of three basic factors: the baby boom, increasing participation rates and the provision of a whole new tier of tertiary instruction, the CAEs. By 1977 the tertiary enrolments were distributed in:

<p>| | |</p>
<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Universities</td>
<td>158,000</td>
</tr>
<tr>
<td>CAEs</td>
<td>140,000</td>
</tr>
<tr>
<td>Total</td>
<td>298,000</td>
</tr>
</tbody>
</table>

Participation rates stood at about 15% for the core age groups, 18-20 years. When those working for 2 and 3 year diploma courses at technical colleges are
added to these figures, the proportion of young people enrolling for higher educational qualifications must have been approaching the 20% level which was the benchmark suggested by the Martin Committee which issued its *Report* in 1964.

The next decade, ending in 1987, brought a slower but still substantial increase in enrolments - 86,000 in universities and CAEs, and 96,000 if "advanced" courses in TAFE and other institutions are added. Excluding the latter, higher education enrolments stood at 394,000 in 1987 (Green Paper, p.94, Table A.1). There is not much expansion left in the baby boom cohorts to add to these figures: the "baby-bust" generation is now about to take over. The demographic crash came in 1972. The Australian record of 276,000 births occurred in 1971. Two years later, births were down by about 40,000. So far the demographic impact of the "baby-bust" on higher education has been cushioned by the increase in participation rates, particularly of mature-age groups. As the Green Paper stresses, the rates of entries direct from schools were declining in the early eighties, and although this has picked up again, the rate is still disappointingly low. (This aspect will be considered further later on in this paper.) Such improvement as has occurred has been amongst the female rather than the male school-leaving cohorts.

What we are witnessing is the reverse of the baby boom. The cohorts coming of tertiary education age will be decreasing, not increasing, as the figures in Table 2 indicate.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Numbers</th>
</tr>
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<tbody>
<tr>
<td>15-19</td>
<td>1,347,000</td>
</tr>
<tr>
<td>10-14</td>
<td>1,312,000</td>
</tr>
<tr>
<td>5-9</td>
<td>1,179,000</td>
</tr>
<tr>
<td>0-4</td>
<td>1,208,000</td>
</tr>
</tbody>
</table>

It should be emphasized that this flattening out of growth amongst the juvenile cohorts is occurring at a high level: they still comprise a greater number than is normal for a stable population with our levels of mortality and fertility. It should also be noted that if we go on to achieve that stable profile, the proportion of total population of working age (15-64 years) will still stay fairly constant at around 65%: there will not be fewer potential workers in the population, but their average age will be higher than at present.

Nevertheless, the Green Paper wishes to do better than live with this stationary situation amongst potential tertiary students and to achieve growth in higher education numbers, by raising participation rates. The Paper gives as its model the projections of the Department of Employment, Education and Training, who want to see higher proportions coming into the system from Year 12 Secondary School students, and a 40% direct transfer to universities and colleges from these school
leavers. On the other hand, they assume constant participation rates at 1987 levels for the mature-age students, aged 25-64. As these are largely baby boom survivors, this assumption still generates considerable growth amongst these older students. (Green Paper, p.115, Appendix Table D.2.)

The profile emerging from these assumptions is expressed in Table 3.

<table>
<thead>
<tr>
<th>Year</th>
<th>17-19</th>
<th>20-24</th>
<th>25-64</th>
<th>All Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>101</td>
<td>128</td>
<td>165</td>
<td>394</td>
</tr>
<tr>
<td>1991</td>
<td>116</td>
<td>141</td>
<td>173</td>
<td>430</td>
</tr>
<tr>
<td>1996</td>
<td>109</td>
<td>147</td>
<td>186</td>
<td>442</td>
</tr>
<tr>
<td>2001</td>
<td>118</td>
<td>141</td>
<td>195</td>
<td>454</td>
</tr>
</tbody>
</table>

If achieved, these levels would keep the pressure on the universities and colleges, but the implied increases are, nevertheless, modest compared with the growth patterns of the booming sixties. The targets therefore set seem attainable. I compared these figures with those in the final report of the National Population Inquiry. From the base figure of 298,000 students in 1977, we projected a feasible total of 371,000 in 2001 (N.P.I. Supplementary Report, 1978, p.100). It looks as if this figure may be too low, but our conclusion is, nevertheless, worth quoting (p.101):

The conclusion that seems to follow is that Australia is unlikely to face this century the extreme shortages at professional and skilled levels that plagued the 1950s, even although the rates of increase of the population will be slowing down appreciably after about 1986. With this stock of your professional and skilled people, the years ahead must surely be seen as years of opportunity for increased efficiency and productivity, rather than as years of surplus. The policy issue now is to get the pay-off in the future from the educational investments from the past.

In reaching this conclusion we had in our minds the 298,000 students at universities and colleges plus about 420,000 persons engaged in vocational training in technical institutions - a grand total then of 718,000 students. Now, in 1988, the corresponding figures must stand above 1 million.

The authors of the Green Paper takes a more pessimistic view. First, they add to the figures given in the Table above estimated enrolments and graduates from state-funded courses provided by TAFE which are considered to be of higher education standard. Such an addition boosts 1987 enrolments to between 475 and 495 thousand and would yield 530-550 thousand students by 2001. Applying current graduation rates, these figures imply an increase in graduate output from 88,000 in
1986 to just over 100,000 in 2001. Not enough, says the Green Paper, if Australia wants to improve its international competitiveness. So, taking American and Canadian levels as the yardsticks, they point out that the matching figure should rise to 145,000 graduates by 2001; the Paper takes a middle position and suggests 125,000.

Reaching this target of graduate output would certainly mean greatly increasing efficiency in the universities and colleges, e.g., by better teaching and better application by students, thus reducing failure rates; or it could also be achieved by reducing standards. It would almost certainly also mean a substantial increase in school retention rates, and it is here that the Green Paper is weakest.

Over the next decade or so there will be very little, if any, increase in the numbers passing beyond compulsory school age. In recent years a substantial factor increasing the numbers entering year 12 has been an upward move in retention rates, particularly for girls. After rising steadily through most of the seventies, these rates had flattened off, but an upward trend is again apparent.

Nevertheless, current levels are still disappointingly low and compare badly internationally. The most recent issues of the ABS's National Schools Statistics Collection Australia (Catalogue No. 4221.0, 1986) does not reveal a very pretty picture: in 1986 less than half the cohorts who had entered primary school in the appropriate year had stayed to Year 12. For boys, the rate was only 45.6% and for girls 52.1%. The worst feature was the low retention rates in government schools: 38.9% for boys and 45.8% for girls, compared with rates of 65.4% and 69.4% in non-government schools. The figures in Table 4 summarize the situation in 1986.

Table 4
Apparent Retention Rates of Secondary School Students to Year 12

<table>
<thead>
<tr>
<th>Year</th>
<th>Males</th>
<th>Females</th>
<th>Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>38.9</td>
<td>45.8</td>
</tr>
<tr>
<td></td>
<td>Non-Government</td>
<td>65.4</td>
<td>69.4</td>
</tr>
<tr>
<td></td>
<td>All Schools</td>
<td>45.6</td>
<td>52.1</td>
</tr>
<tr>
<td>1987</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>All Schools</td>
<td>32.0</td>
<td>37.8</td>
</tr>
</tbody>
</table>

The conclusion which I would draw from this is that the major problem in the nation's whole educational structure now lies, not in the tertiary institutions at all, but in the higher levels of our secondary schools. The low retention rates imply an inadequate co-ordination between basic education and vocational training, on the one hand, and the acquisition of the required skills through the apprenticeship system and TAFE courses, on the other. Until these problems are solved at this level,
the nation will continue to lack a well-trained and technologically efficient workforce which the Green Paper is seeking.

I suspect that this problem of raising levels of secondary qualifications goes much deeper than this. Teaching as a profession has lost its standing. As the Paper (p.96 Table A.3) indicates, the proportion of enrolments going to educational studies fell from 25% to 18.3% from 1979 to 1987; the numbers so enrolled actually declined also, from 79,000 to 72,000. I am certain that a major factor is the poor salary and career structure offered in the profession, largely because unions have been so concerned to establish a good floor that they have forgotten about the top. The teacher of senior secondary students must know his/her subject as well as pedagogy; but, alas, the profession is not attracting enough good graduates.

The tertiary system has been through hell and high water over the revolutionary changes of the last twenty years and their achievements deserve better recognition than the strictures placed upon them in parts of the Green Paper.

Personally, I cannot see the advantages to be gained by some of the Green Paper's proposals, such as a minimum enrolment of 8,000 students in any one institution, and amalgamation into fewer but large institutions. Big is not necessarily beautiful: bigness may save some administrative overheads, but may also carry other problems, such as, lack of close contact between teacher and student, or the multiplication of committees. Nor do I see the advantage of turning all CAEs into universities. There seems to me to be increasing evidence of, and support for, high level vocational courses at two-year diploma and three-year degree levels which have, of course, been the basis of the CAE system since the Martin Committee days. Some amalgamations have occurred and some more may be desirable, but do not turn them all into the equivalent of third-rate American universities. This is not to say that there is no case for one or two first-rate technological universities, or that universities should not bend more towards the private sector for research funding and high level professional training. Perhaps my myopia is that I still believe that the basic function of a university is devotion to the advancement of learning - all learning - and that while other functions may be added this non-political core must remain.

Now, I am not straying as far from my demographic past as you may think. The distribution of tertiary education should be related to the distribution of the population and the peculiarity of Australia's demographic pattern is the very high concentration in a few major urban areas and the absence of a range of middle-sized cities. Some may remember DURD - the Department of Urban and Regional Development - so carefully nurtured by Tom Uren. They sought to turn back the tide of metropolitan concentration and to encourage growth in regional centres: Bathurst-Orange, Albury-Wodonga, Townsville, Gladstone, Rockhampton, Pilbara, Canberra. They over-reached themselves, but these remain, nevertheless, important centres serving wide regions and they need adequate access, not only to secondary, but to tertiary education. This is why smaller institutions like the University of New England and the Riverina Institute of Advanced Education are so important in the Australian scene. We need to be Australian in our approach, not just copy-cats.
The Green Paper is an important document with much to be pondered over and with some things to be opposed (such as the abolition of CTEC, or the over-centralized control of research in the interests of something called the "national need", or the assumption that universities have not reacted dynamically to the pressures that have been put upon them in the past and have become havens of middle-class privilege with ageing, inefficient staff who cannot be sacked). The task is to deal positively with such matters, not to adopt a spirit of antagonism. I have attempted to provide a demographic background and profile in which the discussions should be placed.

For the first time in thirty years the pressure of demographic expansion is off our tertiary institutions, and it will remain this way to the end of the century. This is therefore a good time to reflect upon and tune the systems we have built; but now the government is setting a new target designed to increase graduate outputs by at least a quarter, and desirably by a half. There is just no rest for the wicked, slothful, privileged and tenure-protected academic!
Flexibility and Future Labour Needs in the Light of the Green paper: a Consideration of the EHW Factor

Denis J. Davis

Introduction

I shall discuss the links between education, the economy and the labour market and comment on future needs of highly skilled personnel with, if appropriate, special reference to the needs for more engineers and scientists.

Though I address most of these issues in this paper, I am afraid that in regard to comments on number of places in specific courses some of you may be disappointed. This is because I find little dependable criteria either in the Green Paper or in the context of its debate on which to assess the need for additional investment in higher education, let alone for specific places. Indeed I find the Green Paper disturbing because it seeks radical and extensive changes to higher education for improved national economic performance without adequate thought as to directions to take and without thought as to how to control the partners with which this improved economic performance requires education to work.

Though I accept the notion of increasing educational investment for improved economic performance I shall argue that the Green Paper's economic rationale for increasing higher education is superficial and leaves too many issues unresolved for achieving its aims. I shall also argue that before we significantly disturbed our higher education system with the abolition of CTEC and other organizational changes, we needed (and still need) to examine in more detail the types of education, household and work interfaces compatible not only with economic performance but with our cultural and social environments. The compatibility of these education, household and work interfaces with social and economic development I call in this paper the EHW factor. In determining the appropriate interfaces or EHW factor, I believe a study of the ACTU's paper Australia Reconstructed is a more useful beginning than the Green Paper and I feel it is unfortunate that the Government is not giving priority of debate to the former than to the latter. Until we determine the most appropriate education and industry interfaces it is impossible for us to confi-
dently predict whether we need any more expansion of higher education, let alone expansion of higher education in specific disciplinary areas.

The Green Paper has two major labour needs thrusts: one, explicit, to increase the proportion of qualified graduates in the labour force; the other, inferred, to continue to emphasize the expansion of places in technical and professional, industrial and business fields.

The authors of the Green Paper set, for discussion purposes, an annual higher education graduate target by the year 2001 ranging between 100,000 and 145,000 with planning estimates being based on a figure of 125,000. The setting of the minimum at 100,000, which assumes compensating trends of increasing school retention rates with declining youth population, is the subject of Professor Borrie's paper. This figure keeps the number of graduates per 100,000 of total population, including higher education graduates in TAFE, at the present figure of 550. In contrast the argument for a graduate output above 100,000, along with the argument for making higher education more relevant for industry, is based upon an economic, specifically human capital, rationale and is the subject matter of this paper. Assuming the present mix of graduates between shorter term diplomates, degree programmes and longer term higher degrees, the estimated effect on the labour force of raising the graduate level to 125,000 is to raise the proportion of the labour force with at least a degree or diploma from 10% of the labour force in 1986 to 15% by 2001.

Though in respect of the second thrust the Green Paper does not specify any particular mix of faculty places, the objective of continuing to increase the proportions of graduates in engineering and business areas at the expense of areas such as education can be inferred from, one, statements within the Green Paper concerning the importance of the mix of graduates (p.10), two, previous papers, such as the Hudson Report, to which the Green Paper has looked for much of its evidence, and the CTEC 1988-1990 Triennium Report, and, three, the general ethos of the Australian Government's thrust to make higher education more relevant for industry. I was informed that the Green Paper's neglect to specify the composition of the increased number of graduates results from a lack of time in the preparation of the Paper. However, I speculate that it also has something to do with problems discussed in this paper concerning the setting of specific labour force targets.

The Green Paper's economic rationale substantially derives from Chapter 3 of the Review of Efficiency and Effectiveness in Higher Education (Hudson Report, 1986), which in turn obtains much of its argument from the EPAC paper on Human Capital and Productivity Growth (1986). All are following arguments which human capitalist analysts made common in the 1960s. Though I personally feel that educationists need to be more aware of the economic relationships of education, I argue in this paper that, like the analysis of the 1960s, the present rationale runs a risk, though more through the ways of its implementation by politicians than through the fault of its authors, of being taken out of the context of the cultural, social and economic institutional settings materially affecting it.
The Economic Rationale of the Green Paper

The basic economic rationale of the Green Paper and the Hudson Report - namely, that national economic performance substantially depends upon investment in higher education - is based with reservations upon two areas of statistical evidence. The first is data showing an apparently higher level of investment in higher education of countries, such as the U.S.A. and Canada, with higher levels of economic productivity than Australia; the other is data showing the apparently greater labour market rewards of higher education graduates compared with other members of the workforce.

The upper limit of 140,000 higher education graduates per year by the year 2001, set by the Green Paper authors, derives from an assumed current 45 per cent lower Australian than North American output of graduates in selected disciplinary fields. Their source is Unesco Yearbook data cited in the Hudson Report (Table 1). The 45% difference is reduced to 33% when all graduates, including those in TAFE, are included in the estimates. Though some, such as Windshuttle (1987) and Sweet (1988), may take the authors to task over these figures, I am prepared to accept for discussion purposes that the setting of the specific discussion target at a 25 percent increase sufficiently allows for the classificatory difficulties of the data and for a possible narrowing of the difference between Australia and North America since the early 1980s when the data were collected. In any case, discussions with Canberra suggest that the actual figures should not be taken too seriously; the main aim of the authors of the Green Paper in positing targets well above 100,000 is to establish the general principle that our economic future depends upon a substantial increase in the proportion of higher education graduates in the workforce. Therefore, it is upon the credibility of this principle rather than upon problems with the comparative data that I wish to focus attention.

I shall only briefly mention the second area of evidence. Both the Green Paper and the Hudson Report, though the latter with strong reservations, use the higher labour market rewards of higher education graduates to argue or infer that increased investment in higher education increases the productivity of the workforce. This conclusion, however, involves a subjective judgment. Though the positive association between higher education and labour market outcomes is indisputable the necessary assumption that differences in labour market outcome reflect differences in potential productivity is not.

Some Reservations Concerning the Green Paper Data

As the Green Paper authors do not attempt to match occupational places to specific educational places it is not appropriate to attack them with the conventional arguments against labour force forecasting. Nevertheless reservations, some of which
Table 1
Higher Education Graduates in Selected Fields of Study\(^1\) for Selected Countries
(per 100,000 of population)

<table>
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</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>10</td>
<td>5</td>
<td>22</td>
<td>15</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Comm/bus. admin.</td>
<td>58</td>
<td>29</td>
<td>119</td>
<td>164</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Education</td>
<td>114</td>
<td>28</td>
<td>94</td>
<td>79</td>
<td>57</td>
<td>46</td>
</tr>
<tr>
<td>Engineering/</td>
<td>30</td>
<td>62</td>
<td>73</td>
<td>50</td>
<td>82</td>
<td>37</td>
</tr>
<tr>
<td>architecture</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fine arts</td>
<td>19</td>
<td>11</td>
<td>29</td>
<td>26</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Humanities(^3)</td>
<td>96</td>
<td>67</td>
<td>148</td>
<td>138</td>
<td>228</td>
<td>49</td>
</tr>
<tr>
<td>Law</td>
<td>11</td>
<td>10</td>
<td>14</td>
<td>17</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td>Medical/health</td>
<td>36</td>
<td>17</td>
<td>70</td>
<td>72</td>
<td>23</td>
<td>88</td>
</tr>
<tr>
<td>sciences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Science, maths/</td>
<td>56</td>
<td>51</td>
<td>47</td>
<td>60</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>comm. science</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
<td>430</td>
<td>280</td>
<td>616</td>
<td>621</td>
<td>432</td>
<td>270</td>
</tr>
</tbody>
</table>

\(^1\)The fields of study shown are those relevant to higher education in Australia. Some countries have higher education graduates in other fields. Thus the table does not necessarily reflect the total number of higher education graduates in other countries.

\(^2\)Commercial and Business Administration and Law included in Humanities.

\(^3\)Humanities, Social Sciences and Mass Communication.


the Green Paper admits, exist in making use of the data which the Green Paper does provide. I identify four of these, including:

- the appropriateness (given the existence of alternative paths with or without human capital investment to increased economic productivity) of choosing any country's educational level as a target for Australian strategies;
- the age-old problem of equating need with demand;
- the different options available other than expansion of educational places for making labour market adjustments; and
the often neglected question of whether increased economic performance, in the narrow sense in which it is used by economists, is the right criterion on which to base improved social well-being anyway.

(1) The making of any country's educational level a target for the improvement of our own economic performance presumes, first, that educational investment is related to economic performance and, second, that the type and level of educational investment of the country chosen as our target is an ideal form of educational investment.

Even if we accept the first assumption, we should be very wary of thinking that the level and pattern of investment of the U.S.A., used by the Green Paper authors to set the upper level of educational investment, is the ideal. Some critics in the U.S.A. assert that the U.S.A. is not ideal, that it produces too many graduates (Freeman, 1976; Rumberger, 1981; Clogg and Shockey, 1984; Smith, 1986), is discriminatory and that its quality of achievement is highly variable (Solmon and LaPorte, 1986).

Indeed, as we go in the direction of increasing higher education investment we should note the resulting evils in the American system as well as the benefits. The American labour force is, in general, one of the most educated in the world, but that while, for the American people as a whole, this feature may be a source of national strength (and this the authors above qualify), for some Americans - those who do not hold credentials in this very credentialed society - it can be a barrier to income and wealth. For those not able to afford access to higher education, the lengthening of academic qualifications to enter the labour market makes education a barrier, not a facility, to social mobility and to optimal utilization of the workforce. We must be wary that a lengthening of educational entry into jobs in Australia does not exacerbate social discrimination and create barriers for the full utilization and mobility of the workforce.

The American experience also shows that the pressure to further upgrade qualifications is not eased but is increased by the increase of numbers into higher education. There has been a great deal of upgrading amongst the professions. Law, medicine, dentistry, veterinary science studies are only entered after completion of a first degree while pressure is being applied (see Carnegie Forum, cited in CHE, May 28, 1986) for entry into teaching to require a master level degree. In 1983 master level degrees were already possessed by 54.1% of male and 43.0% of female public school teachers (U.S. Statistical Abstract, 1986). However one should bear in mind that many of these were acquired in part-time study after entry into teaching.

The data which the Green Paper itself uses indicate that there is certainly not a unique relationship between investment in higher education and productivity. The Japanese are far out-performing the Americans yet have a much lower investment in formal higher education (Table 1). Their rate of completion of secondary schooling, on the other hand, is extremely high. The West Germans, one of the OECD's best economic performers, have an even lower rate of graduate output than Australians. However, a high investment in trade and technician level training apparently offsets their lower level of investment in higher education. The well-known critique of
labour force planning which these cases indicate is that there is no one ideal path to economic productivity through human capital investment.

In fact when we question the first assumption that economic growth requires educational investment, we find strategies other than education, such as organization of work and introduction of new technologies, for increasing economic productivity. Indeed, some of these strategies, depending upon the way they are handled, may even be opposed to increased education.

Two hundred years ago, Adam Smith, in spite of being the founding father of human capital theory, saw the "division of labour", not education, as the prime force behind the wealth of nations (Davis, 1981). Others, identifying the division of labour, organization of work or technology as the driving force of economic growth, have different views about the effect of these factors on educational requirements.

Some contemporary writers, Braverman (1974), Dickson (1974) and Reinecke (1982), see technology in terms of a contest for industrial and social control which in capitalist societies inevitably leads to deskilling and polarization of the workforce. The school which associates economic productivity with education, on the other hand, believes the sophistication and complexity of new technology requires higher levels of education (see, for example, Dell 1986, Harris 1985 and perhaps to a more qualified extent various members of OECD 1982 and Peitchinis, 1983). It argues that the upgrading occurs by an elimination on balance of routinised and lower level skilled jobs and a compositional shift of the workforce towards service and "brainpower" type jobs.

Views of other writers range between being optimistic and pessimistic according to their degree of sensitivity to such factors as the time horizon of the technological change, the type of labour market the technology is affecting, the balance between technology's direct effect on skill requirements of workers using the technology and its wider effects on change to labour force composition, and the writer's assumption of technological determinism.

My belief, based upon field research, agrees with a significant amount of the literature (for instance, Littler and Salaman, 1984; Wilkinson, 1983) challenging the notion of technological determinism. These writers may still acknowledge technology's deskilling effect, be concerned about it, sometime feel it is likely, but question whether even under capitalism it must necessarily occur. My own work suggests that the introduction of new technologies generally requires an upgrading of knowledge and skills (1988a) but that it is not inevitable. Hence we currently need additional education to accommodate new technologies but we also need a more universal general education to ensure that technologies we adopt are appropriate for human development.

In brief, therefore, the preceding discussion indicates that not only are their alternative paths within the concept of human capital investment to economic productivity but alternative paths lie outside it. We might assume, remembering that there is an element of doubt, that these paths are compatible with increased educational investment. In accepting this assumption, we have a case for increased vocational education, but the element of doubt also indicates a case for a more pervasive
broader education to help ensure that the community adopts technologies appropriate to human individual and social development.

(2) If the best path to economic productivity lies down a particular human capital scenario, we come to the second problem of converting need to effective demand. It is one thing to believe we need more highly qualified workers; it is another to find the demand in the labour market for their employment.

Planning dilemmas caused by these two concepts are illustrated by conflicting recommendations between government departments over the expansion of engineering places in higher education. On the basis of need the Department of Industry, Technology and Commerce (DITAC) recommended to CTEC and to the Williams Inquiry on engineering in higher education that there be a general expansion of engineering places in higher education. However, though in assessing this request, nobody really rejects the notion of need, although a lot of people question the existence of effective demand. Whatever their limitations, the data in Table 1 correctly depict Australia's low output of engineering and technology professional graduates and highlight a grave deficiency in Australia's ability to compete effectively in a rapidly changing technological world. The case of the almost as low stock of higher education engineering graduates in West Germany is not comparable with Australia as the Germans have a much higher stock of skilled workers at trade and technician levels.

Yet in spite of this accepted need another advising body to CTEC, the former Occupational Analysis Branch (OAB) of the old Department of Employment and Industrial Relations recognized an effective demand for engineers only in electronics.

The two approaches differed in that OAB identified areas of unmet demand by working first from data on current labour market imbalances to data such as international comparisons, whereas DITAC tended to work in the reverse direction. In this particular case, the OAB worked more on the concept of effective demand and the DITAC on need inferred from comparative data.

(3) Even if we recognize an effective demand for additional professional labour, we have more ways of adjusting to it than expanding places in higher education. Deficiencies in trade areas may be more appropriately met by adjustments within industry. The need for greater numbers in nursing might be more appropriately met by changes in career structures and other working conditions. Immigration is another possibility, upon which Australia has long been dependent. However, in accordance with government policy, OAB aimed to shift away from dependence on immigration as a form of labour market adjustment.

Even when educational adjustment is necessary it may be more appropriate to make qualitative adjustment, for example, a deferment of specialist training to postgraduate courses, rather than quantitative adjustment. OAB recommended quantitative adjustment in the tertiary education sector only when it felt significant disequilibria would persist without it. Even then it recommended annual evaluation of the
effectiveness and the need for the adjustment. Its reasons for reservation concerning quantitative adjustment included the lack of good labour market statistical data on which to decide the number of places and the interference such an adjustment has with academic freedom and student demand.

(4) My fourth reservation concerns the concept of economic performance itself. We want a high economic performance to maintain and improve our social welfare, but do the two always mean the same thing? I will not explore this point but nevertheless it is a significant one. Education linked specifically to economic performance, as measured by economists, may involve important social and welfare costs.

The Need for a Total Approach

The limitations just described in the Green Paper's economic rationale for the expansion of higher education places do not form an argument against educational investment per se. They form an argument posited against the rationale for investment based upon narrow economic and very suspect comparative data.

For reasons of meeting the demands of new technology and for reasons of making sure the technologies we adopt are appropriate, I believe we need an expansion of education, but not necessarily of higher education and not necessarily in the formal education sector. I believe the argument for additional educational investment needs to be restated in a broader educational, social and economic setting, what I call a "total" approach. We need to discuss not just the education but the total education, household and work relationship affecting human capital investment and the curriculum affecting the total not just the economic quality of life.

We can benefit in our discussions from the comparisons which John Dawkins and the authors of the Green Paper introduce of educational investment and economic performance in other countries. But not in the narrow sense of simply identifying economic performance with level of educational investment. Rather the real advantage lies in comparisons of the education, household and work relationships within different countries. Differences between countries in compatibility of this relationship, which I call the EHW factor, is what I believe we really need to study in regard to improving our economic and social performance.

What we can learn from the Japanese and the Germans is the strong compatibility with economic performance of the relationship between education and industry and, from the Japanese (I am not too certain of the German), the strong compatibility with economic performance of the relationship between education, the household and work.

Examples of the compatibility with economic performance of education and work in Germany include the support which industry gives to a very broadly based and extensive apprenticeship system involving 44% of the 15 to 19 year old age group, and the avenues of the responsibility it keeps open for persons progressing in their careers from a trade base. A comparative study of staff in metal firms in
Future Labour Needs

France and Germany strongly argues the compatibility of industrial performance with the German practice of recruitment at trade level and progression through the firm (Lutz, 1981). Comparative studies of the adoption of technology in England and Germany stress how German employers in engineering avoid deskilling their workers and how they provide extensive retraining of workers on new equipment (Senker, 1983). An elaborate part-time vocational system in the public sector helps support this industrial training.

I am not suggesting from these examples of features of the German system that a German model of education and work, in which the stress is upon trade and technician rather than higher education, is transferable to all contexts. But my point is that increased investment in education, though considered very important in Germany, neither has to be at the higher education level nor through the formal education sector. German industry is a senior partner in the formation of German human capital.

We might well consider from observing the German experience and from traditions we share with the Germans of early school leaving and, until recently, training through industry, whether we are wise in pushing too far down the path of further higher education investment.

Examples of the compatibility with economic performance of the EHW factor in Japan focus on the transmission of values as well as knowledge. The Japanese are taught through the school system and the pressure of families to be "workaholics", members of teams and loyal workers to their employers. The "learning" day which includes not just time at school, but time at coaching college, in hobby classes, in music lessons and in the carrying out of homework is long, while the school year averages 240 days compared to the Australian 200. Hence the Japanese high school graduate not only is attuned to hard work but has completed by the end of high school the equivalent of nearly 2.4 years of additional schooling to the Australian graduate. The indoctrination and screening functions of the Japanese system is compatible with Japanese work and personnel management practices, but the general education content with a high level of development in mathematics and sciences is also a suitable base for the vocational education provided by the firms themselves. Like the German industry, Japanese industry is a massive educator, but unlike the German industry it takes its recruits at a later stage. Most Japanese process workers would have completed secondary schooling.

Again I am not saying we can transfer these ideas out of the Japanese culture into the Australian, although I suspect the values of the Japanese culture are not as different from those of high aspiring Australian families as some cynics might have us believe. It seems to me that the EHW relationships of the average Japanese and the professional Australian populations are very close. Nevertheless, the main point I wish to make is that like the Japanese we should be looking for compatibility in the EHW relationships. Obviously with the different cultures in our society our task is more difficult than in the more homogeneous Japanese society. However, the maintenance of our present standard of living could depend upon our trying. In another
place I discuss how we might reconcile our multicultural differences to this task (Davis, 1988b).

Though we should adapt our educational and industrial systems according to our own cultural, economic and social background and not that of others, certain factors overseas and at home, are causing a convergence of EHW patterns. In this paper, the effect of the rapidity of change which new technologies have on occupational and industrial work structures is one factor to highlight. The Feminist Movement and the increased participation of women, together with changing sexual, familial and work values, are other factors demanding discussion in other contexts. The growth of the information society, mass communication and international trade cause these factors to affect the EHW relationship in all countries.

In regard to new technology and occupational change we need to note the international interest in the concept of the "flexible worker" and its relevance for education and industry. In Australia as elsewhere our international competitiveness now depends upon the development of the "flexible" workers, a person whom as the name infers can quickly move and adapt to new, changing, and frequently unpredictable situations. The traditional compatibility between the tasks of the worker and her/his previous classification and training into process, skilled, technician and professional levels is now no longer appropriate. With the impact of new technologies, the occupational needs of industry are reverting back to the pre-factory era when the powers of conceiving ideas, diagnosing problems, designing structures, and maintaining and operating equipment all resided in small communities if not in the one individual. The new technological age, if man is to remain master of the technology and not vice versa, demands the proliferation of workers of the Benjamin Franklin mode. But we should be well aware that their proliferation depends upon the compatibility of the education, household and work relationship and not just on education.

**The Deficiencies of the EHW Relationship in Australia**

The question now arises of how compatible for economic performance is the EHW relationship in Australia. In the work cited above (Davis, 1988b) I discuss this in terms of the relationship of education with households and work rather than just its relationship with work. But it is sufficient in this paper to confine the discussion to the compatibility of the relationship between education and work or, more conventionally, education and industry.

The point I want to make is that compared with Japan and West Germany there is now a low compatibility. But this was not always so. Changing industrial structures and the decline of full-time employment for youths have destroyed what was for most Australians a fairly compatible EHW relationship. Youths took from the education system what they wanted; most took a grounding in basic literacy and numeracy; those destined for professional employment took an academic education through the school system and into the university. Youths left school early, explored
the labour market with a high turnover of jobs, and then found the training and pro-
gression they needed through a career structure appropriate for their experience. But
the retreat of industry as a serious educational and training partner, the upgrading of
educational entry into jobs and the new demands of technology caused breakdowns
in our EHW structure which are most apparent in unemployment amongst youths,
and dissatisfaction, expressed by youths and employers, with the inappropriateness
of the curricula of the education system. The history of this development shows that
the reasons for any inappropriateness of the education sector for current industrial
needs do no necessarily originate from within the education sector, nor can solutions
to that educational inappropriateness lie entirely or even mainly with the education
sector.

At a recent conference in Melbourne I spoke on the education sector's response
to industrial needs and pointed out that it was unjust to say that education is not re-
sponsive to these needs (Davis, 1987). It has long been responsive and its examples
of responsiveness to new technological demands could fill several pages. Further-
more the list continually grows.

Indeed, the more sophisticated argument against education's responsiveness is
that it is responsive but that it is not keeping pace with the rates of change required
(Phelan, 1987). We can argue, however, by reference to the overcoming of inflexi-
bility of transfer in the labour market and the development of the concept of the
flexible"worker", how, if education is not keeping up with the labour market
requirements of technological change, neither is industry, and that for either to keep
up both will have to keep in step.

Australian labour's relative inflexibility to be able to move from one occupation
to another is a constraint to technological change which some, such as John
Dawkins, feel education, through an emphasis upon the teaching of generic
(transferable skills), can help overcome.

Even with the best information on likely technological and structural change,
we cannot confidently predict the types and mixtures of skills that will be
needed in the future. The emphasis, rather, must be on broad and transferable
skills, and attitudes which equip the workforce to adapt and influence change.

Industry must also play its part in turning and broadly-based skills imparted
through higher education to the particular requirements of the workplace
(Dawkins, 1987a).

Theoretically transferable or generic skills are skills common to job requirements
within certain families of occupations. Supposedly the identification of these skills
and their teaching by educational institutions makes education more relevant for
modern technological needs. However, quite apart from the fact that the stress on
general education and commonality of skills contradicts what some employers con-
sider to be a more relevant education for industry, the word, transferable, means
transferable in an occupational context. Hence, ultimately the success of the educa-
An Appropriate Response to the Concerns of the Green Paper

In this paper it was not appropriate to attack the Green Paper on the grounds of the limitations of labour force forecasting. The Green Paper does not specifically do any labour force forecasting, and what forecasting might be inferred from the context within which the Paper was written, namely, the thrust towards an expansion of technological places, is too imprecise to attack on technical grounds.

Nevertheless, general arguments of the Green Paper and the contextual debate about the relationship between education and the economy did need clarification and
some statement of the reservations concerning them. In brief, these reservations show that the Government is suggesting a major reorganization and major expansion of higher education without any clear directions of where we might go. The general principle of increasing education to increase economic productivity is debatable but if we go along with this, and I am inclined to do so, there are many paths other than sheer expansion of places in higher education to follow. The economic success and the different education systems of West Germany and Japan show this. The problems which the U.S.A. has with credentialism, rising educational costs, variable standards and discriminatory outcomes for different population groups also show the problems of indiscriminately pushing down the track of higher education expansion. International experience shows that there are alternative areas for educational investment, such as expansion of secondary education and/or expansion of education in industry, that need to be balanced against the expansion of higher education.

As far as I am aware the Government is not really considering the most appropriate track for us to develop, either from our own experience or from the experience of other countries. Neither does it seem to be safeguarding us against some of the costs of change, for example, the consequences in terms of the teaching of the humanities and cultural subjects of the pressure to make our educational institutions more conscious of the industrial market. On this point I have not had time to take up the matter of general education but I believe its existence and structure is important to our affecting the adoption of appropriate new technologies and work structures for our society and economy. Certain caveats are usually made in the reports but they are demoted to the status of a by-line. The Green Paper says we must be aware of the different cultural settings in borrowing from overseas and the Minister for Employment, Education and Training says industry must play a part in the provision of transferable skills. But without proper analysis and debate of these caveats they are trite and unhelpful.

The debate over the expansion of technological places, part of the Green Paper context, though not of the Green Paper itself, illustrates the importance of this education and industry co-operation - as also does the matter of transferable skills. In terms of other countries we probably have a need for more highly skilled personnel, possibly in technological areas, but the experience of different forms of the EHW relationship in different countries shows that education alone cannot resolve this need. Investment in educational places for engineering is wasteful if industry does not translate need for engineers into effective demand. Similarly, education's stress on transferable skills is wasteful if industry and unions do not adapt the labour market accordingly. The solution of the question of what forms vocational education should take, whether it should be more technologically based or not, whether it should be more general or not, first awaits certain resolutions and commitment in industry. The message is that an "education-led" recovery is not likely to work. Industry and education must work together to make it work.

Finally, in translating these ideas into practical realities, I believe we must begin with the discussion of appropriate structures between education and work or, better still, education, the household and work (the EHW factor). Before we undo our
education system and make it subject to the whims and fancies of free enterprise we need direction, preferably by public consensus, of the education, household and work relationships we want to use in the pursuit of economic and social prosperity. As a beginning to this, I believe it would be preferable for the Government to give priority to discussion of the content and implications of the ACTU's paper, *Australia Reconstructed*, rather than to that of the Green Paper.
The first response of many academics to chapter 8 of the Green Paper was that this contained little that had not been said before and that most institutions were already moving on many of the issues identified there as requiring action.

This was seen to be true of all or some of the following: the need for an effective system of staff assessment, longer probationary periods, academic staff development programmes and units, more term appointments, more fractional and part-time appointments, early retirement schemes including those initiated by management on redundancy grounds, and increased salary flexibility to meet market forces, including easier access to consultancy income for both individuals and institutions.

The issues which might have seemed more controversial were an increased emphasis on performance monitoring in the context of dismissals procedures ("these should be established and strengthened system-wide"); the insertion of a firm salary bar within each of the university lecturer scales; the equalization of access to "paid time to develop skills or undertake scholarly activity" (i.e., the old study leave, which is currently more widely available to university staff); and especially the notion of flexible hierarchies by which academic staff holding positions above senior lecturer would hold those positions only for set periods and could revert to a tenured position at the base of the senior lecturer scale either voluntarily or because they failed to get re-selected to the senior post at the end of the time period.

There has also been widespread concern, particularly but not exclusively within universities, that the topic of academic freedom rated only seven lines: (A promise to consider legislative safeguards will seem a bit hollow in the light of the Thatcher government's problems in this area.)

From the point of view of institutions currently in the college sector, it is important not to be drawn into considering issues raised in chapter 8 in isolation from those discussed in other parts of the Green Paper. It would be a major loss if the benefits to these institutions arising from the much-heralded death of the old binary system were offset or undermined by the inauguration of a new binary system even more pernicious and divisive than the old one.
There is a great deal that is good for the college sector in the Green Paper in general, just as there is much merit in many of the proposals specifically in chapter 8 and identified in the paragraphs above. Where institutions have not yet been persuaded by "management" to accept some of these suggestions - on longer probation periods, staff evaluation and staff development units, a longer teaching year, for example - the Green Paper provides powerful additional arguments if management choose to press these points. It is quite persuasive to suggest to reluctant staff that some of this bitter medicine is worth swallowing to achieve the healthy glow of university status.

In other areas, those who feel bitter and twisted by years of discriminatory practices may find sweet satisfaction in seeing the universities "brought back to the field" from the previous privileged position in relation to study leave, research funding and workloads in the light of the Green Paper's general emphasis on the centrality of teaching in the mission of all tertiary institutions. As someone who has very recently moved back to the college sector after a decade away, I am more conscious that the pace of change in many universities has undermined many of these privileges and injected a high level of competitiveness into a previously cosy system. Nevertheless, it is clear that the Green Paper represents a significant acceleration of the rate of reduction of differences in employment conditions between college and university staff.

There are also changes in attitude towards the courses offered by different components within the tertiary system, which reflect upon attitudes towards the staff who teach them and the standards they achieve. Perhaps because of the often harsh treatment handed to them in the past by universities, college staff tend to be more relaxed about linkages with the TAFE sector and cross-crediting (since they are the ones usually knocked back by universities and not vice versa). College staff are often more confident, however, about the vocational relevance of both their courses and the relatively small amount of research activity done in the college sector.

There is also the understated but potentially important support that the Green Paper gives for a general system of accreditation. There appears some unresolved ambiguity in the suggestions in the Green Paper on accreditation:

Government would expect that the existing State bodies which accredit tertiary education awards would continue to operate, although higher education institutions that are part of the new higher education system would be responsible for their own course accreditation ... the Government is committed to a system of national registration of tertiary awards based on approved nomenclature and criteria for accreditation" (p.49).

The apparent intention to apply a common system which places emphasis upon the autonomy of institutions rather than central authorities is welcome in the college sector, especially in the ACT where the Canberra College of Advanced Education (CCAE) has been subjected to a more rigorous system than seems to apply else-
where. Any system based upon the processes of review currently operative in many universities and acceptable to all universities would be a welcome alternative.

Incitement to a more "managerial" approach to institutional management also falls on receptive ears in the college sector. For historical reasons, both teachers colleges and institutes of technology have laboured under (or enjoyed, according to one's viewpoint) a system of governance which placed great power in the hands of principals and directors. At a later stage, this was modified in pursuit of notions of greater staff and student participation imported from the university sector. But the thrust towards "accountable management" - meaning public rather than internal accountability - poses more problems for most universities than it does for college structures.

The thrust of this paper is to suggest that some of the consequences of the Green Paper recommendations - on structure, management and research as well as staffing flexibility - may point to unintended consequences for the college sector and tarnish the shining promise of the end of the binary system.

The menace of the "new binarism" is threefold. The first and most obvious element is the reconstruction of a dividing line based on size of enrolments, which will serve as a surrogate for the old research/teaching dichotomy in differential funding. The second element may emerge in the consolidated institutions now coming off the state drawing boards at an accelerating rate as a predictable response to the alternative of falling below the first dividing line or the threat to generalized research funding in larger institutions. The final element is the impact of salary flexibility within all institutions, which will tend to divide staff even more explicitly than at present along commercial-economic lines.

The division of institutions according to size of enrolments will reward those in existing large or newly-consolidated institutions at the expense of the small and more differentiated ones. The distinction is based on the notion of economies of scale which are asserted to occur at particular sizes of enrolments, at levels which fall just above the current size of many existing institutions. (It is unclear whether this proximity is the happy accident of an independent calculation or carefully chosen on more pragmatic grounds to force the pace of change.)

There is one sense in which there is really a new "trinarism" just as there was an old trinarism which recognized the separate identity of TAFE as a poor relation to higher education. It is clear enough that economies of scale operate by decreasing marginal costs of teaching larger classes in consolidated institutions and in reduced administrative overheads from a single central administration. It is less clear how these economies of scale relate to the two magic numbers of 5,000 EFTSU and 8,000 EFTSU.

Whatever the reason, instituting cumulative penalties for smallness seems an unnecessary reinforcement if the iron law of the economists is already punishing small-scale operations anyway. The effect will be to punish the poor and further reward the rich.
As John O'Brien has pointed out, while this (size criterion) seems a preferable arrangement to that which bases funding on nomenclature of institutions ... the implication of this proposal is that it may increase the 'market advantage' of a relatively small number of institutions, for the most part existing universities, relative to institutions in smaller states and territories and in regional areas. These latter institutions may be locked into semi-permanent second-class status .... Institutions that desire to achieve the 8000 EFTSU level may be forced into amalgamations which are administratively difficult and educationally inappropriate or result in amalgamated institutions which enhance the position of the larger partners at the expense of smaller institutions (O'Brien, 1988: 3-4).

Staff in institutions already near or even above the 8,000 EFTSU number may have another reason for growing even larger, unrelated to economies of scale. The Green Paper hints at a point made more explicitly by Mr Dawkins in other places, that all institutions must expect to have a significant proportion of their staff no longer funded for conducting research, either because they do not have strength in that area or there is an over-supply of research workers on particular topics. So even large institutions face the disruption of coping with identifying such staff if they are faced with a requirement to fund, say only half or three quarters of their current staff complement:

If these institutions can embrace a significant body of college staff, their problems may be solved. College staff can be reliably presumed to be generally less active in the more costly varieties of research, since they have never been funded for research in the past and generally it was not within the mission of these institutions to reward research, at least until recently. Incorporating a sizeable percentage of college staff into a new jumbo institution will provide a relatively easily identified group of non-researchers to non-fund, with the recruits grateful enough for the increase in status not to resent being used to defend the status quo.

For staff within small institutions, above that 2,000 EFTSU which the Green Paper acknowledges may be "reasonably cost efficient", the future will be bleak unless their management can come up with some alternative structural affinity acceptable to NBEET. The pool of income available to meet basic salary commitments is scarcely going to allow for any of the flexibility commended in chapter 8, since the pool is guaranteed to continue shrinking each year.

If these institutions are already reasonably cost efficient, as most will be after the consistent pressures of the last few years, then widespread redundancy may be the only alternative to bankruptcy. Since bankrupting local tertiary institutions may be politically unacceptable (except perhaps in Wales) the practical effect will be the creation of artifices - Clayton's amalgamations sustained by a conspiracy of silence in which the staff are really part of the binary "underclass".
Most of the new round of proposed consolidations tend to focus upon linking colleges and universities. None yet suggested seem to be amalgamating universities with other universities but that is presumably not excluded from the agenda for Griffith, Murdoch or even Newcastle-Armidale if they are overwhelmed with distaste for their CAE neighbours. (The "one big union" kite flown by the South Australian Minister seems to have not attracted much hot air.)

Experience with earlier "uni-coll" amalgamations points to severe problems in industrial relations and personnel practices. (It is a matter of regret that the 1982 DDIAE Conference and the 1987 Armidale Conference proceedings, both on the experience of amalgamations, have not yet seen the light of day.) There is a real danger that the university will be seen as the senior partner and will be able to impose on college staff a whole set of personnel practices, as well as self-protective and self-aggrandizing claims on courses and resources.

To save money, "rationalization" must mean staff reductions, either by sacking or natural wastage. On the basis of protecting academic standards on behalf of the whole institution, the managers of the newly-consolidated structures may be expected to adopt the university's existing criteria for appointment, evaluation of performance of probationers, promotion, access to research funds and study leave; and possible redundancy.

In this case, college staff appointed with different qualifications, experience and expectations will be severely disadvantaged. In some institutions which are relatively new foundations - like the CCAE, perhaps - applying university standards may not matter too much, because the pool of applicants for posts did not differ greatly from those appointed at the same time to universities. In others, there tend to be large discrepancies between university and college staff in terms of the mix of practical experience, formal qualifications and research activity consistent with the different historical missions of the two types of institutions.

If these problems are not addressed in terms of transition arrangements, including funding for staff retraining and upgrading, many of these new consolidations will mirror internally the worst of the old binary system's discriminatory hierarchy and inevitable antagonism. One alternative to making such arrangements - the "dual pathway" solution - creates its own problems, not least the recognition that one of the basic academic rationales for larger units is lost if there is no integration of staff policies.

The third component of the "new binarism" is not directly related to institutional consolidation. It flows from the emphasis on salary flexibility and the possible lessening of controls on outside earnings. The word "possible" is appropriate because the Green Paper discussion is elliptical here, as elsewhere. In the half page discussion, it is not made clear whether the authors of the Green Paper share the opinions of the authors of the Review of Efficiency and Effectiveness in Higher Education who are quoted as favouring a time rather than an earnings limit on outside earnings. The Green Paper notes but does not explicitly endorse the alternative approach which is "to have all money earned by academics through consultancies paid to the institution" (p 62). From the point of view of individual academics, there might be
an enormous difference in motivation and capacity for earnings between the two alternatives, depending on how the institution regards the income thus derived.

This will be particularly significant for academics in what the Green Paper calls "market sensitive" areas. Those privileged to be gifted in and interested in these areas - computer scientists, accountants, lawyers, bio-technologists and health scientists, to cite just a few - will now be encouraged to expect two additional sources of income compared to their less fortunate academic brethren.

First, they will expect to be paid a special allowance for no extra work - broadening and legitimating the previous salary subsidy paid to some categories of staff as clinical loadings. Second, they may be encouraged to use up to one fifth of their time on outside earnings while drawing a fulltime salary or concentrate on this activity for unspecified but presumably significant rewards (and tax advantages) in return for paying their consultancy earnings to the institution.

This additional income might be in addition to any financial returns from other forms of exploitation of their intellectual property, especially through companies floated in association with the institution (also commended in the Green Paper). While I accept that these sorts of structures have significant advantages in easing the administrative burdens of line managers not accustomed to operating in a commercial environment, there are significant consequential problems in blending the two organizational cultures. As I have remarked elsewhere,

the relationship between these structures and the existing patterns of university governance remain complex, given the need for accountability on the one hand and the opportunity to apply commercial judgements on the other. A fear which has sometimes been expressed is that the priorities about resource usage - space, equipment, teaching and research talent - usually determined on academic grounds may come into conflict with the essentially commercial cost-benefit judgements of the new entrepreneurial structures .... This is especially true for that group of staff at the cutting edge of new technologies, whose efforts may be maximized in a commercial sense by taking them out of the teaching/research setting altogether (JTEA, 9, 2, October 1987, p. 161).

It is clear however that some form of incentive is needed to reward those who are active in this area and to deal with the question of equity associated with transferring their income to institution-wide purposes which indirectly benefit the inactive. Provision for access to additional sources of income may ease the potentially disastrous situation of the most lucrative (and in some cases the most economically significant) areas of tertiary study being staffed by underpaid and therefore potentially inferior academics. But it also carries the implications of significant salary differentials and styles of employment within tertiary institutions.

One category of staff will be valued more highly by the institution and - if financial rationalists - expend an important fraction of their time and efforts on outside
earnings. Another category who are not intrinsically idle or even less gifted may be forced by the lack of current market enthusiasm for their teaching and research interests to reconcile themselves to the gentility of relative poverty.

Poverty might not be too strong a term in the circumstances. The Green Paper makes it clear that no additional funding will be provided by government to provide these loadings (or to take up the slack in teaching which might be generated by diversions of effort). This means that the funds for the high flyers must be diverted from those who can be bought more cheaply. As O'Brien remarks, "squeezing the conditions of one class of academics to provide incentives for another class of academics is hardly calculated to increase solidarity or co-operative methods of work" (op cit, p 11).

This third form of the new binarism cannot reasonably be blamed on the authors of the Green Paper; it is inherent in the system of rewards authorized by society. The policies for coping with this system within tertiary institutions which are enunciated in the Green Paper are not new either.

But it seems important to temper enthusiasm for more flexible staffing policies with a recognition that there is still a limited cake to be divided up, the cake is getting smaller all the time, and yet the number of student mouths to be fed is intended to increase. Add on the potential problems generated by institutional consolidation discussed earlier and it becomes clear that the managers of tertiary institutions must expect to face a lot of hungry and disgruntled staff in the future.

Lest I appear to end on a note of pessimism about the future, when I in fact think it is bright with opportunity, I can give heart to those who feel threatened by the pace of change by quoting from a piece I wrote in 1982 on the occasion of a conference assessing the likely impact of the Razor Gang.

I referred to Donald Schon's description of the strategy of dynamic conservatism which allowed well-entrenched institutions to resist the imposition of change. Faced with resistances, changes were unlikely to occur gradually and evenly across a system in accord with some long-term strategy, but in the form of massive shifts which produced dramatic changes in some institutions but scarcely affected others.

Using Schon to analyse the local tertiary scene, McDonnell suggested that Australian universities had successfully resisted major changes aimed at widening access and increasing flexibility in curriculum by first ignoring the threat ("selective inattention"), then "counter-attacking", then aiming successively at "containment", "isolation", "co-option" and then final agreement with the least amount of change needed to neutralize the intrusion. (Given the benefit of foresight, I might have added that history is then rewritten to indicate that the institutions would be seen to have thought of most of the ideas themselves in the first place.)

I concluded my 1982 paper with Schon's suggestion that:

The energy required to reach the threshold of transformation takes the form of disruption and leads to crisis and that this will be brought about, in most cases, by individuals who display irrational commitment, extraordinary energy, a combativeness which enables them to
battle established interests over a long period of time, and a remarkable skill at guerilla warfare.

It is possible that Mr Dawkins would be comfortable with this description; if so, the managers of tertiary institutions may need to batten down the hatches and - at least in the college sector - await the outcome with a great deal of interest and not a little enthusiasm. In 1982 I suggested that the Razor Gang had sounded the death knell of the binary system; in 1988 everyone seems to have at last realized for whom the bell tolls. It would be a great pity if we find, in another six years' time, that we have buried one binary skeleton only to discover several others clanking around in the closet.
In this paper I consider three issues: (1) the nature of the concept of economies of scale; (2) the Government's justification for the goals expressed in the Green Paper, particularly the economic justifications for change; and (3) the rationale behind consolidations and the Government's preference for large institutions of 5,000 and 8,000 EFSTUs.

The Concept of Economies of Scale

Before looking at the economic argument in detail, I should mention that in Canada currently we seem less "hung-up" on size than are Australians. A good Canadian system of higher education is viewed as being constituted by institutions of varying size. There have been institutional amalgamations within Canadian higher education, particularly involving teacher training colleges. Some of the mergers were voluntary - very few were shotgun weddings. But unlike Australia, in Canada some institutions were actually closed during the late 1960s and 1970s. Further, in contrast to Australia, or the United States for that matter, Canada did not transform its teachers colleges into four year degree granting institutions.

Canada has some large multi-campus institutions, particularly amongst the Colleges of Advanced Technology. But the problems associated with running multi-campus institutions is not the same in Canada as in Australia, because the institutions were planned to be multi-campus from the beginning. There is a big difference between managing a multi-campus institution planned to be so from the start, and managing one created through amalgamation.

The Green Paper makes several claims, largely unsupported by research evidence, about the benefits of larger institutional units. On page 30, it is stated that "larger institutions offer substantial economies of scale". My immediate reaction is to think of the large Canadian universities in which one could point to as many ex-

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*This is a summary of Professor Watson's presentation prepared by the editors.
amples of diseconomies as economies of scale. Large institutions have particular restrictions never encountered in small organizations. In large institutions, for example, programme approval must pass through an endless system of committees. I know of one example where a programme was approved only after being considered by twenty-three different committees. That is a system designed to obstruct, not to economize.

The Green Paper also states on page 30 that "larger institutions have greater flexibility in responding to changed community demands:. Once again, where is the evidence to support such a claim? Large institutions are quite capable of insulating themselves from the needs and demands of the community. For each example of the responsive nature of large institutions, counter-examples of large institutions being closed, insular and self-satisfied could be made. Whether or not an institution is responsive to the needs of the community depends on the particular type of institution it is, and on the nature of the society and its expectations. No universal generalizations pertaining to size of institution can be drawn in this regard.

The theory of economies of scale is a theory economists formulated initially by observing production systems and production costs in industry. Conceptually, it is very simple. Behaviour of unit costs can be depicted by a u-shaped curve with a vertical measure in dollars per unit cost, and a horizontal measure in number of units (see figure below).

As the volume of production increases, savings may be made in such things as bulk buying of materials, substitution of various labour costs for other labour costs, management improvements in production, and so on. These changes which enable...
Economies of Scale

goods, capital and labour to be used in a variety of ways, some of which may prove to be more economical, generally can be predicted to produce economies of scale. So with an increase in production, the unit cost declines.

Point M on the U-shaped curve (M for maximum or optimum) represents the theoretical maximum improvement in unit cost reduction for the same level of quality. At that point we find the lowest unit cost. Beyond that point, as production rises, diseconomies of scale occur. Either costs rise, or the quality per unit cost falls.

It has been pointed out that most people writing in this area make the silly assumption that the not-for-profit institutions - schools, hospitals, colleges, universities - are somewhere to the left of point M on the U-shaped curve. In fact, it is just as likely that they are on the right of that point and that increasing their size could lead to higher unit costs.

There may be arguments based on programme diversity and educational services that may lead a system to favour larger universities and colleges. But an economies of scale argument cannot be relied upon to make the point.

From the economic literature, it is clear that two caveats on calculating economies of scale apply. First, in a system of administered wages and negotiated work loads and block grants, i.e., administered total income, where such programme elements as class size, unit scheduling, regulations regarding admissions and output vary greatly from programme to programme - and where the traditions of management vary greatly between the units of the organization - the engineering reality suggested by the concept of economies of scale is not measurable. Second, aggregated average costs cannot be used when trying to calculate economies of scale. Marginal cost data must be used. The concept rests upon the notion of the incremental cost of adding one more unit of production to the left of point M, or the incremental saving of dropping one unit on the right-hand side of the slope (if diseconomies are discovered in the organization). In other words, the marginal cost target is to bring costs as close to the point M as possible. The way in which to do this for an institution is to look at a time series, and try to achieve it over time. It is like playing golf - you play with yourself!

In the late 1970s, school systems in Ontario became concerned with economies of scale in a major way. Although the data were there long before, in 1978 the school boards and the individual schools realized that declining enrolments would have a drastic effect on personnel and career prospects. This caused considerable political concern.

A Royal Commission, the Commission on Declining Enrolments (CODE), was appointed to investigate and report. The Commission recruited an economist to review past studies of economies of scale. This consultant concluded that, after reviewing more than 100 individual studies, all failed to allow for differences in quality and nearly all the studies were based on data which are unacceptable. Past studies tended to treat school boards or systems as companies, and schools as production units.

CODE then asked the consultant to carry out a study that related size to quality, and quality to cost. The study used average daily attendance as the proxy for size,
and it used an output measure consisting of external examination scores and internal school marks. The researcher calculated per capita average costs from the receiving institutions (universities, colleges, etc.) and per capita average costs in the schools.

This study concluded that for very big secondary schools there was some evidence of diseconomies of scale, particularly when they reached the 4,000 student mark. This conclusion was based on hypothetical data. At the level at which most of the secondary schools in Ontario operate (between 1,200 and 2,000 students) there were no economies or diseconomies of scale. At the elementary level, there was no evidence of either economies or diseconomies of scale related to the size of the school. Elementary schools in Ontario in 1978 ranged from about 300 to 1,100 students.

The way in which economies of scale is conceptualized varies with the social, economic and political circumstances of the times. During the 1950s, the concept of economies of scale was used to argue for the amalgamation of schools and school districts in order to achieve larger units. In particular, it was used to amalgamate secondary schools, but for quite different purposes. Educational purposes were the underlying rationale for amalgamation, but the idea of economies of scale was used as the front. Most of the educational argument for merger can be readily supported; most of the economies of scale argument is quite spurious.

When enrolments started to decline in the early 1970s, the focus of the argument shifted. It was not on creating large units for achieving various types of economic savings. In effect, it was argued that small schools should be prevented. The economies of scale argument was evoked not for adopting a system of larger units, but for destroying smaller ones. The argument was based on the diseconomies of small units, not on the economies of larger ones.

Again, on educational grounds, there is a "diseconomy" in having very small units. The one room school of 50 students belonged to a different society. A 50 unit school in a large city is not educationally acceptable. Small schools cannot be argued against in terms of diseconomies of scale - it is doubtful that any economist could make the argument empirically - but educationally they are unsound.

The Goals and Their Justifications

Looking at the Green Paper from an educational planner's point of view, I could support many of its goals. Australia has many noticeably small colleges and even the large Australian universities are noticeably small compared to large universities elsewhere.

The question of scale is contextual. It has to be looked at in terms of the distribution of population, the distribution of urbanization, administrative traditions, the transportation system and the communication system. It also has to be looked at in terms of peoples' expectations for services. If people expect local service, and are unprepared to move, you obviously move towards small local units.
Economies of Scale

There are similarities in the distribution of population in Ontario and Australia. But there is one big difference in the expectations of the Canadian population: many members of the community expect to move for higher education. They expect to travel 100 miles or more to attend colleges; parents expect to put their children on a bus for an hour or more to attend a big district high school. That expectation is not strong in Australia.

The expectations of the Australian population do not necessarily need to be drastically altered, particularly in light of modern communication networks. It is quite possible to achieve locally the advantage of larger units through modern communications, without moving the population.

While the Green Paper seemingly promotes diversity, there is a danger that it may kill it. To me diversity is a system that supports institutions that range from 300 students to 13,000 students. Size is a function of tradition - there are very large universities indeed in some other countries, e.g., India - and each society has ideas of what constitutes the appropriate size. Through mere demographic trends, there are possibilities for institutional growth in the Australian higher education system, without insisting on major amalgamations or declaring 5,000 EFSTU to be the minimum size. A system driven on such criteria will produce less diversity and diseconomies of scale.

What is a reasonable size? It has, first of all, to be studied in terms of the image of the total system, the distribution of the population, existing institutions and desired programmes. A series of small specialist institutions can be linked by telecommunications. Multi-purpose small institutions do not have to be weak. They can also be linked with resources in other centres.

What is possible, though, is constrained by two factors: (1) "empire building" at the centre; and (2) "wall-building" within individual institutions. If an institution feels threatened because it is a small multi-purpose unit and that it must grow to a certain size to survive, then the psychological atmosphere necessary to build the networking that allows it to remain multi-purpose and small, but not weak, does not exist. The "psychology" has to be established first before an institution would be willing to build the network.

The Minister, of course, would find it much easier to control a smaller number of units. So it seems the large will grow larger, and the small will simply disappear, unless there is a counter-force, which would need to be largely political. If there is a substantial element of local pride, an institution is not perceived as weak by the local people. Local political campaigns may build up to prevent the destruction of local institutions.

What else might be used in the defence of small local institutions? Australia is a very centralized federation. The Green Paper could not have happened in either Canada or the U.S.A. There the provinces and states are too strong. The Australian states might defend institutions within their boundaries, but it seems a "weak straw". So, does one bow to the inevitable? Not necessarily. The goals of the Green Paper can be accepted as valid, while the strategies for achieving them may be rejected. The notion that practically every institution is to be amalgamated, the targets, the
numbers relating to minimum size, etc., can be changed without rejecting many of the basic goals. The task is to demonstrate to politicians that poor educational behaviour is costly and has risks.
Economies of Scale and National Provision of External Studies

Ross Harrold, Warren Musgrave and J. Baldry

In Chapter 5.4 the Green Paper asserts that:

- The economy of scale principle should form the basis of decisions regarding student load in external studies;
- Economies of scale and improvement in the quality of provision are to be achieved by limiting the number of institutions regarded as principal providers of external studies, using institutional and course benchmarks;
- Specifically, the Government proposes to limit the number of external study providing institutions to less than 10, each with a base load of at least 3,000 external students. These institutions will be able to tender for blocks of external students in the order of 500 in various fields of study. These blocks are presumably related to the Government's intention to ensure that there is a minimum of 50 enrolments per unit, with 150 a desirable level.

This brief paper examines the concept of economies of scale and uses it to assess the above proposals. It then applies the concept to the activity of providing external studies and considers organizational implications. Finally it raises some basic policy issues about the nature and distribution of any economies to be gained.

Economies of Scale: What are They?

The term "economies of scale" is little used in mainstream economics today: the more specific term "decreasing costs" which is related to the behaviour of costs of production as output expands, is generally preferred. This is perhaps because "economies of scale" can be easily confused with the term "returns to scale", which is used to classify input-output relationships (or production functions) in terms of a particular set of technical characteristics. We shall follow the Green Paper in using the term "economies of scale" to describe a situation in which average or unit costs...
of production decrease as the volume of production increases. (It should be noted that the Green Paper nowhere defines the term precisely.)

Begging the question for the present of whether or not there are economies of scale to be realized by rationalization of external courses or consolidation of external providers, it is useful to ask what are the sources of economies of scale.

Adam Smith's famous statement that "the division of labour is limited by the extent of the market" points to the main source of economies of scale: production processes are often such that a large volume of output (the "size of the market") is needed if the least-cost methods of production are to be employed. This in turn is because many production processes are characterized by indivisibilities of one sort or another, and because the larger the volume of output the greater the degree to which production processes can be broken down into a series of specialized tasks, each being carried out by a specialized worker or machine.

At a trivial level, a hammer or a shovel needs to be of a certain minimum size (and cost) to be able to perform its task. If the volume of output we are producing is such that we can justify employing a worker for only four hours a day to utilize the shovel, it remains unused for half the day, though the daily cost of the shovel is (approximately) fixed, regardless of whether it is used for four or eight hours daily. If our output rate was to double so that we could now justify employing a worker for eight hours a day, we do not have to pay any more for the shovel as it is now utilized more intensively. So (assuming constant hourly wages) the cost of production will not have doubled, though output has doubled. Hence the average (or unit) cost of production will have been reduced by the expansion of output.

This example, trivial though it is, is sufficient to indicate how economies of scale are most likely to arise. Somewhere in the production process there is an input (the shovel) which, for whatever reason, has a minimum feasible size (and associated cost), so it can only be fully (or efficiently) utilized if output, and employment of other inputs, reaches some minimum scale.

Related sources of economies of scale (which can also be categorized as being ultimately due to indivisibilities if a little imagination is used) relate to specialization of inputs along functional lines, and learning on the job. In our example, say the worker and the shovel are used for two different tasks which each require some skill and need to be learned. If one worker is employed he will have to perform both tasks, perhaps being less than fully efficient at each, and perhaps spending some of his time non-productively, moving from one task to the other. If two are employed, each may specialize in a single task, and no time will be wasted moving from one task to the other, so unit costs will fall as more labour is employed (at least up to a point).

This example probably confirms, for many of you, a suspicion that economists spend much of their time describing the obvious. However, such simple examples can be a help in clarifying some of the issues. Consider first the question of the level of aggregation of the activity we are considering, and the nature of any economies of scale involved.
In standard economics textbooks distinctions are drawn between plant-level, firm-level and industry-level economies of scale.

Plant-level economies of scale are generally related to the production process *per se* as in the earlier shovel example: machines and other inputs into the production process are characterized by certain indivisibilities, so can only be used efficiently if the volume of output reaches a certain minimum cost level. Moreover, specialization of tasks, with a consequent improvement in efficiency, becomes easier the greater the volume of output.

Firm-level economies generally relate to administration and associated tasks. Even a small firm needs a manager. If the firm is very small the manager may actually run the business for only a few hours a day, spending the rest of the time as a tradesman. As output expands and the firm becomes larger, the manager spends more of his time managing, and the advantages of specialization - in this case, the concentration of one person on management tasks - lead to lower unit costs. Further growth may allow increased specialization of management tasks, with one executive being responsible for marketing, another for production, and so on.

Finally, at the industry-level, economies of scale, lowering the unit costs for all firms, may be realized via the growth of a supporting infrastructure as the industry expands. Specialized research organizations, co-operative apprenticeship schemes, trade journals, and so on can develop (or at least the cost of such an infrastructure can be spread over a large number of firms) hence lowering unit costs.

Turning from the simplicity of these examples to the realities of testing for the presence or absence of economies of size involves the introduction of considerable complexity caused by difficulties in defining and measuring production processes, output and inputs. In particular, decomposing a multi-product firm (university?) into its component production processes in order to analyse the nature of the economies of size of any one of them can be a complex task involving serious measurement, statistical and theoretical problems. Particular problems can be provided by interdependencies between processes.

*Application to Green Paper Proposals*

In the tertiary education setting, the plant-level may be related to course level (or perhaps departmental level) or, in a multi-campus institution, to the campus level. The firm level relates to the institutional level and the industry level clearly corresponds to the whole tertiary sector.

Given the nature of higher education "industry" one should not be surprised by the paucity of estimates of size economies in external studies. In terms of the foregoing discussion, a university (if we can be so particular) is a multi-product firm engaged in teaching, research and service. Each of those activities has a product that can be defined (and measured) in a variety of ways. The single biggest item of cost in universities, that of academic staff, is used in each of these activities. What is more, the total work-time of an individual academic is not fixed in total, nor is its
division between the various activities uniform across staff members or stable through time.

Even if we could isolate the teaching function and define and measure its output and inputs, further disaggregation in order to separate the external and internal modes still remains difficult because of jointness of inputs to each mode and because of strong interdependencies between the modes. This last point can be illustrated particularly well by reference to the way in which preparing external material imparts a discipline, style and vigour to internal teaching which may not otherwise be present, while the internal mode acts as an important mechanism for external monitoring and control and course development.

Whether or not there are economies of scale to be realized in the provision of external studies at any of these levels is considered later. However it is worth emphasizing that, if there are economies of scale to be realized, the policy measures required to achieve them must be related to the level at which the economies are to be found. The Green Paper (Dawkins, 1987:37) remarks:

available evidence suggests that economies of scale begin to operate only when there are 3,000 or more external enrolments per institution and a minimum of 50 enrolments per unit, with 150 being a desirable level.

The first part of this statement, if true, relates to "institutional-level" economies. It implies that some centralization of or co-operative arrangements between institutions can economize on the costs of administration, library services and other support services. The second part does not necessarily imply such a policy: individual institutions can reduce the number of courses offered, or perhaps the number of departments teaching a given range of courses, hence reducing the teaching cost per student. So course-level economies do not necessarily imply centralization or rationalization of institutions, though this might be one way of achieving them.

In many instances economies can be effected without changing the scale of the operation, and without any change in institutional structures. For example, institutions of a given size may well be able to improve efficiency by modifying administrative structures and incentives, changing the mix of capital and manpower. At the level of the individual course, advantage might be taken of programmed learning systems and audio-visual aids to replace labour in teaching a course to a given number of students. Such economies are not directly related to scale of operation, and recent CTEC initiatives aiming at improving efficiency within institutions recognize this. It is not obvious that economies attainable by an expansion of scale are necessarily more important than those attainable by changes in internal work practices and administrative structures.

If there is considerable scope for improving the efficiency of external teaching which is unrelated to actions to achieve economies of scale, one may well ask, why have these improvements not already been made? Why have institutions not to date been sufficiently concerned with the cost-effectiveness of their external studies
operations? Whatever the answers to these questions, they do not appear to be directly addressed by the proposals seeking to achieve economies of scale, although a requirement to grow with limited additional resources may provide incentives to adopt more efficient methods. One must therefore expect that some sources of these inefficiencies, to the extent that they exist, will remain even if the Green Paper proposals are implemented.

Scope for Economies of Scale in the Components of External Studies

The Green Paper's assertion that economies of scale begin to operate at particular institutional and unit enrolment levels implies certain assumptions about the nature of external studies cost functions. A study of the various components of teaching externally should help provide a basis for evaluating these assumptions.

A report by Ashenden (1987, Appendix A) of the component unit costs of the external teaching of the Bachelor of Business course at the Darling Downs Institute of Advanced Education provides a useful framework for such a study. In Figure 1, which is adapted from Ashenden, the cost of each component is classified as being either fixed, variable or leap. Fixed costs are not influenced by the number of students in a course, variable costs depend directly on course enrolments, and leap costs are discontinuously associated with enrolments, i.e., they are fixed up till certain enrolment limits when they jump to a new level for a higher enrolment range.

The figure is suggestive only: the nature of the costs of individual components can differ, depending on the type of course, the media and the teaching methods used. The main point of the figure is to draw attention to those cost components which provide most scope for obtaining economies of scale. As has been indicated, this will tend to be in those components in which there are large indivisibilities, that is, where costs are insensitive to increases in enrolments.

There will be little scope for reductions in per unit costs in those components whose costs are fully variable, e.g., mailing. There will be some economies associated with leap costs. For example, printing costs can presumably be lowered by long runs, since printer set-up charges can be spread over more copies, and by bulk buying. Larger printing commitments can justify the purchase of more sophisticated, efficient equipment. Examining costs per student can be lowered by greater numbers of candidates sitting at each examination centre. Teaching and student support can incur either variable or leap costs, depending on contractual arrangements. If a marker or a counsellor is hired on a "piece work" basis (i.e., the number of scripts marked or the number of student interviews) the cost will be fully variable; if either is hired on a full-time basis, then there will be no marginal cost of servicing an additional student, up to the industrially-established maximum marking or case loads. In the latter case there will be short-run economies to be gained by increasing enrolments to the point where, for example, the marking cost will "leap". Even then, there will be some scope for economies, since second and subsequent markers are likely to be hired at the level of tutor rather than lecturer.
Figure 1
Nature of Component Costs in the External Teaching of a Course Unit

<table>
<thead>
<tr>
<th>Components</th>
<th>Nature of component costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Preparation</td>
<td>Fixed Leap Variable</td>
</tr>
<tr>
<td>a. author</td>
<td>x x</td>
</tr>
<tr>
<td>b. instructional design</td>
<td>x x</td>
</tr>
<tr>
<td>c. editor</td>
<td></td>
</tr>
<tr>
<td>ii. Production</td>
<td></td>
</tr>
<tr>
<td>a. word processing</td>
<td>x</td>
</tr>
<tr>
<td>b. printing</td>
<td></td>
</tr>
<tr>
<td>c. graphics</td>
<td>x</td>
</tr>
<tr>
<td>d. audio</td>
<td></td>
</tr>
<tr>
<td>e. video</td>
<td></td>
</tr>
<tr>
<td>iii. Warehousing/mailing</td>
<td></td>
</tr>
<tr>
<td>iv. Teaching</td>
<td></td>
</tr>
<tr>
<td>v. Student support</td>
<td>x x</td>
</tr>
<tr>
<td>vi. Library</td>
<td></td>
</tr>
<tr>
<td>vii. Examining</td>
<td></td>
</tr>
<tr>
<td>viii. Equipment</td>
<td></td>
</tr>
<tr>
<td>ix. Capital</td>
<td>x</td>
</tr>
<tr>
<td>x. Other charges</td>
<td></td>
</tr>
</tbody>
</table>

Note: Fixed costs are those whose aggregate costs are the same for both 50 and 500 students.
Source: Adapted from Ashenden, 1987, Appendix A.

The greatest scope for reductions in per unit costs as enrolments increase is in those components where costs are fixed. These are basically the "set-up" costs, associated with providing basic facilities, developing courses and designing and making their teaching materials. As these costs are incurred before the courses are offered, they are independent of subsequent course enrolments. The costs of any subsequent updating or revising of these materials to increase their effective working life will also be independent of course enrolments.

Set-up costs can vary very widely, depending on the media and external teaching approach adopted. As a guide to the approximate costs of alternative approaches to teaching, Figure 2 indicates the approximate academic staff time required to prepare one hour's worth of student work.
Figure 2
Relative Academic Time Input to Prepare Teaching Material

<table>
<thead>
<tr>
<th>Teaching method</th>
<th>Ratio of academic-hours per student-hour of work generated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecturing</td>
<td>2-10</td>
</tr>
<tr>
<td>Small group teaching</td>
<td>1-10</td>
</tr>
<tr>
<td>Teaching by telephone</td>
<td>2-10</td>
</tr>
<tr>
<td>Video-tape lectures</td>
<td>3-20*</td>
</tr>
<tr>
<td>Audio-vision</td>
<td>10-20*</td>
</tr>
<tr>
<td>Teaching text</td>
<td>50-100**</td>
</tr>
<tr>
<td>Broadcast TV</td>
<td>100 or more**</td>
</tr>
<tr>
<td>Computer-aided learning</td>
<td>200 or more*</td>
</tr>
<tr>
<td>Interactive video disk</td>
<td>300 or more**</td>
</tr>
</tbody>
</table>

*Requires support staff  
**Requires several support staff  

The choices of medium and of the instructional approach largely depend on the nature of the subject matter and of the particular teaching objectives. Subjects which require observation and interpretation or the learning of manipulative skills are likely to be taught best with the help of television or video cassette materials, which are expensive to prepare. On the other hand, subjects involving a knowledge of literature or the development of argumentation and reasoning skills are likely to rely on the presentation of written material, whose preparation and production is likely to be much less expensive. It can be argued that the most significant economies of scale are to be derived from those courses in which the pedagogical objectives require the development of high-cost teaching materials.

If the set-up components of such courses are those in which the most dramatic opportunities exist for economies of scale, then a government which aims to capture these economies should be more concerned about rationalizing the development and production of course materials than about centralizing the delivery of the produced materials and of servicing enrolled students. Organizationally this suggests that policy-makers should find consortium arrangements among distance educational providers acceptable. Assuming courses were standardized, a Central Distance Education Facility might be established by each consortium. The sophisticated media hardware and its attendant editors and technicians could be sited at this centre. Teams of specialist academics from member institutions could be seconded to author specific units. These teams would produce their materials at the central facilities. Member institutions could then use these materials for the courses which they teach and (perhaps) examine.
The Magnitude and Distribution of Possible Economies

Prima facie there do appear to be considerable economies of scale derivable at both course and institutional levels. While data from Appendix B of Ashenden's paper (1987) are ambiguous, they suggest that if three identical institutions offered the same undergraduate degree course in Business Studies, generating 1,000 student units each, the external studies infrastructure costs per student unit (net of tutoring costs) would be $1,740. If this course was offered by only one institution, generating the same total of 3,000 student units, infrastructure costs would drop 85%, to $260 per student unit - a saving of $1,480. This is about one sixth of the average Commonwealth grant per higher education student in 1987 (Dawkins, 1987: Table F.3).

At the institutional level (including both internal and external teaching), very rough estimates of the possible magnitude of cost savings from the consolidation of small universities can be made from Table E1 (p. 118-119) of the Green Paper. The recurrent grant per EFTSU (a rough measure of average cost) of large universities (EFTSU > 7,000) was $8,779 for 1987; for small universities (EFTSU < 7,000) it was $8,513. (A.N.U. and James Cook University are excluded as special cases.) However most of the higher "cost" of the large universities is accounted for by their subject mix - more concentration on sciences and medicine. Making the extreme assumption that all small universities are what Throsby (1985) calls "arts-type" institutions, and using Throsby's estimate (Table A.I.7) that the average cost per EFTS of an arts-type institution is 68 percent of the average for all institutions, the average cost per EFTS for small institutions "should" be $5,925, giving a potential saving of $2,787 per EFTS or 30% of the present "cost", if rationalization of all small institutions into large-sized institutions were to lead to these cost savings. On the basis of these figures, we might hazard a guess that the maximum potential savings from consolidation of external studies institutions could be about 15% to 20%.

Although these estimates are very hypothetical, they do demonstrate that the potential economies of scale could be substantial. But who will benefit most from them - the Government, or academic and administrative staff in the providing institutions, or the external students themselves? The answer depends heavily on the ways in which political and organizational power will be exercised.

Obviously the Government is fully intending to capture the lion's share of any economies and to use the freed resources to increase the intake of internal and external students into higher education with a minimum additional commitment of its own budgetary resources. Much will depend on its adroitness in devising appropriate "contract prices", i.e., the levels of operating grants per EFTSU, for the teaching of blocks of external students in degree courses. The formula must implicitly recognize, not only the magnitude of costs involved in different media and methods used in teaching externally, but also the potential economies of scale in each field of study. Moreover, if it is to capture scale economies for itself, the Government needs to offer different contract prices for different sized blocks of students in the same way.
Economies and External Studies

degree courses. To do this successfully, the Government must know a great deal about marginal costs of different external studies arrangements, on the one hand, to avoid allowing the institutional contractors to keep too great a share of the economic benefits of scale, and on the other, to avoid eroding too greatly the resource base of external teaching activities.

The setting of subcontract prices and the making of reciprocal agreements among the campuses of providing institutions will be at least as complex and politically sensitive as the establishment of contract prices. If the Government is sincere about its respect for institutional autonomy, it will take a "hands off" approach to these inter-campus arrangements.

The details of these inter-campus agreements will depend heavily on the nature of the institutional bonds among the members of the providing institutions. At one extreme, one dominant campus might insist that its staff design, develop and co-ordinate all courses and that the staff of its "satellite campuses" act as its agents for marking assignments and tutoring students. At the other extreme, representatives of member campuses of a consortium could negotiate how the responsibility for developing teaching materials for different courses in a consolidated degree programme could be shared among campuses, even though the recording and production of all materials were to be handled by a central facility.

Finally, before we become too excited about either the magnitude of the potential economies of scale which might be obtained from rationalizing provision, or about who will receive their benefits, we must recognize certain practical organizational realities: (i) Australian providers of external studies are dual mode institutions, and academic lecturers in Australian tertiary institutions are mostly (ii) tenured and (iii) highly specialized in their fields of expertise.

Dual mode institutions mean that academic staff teach the same subjects to both internal and external students. What will happen to those staff who lose direct responsibility for their external course? They presumably will still have responsibility for teaching their internal course and they will still mark (but not set) assignments in their old external course. Where will be the savings? If their field is expanding they might be given a higher internal or external marking load. If not, they might try to offer new internal courses to higher level internal students. If allowed, there will be more choice to internal students who will be in smaller classes. Or they might have more time for their research activities. Are the benefits of economies of scale to go into subsidizing the teaching of internal students or the research time of lecturers?

These organizational realities serve to remind us how difficult it will be in the short run to prevent any economies of scale from being dissipated within institutions. Perhaps it is only over the longer run, when staff movements and retirements free resources, that opportunities can be taken to redirect into growth areas, the resources created by economies of scale.
Conclusion

At first blush the concept of economies of size is simple and readily grasped intuitively. Elaboration and application of the concept usually bring to the fore significant problems of definition, specification and measurement. This is no less true of external studies than of other areas of application.

Despite this, economies of size that may be worth pursuing are likely to exist. Policy-makers, in the course of such pursuit, should acknowledge that in changing the production process they are likely to change the nature of the product. This, of course, need not be seen as undesirable but sight should not be lost of the possibility.

Finally, careful attention will need to be given by Government to the mechanism by which economies of size might be pursued and to whom the benefits accrue. The assumptions underlying the Green Paper proposals appear to expect considerable savings from reorganization of the higher education sector and implementation of many of the proposals will depend on the collection and redistribution of the savings by Government. Much thought has yet to be given to the nature of the policies for external studies that will make this possible.
10
Lessons From Recent Experience With Mergers

Grant Harman and Lynn Meek

Introduction

One of the most dramatic direct effects to date of the Green Paper has been the strong additional push it has provided towards further institutional amalgamations. After the "Razor Gang" amalgamations of the early 1980s, there was a brief pause before renewed pressures towards amalgamation brought specific merger possibilities back on to institutional and government agendas. One amalgamation already has been achieved - in January this year Lincoln Institute of Health Sciences became part of La Trobe University. What the Green Paper has done in just two months is to accelerate the trend towards amalgamations. Both small and large institutions across the country are looking for partners and we have read in the press numerous suggestions for combining pairs or groups of institutions, or for re-organizing institutional arrangements on a state-wide basis. Even a few months ago, few of us would have predicted that today there would be so much enthusiasm for amalgamation and so little public opposition.

Compared with the Razor Gang forced amalgamation of 1981, the Green Paper employs a more subtle and more politically powerful approach. To be part of the new unified system, institutions must meet minimum student loads. Thus for many institutions what is euphemistically described as consolidation is the only alternative. Although the Review of Efficiency and Effectiveness is quoted as one authority for the new benchmarks on size, the actual minimum figures for student load seem to have been plucked out of the air; they do not have a solid research base at all.

The Green Paper sees great benefits in consolidation. It says larger institutions offer education, economic and other benefits for students, staff and institutions, including a wider range of courses, better facilities and services, and more flexibility in teaching and research loads. It also believes that larger institutions tend to be more flexible, more responsive to community needs, and better able to manage their own affairs. Particular attention is drawn to possible savings in merging adjacent
institutions. On the other hand, nothing is said about possible problems or costs of consolidation, though it is admitted that some advantages can be secured from organizational linkages other than full amalgamation.

In order to attempt to provide some comment on the Green Paper proposals on consolidation and to draw from experience with amalgamations, I propose to attempt to discuss four questions:

1. What do we mean by consolidation and related terms, and what forms can consolidation take?
2. How do we explain the pressure for amalgamation?
3. Are there possible benefits from amalgamation, and do we need a new major round of amalgamations?
4. What else have we learnt from recent amalgamation experience?

What Do the Key Terms Mean, and What Forms Can Consolidation Take?

Four key concepts need some discussion - amalgamation, merger, consolidation and integration (Harman, 1983; Harman, Beswick and Schofield, 1985). What do we mean by these terms? I do not propose to refer to how various writers use them, but it should be noted that, despite differences of views, there is a fair degree of consensus about the basic notions involved.

I propose to use the terms merger, amalgamation and consolidation as being interchangeable. Basically, a merger is the combination of two or more organizations to form one entity, while integration is the process following merger when components of the two organizations are combined - libraries, central administration, student services and so on. The process of integration can take years. For example, despite the fact that it is almost 30 years since the Canberra University College was amalgamated with the Australian National University, the ANU still has two separate academic boards, not one.

Amalgamation or merger is only one of the ways of linking separate tertiary education institutions. Figure 1 presents a continuum of ways of linking institutions. At the far left of the continuum, is the voluntary co-operative agreement between two or more institutions. Such agreement may be enacted by the simple exchange of letters between institution heads, or they may take the form of formal, legal agreements. Examples of formal agreements are the arrangements whereby various independent research or teaching institutions or university residential halls affiliate with universities, or where institutions agree to co-operate in some activity or to share a resource.
Next comes the formalized consortium which is usually formed to provide a common service to participating institutions (such as a health service, student counselling, library cataloguing). In Victoria, for example, a formalized consortium to provide a particular service is CAVAL (Cooperative Action by Victorian Academic Libraries), a company limited by guarantee, whose aim is to promote co-ordination of library services and collections, and to develop improved methods of identifying, locating and exploiting recorded information in participating libraries. But with such arrangements, apart from the agreed area of common activity, the participating institutions are able still to pursue essentially autonomous directions.

Moving along the continuum, the next two types of organization arrangements are federations and unitary institutions. With the federation, responsibility and authority are divided between the participating institutions and some new over-arching central body. The particular arrangement may take a number of forms, but the most common pattern is the imposition of a super governing body and central administration, or the establishment of a co-ordinating council of heads of institutions, that co-ordinate the joint activities. With a federal structure, powers and responsibilities at both individual institutional level and central level are usually clearly specified. Examples of federated structures in tertiary education are the University of London and the University of Wales. At the far right of the continuum is linkage through establishment of a new unitary organization.

Classification of Amalgamations

Amalgamations come in a wide variety of forms and patterns. To help make sense of the diversity let me suggest a few basic distinctions.

The first is between voluntary and involuntary amalgamations. A voluntary amalgamation is when two or more institutions initiate amalgamation themselves, rather than the impetus coming from outside, whereas involuntary amalgamation is where a merger is forced on institutions by some outside body. Most amalgamations in Australian higher education over the past decade have been basically involuntary resulting from government pressure, but in some cases, such as at Wollongong,
was clearly a combination of factors - the Wollongong people may well say it was essentially voluntary.

Second, amalgamations can be divided into consolidations and acquisitions, based on whether one participating institution continues largely unaffected and absorbs the other or others, or whether the result is the emergence of a new institution. The combination in Sydney of various small health sciences colleges to form what is now Cumberland College of Health Sciences can be described as a consolidation, whereas merger of the Commonwealth Government School of Forestry in the 1960s within the Australian National University can be described as an acquisition. For political reasons, an acquisition is sometimes publicly presented by a government as a consolidation, while it is not unknown for an institution facing absorption into a larger institution to argue that the merger should be treated as a consolidation rather than an acquisition. The latter strategy was used in 1981-82 by the Newcastle College of Advanced Education in its efforts to halt its proposed forced merger with the University of Newcastle.

A third distinction is between mergers of institutions in the one sector of tertiary education, and cross-sectoral amalgamations. The amalgamations at Ballarat and Bendigo in 1976 were in both cases mergers of two colleges of advanced education, whereas the merger of parts of the Tasmanian College of Advanced Education with the University of Tasmania was cross-sectoral. Cross-sectoral amalgamations, whether they be university-CAE or CAE-TAFE pose special problems, not only at institutional level, but also at system level, particularly with regard to matters such as funding, co-ordination and course accreditation.

Fourth, it is useful to distinguish between amalgamations of institutions covering similar academic fields (e.g., two teachers' colleges) and amalgamations of institutions with different interests (e.g., a teachers' college with a multi-school college). If we were to employ definitions used in the business sector, the first of these could be referred to as horizontal mergers and the second as vertical mergers.

Fifth, distinctions can be made on the basis of the number of institutions being combined. Two institution mergers have been the most common form to date, but there are five examples in Australia of recent mergers which have involved four or more institutions (i.e., the Western Australian College of Advanced Education, the South Australian College of Advanced Education, the Sydney College of Advanced Education, the Brisbane College of Advanced Education, and Victoria College). Almost without exception, mergers which involve more than two institutions have been consolidations rather than acquisitions. On the basis of these ideas we could attempt to develop a schema of classification. One attempt is set out in Figure 2.
Figure 2
Classificatory System for Amalgamations in Australian Tertiary Education

1. Involuntary Amalgamations
   (a) Consolidations within the Same Sector (e.g., merger of Canberra University College and the Australian National University, and of Melbourne State College and the SCV Institute of Early Childhood Development).
   (b) Acquisitions within the Same Sector (e.g., absorption of Mount Stromlo Observatory within the Australian National University).
   (c) Acquisitions across Sectors (e.g., absorption of Townsville College of Advanced Education within James Cook University of North Queensland).

2. Voluntary Amalgamations
   (a) Consolidations within the Same Sector (e.g., combination of various institutions to form Lincoln Institute of Health Sciences).
   (b) Acquisitions within the Same Sector (e.g., absorption of Wagga Wagga Agricultural College by Riverina College of Advanced Education).
   (c) Acquisitions across Sectors (e.g., absorption of Wollongong Institute of Education within the University of Wollongong).
   (d) Consolidation across Sectors (e.g., merger of Kalgoorlie School of Mines and the Kalgoorlie TAFE College to form a new institution).

How Do We Explain the Pressure Towards Amalgamation?

What we are seeing in Australia today with respect to renewed pressure for amalgamation of higher education institutions is part of an international trend. Amalgamations are not a new phenomenon by any means in higher education systems in western societies, but their incidence clearly has become much greater and more marked over the past couple of decades or so. Let me refer to three examples apart from Australia - the United States, Britain and the Netherlands.

In the United States, amalgamations in higher education have been common in both public and private sectors for many years, but the incidence of amalgamations has increased from the 1960s on. In 1976 Shirley and Peters (p.144) estimated that, in the previous decade, there had been over 100 mergers which involved well over 200 separate institutions (also see Millets, 1975). Since the 1970s amalgamations have taken four main forms:

- merger of small women's colleges into larger co-educational institutions;
- consolidation of public institutions into state-wide systems;
- court mandated mergers for racial desegregation purposes; and
bilateral mergers i.e., mergers of institutions with strength in different areas.

In Britain the history of amalgamation until the 1970s was essentially a story of a number of new universities being created through combining smaller non-university institutions, and of specialist single purpose institutions being absorbed in existing universities, thus becoming new professional faculties. Since the early 1970s, amalgamation has been employed as a device to achieve substantial reorganization - first, mainly involving colleges of education because of the over-supply of students in teacher education courses and a major teacher over-supply problem, and more recently in both university and non-university sectors to cope with dwindling budgets and, in some cases, enrolment problems. A number of amalgamations have already been achieved - for example, various colleges in the University of London have combined to form larger and stronger units, while in Northern Ireland in 1985 the New University of Ulster (the last established of the new British universities of the 1960s and 1970s) was combined with the Ulster Polytechnic to form the University of Ulster. This amalgamation created a great deal of interest, not just because it was cross-sectoral, but because the non-university institution was the larger of the two and was also multi-school. The Rector of the Polytechnic incidentally became the Vice-Chancellor of the new institution. Currently other amalgamations are being considered or have been suggested - combination of some of the colleges of the University of Wales, the University of Keel and North Staffordshire Polytechnic, the University of Aberdeen and nearby colleges, the University of Stirling and Paisley College in Glasgow, the City University in London and one or more nearby polytechnics, to name a few. Almost every week the Times Higher Education Supplement carries at least one story about a forthcoming or possible amalgamation.

Similarly in the Netherlands merger has been used as a mechanism to solve system-wide problems. In 1983, the Minister of Education and Science proposed a major reorganization and concentration of higher vocational education. As a result since 1984 a massive re-organization has taken place, merging 300 mostly mono-purpose institutions into 50 very larger multi-purpose institutions.

The Australian experience with amalgamations has been somewhat different in that none of our older universities was created through a process of consolidation of two or more non-university institutions, and amalgamations appear to have been relatively uncommon until the 1960s, at least in higher education.

From 1900 to 1975 there were three main sets of amalgamations:

1. two amalgamations involving the Australian National University (ANU) - the combination of the original ANU with Canberra University College, and the absorption of the School of Forestry into ANU's Faculty of Science. (Earlier, the Mt. Stromlo Observatory had become a department of the original ANU);
2. amalgamation of small single purpose institutions in the advanced education sector to form larger units or within multi-school colleges; and
Since 1976 until now most of the amalgamation effort has related to the perceived problems of former teachers' colleges and other small CAEs. A number of amalgamations took place or were considered in the late 1970s, but the main burst followed the Federal Government's Razor Gang decision of April 1981, which required 30 teacher education CAEs to amalgamate or lose all Commonwealth funding. All the required amalgamations took place, except those involving the Armidale, Newcastle, Miplerra and Hawthorn colleges (Harman, 1981; 1986).

How do we explain this common trend in many western societies for consolidation and often multi-campus institutions, and from smaller towards larger higher education institutions, and from mono-purpose institutions towards comprehensive multi-school institutions? In part, it is a result of the transformation of small elite systems of higher education into mass systems of higher education. Mass higher education creates considerable financial demands and affects society directly in so many ways. Hence we have pressures for efficiency, elimination of apparent duplication, and consolidation into more economic units. Second, educational and technological changes work towards larger institutional units. Degree courses generally demand better facilities and more sophisticated equipment than associate diploma and certificate courses. Technological developments, especially related to computing, also provide a push to larger units, since technology is expensive, and the use of particular forms of technology often can only be justified in larger institutions. Third, governments tend to favour larger multi-school institutions over mono-purpose institutions, since the former provide greater political flexibility in enrolments in particular fields according to labour market needs. Fourth, governments have tended to favour consolidation as a means of increasing effective control - a small number of larger units are easier to control than numerous smaller institutions. This trend has been reinforced with a market oriented approach to higher education; if higher education institutions are to be more entrepreneurial, they need greater freedom of movement and stronger internal management.

Are There Potential Benefits From Consolidation, and Do We Need a New Round of Mergers?

Consolidations clearly can produce substantial benefits. There can be economies of scale, and reductions in unit costs. There can be savings in terms of future capital expenditure; for example, if two adjacent institutions with inadequate libraries combine, it is possible that a single new library building will meet needs, whereas for two separate institutions two separate new buildings would have been required. Essentially, savings of this kind were achieved in Ballarat and Bendigo with the college amalgamations of the mid-1970s.
Consolidation can produce educational gains - stronger teaching programmes, stronger research groups, more student choice of fields of study, better academic and student services, better qualified and more cosmopolitan academic staff, and higher degrees of student satisfaction with their courses. Such gains have been experienced in a number of amalgamations.

In addition, consolidation can yield organizational and management benefits, such as increased flexibility, stronger management structures and the opportunity to make substantial organizational changes and to find attractive new growth points. The amalgamation of the University of Wollongong and the Wollongong Institute of Education is a good example of how amalgamation was skilfully used to promote growth and new academic developments.

On the other hand, it must be stressed that not all amalgamations automatically lead to such benefits. It depends on the particular situation, and on how amalgamation is handled. In some cases, for example, instead of savings there may well be increased costs, as a result of the need for new communication systems between non-adjacent campuses. Multi-campus institutions can be expensive to operate.

Further still, while amalgamations may produce many benefits, there are usually costs - short-term additional financial costs as a result of redundancy packages, costs of integrating administrative library and computer systems, and minor works associated with reallocation of space; sometimes new capital costs; human costs in terms of increased anxiety; and administrative costs in terms of additional organization efforts.

In contemplating consolidation, a sensible strategy would seem to be to try to estimate both the short-term and the long-term costs and benefits. Enthusiasts for consolidation understandably often emphasize the benefits, but neglect the costs.

Do we need a new round of mergers? In essence my answer is that some additional mergers appear to make good sense, particular if the binary system is finished. Looking back, some of the past mergers were not the most sensible, largely because of restrictions of different kinds imposed by the binary line. There are many examples of adjacent institutions where consolidation would appear to make good sense - such as the Melbourne College's Carlton campus and the College of Pharmacy going into the University of Melbourne. But I remain somewhat sceptical about many recent proposals, especially those aiming to link geographically dispersed institutions. Of course, some proposed multi-campus arrangements may make good sense, but what we need to ask is

- what is the purpose of the proposed consolidation?
- what benefits are likely to be derived?
- what are likely to be the short-term and long-term costs?

Currently, in the scramble to find partners, such questions do not appear to be attracting much attention at all.
Mergers

What Else Have We Learned About Consolidation?

A number of lessons can be drawn from the recent amalgamation experience in Australia and overseas. First, the human factors are of pivotal importance. People and not organizations bring about mergers. Whether a merger succeeds or not will depend largely on human ability, on foresight and imagination, and on leadership. Staff and students need to be convinced that the merger can produce benefits; they need to be involved as far as possible in discussions and planning. In any merger, the crucial questions of staff future employment and conditions need to be addressed. Serious amalgamation proposals generate tremendous anxiety among staff, and in any amalgamation there are winners and losers. Unfortunately, some people will be hurt in the process.

Second, generally voluntary amalgamations tend to produce more desirable outcomes than do forced amalgamations. For a voluntary amalgamation to succeed, staff must be convinced of the potential benefits. If they participate actively in the process, then they may have greater commitment to the final product and, thus, there may be greater assurance of the success of the venture. However, every point of negotiation in a voluntary amalgamation is open to dispute, and interest groups may have undue influence on the negotiations through the constant threat of withdrawing their support for the merger. As already noted, all successful mergers require strong leadership, and voluntary mergers probably require a core of "institutional elites" in the institutions involved who are committed to the proposal and prepared to push it through despite opposition.

Third, while achievement of a successful merger requires skilful leaders, dedicated to the idea of change, the merger process does not usually transcend normal organizational politics and conflicts. Various groups within an organization, such as faculties and departments, can be expected, at the very least, to attempt to maintain their positions of power and influence both during merger negotiations and after the marriage has been consummated. Also, it is generally the case that when groups from different institutions have similar functions, a merger between the institutions will cause these groups to compete with one another over such matters as status and prestige, and the greater the similarity, the greater the competition. Change always involves some degree of inter and intra-organizational conflict, and even if a group loses out in the initial round of negotiations, its members can be expected to attempt to recoup their losses during the implementation phase.

Fourth, merger negotiations produce fascinating power plays and bargaining games, and all sorts of arguments appealing to ideas about fair play, traditional loyalties, and distinctiveness of particular initiatives or schools. Large institutions trying to take over small ones often use language such as a marriage of equal partners.

Fifth, institutional loyalties often run very deep, especially in teaching institutions. With a merger it is sometimes very difficult to overcome the sense of loss of organizational identity, and the old institution, although it may no longer exist as a legal identity, will live on in the minds of the people who belonged to it. Some actors will not even consider the benefits of a proposed merger because of their
institutional loyalty. Those who oppose merger will use claims of organizational distinctiveness - such as its scholarly reputation or vocational commitment - as weapons in the dispute. It also must be recognized that it takes time to create new institutional loyalties, symbols and meanings; in some situations it may not be achieved until there is a nearly complete turnover in staff.

Sixth, the post-merger and integration phase generally is long and painful. Mergers involve dramatic change, the death of established institutions and the creation of new ones. Mergers affect the lives of everyone involved, from Vice-Chancellors and Directors to secretaries and cleaning staff. To merge is to change, and, as mentioned above, there is no such thing as painless social change. Generally the process of integration is more complex and far slower than expected. Merging of units such as library services alone can take time and effort.

Seventh, it often takes considerable time for the benefits of merger to appear. Commenting on the North American situation, Millett states that "it is no exaggeration to say that most mergers take about ten years for the wounds to heal and for the new realities to be generally acceptable and workable for faculty, students and staff". Sections of the Australian academic community are now prepared to state the positive benefits of past merger, but there are academic staff in several of the recently amalgamated institutions who remain alienated and feel dispossessed.

Eighth, that while in the long-term, institutional mergers may achieve rationalization of resources and academic programmes, the short-term costs of merger - both financial and emotional - are high. Some of the emotional costs of merger have been mentioned, but it also needs to be recognized that financial savings cannot be immediately achieved. For example, the long-term costs of operating one consolidated library may be less than the operating costs of the separate libraries of previously independent institutions, but the immediate costs of consolidating library holdings, such as the cost of re-cataloguing, are high. In the long-term, salary savings may result from retirement, but in the immediate post-merger phase, the amalgamated institution may find itself with contractual obligations to pay (at their previous salary scale) three or four registrars, bursars, vice-principals, etc., and no opportunity to effectively use all of their talents. Government probably should consider providing special funds for implementing mergers, and a national staff redundancy scheme might help to alleviate many of the short-term emotional and financial costs of merger.

Ninth, mergers do not accomplish miracles; they merely change the pattern of social interaction within participating organizations. During the negotiation phase of a merger, staff often want guarantees about the future. They want assurances that there will be no shortfalls in funding, or that funding will actually be increased. They want guarantees that new and major research initiatives will be achieved, that teaching will be improved and offered to a larger, better qualified and more highly motivated group of students, and so on. It is quite understandable why people seek such guarantees, though they are impossible to provide. The best that can be offered is a fairly clear statement about the potential gains - both educational and material - that may result from merger. Whether or not substantial achievements actually re-
Merger is an empirical question. Staff members can be guaranteed that following merger their jobs will be preserved, but what they choose to do with their jobs under the changed circumstances is largely up to them.

Finally, it is important to recognize that the forces which lead to merger seldom, if ever, originate solely within the institutions involved. The conditions that stimulate merger are mainly external ones, although seldom is the impact of external forces on individual institutions so clearly illustrated as it was with the 1981 announcements of the Razor Gang. This may be a reason why so often there is internal staff and student opposition to merger proposals. Students and rank-and-file staff members are seldom in a position - nor is it their primary concern - to have the knowledge to assess the external political, economic and educational factors that may necessitate merger.
Amalgamations and the Operation of Multi-Campus Institutions

Jillian Maling and Bruce Keepes

Although the title of this paper refers to amalgamations, in the language of the Green Paper, consolidation has several forms of which amalgamation is only one. It is important to distinguish between amalgamations 1981-82 style, which resulted in the formation of multi-campus CAEs in metropolitan areas, and the opportunities offered by consolidation Green Paper style. The 1981-82 amalgamations were seen as primarily motivated by financial considerations. The Green Paper views consolidation as resulting in greater efficiencies but, more importantly, giving opportunities for improved educational delivery and strengthening of academic programmes. It describes the objectives of consolidations in terms of benefits to students, staff and institutional management. The Green Paper sees such consolidations as leading to larger institutions which will give:

- for students, a wider range of educational offerings, scope for transfer, and improved facilities in terms of libraries, computing, and student services;
- for staff, enhanced professional contacts, more flexibility, the respect for teaching and research loads, and broader promotional opportunities; and
- for institutions, the opportunity to develop an effective research infrastructure and substantial efficiencies of scale.

Further, it states that the Government will not pre-determine these consolidations. Instead, the Government will offer inducements for consolidations. Hence, consolidation in terms of the Green Paper contrasts sharply with the 1981-82 amalgamations in that while motivated by the Government's policies, the amalgamations will be proposed by the institutions themselves. They will not be based simply on economic arguments but on a range of considerations. Where they are formed the government will:

- contribute to the cost of early retirement or redundancy schemes;
As suggested from the two examples above, there are various definitions of multi-campus institutions when a single corporate identity functions on different sites in separate locations. Distance between the sites may vary. The locations may...

The different forms of consolidation proposed by the Green Paper include:

- amalgamations;
- formal collegial arrangements;
- networking of non-metropolitan colleges;
- joint administrative arrangements; and
- where the population base of a region is below 500,000 arrangements which combine in a single institution elements of both TAFE and higher education.

Given the five different forms of consolidation proposed, and the extent to which multi-campuses are already a feature of institutions, many of the institutions which the Green Paper sees as emerging will be multi-campus in character and will be composed of former institutions which, in some cases, were themselves multi-campus institutions. That is, they will be multi-campus institutions formed from multi-campus institutions which were formed from independent institutions. These will, then, be second order amalgamations. Nevertheless, because of the size of the consolidated institutions, they may be quite different in character than the earlier multi-campus institutions.

The remainder of this paper focuses particularly on the operations of multi-campus institutions and while attention is paid to the broad concept of consolidation as set out in the Green Paper, most of the points that follow are based not only on the literature but also on the experience of the authors with four earlier amalgamations in two states and the current operation of two different multi-campus institutions in a third state.

The current two experiences with multi-campus institutions include the Nepean College of Advanced Education operating on three campuses and four sites in Western Sydney; one campus in Kingswood at the base of the Blue Mountains, a second campus consisting of two adjacent factories in the Penrith industrial district, and the third campus over 20 kilometres distance at Westmead with two sites separated by about a five minute walk. The other multi-campus institution is Sydney College of Advanced Education, with six teaching campuses located in inner and southern central Sydney, a central administration located in an industrial office building, and a number of other sites which are involved in some form of administrative support.

As suggested from the two examples above, there are various definitions of multi-campus institutions when a single corporate identity functions on different sites in separate locations. Distance between the sites may vary. The locations may...
be broadly similar, e.g., country towns acting as the commercial centres for their respective regions, or they may differ considerably in character, e.g., metropolitan Adelaide and Whyalla. There can be differences in programmes. The central administration may be located at one of the campuses, distributed on several campuses, or it may be a separate entity.

The administrative organization of a multi-campus institution can take many forms. It can have a large central administration, organized on one or more of the teaching campuses or, alternatively, located on an administrative site with no daily contact with students, or it can have a small central administration with deliberate delegation and accountability of administrative functions and services available at individual teaching campuses. The central question, in the context of the Green Paper, is: "What are the permutations and combinations that result in an efficient and effective operating institution?" The precursor questions are: "What are the key decision points?" and "How does the operation of a multi-campus institution differ from that of an institution consolidated on a single site?"

The operation of multi-campus institutions which result from consolidation is, particularly in the earlier stages of their existence, heavily influenced by contextual factors. First, there may be the politics surrounding the proposed consolidation. In the case of the establishment of the Tasmanian Institution of Technology, and its predecessor institutions, the north-south regional nature of Tasmanian politics became a significant factor. The Lincoln-La Trobe merger has, in contrast, been relatively free of such issues and so able to expend more energy directly on the issues relating to the merger of the two institutions. In effect, such political influences increase the number of "stake-holders" involved in the consolidation and create a situation where the interest of these differ by campus.

Second, there are both the formal and informal attitudes of the parties involved. For example, while an institution's council may favour consolidation there are almost always pockets of staff resistant to it. In the case of the 1982 amalgamations in South Australia, the chief executive officers and the Co-ordinating Authority reached agreement that it should occur. Some sections of staff disagreed and continued to oppose the amalgamation even after the new institution existed as a legal entity. Where the consolidation involves institutions operating on several campuses the attitudes of support or non-support may become co-terminus with campus boundaries. In the case of the Sydney College of Advanced Education such opposition, based on the desire of continued autonomous identity of the constituent institutes, was incorporated into the legal basis of the new institution, thus becoming part of its operating structure. (This has, however, not prevented one institute from recently de-amalgamating.)

Third, the institutions involved may approach the task as one of creating a new institution with its own corporate identity, or with a range of alternative assumptions. Larger established institutions may see themselves, for example, as simply absorbing smaller ones into their established traditions: for example the Kindergarten Teachers College into the Western Australian Institute of Technology in 1974. Differences between institutions may not only relate to size, but also to perceived relative status.
of academic standing, quality of staff, and research. Such attitudes about status are deeply held. They are sometimes made tangible through the legislative base of the new institution, visible and felt in the debates of academic board, and may emerge several years later in criteria for appointments and promotions. In the case of multi-campus institutions, the various campuses may not be equal partners in the consolidated institution, or may not perceive themselves as such.

Fourth, consolidating institutions may have different philosophies, and different administrative styles and practices. Frequently, institutions know relatively little about each other. Although the available information base on higher education has noticeably improved in the past few years, accurate information needed for planning a consolidation depends heavily on the goodwill of the partners and the strength of their individual institutional knowledge base. In the case of multi-campus institutions resulting from a consolidation, there is the need to generate a new fund of knowledge which specifically relates to the differences between the campuses. This may include factual details as to the home base of staff and students by campus, travel times between campuses, public and private transport between campuses, the telephone systems and their operating codes, the questions of judgements as to how the different philosophies conflict or complement each other and the perceived future directions of the consolidated institution.

Fifth, there is staffing. The Green Paper proposes a future of more flexible staffing arrangements and, in particular, for consolidating institutions, assistance with early retirement and other schemes aimed at easing the potential burden of redundant or inappropriately skilled staff. Consolidations, as proposed in the Green Paper, could potentially lead to institutions of a much larger size, in some cases, significantly larger than those currently in existence. The skills required for managing a student information system of ten or twelve thousand are significantly different from those of an institution of two or three thousand. Size, particularly when combined with multi-campus, frequently necessitates a different technological base and operating style. A related factor has already been touched on, that is the attitude of the staff themselves to the consolidation. Hostility can rapidly make even a flexible context rigid.

Sixth, the educational programmes offered might be the same, overlapping, or significantly different from one campus to another. For example, at Sydney CAE the Diploma of Teaching/Bachelor of Education (Primary) courses offered at the St. George Campus and the Sydney Institute Campus are the same. Similarly, the Institute of Nursing courses, offered at the Salisbury Road Campus and St. George Institute, are the same. On the other hand, the GDES (Computer Education) at the Institute of Technical and Adult Education, while purportedly the same course as at St. George and Sydney Institute, has a distinctly different approach in catering for the particular clientele.

Factors, such as the above, shape significantly the context in which consolidation occurs and hence the early operating efficiency of the multi-campus institution.
In the following section of this paper some key issues are suggested for operating multi-campus institutions in a manner which contributes to quality, direction and efficiency. The account is not comprehensive but deliberately eclectic.

The form of consolidation of a particular institution will vary over time. Initially the necessity of developing an institution-wide information base and of operating in an effective manner will probably lead to a centralization of many administrative processes. This is particularly so when viewed from the perspective of campuses, or multi-campus institutions, which had their own autonomy. For example, the 1982 amalgamation which resulted in the South Australian College of Advanced Education (SACAE) faced the institution with seven differently configured student information systems, not all of which were completely computerized. Similarly, each of the constituent Colleges had different financial systems, different approaches to assets control, to maintenance, minor works and the purchase of equipment. Each had different academic policies and procedures. Further, in the case of two member institutions, these not only differed by campus, but also according to the institution's involvement in an earlier merger, and by external studies. The terms and conditions of the employment of academic and general staff also differed by institution. Courses, even when they were in the same area, differed in content and structure, and so did the status given to students wishing to transfer between what had become campuses in the same institution. (The last factor resulted in numbers of complaints to the Ombudsman's Office in the first two years of the operation of SACAE. Students and their families viewed the institution as one, even if the staff at the different campuses still adhered to their former institutional affiliations.)

Initially, then, the necessity for creating selected common policies and structures, and common unity, necessitates a degree of centralization which previously independent campuses/institutions will resist, unless the purposes and stage of development is clearly understood and mutually agreed. Once common practice, policies, and procedures have been established a great deal more campus autonomy within a multi-campus institution is practicable.

There is the matter of a "corporate identity" for the new institution: type, form and strength. Issues that have to be squarely faced and clearly delineated include the corporated identity of the institution. Is it a new institution? If so, what are the benefits for the various constituent campuses? What are the benefits for each campus? What is the direction (mission) of the corporate institution? Are one or more campuses to be treated as branch, junior, or subservient in status to the main campus? Is the remote campus viewed as a remote outpost? One of the reasons why such issues need to be dealt with early in the life of a multi-campus institution, and then continuously over several years, is that our institutions employ and serve people. People relate to the local campus and to the section within it with which they deal. Their impression, and verdict on the total entity, is based on that experience. How will they see it, and how will the communities immediately contiguous view that campus, depends on that localized view. The consolidated institution needs to consider how it wishes to be viewed by each of these groups and to set about achieving a corporate identity.
There are many different management models which can be adopted for multi-campus institutions, some of which are implied in the terms used above. The Green Paper suggests both a certain strength for the chief executive officer, who is both expected to negotiate on behalf of the institution, making commitments in its name, and for the campuses of whose autonomy she/he speaks. Without clarity on the model desired, the roles of chief executive and campus chiefs become confused and overlapping and the institution will inevitably speak with many voices, some of which will be damagingly in conflict. On a day-to-day basis there is likely to be ongoing confusion as to the relative operations and spheres of influence of member campuses and the central office of the institution. Neither is conducive to efficient functioning, particularly in a context where resources are limited.

One of the central issues for multi-campus institutions is the degree of decision-making at the campus level. As noted above, the necessity for creating the information base needed for mutual understanding will itself lead to an initial centralization. Where campuses are separated by distance of time and travel, and where they have previously been independent institutions, it is particularly important that the process of centralization is followed by decentralization. For that to occur requires a certain flexibility on the part of all involved over a period of time. It also requires the necessary decision-making processes to be in place by which the changing roles and patterns of management and administration can be carried out without disrupting the on-going functions of the institution. It involves the careful selection of what is delegated and what is not. Just as significantly, effective management requires the "nerve centre" of the institution to function as such. Issues which need to be thought through include simple ones like processes of student enrolment, and more sensitive ones such as the notation on parchments of the campus designations, and the more fundamentally important one of in which areas the signature of the chief executive and institution council is binding.

One of the tasks facing a consolidated institution in the current environment relates to developing an integrated information system which encourages effective management of the institution, while optimising user access. An integrated information system would permit those with management responsibilities for the institution to access information which relates student data to staff data to accommodation to space utilization, not only in terms of inputs, but also in terms of results achieved. In order to have uniformity and accuracy of the information, the system design and the data gathering need to be centrally controlled. Relatively few institutions in Australia have such a system in operation. Such data systems are particularly important in the multi-campus institution where one cannot walk over to the other person’s office to correct or enhance a particular interpretation. Some of the systems that have so far been developed meet management needs, while providing little in terms of user access to that information. Such systems are especially important for multi-campus institutions where the mutual understanding of the information base used in making institution-wide decisions is a pre-requisite for the effective co-operation of all parties.
A closely related matter is the decision-making processes of a consolidated multi-campus institution. Of course these, and the system of governance, are critical in any academic institution. However, in the multi-campus setting, the ordinary processes of membership on working parties, and committees, and the participation in the governance of the institution, take on the added dimension of campus identity. For example, does a multi-campus institution, with science operating on three out of four campuses, constitute its academic board with relevance to the campus, discipline or institution? Are such decisions made at the campus level (primarily)? How do the institution-wide decision-making processes relate to campuses, academic units, and administrative sections? Are there separate advisory boards on the whole range of matters at both campus and at institutional level? Or are certain matters clearly a campus responsibility and others decided on an institution-wide basis? It is all too easy to delegate to the campuses the decisions related to the academic area, while keeping those relating to finance, minor works, capital, and equipment at the institutional level. One of the aspects of the Green Paper which is of interest on this issue is the insistence on clear-cut decision-making processes. Another is the extent of a clear perception of the relationship between educational choice and resource allocation, if the former is to mean anything.

Multi-campus institutions, even when campuses are relatively close (say 20 to 30 minutes apart), raise significant questions about the technological underpinning of both administration and teaching. Some aspects of this have already been noted above in the comments relating to the importance of user access of the institution's data base, not only as it relates to that individual's own particular responsibilities, but to the institution as a whole.

Our experience at SACAE, Nepean, and Sydney is that community members ring any campus of the institution expecting to be able to access the institution as a whole. There is considerable frustration experienced when a member of the public needs to make two or more telephone calls to access the information or person she/he is seeking. On the other hand, when an institution spans different telephone area codes the immediate local community expect the local campus to be in their dialling area.

Apart from the telephone, the systems that relate to printing and publication, computing, information generation, storage and retrieval, as well as libraries, represent areas in which members of a multi-campus institution can reasonably expect equitable service, irrespective of their location. However, for the institution to meet that expectation requires a deliberate selection in the allocation of resources.

Then, too, there are the relatively uncharted waters in Australia of the technologies relating to teaching. Most of the institutions amalgamated in 1981-82 continue with face-to-face teaching (and associated print materials) on individual campus as the primary mode of teaching and learning. The developments in communication technology are increasingly making possible the access of classes conducted on one campus at a remote campus. Such access is no longer limited to that of the passive listener/viewer, but it can be interactive, student-to-student and student-to-teacher.
The development and maintenance of multi-campus institutions carries particular implications for the staff. The development frequently involves senior staff, in both academic and administrative areas, having to accept significant diminution in status, significant redefinition of their roles, retraining, and redundancy. Provisions for early retirement may provide a dignified way of resolving some of these issues, but not all. Further, administrative staff are frequently required to develop new skills, e.g., the movement from manual to computer-based systems, from the routine administration of the expected to the development and administration of policies and procedures in a rapidly changing environment, and from thinking only of the next item to understanding and planning for the next three to five years.

Moreover, all staff at each of the campuses involved in the consolidation would experience uncertainty; for many, for the first time in their careers. Yet, it is these very people that the institution depends upon for its continued development, for the quality of its work, and its future standing. Without their active support, productivity, and public relations work, the institution remains a significantly underutilized and ineffective resource. Hence, it is particularly important for those responsible for multi-campus institutions resulting from amalgamation to act to reduce the resistance to change and to gain general support for the directions which they intend to pursue. In turn, some of the challenges of multi-campus consolidations for staff need to be acknowledged, e.g., frequently academic and administrative staff are expected to travel between campuses. It is not easy for anyone to function effectively away from their immediate home-base: away from their office, their files, their computer, and the staff room with which they are familiar. If travel is to be replaced by communications (telephone and video) they too require skills and information support which are different from those in which a quick telephone call can be followed up by a quiet chat in the corridor.

That, in turn, leads to the final aspect of multi-campus organizations selected for comment: communication. Today it is widely recognized that communication within an organization, and between an organization and its clients, and potential clients, is a significant factor in determining its success. Multi-campus institutions place a premium on communication. When they are formed as a result of consolidation, that is especially the case. The essence of corporate identity is that a single message is interpreted in the same, or compatible, way, irrespective of location. That is particularly difficult to achieve in multi-campus academic institutions where, to some extent, academic debate and quality depend on the vigorous exploration of alternatives. It is also likely that the informal means of communication at each of the campuses will differ and the staff will react to formal communications in different ways. It is partly the case because the tradition of the campuses (or component institutions) will differ from each other. Words, and similar terms, will have different meanings. Perhaps more significant than the establishment of the formal means of communication within a multi-campus institution is an understanding of the symbolic means of communication, especially those attached to position within the institution. Many campuses will, for example, expect to have immediate face-to-face access, not only with the senior administrative officers, but also with the chief
executive officer. Staff in a single campus institution will have experience of seeing such people around the campus on a daily basis. In a multi-campus institution, with significant distances between campuses, that daily contact vanishes. Instead, alternative channels of communication need to be found and the ritual of this new form of communication needs to be understood and used effectively.

In conclusion, this paper has selected some of the aspects of consolidated institutions which are particularly significant for the operation of multi-campus institutions, and has drawn attention to the importance of the initial context in which the consolidation occurs. Factors selected include the degree of centralization, the development of the corporate identity, the information base and systems, decision-making process, the use of technology, a focus on the people involved, effective communication and an acceptance that the form of consolidation will change over time.
Post-Binary Arrangements and Diversity of Provision

P.B. Botsman

Post-Binary Arrangements and Diversity of Provision

Australia is also a "Nation at Risk". The reference is, of course, to the United States. It is now five years since the National Commission on Excellence in Education in the United States startled that country, and others, by publishing a report, A Nation at Risk. In that five years there has been an unprecedented wave of educational reform in the United States.

The U.S. National Commission suggested that it would take a decade to effect the necessary improvements in order to stem "the rising tide of mediocrity" which was eroding the very foundation of U.S. society. As a consequence David Gardner suggested in the Fall 1987 number of Forum, "Educational Reform must be seen as a part - a prime part of a continuing agenda". And he went on to say, "the biggest challenge in the next decade is to maintain a persistent determination to improve our schools and to sustain the momentum for reform that the last four years of effort have launched". And though all these references are to schools while our present focus is on higher education, the contrast between the time frame envisaged from the U.S. compared with that which appears to be the unseemly, ill-considered and panic laden approach to higher education in this country is striking.

Australia has a policy discussion paper on higher education - a "green" paper - which, in view of its timing (released in December during the long summer vacation) and the fact that decisions are already being made about issues and proposals which are still claimed to be moot (for example, the development profile for institutions), many cynically believe to be very light green, one could almost say in some lights, even white. (Though if white is associated with purity of intention, innocence or unsullied virtue, one would even have to demur at that!) Perhaps finally we will agree in terms of colour, that it is a blue print.

What is patently clear is that Australia has a Commonwealth Government intent on increasing its control over higher education. Incidentally, I was interested to read in some briefing notes to another Federal Minister, which fell off the back of what
must be a busy trucking industry in Canberra (the only thing that is busy) the following observations which support this view. "A stronger link between the Commonwealth and institutions is proposed with the Commonwealth directly/encouraging/financially coercing institutions towards national goals, which does not seem to envisage a role for the States in these processes".

Australia is also a nation at risk! It is so because Australian higher education has been squeezed and constricted, starved for funds and denuded of resources to the point where it will probably take 25 years - a quarter of a century - for our system to recover, and then only if steps are taken to initiate a new vision of excellence and then to sustain and support that vision.

I preface my remarks with these comments in order to create a context, for the "green" paper appears as though it has been well received. What I would like to suggest is that it offers the first glimmer of light that we have had through a long, long dark night. If the darkest hour is just before the dawn, when the first wink of light appears on our horizons, it is hard not to greet it with something that might very well be misconstrued as euphoria. However, when the true shape of things is revealed by the harsh light of day, it may well be perceived that "green" does not always mean GO.

In sum, I want to suggest as strongly as I can that any optimism about the future of higher education in this country can not be sustained if one considers the Green Paper proposals calmly. Indeed, when one looks past the paradigm shift - when one looks past the demise of the so-called binary system - what is offered thereafter is naught for anyone's comfort!

Some less charitable acquaintances have suggested, that it is "a collection of platitudes" or "a naked grab for power by the Commonwealth", or even "a set of assertions which support a selected position rather than the outcome of a judicious weighing of the evidence". I could support all of these judgements by quotations from the text. But I am sure you have all done that. So let us consider some basic points.

Firstly, the Green Paper takes on an unabashedly "instrumental" view of higher education. Indeed it goes further and assumes a cause and effect relationship between certain approved types of higher education inputs, outputs and short term economic growth. Not surprisingly, no real evidence is supplied to support this view, which we are, presumably, expected to accept because they say it is so. Again, interestingly, the briefing notes to another Minister, which I mentioned earlier notes, having observed that Chapter 2 of the Green Paper is a "critical, but fundamentally flawed Chapter", says that "there is no guaranteed link between new graduates and economic growth".

Interestingly too, the Commonwealth Minister has been reported to have cited the Japanese economic miracles (and I do stress the plural) in support of the simplistic view apparent in the Paper. The latest figures on university undergraduate enrolment in Japan that I have been able to get from Monbusho, the Japanese Ministry of Education, Science and Culture are those of May, 1985. They are listed in Table 1:
**Table 1**
Undergraduate Enrolment* in Japan, 1985

<table>
<thead>
<tr>
<th>Field</th>
<th>Enrolment</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Sciences</td>
<td>671,001</td>
<td>38.7%</td>
</tr>
<tr>
<td>Natural Sciences</td>
<td>59,678</td>
<td>3.4%</td>
</tr>
<tr>
<td>Engineering</td>
<td>343,590</td>
<td>19.8%</td>
</tr>
<tr>
<td>Agronomics</td>
<td>60,068</td>
<td>3.5%</td>
</tr>
<tr>
<td>Medicine and Dentistry</td>
<td>74,750</td>
<td>4.3%</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>36,508</td>
<td>2.1%</td>
</tr>
<tr>
<td>Home Economics</td>
<td>32,185</td>
<td>1.9%</td>
</tr>
<tr>
<td>Pedagogy</td>
<td>135,227</td>
<td>7.8%</td>
</tr>
<tr>
<td>Humanities</td>
<td>246,850</td>
<td>14.2%</td>
</tr>
<tr>
<td>Others</td>
<td>74,535</td>
<td>4.3%</td>
</tr>
</tbody>
</table>

*N.B. Another 48,288 students were enrolled in the relatively new colleges of technology.

Now international comparisons of education need to be treated with caution for many reasons, not the least of which is that all governments present their own performances in the most favourable light, both for political reasons (I might add that Australia has probably topped the international performances here) and for reasons of national pride.

However, if you simply sum enrolments in the Social Sciences, Pedagogy, and the Humanities, you will see that this sum accounts for marginally over 60% of Japanese university undergraduate enrolments (60.7%). Add Home Economics and you get 62.6%.

But the facts are, as the Monbusho was to put it in an earlier document and in an understatement of some magnitude, "INSERVICE TRAINING WITHIN RESPECTIVE ENTERPRISES IS THOROUGH GOING IN JAPAN" and as it also suggests: "Generally speaking, only a little has been expected from the results of specialized education itself of universities in regard to graduates of humanities branches and social science branches of democratized universities in Japan ...." And while quaintly expressed in translation, the real key to all this is contained in the following sentence: "This may lead to such an evaluation that university graduates were enabled to respond flexibly in regard to the field of employment."

In following up this issue with Japanese university people, I have been told, again and again, that what Japanese employers seek are well-trained, creative thinking individuals, broad ranging in understanding and preferably able to speak several other languages including, most desirably, English! Meantime, in stark contrast, Australia wants to produce more vocationally myopic technicians from its universities and colleges, in apparent ignorance of the fundamental fact that in Japanese industry, the Japanese employer prefers broadly educated graduates and not well-trained clones. After graduation and employment Japanese industry then sets about
systematically to train the employee in the specialist needs of the pertinent company. (I note that since writing these words, Mr Dawkins has at last joined the plea for more training resources for employees.)

However, in Australia, the assumption seems to be that by putting students into courses that some Commonwealth 'guru' believes to be important, we will achieve national economic goals, as surely as the sun will come up tomorrow! Again the "briefing notes" mentioned earlier are more realistic. Of Chapter One, they comment: "This is essentially rhetorical material without substance".

In Table 2 are some recent Australian statistics.

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Number of Students in Discipline</th>
<th>Total Enrolments</th>
<th>% Of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts Humanities and Social sciences</td>
<td>76,239</td>
<td>264,177</td>
<td>28.8</td>
</tr>
<tr>
<td>Business Administration and Economics</td>
<td>57,533</td>
<td>264,177</td>
<td>21.7</td>
</tr>
<tr>
<td>Education</td>
<td>27,990</td>
<td>264,177</td>
<td>10.6</td>
</tr>
<tr>
<td>(sub-total)</td>
<td></td>
<td></td>
<td>(60.1)</td>
</tr>
<tr>
<td>Engineering (inc. Surveying)</td>
<td>23,315</td>
<td>264,177</td>
<td>8.8</td>
</tr>
<tr>
<td>Science</td>
<td>38,737</td>
<td>264,177</td>
<td>14.7</td>
</tr>
</tbody>
</table>

Source: Selected Higher Education Statistics, CTEC, October 1987, Table 5, p.50.

Note the startling differences between the Science figures for Australia (14.7%) compared with those for Japan (3.4%) and those for Engineering in Japan (19.8%) with Australia (8.8%). The Japanese figures do not show a category for Business, Administration and Economics, presumably including such students in their Social Sciences category. The Australian figures for this category at 30/4/87 was 57,533 which represented 21.7% of undergraduates in colleges and universities in Australia. The Australian total for Arts, Humanities and Social Sciences, Education and Business, Administration and Economics represents 60.1% which almost exactly matches the Japanese proportion.

The point is that the assumption that Japanese university enrolments are heavily biased in favour of the technologically, skill based areas does not stand up to scrutiny. Perhaps, therefore, we should be wary of jumping to conclusions based on impressionistic evidence and/or the assertions of ill-informed Commonwealth planners. It seems that they just are incapable of realizing that higher education has not,
is not and never can be backed by a simple and unambiguous view of the purposes of education.

Mr Dawkins concludes his Foreword by suggesting that the issues raised in the Green Paper should be "considered carefully from the wider perspective of developing a higher education system which will best meet the full range of our social, economic and cultural ends". But, and this is clearly significant, the word "cultural" hardly gets a mention thereafter. Indeed, and again I repeat, the overwhelming impression created by the document is that higher education is seen primarily as an instrument of economic purpose.

But, let us not be too hard on the Canberra crows. Academics must accept some of the blame for this. As A.S. Watts noted back in 1974, "the expansion of higher education has been legitimated largely in vocational terms". We have acquiesced in, by our silence, and abetted, by our failure to criticize, the expectation that higher education makes a direct and substantial short run contribution to national or regional economic development. Had I time, I would argue for long run, broad ranging, social and cultural contributions as being more important, but that thesis must wait.

I am trying to find something positive about the Green Paper. Some have obviously taken heart believing we are at last ready to heed the words of George Tolley who, some five years ago said: "It would remove a great deal of the snobbery from higher education ... if only those of us in education would remove ourselves from the empty battlefields of the nineteenth century". He went on to say that it would be helpful to eschew an over-simple categorization of courses into vocational and non-vocational. But then again, maybe we are so carried away with the rhetoric of the Green Paper that we might be in danger of throwing out the baby with the bath water!

In a paper delivered to a Conference in Western Australia, titled W(H)ITHER BINARY? Dr. Edwin Kerr, Former Chief Officer of the Council for National Academic Awards in the United Kingdom, cited seven objectives of the "binary" system when it was introduced in the U.K. They are worth emphasizing. They are broadly as follows:

1. To prevent the total domination of higher education by universities.
2. To promote the further development of vocational or relevant courses within higher education by making this one of the major tasks of the polytechnics and colleges.
3. To ensure that adequate emphasis was given to full-time sub-degree courses and part-time courses so all types received at least equal attention to full time degree courses.
4. To keep a substantial part of higher education "under social control and directly responsive to social needs". Kerr noted that Anthony Crosland was referring to the "administrative approval of new courses" (as distinct from the academic approval of these courses, in this comment). This was so that specific national needs would be satisfied if a well-balanced higher education system was produced.
5. To ensure local accountability and good housekeeping.
6. To achieve excellence in teaching and the research undertaken was to be less in extent than that undertaken in the universities.
7. To attract students from a less restricted social constituency.

As Kerr put it: "These seven objectives incorporate the essence of the original statements on the binary policy for England and Wales" (p.107).

In assessing the success achieved as measured by these objectives Kerr had this to say: "the beneficial diversity of the system would have been much less if the many factors which shaped the non-university sector, including the binary policy itself, had not existed" (my emphasis; p.109). One must ask in the Australian context:

- whether we can be as confident that these or similar objectives have been achieved,
- whether they are likely to continue to be achieved (if they are still relevant) in the new unified national system, and
- whether anyone has seriously examined what the objectives in Australia are, why it is necessary to change them, or how the new system is going to improve the chances of these objectives (whatever they are) being achieved.

I will return to the issue of beneficial diversity a little later.

All this is to emphasize that there is no use of criterion reference in the Green Paper. There is no real definition of the parameters that have been used to make judgements other than in the broadest terms, nor, for that matter is there advanced any solid argument. There seems to be a mindless belief in the proposition that growth is ipso facto, a good thing, and that at a certain precisely determined point in EFTSU totals, institutions become viable in terms of operating efficiency.

Moreover there is evidence of overt chicanery. It is proposed, for example, that associate diploma enrolments should be included in higher education. The reason for including them seems to be that they may be a means of improving higher education statistics. As has been noted cynically elsewhere: "these graduates are already in the system whether or not they are counted as higher education or technical education students". Window dressing is clearly a popular course in Canberra.

I want to end this section of my paper by saying that in my view the Green Paper:

(i) lacks vision. It could, for example, have adopted the view - one that I believe ought to be accepted as axiomatic - that in Australia everyone who is able to benefit should be able to participate in higher education. This, stated as a goal, could be worked towards as an accepted bi-partisan social goal to be achieved, say, by the year 2000.
I now turn to consider the post-binary arrangements.

Post-Binary Arrangements

I will keep this section brief, because I want to leave enough time to speak from a special Queensland perspective on the Green Paper proposals. But in relation to many of the post-binary arrangements that are suggested, they are in general to be applauded.

No objection can be raised, for instance, to the notion of granting higher education institutions more autonomy, and none should be raised to suggestions regarding greater accountability, more executive authority, or to other matters such as employment conditions, including those relating to tenure and salary levels.

However, anyone who imagines the academic unions are going to accept the propositions associated with these latter issues is being quite blind to current realities.

Sadly, however, the Green Paper does not really suggest ways in which any of these kinds of issues might be addressed. To a certain extent, therefore, they are all "motherhood" statements. I suppose in fairness it should be said that detailed machinery or operational plans probably could not be spelled out in this kind of paper. But, on the other hand, the absence of suggestions, or the mention of practices that might be looked at, or those that have been tried and proven elsewhere, seems to me to add support to the assertion that many of these ideas are mere platitudes.

To take a single example, it seems to me that the continuing education unit which is brokered and quality controlled through a central clearing housing in a state or region, would do more to expedite real credit transfer, than practically any other measure. Yet, there is nary a mention of this kind of operational machinery. Perhaps it

(ii) is hypocritical in that while stressing issues of academic freedom and autonomy, it is clearly predicated on the view that the Commonwealth will call all the "shots".

(iii) is ill-considered in that it appears to be based on at least three extremely dubious propositions:

(a) that there is a direct causal short-run relationship between higher education and economic growth;

(b) that by juggling the inputs to various courses and programmes the planners can direct this economic growth and further are able to, because "they" can predict the manpower or labour market needs of the country. All the evidence points in the opposite direction; and

(c) that it is possible to pluck out precise enrolment figures expressed in EFTSU terms, without any data to support them, which, if achieved, make it possible for higher education institutions to be viable (without defining that either).
is expected that these really fundamental machinery issues will be addressed by the proposed joint planning committees. If that is the expectation, this is indeed nonsense.

To expect such groups to come up with paradigm shattering innovations is like expecting cats to swim. Yes, I know some of them can swim. Indeed, most can when survival is at stake. So perhaps the bureaucrats are using the unsubtle threats of demise to force survival action. If this is the case, they should be aware that while some cats can swim, they are not very good at it.

Let me now quote a key sentence on page 48: "an essential requirement is the development of an effective advisory and consultative mechanism between each of the States and the Commonwealth to facilitate the planning process and to advise on State priorities in the light of established national priorities". To facilitate this process, a joint planning committee of each state and the Commonwealth is proposed. The preferred small membership, two from the state and two from the Commonwealth would, we are told, provide co-ordinated advice on higher education to the Commonwealth and state Ministers relating to a wide range of issues. These issues would include the distribution of resources among institutions within the state, rationalizations and mergers, credit transfer, cooperation with TAFE and any number of other matters. For its part, the Commonwealth would channel its advice, we are told, on the likely levels of resources and any conditions to be imposed on those resources through the joint planning committee.

This sounds all sweetness and light - an ideal world where state and national views are in perfect harmony, consistent with respect to priorities and educational profiles and dedicated to the proposition that education is above politics. But, just in case there are minor disagreements, differences are to be sorted out by "Ministerial resolution", which, judging by past experience, could be reworded as "Commonwealth fiat".

Let us not mince words. These proposals represent a complete and naked bid by the Commonwealth to enforce what it interprets to be national priorities. Clearly, these proposals are designed to emasculate any state authority, despite the fact that as we are all aware the Australian constitution places responsibility for education unambiguously with the states and the fact that we do indeed live in a federal system. These realities are inescapable.

Perhaps the greatest failure of the Green Paper and its authors then is that they seem both incapable of addressing, and unwilling to address the real issues these deep structures represent. Indeed, one is tempted to surmise that they are not even aware of the ways in which public policy issues in federal systems have been addressed elsewhere in the world. Or worse, being aware, they arrogantly assume that the golden rule of "he who has the gold makes the rules", leaves them unassailable. I believe the Greeks called it hubris.

Finally, I cannot help but observe, wryly, a piece in the Financial Review on page 4, dated February 11, 1988, by one Wayne Burns. This article attributes to a spokesman, an unnamed spokesman, of course, for the Minister for Employment, Education and Training, Mr Dawkins, that "most major players who entered the de-
Diversity of Provision

I now return to the concept of a beneficial diversity of provision. My comments will be based on Queensland, though I should make it clear, I have no authority to speak for Queensland, nor do I claim to represent an official Queensland position. These views, though I have drawn on data supplied from some of my colleagues*, are my own. Let us then look at the background.

In 1987, the higher education participation rate in Queensland measured in terms of student load (EFTSU) per thousand of population shows that Queensland achieved only 16.62 against an average for the rest of Australia of 19.13. So much for equity of provision.

But it goes, of course, further than this. CTEC (Volume 2, 1986) suggests an average funding rate for higher education of $7,410 per EFTSU. If the gap between 16.62 per thousand (Queensland) and 19.1 per thousand (for the rest of Australia) is converted into a money sum, then Queensland's existing "funding gap" is marginally under $52 million. This is the sum that the State is theoretically entitled to. That is, of course, if we assume that the citizens of Queensland are as entitled to higher education as those in other parts of the Commonwealth.

Again, sticking for the moment to differential funding levels, the CTEC shows that the funding for 1986 per EFTSU in Queensland, which averages $6,977, is $509 per EFTSU below the average figure for the rest of Australia ($7,496). A similar gap is shown by another means in Appendix A, where individual Queensland higher education institutions are compared with all others in Australia.

* I am indebted to Dr. Sharma at the Capricornia Institute of Advanced Education for the following statistics.
The point of all this of course is that Queensland is seriously disadvantaged. Hence, even before we start to address issues of diversity and start to recognize that size is probably one of the crudest and most inappropriate measures of higher education's viability, you may see why Commonwealth rhetoric about disadvantage has a hollow ring to most Queenslanders.

Moreover, the situation grows worse apace. In 1987, the existing cohort from Year 12 from all Queensland secondary schools, i.e., government and non-government, was 28,544 students. By 1989, that figure will be 35,750 students, an increase of over 7,000 students or over 25%. In short, great success has been achieved in persuading students to stay at school to complete Year 12.

But these students may well ask "For what?" In May 1987, a joint AVCC/ACDP report was produced on "unmet demand in universities and CAEs in 1987". That report showed that between 13,000 and 20,000 students who were eligible for entry and willing to accept an offer of place, were unable to commence higher education studies in Australian universities or CAEs at the beginning of 1987. Approximately 25% of those students were Queenslanders - between 3,500 and 5,000 of them. The State figures for this year, 1988, though still not final, show an increase of over 20% on 1987. Quite obviously then, on grounds of equity alone, strong growth in student places is needed, demanded and warranted in Queensland.

Queensland higher education institutions with the mid-point of their 1988 planning range (including additional numbers to encourage Aboriginal students) are as follows:

University of Queensland 14,540
Griffith University 3,866
James Cook University of North Queensland 3,336
Brisbane College of Advanced Education 7,528
Capricomia College of Advanced Education 2,401
Darling Downs Institute of Advanced Education 3,984
Gold Coast College of Advanced Education 290
Queensland Agricultural College 1,305
Queensland Conservatorium of Music 340
Queensland Institute of Technology 6,960

*(McCauley College had an additional 640 students in all courses in 1987).

Given that the Green Paper alleges that an institution should have a minimum student load of 2,000 EFTSU to be reasonably cost efficient, three institutions stand out. I will come back to them as separate and special cases.

But if we could assume that Queensland will be given the places to which it would appear to be entitled, all the other institutions could reach, or have already reached, the arbitrary bench mark of 5,000 in the not too distant future. In short, growth, at a rate to which the State is entitled, would enable most Queensland institutions to survive in their present structural form.
But the three institutions which would be at risk if we accepted the Green Paper's arbitrary size parameters are the Queensland Conservatorium of Music, the Queensland Agricultural College and the Gold Coast College of Advanced Education.

The Conservatorium is of course a small, specialist, high quality, music institution, oriented towards performance skills. Its record by any measure is the equal of any in the country. The Queensland Agricultural College has a long and distinguished history of responding to and servicing the needs of the primary producers of the State. And last, but not least, one of the newest higher education institutions in the country, the Gold Coast CAE, was finally supported by the Commonwealth, only in 1987. Presumably this was because it is servicing a region of very rapid growth.

All these institutions which appear to be in the firing line, are responding to a special need. Each reflects the special nature and the values attached to higher education in special forms by the people of the State. And in the case of the Gold Coast CAE the very recent decision to create it was based on the fact that south east Queensland is one of the fastest growing areas in the whole of Australia. Yet this diversity by design, responsiveness to needs, regional realities, equity of access and the disadvantage of distance is, it seems, to be ignored.

James Cook University is Australia's only university in the tropics, although the Darwin University College is now making significant and welcome progress. But it is 2,800 kilometres from Townsville to Canberra, indeed it is 1,600 kilometres from Townsville to Brisbane, or as far as it is from Brisbane to Melbourne. Is the question of access by the Australians who live in the north to be simply ignored? Will anyone recognize that it costs much more to run an institution in a distant setting?

The Green Paper almost ignores the problems of northern Australia, and the needs of the people who live there. Yet this is an area where even if the cost per capita of the students actually enrolled is high, the total recurrent funds provided by the Commonwealth Government for higher education per person amounts to only one third of the national average ($53 per person, compared with the national average of $158 per person).

The basic point is that the provision of adequate higher education in an expanding and strategically important region (where population growth is well above the national average, 2.4% compared with 1.6%) cannot and should not be modelled on the requirements of those who huddle in the capital cities or those who derive all their work experiences from places like Adelaide, where higher education apart from the Agricultural College, is virtually non-existent outside the metropolitan area, or Perth.

Now let us look at the context for our Queensland regional colleges. ABS statistics for 1986, shows that Queensland has 54.6% of its state population living outside the capital city. Figures for the other mainland States are presented in Table 3.

Precisely because it has a pattern of decentralized growth, which it is committed to supporting and encouraging, Queensland has followed a firm policy of decentralization of education by providing higher education institutions in regions of significant population growth. Its highly regarded and strongly supported colleges at Dar-
ling Downs, Rockhampton and Gatton (QAC) are evidence of this policy of not dis-
advantaging those who live outside the urban wen.

<table>
<thead>
<tr>
<th>State</th>
<th>Capital City</th>
<th>Non-Capital City</th>
</tr>
</thead>
<tbody>
<tr>
<td>New South Wales</td>
<td>62.3</td>
<td>37.7</td>
</tr>
<tr>
<td>Victoria</td>
<td>70.5</td>
<td>29.5</td>
</tr>
<tr>
<td>South Australia</td>
<td>72.6</td>
<td>27.4</td>
</tr>
<tr>
<td>Western Australia</td>
<td>70.0</td>
<td>29.3</td>
</tr>
</tbody>
</table>

Summing up, in Queensland, the percentage of population and industry in non-
metropolitan areas is significantly greater than in other states. This, via any rational
planning approach to education, would suggest that institutions should be established
and maintained in a way that is best suited to the needs of the regions they serve.
Size, while it is not unimportant, is just one of many parameters.

Furthermore, if Queensland places were allowed to grow at the rate at which eq-


ity, fairness and responsibility demand, there would be no real need for significant
change in the structure of Queensland's higher education institutions. Nor has the
need for such change been demonstrated.

Nevertheless, it may very well be that Queensland will be forced to move to a
federated state university system in order to maintain the emphasis that it has hith-
erto placed on decentralization, and in order to ensure that its regions continue to be
served effectively and efficiently.

However, I want to end this paper by suggesting again that while we are threat-.
ened by a centralist government with financial constraints unless we comply with
their objectives (past experience of which does not exactly inspire confidence), the
criterion of size and spurious unsubstantiated assumptions about economies of scale
appear to be the only justification for a unified national system. There appears to be
no understanding of the needs of tropical Australia, or of those disadvantaged by
distance, or of regional needs, or the benefits and advantages of functional diversity.
I believe Queenslanders in general will continue to find little to be welcomed in the
Commonwealth's policy discussion paper on higher education.
PLOT OF UNIT COST PER EFTSU IN 1988 BY INSTITUTION
(COMMONWEALTH GOVERNMENT FUNDED ONLY)

EQUIVALENT FULL TIME STUDENT UNITS
orida of Provision
Appendix A
1988 is a year of major opportunity for higher education in Australia. Whether we grasp that opportunity or squander it will depend on whether academics and administrators can see the wood for the trees and chart a course into the future, or become so defensive they concentrate on bunkers, holes in the ground, and all the negatives that can surround and enmesh even modest change. I see 1988 as a year of major opportunity for three reasons:

1. We need to change to simply retain our relativity in the knowledge industry. To postpone change would be irresponsible. It would, in some respects, allow our well performed higher education system to decline. This would be a natural tragedy.
2. John Dawkins has provided us with an opportunity to re-assess priorities, to shed some of the structures and system we have outgrown, and to develop new approaches to the management and delivery of higher education programmes.
3. Academic staff themselves sense the need for change and seem ready to grasp some of the difficult issues it presents.

I am something of a student of organization theory and organizational change. Alvin Toffler has suggested that change in large scale organizations only occurs when there is a clear external imperative, when there is clear internal dissatisfaction, and where there exists some coherent, alternative future. I suspect that represents a major insight into change processes. Certainly each of Toffler's preconditions can be found in higher education today.

I have been asked to address the management implications of change and particularly some of the criticisms and solutions offered in Chapter 7 of the Green Paper on Higher Education. I will not seek to be prescriptive or to define a man-
agement solution independent of particular situations. Management simply is not like that and those who seek simple solutions will be disappointed.

I will seek to place the management issues facing higher education in perspective and to link these to some of the developments in management theory that seem relevant. I will pose five questions to guide us through some quite complex issues:

- What are the proposals for management reform advanced in the Green Paper?
- What is the management challenge facing higher education today?
- Why is strategic management so critical to the management of change and why is it central to the autonomy/accountability - deregulation debate?
- What management changes are needed in systems external to institutions in co-ordinating groups and in the relationships between institutions and governments?
- And finally, what management changes are needed within institutions?

I will, from time to time, illustrate issues using Victorian data. This is simply because it is available to me and, I believe, illustrates some of the points that need to be made.

Proposals for Reform

Chapter 7 of the Green Paper deals with management. It needs to be read in conjunction with the sections on profiles resourcing and staffing and the size of institutions.

Essentially, Chapter 7 proposes a joint state/Commonwealth planning committee. It proposes an enhanced role for Chief Executives and a streamlining of institutional decision-making powers. The Green Paper rejects the notion of national review of management practices. Wisely, in my view, it emphasizes the need for outcomes and accountability and suggests that these have implications for internal management. Finally, Chapter 7 addresses the productivity of capital resourcing which, although an important issue in its own right, sits rather quaintly in Chapter 7. I do not plan to address these proposals further in this paper.

The Management Challenge

What management challenge are we seeking to manage and how should we evaluate management needs? Management does not exist for its own sake, but to assist institutions to produce programme outcomes.

It follows that any evaluation of management must relate to the delivery of key outcomes. We have recently suggested 12 outcomes from change in Victoria in a
widely circulated options paper. Let me summarize these and use them to illustrate the management implications which I believe are involved. At the same time, this will enable me to challenge some of the conventional views about the operation of the present system.

**Key Outcomes Proposed by VPSEC for Higher Education in Victoria**

(1) The effectiveness of academic programmes in critical areas to be strengthened by targeting growth, rationalizing programmes, and developing structures which support the delivery of key programmes.

(2) The capacity of higher education in the science, technology and engineering areas to be expanded and the quality of programmes improved by developing two major institutes of technology of world class and standing with full university status; a minimum of 10,000 students each, with at least half studying science, technology or engineering programmes; and providing major centres of expertise in technology, its development and its application in Australian industry.

(3) The size of existing teacher education programmes to be reduced and the profile altered to align these programmes more closely to future emerging labour market needs, by rationalizing both programmes and structures to create a few strong centres of teacher education able to grow and improve programmes within an overall reduced programme level.

(4) The proliferation of business courses and the low graduation rates evident in some programmes need to be addressed more effectively by rationalizing existing programmes around key strengths and demonstrated business needs, and by integrating such programmes more effectively into other major vocational education programmes, such as, technology, computer science and health.

(5) The development of major new programmes such as tourism to be facilitated by allocating development to a single institution and enabling such programmes to grow rapidly to attain viable size.

(6) The quality, quantity and relevance of research programmes and training to be strengthened by focussing resources and programmes into areas of demonstrated expertise.

(7) Access to quality programmes for students and business in regional areas be expanded by developing co-operative arrangements between institutions.
(8) Access to quality programmes for students and business in the North and West of Melbourne to be improved by targetting the planning and development of programmes and institutions.

(9) Closer linkages between TAFE and higher education to be instituted by co-ordinating programme planning and facilitates usage more effectively and by developing the TAFE associate diploma programme as equal in quality and status to associate diploma programmes conducted in higher education institutions so that they are seen as part of a broader higher education system in which student access to higher level programmes is assisted by the provision of full credits for outcomes achieved.

(10) The development, delivery and management of external education programmes to be strengthened by allocating these programmes to one major provider able to qualify for a major role in the new national system proposed by the Commonwealth.

(11) The capacity of the existing universities to be developed and utilized to provide leadership in the overall change process by removing the restraints which have been placed on the development of the two major institutions - Melbourne and Monash - and by developing the two smaller institutions, La Trobe and Deakin, into major institutions with clear programme strengths and leadership roles.

(12) Institutional structures to be rationalized to produce fewer, stronger institutions in order to optimize membership of the proposed new national system for all institutions and to improve the capacity of the higher education system to manage effectively the development and delivery of programmes within a more deregulated system.

Strategic Management

Why is strategic management so critical to the management of change and so critical to academic value systems?

The idea of profiles and evaluating the performance of institutions against key outcomes can be seen as part of a shift to a strategic management approach. It is an approach which has evolved in response to high innovation situations. It makes sense to move this way in higher education.

It will be effective if it increases both accountability for strategic outcomes and autonomy over other activities, including the flexibility to manage activities free of detailed regulation and control. The idea of managing systems by focussing on a few key outcomes and evaluating performance against these is one way to negotiate priorities and increase accountability without building the sort of bureaucratic controls which burden so much of public sector management.

Within higher education institutions, bureaucracy also abounds, but with a somewhat different perspective. It has been developed to avoid differentiating be-
Management Implications

tween outcomes and individuals. It has been applied to build a legal fabric which in important respects exists to protect equity rather than facilitate outcomes.

At the heart of strategic management is the idea of differentiation, that some outcomes are more important than others, and of evaluation, that organizations need to notice and learn from success and failure. These two value systems need to be carefully managed in the change process. We do not need polarized positions, we need a process of thinking through the implications of these developments to obtain the benefits of both approaches.

The issue goes further than a new external imperative. Within institutions, the knowledge industry is increasingly requiring differentiation of units, standards, and priorities. This is an area where we can learn from American institutions which have always sought a wider, more differentiated role. The traditional community of scholars, of equals, pursuing knowledge unfettered by short-term demands to perform may be the most effective way to manage the affairs of selected institutions. It is unlikely to become the norm and it is, in many respects, unsuited to the needs of many higher education institutions today.

External Management

What external management changes are needed in co-ordinating groups and in the relationship between governments and institutions?

The Green Paper proposes a number of changes to management structures. The most important of these is the proposed joint planning committee with each state. This is a sound response to managing a federal system where both the state and Commonwealth have interests. Five points can be made about this proposal:

- It is a clear signal that the Commonwealth wishes to shift to a situation where co-ordinating bodies at each level of government co-ordinate themselves more effectively and then assist institutions to manage change.
- It would simplify relationships between governments and institutions.
- It would make possible co-ordination through planning rather than ad hoc regulation.
- It would counter some of the criticisms of the existing system which centre on the lack of detailed knowledge of institutions at the Commonwealth level by enabling the Commonwealth to work in partnership with the states on these matters.
- There are those who feel that the Green Paper implies a reduced co-ordination role at state level. I take a contrary view. If all this is to be successful, we will need a stronger but somewhat different contribution at state level. Instead of the resource bidding which has preoccupied much of the time of co-ordinating agencies in the past, we now have the need to facilitate discussion, and co-ordinate change initiatives which can only be
effective if institutions, business, and others come together at the level of individual courses and programmes.

In addressing the need for system-wide reform, we need to recognize that the existing system, comfortable as it may be, is in some respects flawed. Effective change requires a strategy which builds on the strengths of the existing system while addressing the following weaknesses:

- For years we have operated a somewhat artificial distinction between universities and CAEs which has offended the principles of equality and the teaching and research model which so often underpins debate amongst academics on these matters. Much of our most successful research has been conducted in specialist research centres rather than teaching institutions.
- The existing system restricted the growth of major institutions in order to develop alternative institutions and diversity.
- This existing system managed growth by incremental allocation at the margin. In my view there was an over-allocation of resources to arts and teacher education and an under-allocation of resources to science and engineering and technology. At a time when technology is driving worldwide change, Australia's proportion of students being educated in Commonwealth funded courses in science, engineering and technology has actually declined from 35% of places in 1965 to 21% in 1985. Over the last 20 years the number of students studying arts has increased 188%. In the same period, the number of students studying Engineering increased only by 78%, which is less than half the proportionate increase for arts.
- The system is so segmented that it did not, until very recently, line up the way in which students were counted or resources were allocated between the university sector and the CAE sector. This year we, in Victoria, recommended to CTEC that funds be allocated away from the CAE sector to maximize the engineering intakes at Melbourne and Monash Universities. This was rejected and we received the funds for additional engineering places at one of the CAEs. It seems to me that this illustrates the way in which the politics of allocation can, on occasions, subsume the realities of producing outcomes.
- The system allowed courses to lengthen and placed little emphasis on the failure to improve completion rates, or on the need to adapt programmes in areas such as engineering and technology. In this respect, quality control was too often linked to an examination of inputs and process rather than outcomes. The Green Paper is too kind about completion rates. A preliminary study of Victorian statistics suggests that 26% of all CAE courses had completion rates below 36%. On the other hand, 15% had rates of 70% or higher. There is little sign of improvement since the Murray Report in 1957 cited them as low and unsatisfactory. The system
Management Implications

has not only allowed this situation to continue, it has also tended to re-
ward offending institutions through the resource allocation process.
Internally the system is over-regulated. Existing programmes and those
able to evolve slowly are advantaged over new developments. In a sys-
tem which should conceptually fund outcomes, the regulators have zeal-
ously deducted $9,000 from the over $20m. recurrent budget of one
institution because, in their view, the Chief Executive is over-remuner-
ated.

This is the context against which we need to consider the call for more executive
powers for administrators, fewer committees and so on. It seems to me that the ex-
ternal environment will, for good reason, force priorities and evaluation onto higher
education institutions. The need to broaden higher education will also challenge
concepts of uniform standards, the nexus between teaching and research, and the
importance of individuals versus the power of teams, often interdisciplinary teams.

If these changes are linked to academic outcomes and the development of a
stronger higher education system, it seems to me they may be accepted as the price
of progress. If they are seen as an attack on the ability of academics to pursue
knowledge goals or worse, if they are based in this way, they will be seen as
counter-productive.

In the end, that is the management challenge within institutions, to make needed
changes in such a way that individual academics and academic groups see value
from the management process and become involved in it.

Internal Management

What internal management changes are required within institutions?

Perhaps the most important proposal is the use of negotiated profiles as a way of
co-ordinating the development of the system around agreed strengths. Perhaps one
of the weaknesses in the Green Paper is that it does not explore the way in which
profiles might be used.

There are those who see profiles as more government interference with institu-
tions rather than less. I see them as the price of deregulation and it seems to me it is
a fair price. The community will not support the funding of institutions with blank
cheques. It is demanding more accountability. Profiles allow institutions to negoti-
ate these outcomes in the open, not behind closed doors.

Those who oppose profiles fear the closing down of liberal arts courses and the
total commitment of the system to some new science and technology juggernaut.
That is quite fanciful in terms of what is proposed. Developing priorities is neces-
sary. To assume that these priorities will close down other areas of higher education
or that reduced growth somehow makes areas less important within our academic
communities not only misinterprets the use of profiles, and the capacity of institu-
tions to negotiate these matters, but also misrepresents the academic value system.
The proposals to strengthen the management in institutions start with the idea of negotiated profiles, increased accountability and reduced regulation. The shift to planning, agreements and profiles will itself alter the role of managers in institutions. In addition to the traditional role of acquiring resources, protecting the institution and governing the various academic fiefdoms, the proposed changes erect a new role which is the negotiation of outcomes and profiles with governments and actions within institutions to deliver agreed outcomes. The process of deregulation, so necessary in the relationship between governments and institutions, needs also to proceed within institutions. Some of the procedures and rules tolerated within our higher education system make the external regulators look somewhat amateurish.

There is a great deal of talent in the academic staff of higher education institutions. How they manage the systems which surround them and still find time to make a contribution to academic programmes is a minor miracle. We need to open up discussions on how to deregulate both within and outside institutions. There is an old adage that administration is too important to be left to administrators. It seems to me that this is certainly true of the sorts of reforms we now need to discuss. If the aim is to allow academics to contribute more effectively, it is important to involve them in the details. It appears that many institutions currently lack the procedures to do this effectively and the Green Paper also gives little guidance on this issue.

Finally, a number of questions were proposed for my consideration. I was asked to comment on the proposed Commonwealth/state arrangements, and I have. I think they are positive and a realistic reflection of shared roles.

I was asked to comment on the future role of the states in higher education. I do not believe that any state can afford to ignore higher education in its planning. In the case of Victoria, the Economic and Social Justice Plans suggest a key role for higher education and one which needs to be addressed in terms of central priorities for the system.

In addition, effective change will require detailed review and development of programmes, credit arrangements, and management issues within institutions. These are best addressed at the grass roots level by groups closer to institutions than a central Canberra based group can hope to be.

I was asked to comment on institutional responsiveness and flexibility. While many new initiatives have occurred, you only need to talk with those involved in maintaining them to realise that the management dice is still loaded against new initiatives and developments, particularly where they threaten established territories and interests.

Summary

In conclusion, the most important point I would like to leave with you is the need for all the changes envisaged in the Green Paper to be programme driven. If they are so driven, then the various changes that are proposed have the capacity to invigorate and benefit our higher education system. If we ignore programmes and quality and
Management Implications

relevance and become fixated on process, budgets, territory, and autonomy, we run
the risk of increasing activity in higher education without providing effective results.

The second point I would make about management is a plea to see initiatives in
context and to test them against outcomes. The profile suggestion is a case in point.
It is a simple approach to deregulation and accountability. It provides for some gov-
ernment influence in how funds are spent. It also ensures institutions have very sig-
nificant autonomy to manage their own affairs. Much of the debate about profiles
seems to presume that governments exert no influence over institutions. Worse, they
presume that institutions themselves exert no influence over the lives and work of
the individual academics who work within them. In a sense, an academic straw per-
son is being erected to avoid thinking through a potentially valuable idea.

It seems to me that strategic planning and profiles and increased external ac-
countability can assist institutions to address these needs and in a sense redress some
of the bias against change which exists.

I understand that this bias against change exists to protect academic values and
performance rather than to hinder responsiveness. However, we need to accept that
a consequence has been a reduced capacity to respond. In reforming management
and improving responsiveness, we also need to protect academic values and auton-
omy.

Finally, I was asked: do we need a national review of management practice? It
seems to me that the Green Paper has the priorities right. The urgent need is to de-
fine priorities and outcomes and accountabilities. In a sense, this sets the agenda for
internal management reform. The actual practices and solutions adopted are likely
to be as varied as the institutions and programmes delivered.
The Green Paper does not deal with the Australian Research Council (ARC) in any great depth. Although the ARC is an essential aspect of the Government’s plan to target research funding, it arose from the 1987 ASTEC report on higher education research performance. The basic structure and functions of the ARC were agreed to by Cabinet well before the Green Paper was issued. Thus the Green Paper is not making any de novo statements with regard to the structure of Australian research.

There are, of course, existing functions which are subsumed in the role of the ARC, and a set of programmes, fellowships and scholarships that are already being supported and will continue to be supported. Unlike the other bodies under the National Board of Employment, Education and Training - the Higher Education Council, the Schools Council, etc. - the ARC is already up and running. With that said, it should be noted that the Research Council presently consists of one person: the Chairman. For the time being, I am able to assume that the views expressed below are based on complete consensus within the Council. This paper will outline a few of the aspects of the new role of the ARC, with particular reference to the identification and funding of research that is deemed to be of high national priority.

My task as Chairman has been to get from last year, when there were a number of research-funding agencies, to this year, when the ARC will assume a number of previously disparate research functions. While the ARC will pursue new goals continuity must also be preserved as far as is possible.

The basic mission of the ARC is two-fold: 1) to design a national research strategy, which includes not only higher education institutions but every other part of Australian society which is, in a meaningful sense, involved in research and development; and 2) to persuade Government of the virtues of the proposed strategy. This does not mean that the ARC will be funding other sections of the society; it means that the ARC has a specific responsibility to advise Government on the strengths and weakness, the balances, and the emphases of Australian research and to connect these factors in some way with Australian industry and higher education.

* This is a summary of Professor Aitkin’s presentation prepared by the editors.
institutions. This has to be done in order to provide appropriate advice to Government.

The ARC's principal predecessor, the Australian Research Grants Committee (ARGC), had no priority system in funding research, and was proud of it. The ARGC was wholly reactive to the research proposals coming from the academic community. Through the system of peer review the ARGC identified what it saw as the excellent research proposals and asked the Government to fund them. By the early 1980s it became obvious that Government was no longer prepared to fund all the research proposals that the ARGC regarded as worthy of support. Since about 1978, the ARGC has had to get by with less funds than the National Health and Medical Research Council, whose resource base increased substantially. While I am not in anyway proposing that money should not be spent on medical research, it is not obvious to me that medical research in Australia should draw twice as much money as that spent on all other forms of research. This view was put to Government by the ARGC, but it did not result in any increase in funding. There is a world-wide tendency for research funding bodies to have priority programmes, and it became clear to me that if the support of Government for Australian research was to increase then priority programmes would have to be established.

There are two crucial statistics that must be considered. The most important one is the decline of the Australian economy. Australia's overseas indebtedness is increasing roughly at the rate of $1,000 million per month, every month. Every day the debt increases by the size of the ARGC's annual vote. Also, there seems to be no prospect that Australia will stop increasing its indebtedness at this rate for a few years. Given this financial haemorrhage, it is very difficult for the Australian research community to persuade Government that even though the financial situation is bad, excellent research should be funded regardless. The Government's response is, basically, "Ask not what Australia can do for you, but what you can do for Australia". Government is also likely to ask, if Australian basic research is so excellent and important, why is not the balance of payments better?

The other statistic of importance is that Australia is at the bottom of the international pecking-order of wealthy countries in relation to the proportion of its GDP devoted to research and development: 1.15% at present. In Sweden, the figure is 2.46%. South Korea has gone from 2.0% to nearly 3.0% in the last four years. Most modern nations with growing economies spend over 2.0% on research and development. On the other hand, Canada, with an economy not unlike Australia's - in the sense that it is dependent on primary products - devotes 1.3% of its GDP to research and development. Canada has many of the same problems as Australia.

While Australia is devoting a little over 1.0% of its GDP to research, it does not seem that this will change the economy in any material way. The difficulty is that the primary industries will remain the big export earners. (Of course, a significant proportion of R&D in Australia is devoted to the wool industry, the wheat industry, and other commodities.) Because of Australia's dependence on primary industry, the economy is unlikely to grow substantially in the near future. Unless Australia gets into manufacturing and technological industries in a big way - and no one knows
Research

how to do it or where to sell the products - it is unlikely to be a huge spender on re-
search and development.

Nonetheless, 1.15% of GDP spent on research and development in this day-and-
age is very low, and Government knows it is low. John Button, the Minister chiefly
responsible for the relationship of research and development to industry (the pay-off,
the other end of what universities do), insists that Australia must spend more. So
why is not the money flowing straight into the universities? The answer is that all
the universities have been able to say is that "we have all these clever people and
they do all these clever things, and one day something will pay-off. It will probably
be the unexpected one. If you try and predict research outcomes, you will make a
mistake". While there is a good deal of truth in this attitude, it does not provide a
very persuasive basis for getting more money out of Government. Ministers have
elections to face and love winners. If the universities could provide them with
winners, they probably would get more money.

The ARC has been set up on the basis that it will endeavour to identify areas of
research priority and their costs, and then will tell Government that if the money is
forthcoming, the ARC will "promise" tangible rewards in the future. Fifty percent of
the function of the ARC will be devoted to establishing a national research strategy.
The ARC will be saying: "This is what Australia is generally good at industrially,
and is likely to do well at in future. And this is the sort of research Australia is good
at. So a productive marriage of the two should provide a research strategy that is
worth funding". It is from approaches like this that we are likely to get measurable
increases in research expenditure.

With regard to the universities, the ARC is all about basic or fundamental or
"curiosity-led" research. There are three factors that are bound-up in forming a re-
search strategy. First, we must be able to identify areas for special emphasis in re-
search. Second, the researchers must be located and the places capable of carrying
out certain types of research identified. Third, an estimate of the money required
must be arrived at. The identification and assessment of these factors will be
achieved through seven basic mechanisms.

The first mechanism is the creation of a national conspectus of research strengths
and weaknesses. This will be achieved mainly through peer review.

Of course, peer review is marvellous once you know how much money there is.
But peer review is absolutely useless if you want to decide to spend more on biolog-
ical science and less on physics, more on engineering and less on chemistry, or more
on all of those and less on history, etc. Decisions about going this way rather than
that way are always made in some kind of political fashion, whether in universities,
colleges, governments, or anywhere else.

But the first strategy of the ARC is to find out what Australian institutions are
good at. Where are their research strengths and weaknesses? The ARC will be ask-
ing Government for money for a national enquiry - involving the Australian Vice-
Chancellors Committee, the learned academies, the CSIRO and the Research Coun-
cil - to develop a conspectus of strengths and weaknesses. Of course, the enquiry
will not work unless people accept that a) it needs to be done, and b) it is done fairly.
The second mechanism involves some sort of "foresight process", and this process is essentially bottom-up; i.e., you go to the research communities in each discipline and ask: what areas are exciting and are likely to have particular pay-offs, both material and intellectual? The users of science also need to say what they could do if only certain things happened. Without the twin pieces of information - our strengths and weaknesses coupled with what we should be doing - putting together a national research strategy would be difficult indeed.

The third mechanism involves the allocation of funds to the national priority areas. In this context, the ARC would probably be unwise to allocate more than 20% of all funds to priority areas. There are risks; the priorities identified may not be the most appropriate ones. The British SERC has allocated about 60% of their research funds to priority areas, and that is widely viewed as too great a proportion. The British cannot now get out of that funding pattern because they have locked money up in very large experimental facilities. At the moment, the ARC spends about 15% of its research budget on priority work. No one is proposing a great increase on that level of spending.

The fourth mechanism involves the concentration and selectivity of research effort. If setting research priorities is essentially bottom-up, then the selectivity and concentration of effort is essentially top-down. Particularly where it requires very expensive equipment, research must be concentrated in fewer places. In the past, the ARGC funded individuals, not institutions. This could result in duplication between institutions of very expensive equipment. The ARC will be saying, for example, if there are to be two or three major equipment installations for a certain type of research in a particular discipline, the best place to put them is in the institutions where research of that kind is done best of all. The tendering for special research centres will become more specific. The ARC will identify an area in which it wants a special research centre, and institutions will tender for it.

The fifth mechanism is to reform the postgraduate system. This will be done in two parts. The first task is to improve training at the postgraduate level. The second task is to radically reform the stipend and the whole system of funding postgraduate students. I am looking toward a basic stipend of about $15,000 - fixed at something like two-thirds of the salary of an assistant research officer, grade one - plus a $3,000 relocation allowance for people who move from their university of undergraduate training. The ARC hopes to foster an attitude that only under most exceptional circumstances would students pursue postgraduate training at the same institution at which they received their undergraduate education. The ARC wishes to build an expectation amongst postgraduate students that they move, and the only way to do that is to pay people to move.

Of course, the problem with this proposal is cost. At present, $22 million is spent on the Commonwealth postgraduate system - supporting 2,400 students. The above suggestions will cost around $37 million and there may need to be trade-offs. If funding per postgraduate student is to increase then, it will be argued, the number of scholarships will need to be reduced.
The sixth mechanism involves a review of the Institute of Advanced Studies at the Australian National University. The Institute was created forty years ago, and its mandate was set in the years immediately following the Second World War. The relevance of this mandate to present circumstances is questionable. The Institute has the deepest and widest concentration of research strength in the whole of the university system and no national research strategy can succeed that does not build on that fact. The review ought to take place in the middle of 1989, and the review team would include people from overseas who are not only well-known academics but also have some experience of advising governments on major research decisions. It is bound to involve recommendations on the way in which the Institute is funded.

The seventh mechanism is to institute a rapidly growing budget for the ARC. This year, the budget is $70 million. My hope is to increase the budget to $200 or $250 million within five years. Some of the increase will come from the money universities already have for research. But some of the money must come from outside the system. We will move more towards the Canadian system, i.e., separate funding for teaching and for research. How successful the ARC will be in reaching the $250 million budget target remains to be seen, but if you do not start with major targets you will never hit them.
There is much in the Green Paper that is to be applauded. Many of the suggested reforms are long overdue, and the fact that the Government is proposing significant growth in higher education is welcomed. However, the Green Paper cannot be accepted in toto, nor was it the intention of its authors that this happen. The Green Paper is, as the title suggests, A Policy Discussion Paper.

Before formulating a White Paper on higher education and legislating for extensive structural reform, the Government may be well advised to take into account the analysis and criticism provided in this volume. However, it is not the purpose of this concluding chapter to recount the points already made. Rather, we wish to comment on the overall task of reconstructing higher education and on some of the dangers and pitfalls that may be encountered.

Clearly, all public policy plans have their unintended as well as their intended consequences. One unintended consequence of the Green Paper seems to be evident already, i.e., the linking of the idea of institutional size with institutional consolidation, regardless of educational rationale. Several of the recently proposed consolidations seem structurally and functionally preposterous, predicated on the simple assumption of the institutions involved that increased student numbers will provide security, or worse, the preservation of the status quo. Such consolidations would achieve few if any of the goals stated for consolidations in the Green Paper. It seems probable that the authors of the Green Paper did not realize the "amalgamation bushfires" that they would start by unintentionally linking in people's minds the idea of viable institutional size with that of consolidation. Certainly, the Government desires a smaller number of larger institutions, and amalgamation is one method of achieving this goal. But several of the recently proposed mergers, particularly those that suggest linking institutions together in some form of federation, possibly would work against other goals in the Green Paper, such as, the rationalization of resources.

The Green Paper proposes a restructuring of higher education that has not occurred in Australia since the 1965 Report of the Martin Committee. In fact, some of
the proposals in the Green Paper have been necessitated by the unintended consequences and structural contradictions set in train by the Martin Committee. This is particularly the case in relation to the abolition of the CTEC and the end of the binary system. Before attempting to restructure the future, it may be worthwhile to briefly consider some of the mistakes of the past.

Just prior to the second world war, Australia had established one university in each of the state capitals, with higher education being almost exclusively a state matter. By 1985, Australia had 19 universities, 47 colleges of advanced education, a university college in the Northern Territory, had proposed the establishment of a university in the western suburbs of Sydney, was on the brink of providing several of the large institutes of technology with university status, was about to see the creation of the first private university, and had a large federal bureaucracy to help look after all forms of tertiary education. Obviously, in the intervening four decades, Australian higher education experienced dramatic growth and underwent important changes.

In 1946, there were 25,500 students enrolled at Australian universities. Shortly after the war the Commonwealth government created the Australian National University to further research and post-graduate study, and in 1949 the New South Wales government established Sydney's second university: the University of New South Wales (initially called the NSW University of Technology). In 1954 the New England University College received its independence from the University of Sydney and in 1958, Monash became Melbourne's second university. Thus, by 1960, Australia had ten universities with a student population of 53,400.

In 1965, the advanced education sector was created and Newcastle University College became a university after severing its ties with the UNSW. Ten years later, the University of Wollongong severed its ties with the UNSW. In 1971, Townsville University College became James Cook University upon gaining its independence from the University of Queensland, and during the period from the mid-1960s to the mid-1970s, there were several new universities created: Macquarie University (1964), La Trobe University (1964), Flinders University (1966), Griffith University (1971), and Deakin University (1974). While it is common practice to believe that Australian higher education is resistant to change, the facts do not support the assumption. The Green Paper in particular seems to overlook many of the positive changes that have occurred.

From the mid-1970s onwards, higher education entered a period of no growth, or what has been termed in Australia and elsewhere a "steady state". With the decline in teacher education and a worsening economy, there was little or no growth in Australian higher education in the late 1970s and early 1980s; and by the mid-1980s the number of CAEs had been reduced from a previous figure of over 70 to 47 (mostly through merger). In about 1983 the retention rates at Year 12 started to improve, along with an increase in the demand for higher education, but the number of students enrolled in higher education in that year (168,639 university students and 179,893 CAE students) was only marginally above the mid-1970 figures.
Concluding Remarks

Constitutionally, higher education has always been a matter for the states, with the exceptions of the ANU and the Australian Maritime College. But today, higher education is almost exclusively funded by the Commonwealth, and obviously many of the far-reaching political decisions affecting higher education are made in Canberra. Increasingly, Australia during the last four decades has moved towards a national system of higher education. There was the beginning of a national consideration of higher education before the war with the establishment of Canberra University College in 1930. But it was the war, and even more importantly, the post-war era of reconstruction that gave higher education national importance.

A paradox of Australian society is that while holding to the norm of egalitarian social relations, "Australians are one of the most bureaucratically controlled and over-governed peoples on the face of the earth" (Auchmuty, 1963:146). Since the second world war, centralized bureaucratic control has progressively become the domineering feature in the development of both Australian tertiary and higher education. Following the Report of the Committee on Australian Universities (Murray Committee) in 1957, new layers, and entirely new educational sectors have appeared on the scene, and the list of reports and recommendations made by various committees enquiring into the structure and function of tertiary education has grown longer year by year.

While the Green Paper casts its suggested policies in the light of the deregulation of higher education, there is little in the Paper that does not leave the central bureaucratic apparatus in firm control of higher education. In fact, with the abolition of the CTEC, the federal bureaucracy may take an even firmer control over individual institutions and the system as a whole. In a sense, extensive structural change of any system can only be accomplished through the power of central government. However, it is the intention of the Green Paper to make higher education more responsive to community demands and national priorities. But centralized bureaucratic control will do little to involve local communities in the affairs of higher educational institutions. Moreover, a centralized structure denies certain possibilities for innovation and diversification, such as, "community colleges". We will explore this point in more detail in a moment.

To date, the two most important structural changes that have occurred in Australian tertiary education in the last 30 years are the creation of the advanced education sector in 1965 and the establishment of the technical and further education (TAFE) sector twelve years later. The complexities of the CAE sector and the problems encountered during its development cannot be grasped fully without reference to technical education.

Before the advent of CAEs in 1965, non-university education took place primarily in technical colleges and single-purpose teachers' colleges. Technical education had its beginnings in the middle of the last century with the establishment of "working men's colleges", "schools of mines", and "mechanics institutes". By the 1960s there existed, particularly in Victoria, an array of well-established (though not well-endowed) technical colleges. These institutions were oriented to commerce and industry and were particularly strong with regard to engineering education at
diploma level. "The industrial aspect of their course programmes has been both their strength and, when it came time to develop senior technical colleges into CAEs, their weakness" (Meek, 1984:28).

Since the 1940s, the larger metropolitan technical colleges have sought recognition of their diploma courses as equivalent to degrees, and an upgrading of the colleges to university status. However, there developed in Australia an educational status hierarchy where the universities were seen to be socially and intellectually superior to technical education.

This status hierarchy of tertiary educational institutions, particularly in Victoria, is the result of three historical factors. First, secondary education was separated into two streams, with one leading through the junior technical colleges to entry into the diploma courses of the senior technical colleges and the other leading through the senior high school to university entry or teacher education. The mere separation of secondary education into two streams made the evaluative comparison of institutions inevitable. Second, the purposes of the technical schools developed in the nineteenth-century were, on the one hand, to improve the lot of the working class, and, on the other, to supply capital with skilled labour. The technical colleges were associated with a utilitarian, industrial education. High school education led to "white collar" employment, university entry, and professional careers; technical education led to a career in the trades or sub-professional training in such areas as engineering. Third, while some of the technical colleges provided tertiary education at diploma level in the senior division, the tertiary functions were not physically separated from secondary technical education. As a result, their diplomas were held in lower esteem than those offered by the universities.

While various committees of inquiry extolled the value of technical college diplomas they resisted upgrading their status. For example, the "Committee for the Development of Tertiary Education in Victoria" under the Chairmanship of Major-General Sir Alan Ramsay reported in August 1963 and stated that technical college diplomas "have a valued place in the hierarchy of qualifications" but "it would serve no useful educational or vocational purpose" to raise the standard of the diploma to degree level. To do so "could deter from commencing it, or divert into other courses, many who now enter it confidently or hopefully. Something akin to it would be reinstated because it is and will be needed". Two years later, the Martin Committee Report set events in train which led to the conversion of former technical college diplomas into degrees, the very diversion of students into other courses which the Ramsay Committee feared, and, to some extent, the development of the TAFE sector has been brought about by the need to reinstitute the technical college diplomas. The Green Paper speaks of a partnership between TAFE and higher education, but leaves TAFE structurally separate. It will be surprising indeed if a competition between TAFE and the new higher educational institutions that mirrors the past competition between CAEs and universities does not develop in the coming years.

In December, 1956 the Prime Minister, R.G. Menzies, invited Sir Keith Murray, the then Chairman of the University Grants Committee in Great Britain, to head
Concluding Remarks

a committee of inquiry into the future of Australian universities. The Murray Committee submitted its report in September, 1957 and recommended that the Commonwealth become more involved in the affairs of the universities - particularly with regard to finance and development - and that an Australian Universities Grants Committee be established to advise the Government on university matters.

By 1961 it was apparent that the demand for higher education was expanding far more rapidly than was the capacity of the universities to supply student places. In that year, the Menzies government asked the University Grants Committee and its Chairman, Sir Leslie Martin, to establish the "Committee on the Future of Tertiary Education in Australia". At the time the Martin Committee was appointed, both the Government and educators were concerned that rapidly expanding student enrolments would dilute the standards and status of the universities, and distract them from their traditional role. Also, the expansion of university education suggested by the Murray Committee had placed a heavy burden on the Commonwealth Treasury. In assessing the future of higher education in Australia, financial considerations were to play an important role in the deliberations of the Martin Committee. In this sense, little has changed in the last twenty-five years.

The Martin Report was tabled in Federal Parliament in March, 1965. The Report stated that diversification and increased participation in higher education should be achieved through the expansion of alternative, non-university forms of education. The Committee rejected any notion of expanding the role and function of the universities, which, at the time, taught sub-degree diplomas. The Committee believed that no new universities should be established in the future, that part-time and external studies at universities should be gradually reduced and eventually eliminated, and that university entrance be restricted to students whose standard of pass at matriculation level was high enough to reasonably predict that they would graduate in minimum time (3 years), or minimum time plus one year.

In proposing the expansion and diversification of non-university tertiary education, the Martin Committee recommended a new bureaucratic structure for the management and co-ordination of educational activities. It envisaged the establishment in each state of an Institute of Colleges to oversee technical education, and a Board of Teacher Education to supervise the activities of teachers' colleges. At the Commonwealth level, the Committee recommended the creation of three bodies to co-ordinate the activities of each sector - teacher education, technical and university. These three bodies would report to one umbrella Committee: The Australian Tertiary Education Commission. However, the government was to accept only those recommendations relating to technological education, and only the State of Victoria was to create an Institute of Colleges in the form recommended by Martin. The exclusion of teacher education from the co-ordinating structure was probably a mistake.

The Martin Committee's most important recommendation was the diversification of Australian higher education through the development of colleges offering sub-degree courses with a strong technological and vocational emphasis. This led to the CAE experiment, the creation of a vocationally relevant higher education sector
committed to teaching technological subjects, and separated from the universities in function but equal in status. It was envisaged that the staff in CAEs would concentrate on teaching with research left to the universities, students would receive diplomas rather than degrees, and the cost of their education would be much less than in universities.

But the original goals set for the CAE sector were not to be achieved and it became difficult to attach to the sector a clear educational philosophy and to distinguish its functions from those of universities. While it is true that CAE courses have been cheaper than university courses, the CAEs also have proved to have an appetite for money which far exceeded original expectations. The bulk of student demand was for courses in the humanities, business studies, and social sciences, not in the technologies. Many of the CAEs had to pour their resources into the non-technological areas in order to survive, and in the process, create arts courses resembling those offered by universities. Once again, in 1988 the Government is attempting to redirect the stream of student demand towards engineering and the technologies. It is not necessarily being reactionary to ask, "for what purpose?" More to the point, drawing on past experience, the need (and the demand) may be for vocationally relevant training outside of degree level higher education. This requires careful investigation before large sums of money are directed at expanding degree enrolments in engineering and the technologies.

In their search for equal status with the universities, the colleges either dropped or upgraded diplomas in favour of degrees, and college staff achieved parity of salary with university staff. In order to teach degree courses, the colleges recruited staff with higher degrees and a record of research publications, the same sort of staff that were employed by universities. At the same time, policy-makers in the CAE sector insisted on the vocational, technological charter of the colleges and claimed that they were equal to, but different from the universities.

The Martin Committee's and the Menzies Government's selective acceptance of the Committee's recommendations created a binary system of higher education, which took a little over ten years to transform itself into a "trinary" system. As the colleges shed many of their responsibilities in the sub-diploma field and moved into degree and postgraduate studies, TAFE developed to fill the educational vacuum at the lower levels left by the colleges as they drifted towards higher academic standards and programmes. The Tertiary Education Commission was established in 1977 to co-ordinate the three sectors of tertiary education, including TAFE. According to one observer (McKinnon, 1985:16):

The creation of this separate stream has been a major national educational blunder from which Australia is still suffering. This is not a derogatory comment about CAEs .... The best colleges have been eminently successful in achieving high standards and turning out first rate people. The wide coverage of courses in the larger colleges makes some of them difficult to distinguish from univer-
One of the problems with the structure of Australian higher education is that there has been no tradition of local community control. Jones (1985:15) argues that government has played a disproportionately important role in the creation and maintenance of Australian higher education in comparison to other Western countries, and that "in the absence of strong local government this meant distancing educational institutions from their locales". As an aside, Jones adds that "in recent times the shift to Federal funding and control has increased the distance". Prescriptions on what are the inherent features of colleges and universities, the clientele that they should serve and the courses that they should or should not offer, have become increasingly the province of Commonwealth bureaucracies and governments.

Over the years, there have been discussions on how to provide local communities with more direct control over higher education, and the North American community college is often mentioned in this regard. The Martin Committee investigated the community college model in the early 1960s, and interest in the concept was renewed following the report of Professor Dennison to the Poverty Commission in 1976. But for several reasons, there has been no serious attempt to introduce community colleges in Australia on a wide scale. For one thing, it is highly unlikely that local Australian communities would achieve the financial control, or offer the financial support, that is a fundamental aspect of North American community colleges.

Nonetheless, if there is a need to make Australian higher education a more integral feature of Australian society, and more responsive to community and industrial needs, then it seems logical that those who would benefit most from higher education should have a more direct interest in its affairs. Higher education should neither be the handmaiden of industry nor should it allow gross political interference in its internal day-to-day affairs. But there does not seem much likelihood of this happening in Australia. Throughout its history, higher education has been too removed from Australian society, and it is doubtful that a closer association between the two would threaten any cherished academic norms.

For a number of years several students of higher education have been saying that Australia requires a number of different types of educational institutions, shaped as much by local interests as by national priorities and international standards. But this will not occur on a wide scale so long as higher education is structured upon the basis of a monolithic bureaucratic model. The binary system assumed that there would be uniformity amongst institutions according to their sector rather than their geographical and social location. There was recognition that regional CAEs constitute a "special case" and need to be more diverse in order to cope with geographical isolation. But for the most part, educational policy-makers have been intent upon enforcing uniformity amongst higher educational institutions, rather than promoting diversity. The Green Paper continues this tradition by allocating function according to size. The negotiation of educational profiles may promote diversity amongst in-
stitutions, then again, it may not. There is a powerful tendency for institutions to ape those at the top of the status hierarchy. The Green Paper, despite what it says about an integrated national system of higher education, clearly suggests a hierarchical institutional arrangement.

Properly constructed, mergers may help promote institutional diversity. Some past mergers, particularly those between universities and colleges, have resulted in interesting experiments in Australian higher education. More of these probably should be promoted. It is fairly clear, for example, that the merger between the University of Wollongong and the Wollongong CAE has not only strengthened the University but also has extended the range of educational opportunities available in the Illawarra region. Once again, however, mergers (as well as other structural changes) should be guided by regional as well as national priorities.

It needs to be recognized that the Green Paper does not advance its proposals de novo. There have been several recent interesting proposals on what a restructured tertiary system might look like (McKinnon, 1985; Birt, 1985). Most of the proposals prior to the Green Paper questioned the usefulness of the binary distinction and opted for a more integrated structure of tertiary education. Such proposals suggested that students be allowed to move freely from institution to institution with full transfer of credit and that they not be identified by type of institution but by level of study (McKinnon, p.17). McKinnon proposed in 1985 a three tier system of tertiary education, consisting of: 1), community colleges that would teach the first two years of degree level general and vocational education; 2) tertiary colleges "that combine undergraduate vocational and arts and science study in one institution"; and 3) universities which would "provide the graduate training and research opportunities ... in the basic sciences, in the learned professions and in the technologies". In McKinnon's scheme, entry to the learned professions would be based on preparation in the arts and sciences in the tertiary colleges. This might make the professions less socially exclusive. Although it is not explicitly suggested by McKinnon, community colleges could be made to be directly responsible to the regions in which they are located.

McKinnon's proposal is appealing. It serves the purposes of increasing access, diversity and local involvement in higher education. But a three tier functionally integrated system of higher education is impossible if TAFE is left out of the equation. The Green Paper acknowledges the importance of TAFE institutions, but it does little to involve TAFE in the overall structural reorganization. As stated above, it is quite probable that a competition between TAFE and higher education will develop that parallels the past competition between CAEs and universities, with all the derisive effects. There is already evidence of this occurring. On the other hand, a combination of TAFE institutions and CAEs in certain regions, particularly the rural ones, could produce a truly "new type" of Australian higher education institution. It might resemble the North American community college in many of its functions. However, such a new institutional model would not come about unless Government was prepared to give it considerable financial support. Of course, presently, TAFE
Concluding Remarks

is largely under the control of the states and their wishes would need to be taken into account.

Clearly, there is a need for new and innovative arrangements in Australian higher education. But any restructuring will have to overcome the weight of historical traditions and will be met with resistance from at least some sectors of the established bureaucracy.

There are substantial social and structural barriers that prevent Australian higher education from being a fully integral feature of Australian society. For the greater part of their history, Australian higher education institutions looked towards Britain for their standards, curriculum, inspiration and culture, rather than to their own country; and although higher education has undergone substantial changes since the second world war, it has yet to fully change from being an elite male preserve, peripheral to the day-to-day concerns of Australian society.

It would have been impossible for higher education to have achieved the substantial growth that has taken place over the last four decades without the intervention of the Federal Government. Also, governments cannot rely on higher education institutions to co-ordinate and rationalize themselves. There can be little doubt that higher education requires co-ordination at the national level. Nonetheless, it also needs to be recognized that the way in which higher education has been structurally differentiated in the past has created problems. The present task is not to repeat history.

There needs to be much more research on how TAFE relates to both society and to the higher educational sector. The bulk of tertiary education students are enrolled in TAFE institutions, but we know relatively little about them or their institutions. Also, there is some suggestion that TAFE is following the same pattern of upward academic drift that set in at the CAE level more than a decade ago. Some TAFE courses are demanding higher entry levels than were required a few years ago and are attempting to upgrade the level of course offerings. In any hierarchical arrangement of institutions, all institutions will strive for higher status. Any restructuring that does not take TAFE fully into account is bound to encounter problems.

Any possible future model of tertiary education must be carefully evaluated in terms of its social, educational and political consequences. The constant danger in changing the structure of any social institution is that the same old problems surface under a new disguise. In this regard, the dual criteria of access and equity should be used to assess the suitability of any new arrangement. And it is not at all clear how either higher or tertiary education may be made to be more equitable, particularly when it comes to allowing women to share in their management (an issue not addressed by the Green Paper). Australian higher education institutions face complex problems, but it should not be beyond the intellectual capacity of those who work for them and care about them to create lasting solutions.
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