

Occasional Address delivered by Professor Brian Vincent Graduation Ceremony March 29th 2010

Chancellor, Vice-Chancellor and President, University Council Members, Laureate Professor John Ralston, honoured guests, celebrating families and fellow graduands.

It is indeed a very great privilege to be with you today, and to share this occasion with other, if slightly younger, graduands, most of whom are just stepping out into the wider world beyond formal education. It is a great honour that you are bestowing on me today, which I greatly appreciate and am very proud of. I have had a strong link with this University, even before it gained university status in 1991, when it was formerly the South Australian Institute of Technology. Most of my connections here have been through Laureate Professor John Ralston, whom I first met around 35 years ago, when he spent a short period in my *alma mater*, Bristol University, working with my old research supervisor. I remember, soon after John was appointed to the chair of chemical technology in the old SAIT he invited me to visit his labs and give a talk. What a magnificent and brilliantly successful transformation from the old Chemical Technology building and the Levels Campus, to the Ian Wark Research Institute and the new Mawson Lakes Campus. It has been fascinating to watch the stupendous growth of the Wark and the University over the many years I have been coming here.

As one who has been in or around the Higher Education sector for almost 50 years, it is some thoughts concerning the huge, transformations in Higher Education, worldwide, that I wish to leave with you today. Of course, it would clearly be inappropriate, in a speech of this nature, to pontificate in detail about such matters as university finances, or management structures, important as they are. Nevertheless, I thought it would be interesting to reflect on three aspects of the various changes that have occurred during my time, which have certainly led to great improvements in the role and function that universities play in our global society.

The first topic concerns expansion and diversity, both in students and in courses. In 1961 when I went to Bristol as an undergraduate only 8 % of 18 year-olds in the UK went onto Higher Education, into one of about 20 or so universities. Now it is around 45 %, attending well in excess of 100 universities. The social background of the students has broadened significantly as well, with the proportion of students from poorer backgrounds rising continuously. In addition, the number of overseas students has risen from virtually zero in the UK to the great numbers we see today. (At Bristol, which is in the SW of England, the only “foreigners” we saw when I was an undergraduate were the Welsh students who had escaped across the Severn Bridge, or the odd Scots or Irish student!). Exchange of international students, and the mutual understanding and respect hopefully that brings, has to be good for future World peace and collaboration. As regards the range of subjects, and combinations of subjects, now studied, that has widened greatly too. Some might say perhaps we have gone too far in this direction. The only criterion that should be applied to any university degree course is the following: is it intellectually rigorous and challenging enough to be worthy of the title of a “degree”? Similarly the only criterion that should be applied to any student applying for a given course should be: is he or she thought to be intellectually capable of successfully completing the course.

A second enormous change we have seen is the increasing use of technology, and in particular, computer technology in delivering degrees, both from the teaching and the learning perspectives. I do not have to list all the many benefits here; we are all aware of them. The only real caveat I have in this regard concerns the potential loss of what I might call the “human interaction factor”. Is learning something from a website, as good as listening to a really good lecture on the subject? A comparison might be: is listening to piece of music on a CD better than going to a live performance? We need to keep a balance here. Not so long ago I walked in to supervise a second-year undergraduate workshop class in chemistry. The students were all busy at their terminals doing the workshop questions. I wandered around and engaged with each student on an individual basis. In former times I would have addressed the whole group and asked questions, and there was multi-way discussion. Students learn from each other as well as the teacher in this format.

The final point I wish to make concerns research. I think there has been a significant shift over the last 50 years in what university research is about. Let us think about this in the context of the two great intellectual activities human beings carry out. Firstly, there is the *analytical* activity: i.e. the understanding, and extension of our knowledge base, of what is out there already in the World around us (what we call “pure or basic” research). Secondly, there is the *creative* activity: i.e. adding to what is out there already (that is, “applied” research). Let me give you an example of this from my own subject, chemistry: the world of molecules and materials. Some chemists like to analyse and theorise about molecules which exist already, in the biosphere or the geosphere. Other chemists like to create new molecules, often, but not necessarily, with some application in mind, for example, a drug, perhaps in that case in conjunction with a pharmaceutical company. I think where the change has occurred in the research profile of universities is a distinct, although of course by no means complete, shift from pure research towards applied research. Relatively few university chemists, when I started, had contacts with industry. Even if this shift in emphasis has been, let’s say, “encouraged” by Government, it has actually been hugely beneficial, both for the universities themselves and for society in general. There are two caveats I would apply, however. The first is that we must retain a broad balance between pure and applied research, across the whole spectrum of university research. We must go on deepening our knowledge base, for future applications to feed off. One of the great strengths of the Ian Wark Institute here, and one of the reasons for its success, is that it has kept a good balance between pure and applied research. The second caveat I would add is that universities should not end up “making new widgets” themselves, if I can put it that way. That is what spin-out companies are about. Our role is to advise companies, not run them.

If I may, in closing, just address a few words to the younger graduates here. You will have gained an enormous amount from spending several years in a top-class university like this one. It’s not just the knowledge and the skills you have gained, important as they are. You will have had many new experiences, met new friends, and taken up new interests. As I said at the start, many of you will now be moving out, most likely for the first time, into the wider world. I hope your various experiences here have left you with a sense of gratitude, of course, but also a sense of motivation for your own lives, and above all a sense of responsibility for the wider world around us. You are the coming generation. Our future is in your hands.