'it may be argued that most, if not all, of the facilities are presently available in Australia.' Yes. So, why start an another expensive institution? We, well, are told that this is a good idea because it is easy that is to say that he already has change already existing institutions; they will be easier to control; and the students will benefit from the variety of courses, the mixed intake, the possibility to make changes. Now, all that is not clear enough, what more could anyone ask for?

There may be some people who are not convinced that the present system is inadequate and that these comments provide enough of a basis for future planning. Well, it turns out that Professor Dennison has covered present problems as well in his review of the community college concept. Overall, he thinks there are three problems: the different parts of the tertiary sector pursue different objectives, and don't cooperate: students can't transfer between institutions unless they are motivated (clearly here the logic is that unmotivated students should be allowed to transfer with ease); and there are problems in the funding machinery. In relation to the last of these points there are problems of course — but not the ones which Dennison noted, since these were some of the facts he did get wrong. In the final section of the report, Dennison goes into some detail in looking at the various component parts of the post-secondary education sector. He repeated in some detail. Two examples should suffice. He notes that the universities here are as good as anywhere else — and then he notes somewhat critically that they are reluctant to change. The connection between these two points is not immediately, at the other extrems, he is worried about the effects of the final public examinations taken in secondary schools. If you changed from the HSC to its equivalent, the schools could do anything they liked, couldn't they? How true.

When all the talking is over, we do get presented with a blueprint which are not so much with the provision of opportunities for life-long learning as with the restructuring of post-secondary education. Instead, we do not want to follow Dennison's suggestions and develop a 'unique' solution to Australian needs, and we also do want to take account of other systems in other countries. (The maxim seems to be: Do it different, but in solution he puts forward is simple; that we should set up co-ordinating bodies for post-secondary education in the States; that courses and programmes should take account of community and managerial needs; that the TAFE area should be recognised as an autonomous and equal partner with the others; and that we should make the institutions of Technology and a few of the larger C.A.E's (about 20 altogether) into universities. Then everything else which is not a university could become a community college. Now there's a unique solution. There is no doubt that Dennison has considered the applicability of the community college concept. By and large, it seems, we can completely recreate the pattern of post-secondary education and introduce the community college concept just by changing some names. Admittedly there are a few problem areas, where there is not a college already available to become the new community college, but otherwise it is all easy, cheap, and very tidy. Well, fairly cheap, as there may be some unscrupulous people who, once they find they are now running a community college, will feel that they need to expand. All this might make you wonder who the man is who wrote this report, and the convenient list at the end of his report reveals some very interesting omissions. Look at South Australia as an example, where Dennison "cannot help being impressed" by the approach developed in the FE area. He didn't see anybody else!

Dennison urges us to discuss his report "in the spirit in which it was written." To be fair to Dennison, when he prepared his report he did not expect it to be published, but published it was. He was recognised (expensive) institutions! It is important to note that in the cases of Armidale and Newcastle, merger proposals were not initiated by the universities, but by the government, and still by the government, that we need to avoid. It was recently exemplified yet again in a Commonwealth Seminar on "The Changing Balance in Education" responsibilities for Post-Secondary Education in Two Federal Systems in Australia and the United States" which was held, for a privileged few, in March 1977. The strategy was to invite outsiders to come and tell us what we should do. Surely we are capable of discuss and analyse these matters ourselves — and openly too? It really is not good enough to be reading Dennison's report, read it, after it was written, or to be hearing about seminars through the grapevine. Dennison also suggests in relation to his report that "doubts" and "fears" raise many reactions. I certainly hope it does. In talking about accountability we need to be thinking about universities in the future, and in looking forward we need to be accountable.

Between 1969 and 1975, proposals to merge three N.S.W. universities and their neighbouring Teachers' Colleges (now Colleges of Advanced Education) at Newcastle, Armidale and Wollongong gave rise to much formal and informal debate within the institutions concerned. This article deals only with the issues raised by academics in the Universities concerned and which appeared in writing. It is intended as a background to the present discussions which have arisen from the proposals. Professor Short of Newcastle 1977-79 triennials. In reports of the Universities Commission and the Commission on Advanced Education: these require further consideration of rationalization in selected cities.

An evaluation of the arguments themselves, and of the weight they may have carried in the policy making process was written. However, it is important to note that in the cases of Armidale and Newcastle, merger proposals were not initiated by the universities, but by the government, and still by the government, that we need to avoid. It was recently exemplified yet again in a Commonwealth Seminar on "The Changing Balance in Education" responsibilities for Post-Secondary Education in Two Federal Systems in Australia and the United States" which was held, for a privileged few, in March 1977. The strategy was to invite outsiders to come and tell us what we should do. Surely we are capable of discuss and analyse these matters ourselves — and openly too? It really is not good enough to be reading Dennison's report, read it, after it was written, or to be hearing about seminars through the grapevine. Dennison also suggests in relation to his report that "doubts" and "fears" raise many reactions. I certainly hope it does. In talking about accountability we need to be thinking about universities in the future, and in looking forward we need to be accountable.

Although arguments recorded in university documents are not necessarily without bias, or reflective of the whole debate, they do include a spectrum of opinions voiced by various faculties, departments, groups and individuals within the three universities. The issues fall under nine headings, as follows:

The Role of Universities vis-a-vis C.A.E.'s

In each of the three universities there are some perceptions and beliefs about the intentions of the C.A.E.'s and C.A.E.'s are different and that these disparate organisations should not be amalgamated. Dr. B. R. Miller of the University of New England (U.N.E.) attacked the notion of amalgamation; "A.C.A.E. in question can be integrated simply because they are both tertiary ones." He said that might be valid if they were tertiary institutions of the same kind, but they are not. C.A.E.'s were designed set up to do a different job from universities: not necessarily a lesser job, but certainly a different one. Integration of a C.A.E. with a university or polytechnic or college in both worlds, with neither institution able to do the job of the other.

On the other hand, Professor Short of Newcastle University (a protagonist for incorporation) believed that the universities and the colleges are to be seen as variations on a theme: .. all should be seen as engaged in what is essentially the same enterprise.1 In U.N.E. at Armidale, the Faculties of Science and Rural Science thought that if U.N.E. and the neighbouring College amalgamated the University might be regarded more as a C.A.E., than a university — with concomitant loss of status. They argued that although this might be relevant to universities at Sydney, Newcastle and Wollongong, it was much more so to U.N.E. Presumably the inference drawn was that the rural U.N.E., with its narrower range of disciplines, was more likely to be regarded as a C.A.E. If merger took place than would be the case if this happened to metropolitan universities with their wider range of disciplines.

Competition for Students

It was recognised that university student enrolments were likely to be reduced simply because C.A.E.'s had been introduced in various parts of the State, thus providing an alternative form of tertiary education. Moreover, in Newcastle University and U.N.E. the point was made that a large proportion of students enrolled at those Universities were in receipt of student training scholarships from the N.S.W. Department of Education. At Newcastle University in 1969, 50% of the first year intake of Arts students and, perhaps, 60% of all full-time students held such scholarships. At U.N.E. the Vice-Chancellor wrote: In any consideration of the academic implications of the proposed merger, it must first be recognised that already the University has a widespread involvement in, and dependence upon, further education. … In the last seven years, (p01971) 85% of the growth of the University's internal undergraduate numbers has been directly
The major rationale for and objective of Teacher training. In N.S.W. of teachers. The Academic staff N.S.W. State incorporation on amalgamation in Wollongong there is no reference to C.A.E.'s rather than to universities in order to maintain a consistent possibility of competition between those organisations.

Quality of teacher trainees was also taken into consideration. It was said that teacher trainees studying arts and economic studies at U.N.E. were of better quality than those of any university. It was felt that the N.S.W. Department of Education allocated more scholarships to C.A.E.'s and less to the universities. Since teachers' salaries were higher than those of universities it was felt that the N.S.W. Department of Education might prefer to send teacher trainees to C.A.E.'s rather than universities in order to maintain a consistent supply of teachers, the incorporation of C.A.E.'s within Universities at Newcastle and Armidale would eliminate the possibility of competition between those organisations.

Teachers' Colleges were all agreed that in some respects, at least, teacher training could benefit from incorporation. However, the pre-sale of university courses were not unanimous among academicians generally, faculties or departments of education and teachers' college staff.

Academic Standards
In its Fifth Report of 1972, the Universities Commission (U.C.) stated that there would be no objection to amalgamation providing teachers' college students were qualified to enter universities, in the university, or to receive higher salaries as a result of the latter. It was also evident that if, on incorporation, teachers' college staff were to receive higher salaried university staff with equal academic qualifications, the latter would resent it. In Wollongong the problem of absorption of teachers' college staff was seen to be acute since the then University College would not gain autonomy until January 1976 and had yet to establish its own reputation with pre-existing Australian and international universities. The three Vice-Chancellors did not view the incorporation of C.A.E. staff as an insurmountable problem. There appeared to be no formal protest from the Newcastle University Department of Education concerning the incorporation of college staff although some staff within that department dissented. At U.N.E. the Professor of Education, Bill Walker, supported their incorporation and the Faculty said that it would welcome them as colleagues.

In each of the three universities accreditation and absorption of the existing college courses was seen as a problem. Where viewed as clearly unacceptable while others viewed examination before admission to the university. However, the problem appeared to have been resolved as an issue which could be resolved during subsequent merger negotiations.

Finance
In U.N.E. and Newcastle University it was felt that since teacher education was a relatively low cost activity, more involvement in teacher education would be financially beneficial providing the Universities Commission maintained its recurrent funding for the University. In Armidale it was felt that if merger occurred, increases in funds might not be made available, a possible reduction might even result in economies of the use of resources.

Site Planning
The Colleges at Newcastle and Wollongong are located next to the universities. Site planning was one factor which led to incorporation proposals at Wollongong. In Armidale the proposals were largely founded on the thinly excused to gain more land for the university was boldly stated in a report of informal conversations at an annual general meeting of FAUSA: the Wollongong University College wishes to incorporate the Teachers' College because the University College cannot reasonably expand. In exchange for the site, the College is willing to take over to accommodate the new C.A.E. teachers but wishes primary teachers to be trained in a new teachers' college on a separate site. The Balance of Discipline
It was feared that if the colleges were incorporated into the faculty or departments of education in the universities, then the academic and administrative holders would enrol almost exclusively in that faculty or department instead of in the faculties of arts and science in which, traditionally, large numbers of teacher trainees enrolled. The impact on the existing balance of disciplines within a university that such a large faculty or department of education would have, caused considerable concern.

Academic Government
In each university there was some discussion of several possible arrangements for linking the teachers' college with the university. These arrangements included an association through an institute of education based on the English model. At Newcastle University the point was made that if the institute of Education model was adopted then the university department of education would be placed in an invidious position if it were responsible to both the University Council and the proposed institute of Education. At U.N.E. Wollongong was that the proposed enlarged faculty of education would be entitled to approximately 12 full-time professors on the academic governing body (Senate). This addition to the then current entitlement of the Faculty of Arts would radically alter the Senate. In Wollongong, it was felt that the incorporated teachers' college staff could, on the basis of common interests, act as one group in the event of meaningful and strongly influence university policy.

Consideration of merger proposals did not appear to have been significant in U.N.E. discussions on incorporation proposals.

As noted above, the arguments and issues discussed were not the sole influence on either the initiation or process of merger policy-making. Similarly, current 1977 discussion within the universities, in Armidale and Wollongong, in the process of amalgamation. The merger issue has been represented by the Universities Commission and the Commission on Advanced Education for the 1977-1979 triennium which recommended amalgamation at Armidale and Wollongong. In response to those reports the N.S.W. Higher Education Authority recommended that the Armidale C.A.E., and a number of tertiary institutions in other parts of the State. In the letter to the U.N.E. Council
As a consequence of such letters, merger discussions are once more taking place among universities at Armidale, Newcastle and Wollongong. (Merger debates are not confined to N.S.W.; in Queensland a possible amalgamation of Townsville C.A.E. and the James Cook University has been considered.)

The arguments and issues discussed by academics which are outlined above were raised during a particular national economic climate when there were expectations of expanding numbers of tertiary students. Since then, the economic climate has changed considerably and so have predictions of future tertiary student numbers. Student expectations and demands for courses are also changing. If these new conditions are incorporated by academics in their appreciation of the current situation their views of the arguments and issues on merger could well differ from those recounted here.

REFERENCES
1. These institutions were:
The Armidale Teachers' College — now Armidale College of Advanced Education (C.A.E.);
The University of New England (U.N.E.);
The Newcastle Teachers' College — now Newcastle C.A.E.;
The University of Newcastle;
The Wollongong Teachers' College — now Wollongong Institute of Education.

THE PRODUCTIVITY OF UNIVERSITY RESEARCH

The value of university research funds to be taken for granted by who pursues it. Researchers readily accept the view which has twice been advanced in Reports of the Universities Commission, namely that:

Research is an essential activity of a university;... the extension of knowledge is at the very heart of university work; indeed learning can only be experienced at the higher levels if the minds of students are stretched at its frontiers.

Accordingly, there is little need to justify the role that research plays in universities or the allocation of funds for it.

The Commission's complacency was in fact short-lived. In the August 1975 federal budget, the Government proposed cuts in research expenditure. A change of Government has not changed the economic climate in which universities have to justify their needs for funds for research as for all other purposes. Indeed if the traditional respect paid to research and researchers in universities is to survive, more attention may have to be paid than ever before to the productivity of university research.

Australian universities are very dependent on Government for research funds. The Universities Commission has produced figures which show that of the total research expenditure of $285 m in 1973 by universities other than the Australian National University, 77.5% came from Government sources.

The OECD Examiners found the level of Australian research funding low and offered the following advice as a basis for improvement:

Since the normal way of financing universities' recurrent expenditure allows just a relatively small part for research work, ways have to be found by which the unrealising situation might be improved. To ask for more money is certainly the easy way, but it will have success only when the Government and to the Parliament are convinced:

(a) that the money is needed for purposes worthy of additional funding;
(b) that every other way to achieve greater efficiency in using available funds and means has been tried.

The OECD Examiners' advice thus seems to suggest that analysis of both inputs and outputs of university research ought to form the basis of submissions to Government.

Input/Output Measures

The development of measures of research output on a national scale has been relatively recent in Australia. The Department of Science is continuing the work begun by the Universities and Science on a national inventory of resources devoted to R & D as part of Project SCORE. The first inventory covered the year 1968/69 and another has been prepared for 1973/74. Research inputs are more amenable to measurement than outputs but there are difficulties. How, for example, is the cost of unsuccessful research to be allocated? Should it be charged to the final cost of a successful research effort, regardless of whether the previous research was carried out by the same people, or in another department, or in another university? and regardless of whether people's efforts made any contribution to the successful project? Research sponsors have been known to be disappointed, not to say suspicious, to the point of litigation, when work they have funded has proved unproductive while work done under other auspices on the same problems has proved successful.

Measurement of the totality of research inputs must therefore be recognized as at least difficult.

While efforts like Project SCORE are important in contributing overall information on research inputs, there have been suggestions other than those of the OECD Examiners that responsibility for the efficient management of research resources lies with the researchers themselves. An Australian professor has recently observed that "the academic staff are the key people in determining the productivity in research. They are subject to a number of constraints and must optimise within those constraints." The authors can offer no certain prescription for optimisation of scarce research resources. They can only observe that optimisation of time and effort is likely to be difficult in many Australian university departments where researchers combine heavy teaching loads with research commitments and where there is a high degree of uncertainty about future funding.

Perhaps optimisation is rather to be sought in the choice of projects and in allocation of funds to competing projects. Implicit in this suggestion is of course the assumption that there are valid measures of research output which can be applied to individuals and to projects.

Whether the outputs of university research can be measured in the same way in relation to the achievements often claimed or at least assumed to result from it. These are (1) additions of knowledge, (2) improvements in university teaching, and (3) improvements in the life of the community generally.