

Centre for the Study of Higher Education

Education, Science and the Future of Australia

A Public Seminar Series on Policy

Focus, Collaborate, and Thrive

Professor Shih Choon Fong President, National University of Singapore 25 June 2007

Opening

The title of my talk – **Focus, Collaborate, and Thrive**" – is linked to an unlikely source. A few weeks ago, I was featured in an article in the Higher Education section of *The Australian* – *"Focus or die, says Singapore uni chief"*.

I thought of taking advantage of this eye-catching headline and calling this talk "Focus and Collaborate, or Die". On reflection and in keeping with the spirit of today's occasion, I decided on a more uplifting title – **Focus, Collaborate, and Thrive**.

You may be interested in the context for the remarks attributed to me. They were made during the Second Presidents' Meeting of the International Alliance of Research Universities (IARU) hosted by The Australian National University (ANU) in March 2007. IARU is an alliance of 10 research universities which share a vision and commitment to addressing scientific, socio-cultural, research and policy issues of global significance.

On the sidelines of the Presidents' Meeting, other IARU university leaders and I were interviewed. Speaking on the mission of research universities, particularly in small countries like Singapore, I shared my perspective that they need to focus on niche areas where they can achieve global excellence, and build international partnerships. I also suggested that revenue chasing is not a sustainable strategy for such research universities facing global competition since they work on a long time horizon and the returns on investment take time to be realized.

The timing of *The Australian* article suggested a link between the decision by the University of New South Wales to close its campus in Singapore and the remarks I made two months earlier, in March. To the best of my knowledge, I am not aware of ever having the gift of telling the future.

Now that I'm a little wiser about the danger of comments being reported out of context, let me define at the outset the scope of my talk. This evening, I'll be speaking about the changing higher education landscape, and its strategic and policy implications.

I want to thank Vice-Chancellor Glyn Davis for inviting me to speak at this public seminar series. It is an honor and privilege to be sharing perspectives with such a distinguished audience this evening.

Tectonic Changes

Let me begin by outlining some tectonic changes, by focusing on three global phenomena transforming our world:

 shifting centers of gravity, increasing cultural complexity, and rising China and India.

Shifting Centers of Gravity

From the 18th and up to the early 20th century, the world tended to be seen from a Euro-centric perspective.

For many centuries, this was *the* map of the world. Europe was at the center of economic, political and military power. London's Greenwich Meridian even symbolically defined time. Then, there was the periphery, with Asia being called the Far East!

The early 20th century saw the rise of America. The geopolitical axis shifted, and America became the economic, political and military superpower of the world. I was a graduate student in North America in the 1960's and the map I often saw in those days showed America in the center, with Europe to the east and Asia across the Pacific Ocean to the west.

The center of gravity for knowledge and culture has moved in similar fashion, shifting in tandem with economic power.

Asia, including the Middle East, was the seat of knowledge and culture during the days of the Agrarian Society.

About 500 years ago, Europe became the center for knowledge and science, through the Industrial Age, up until the early 20th century.

The advent of the information and innovation revolution in the second half of the 20th century took the world into the Knowledge Era.

In this post-Industrial age, America developed as the hub for leadership in science and innovation as universities sprung up to anchor the creation and exploitation of knowledge.

In the science and innovation-driven global economy of the 21st century, there is a rich interplay between a country's economic strength and its capacity for development and competitiveness. With Asia being home to the world's two most populous countries – China and India – the center of gravity for economic strength and leadership in science and innovation could well shift further westwards, towards the Asia Pacific. I shall return to this a little later in my talk.

Increasing Cultural Complexity

The second phenomenon I would like to highlight is the increasing cultural complexity of the world today.

Earlier, I traced the evolution of societies over the millennia – from Agrarian to Industrial to the Knowledge Era.

Socio-cultural change is measured by generations, if not centuries. During the Axial Age, great thinkers and founders of faith like Plato, Confucius and the Buddha set forth basic values and human ideals – like compassion, empathy and self-cultivation – that have shaped us till today. But this profound transformation took place some 2000 years ago! The evolution of our social and cultural DNA – our empathy, identity and values – occurs slowly.

In contrast, in the Knowledge Era, the pace of technological change is measured by years, even by months.

If anything, the accelerating pace of technological change has far exceeded the pace of socio-cultural evolution. And, this technology-culture divergence is growing – with far-reaching impact.

Let me elaborate.

In recent decades, as advances in science and technology have accelerated, space and time have shrunk. In shrinking the space between cultures and civilizations, technology has shoved us in one another's faces, often making diverse peoples into reluctant neighbors. Without a core of shared values, familiarity may breed contempt instead of respect and admiration.

Moreover, the Internet has created an instantaneous medium with a global reach. Information can be sent at the click of a mouse; so can disinformation. "Forward" or "Reply all" is all too often a reflex action, done with little thought.

The upside of this is that information that creates positive social change can spread overnight. On the plane over, the movie *Amazing Grace* was shown, which told the

story of William Wilberforce and his campaign against slavery in the British Empire. Had the Internet existed then, he could have exposed the atrocities of slavery much quicker to his compatriots, who were blissfully unaware of the source of their sugar.

But where the light of truth may spread, so too may hysteria and the poison of hatred. There is a negative impact, when the damping effect previously created by continents and time no longer exists. Like a body of liquid that loses viscosity and becomes volatile, a small perturbation can lead to great turbulence. The Internet facilitates making mountains out of molehills, spreading anxiety, anger and hysteria faster than a bush fire. A butterfly flapping its wings at a knighthood in Buckingham Palace leads to hurricanes in Pakistan. Personal vendettas have global effect, and global events can upset personal lives. The point is, the personal can become global, and oddly enough, the global has become personal.

We are thus witnessing intensified conflicts on a global and personal scale – clash of cultures, global terror, social turmoil and congestion – apart from the ever present competition for limited resources. Ironically, while clashes on a regional scale have been common throughout history, the **increasing intensity** as well as frequency of global conflicts may in part be attributable to our immense success **in harnessing science and innovation**.

It is clear that we will need to go beyond science and technology to seek answers.

Rising China & India

This brings me to the third tectonic change – rising China and India.

By 2050, China and India, and the United States are forecast to be the three largest economies. Note that two of them are in Asia. Europe and Japan will continue to be major players.

Emerging Asia will be shaped by the major economies in Asia – Japan, China, India, and Korea. I suppose we should also include a little red dot – Singapore. You have to strain your eyes to see the tiny red dot that is Singapore.

With the robust economic growth and huge population base in an emerging Asia, demand for higher education is expected to increase threefold by 2025. Its rising investment in higher education to meet the demand will give Asia a comparative advantage in a talent-based, innovation-driven global economy. At the same time, we are seeing the intensification of trans-Pacific ties and linkages – facilitated by a more balanced talent flow between North America and Asia.

It is not surprising, then, that the 21st century has been forecast to be the Asia Pacific century.

What's the consequence for small economies and their universities? How do small players, particularly those in Asia Pacific, ride the tide of a rising China and India, and not be caught in the cross currents?

The University's Mission in a Time of Tectonic Change

Amidst these tectonic changes, universities have a larger role in preparing citizens and societies for a new tomorrow that is driven by science and technology. However, science and technology alone cannot provide the solutions – there are strong ethical and cultural dimensions to many of the world's challenges.

I would like to suggest that the university for the 21st century has both a functional mission and a civilizing mission. The functional mission is to develop human capital, encompassing both intellectual and socio-cultural aspects. The civilizing mission relates to character development of the global citizen and the ongoing quest for shared values in a fragmented world.

With the rising Asia Pacific tide, our geographical location seems to be a strategic advantage. The challenge for both Singapore and Australian higher education is how to come to grips with the Asia Pacific century. Will we ride the tide of a rising China and India? Or will South East Asia, including Singapore, and Australia become backwater?

Focus and Build Global Bridges

Universities in small economies like Singapore and Australia can ride the rising Asia Pacific tide by focusing on niche areas, helping them compete for globally mobile talent and resources, and build up strengths.

These areas of strength can build the foundation for strong global bridges with traffic flowing in both directions. Without indigenous areas of strength, a bridge merely functions as a service stop.

Global excellence in education and research is likely to be advanced by collaborative endeavor. Bridges – across continents, cultures and disciplines – enable universities to reach higher levels of excellence requiring resources and impact that few institutions can deliver by themselves.

Take for example an MNC, which might be characterized as a global alliance of different business units, each of which is typically the best in class in what it does. In what Thomas Friedman has referred to as a Flat World, best practices gained in one business unit, or country office, spreads quickly across the corporation. In contrast, we don't see this in our universities. Our departments and faculties look like silos. Like some medieval ivory fortress, we seem to be instinctively tribal, allied to turf and discipline. While providing stability to our societies, our impermeability mitigates against innovation. For universities, especially in small economies, the flow needs to speed up, and we need to reap the benefits of being more like a highly networked organization.

I would like to share a few examples from Singapore and NUS that reflect our efforts to focus on areas of strength, collaborate with partners to build networks, get into the flow and create synergies.

Bridging Institutions, Bridging Disciplines

The first is our National Research Foundation's Campus for Research Excellence and Technological Enterprise, or CREATE. CREATE will be located on NUS' campus. It is a collaboration bridging institutions and disciplines that will bring top researchers from some of the world's best universities to work alongside Singapore collaborators in areas that are aligned to Singapore's strategic interests.

Locating CREATE within a university setting promises to catalyze the organic growth of a global R&D community in Singapore as well as expand our talent base, homegrown and overseas sourced.

The first to set up a research centre within CREATE is the Massachusetts Institute of Technology. Another institution likely to join CREATE is the Swiss Federal Institute of Technology.

Bridging Continents, Bridging Disciplines

Universities in small economies can also bridge continents and disciplines through global university networks. Let me offer a few examples.

The Association of Pacific Rim Universities (APRU) is an alliance of 37 researchintensive universities across 4 continents.

Melbourne, Sydney, ANU and NUS are members, with Sydney and NUS taking a leadership role.

Under the auspices of APRU is the APRU World Institute, or AWI. Professor Davis is a member of the Governing Board for AWI. Bringing together top minds to harness the power of science unbounded by disciplinary, cultural, or continental boundaries, AWI seeks to address pressing global challenges such as public health and climate change.

Another global network is the International Alliance of Research Universities (IARU) that I spoke about earlier. IARU is led by ANU.

Through these global alliances, the whole can be greater than the sum of its parts. The synergies in these partnership help create greater impact.

Bridging Continents, Bridging Cultures

On the educational front, I want to share with you two initiatives we are thrilled about – NUS Overseas Colleges and our residential colleges.

For the past six years, NUS third-year undergraduates have the privilege of being immersed in five of the world's dynamic entrepreneurial hubs – Shanghai, Silicon

Valley, Philadelphia, Stockholm and Bangalore. The alumni of this program – NUS Overseas Colleges – now number about 400. While at the overseas colleges, our students engage in full-time internships with start-up companies. A good number have started their own companies.

On the home front, we are building an integrated learning and living environment of residential colleges for about 6000 students. **40%** of the residents will be from abroad.

Both our overseas colleges and residential colleges promote peer learning and dialogue across cultures. Through shared experiences, students from diverse disciplines, nationalities and cultures learn mutual trust and respect, so vital for global citizenship. They learn to bridge the divergence between technology and culture that I spoke about earlier.

The Path Ahead: Riding the Asia Pacific Tide

I have spoken of bridging continents and cultures as a global strategy for universities in small economies to fulfill their functional and civilizing missions. These are investments in the future, in which Asia Pacific is likely to take center stage.

Australian universities have much to contribute to this future. My view of Australian society is that it has the drive of an immigrant society, and at the same time values the individual. In a knowledge economy, such traits are a good thing, because they enable tall poppies to flourish. These are qualities that Australia could tap to its advantage.

However, for Australian universities to ride the Asia Pacific tide, Australian society will have to decide if it wants to be a committed cultural neighbor of Asia. This is a choice that I am sure you know is before you.

Let me pause here. So far, I have spoken to you while wearing the hat of a strategist. Now, I want to put on the hat of a philosopher.

I'm not trained as a philosopher. I am an engineer and materials scientist, but at my age, I hope I have a right to philosophize, at least about science.

The West has contributed immensely in terms of science and technology. While this science has been fundamental in building our current technological civilization, it has been peripheral in civilizing the human heart. This science can crack the human genetic code, but cannot mend the human heart that has been split by hatred. Our technology can regulate the destructive energy of the atom, but we can't regulate our destructive impulses. We have much knowledge, but less wisdom. The promethean flame of science which has lit up our lives, sometimes threatens to reduce humanity to cinders as well. In the headlong rush for functional knowledge, especially science and technology, and for economic gains – perhaps most evident in China, but elsewhere as well – we are now asking our universities to exert a civilizing influence

- to develop character, not just careers;
- to build global citizens, not just global workers;
- to engage in the difficult quest for shared values, and not just share value.

The imperative to focus and collaborate, to build bridges across the world's many divides has greater urgency now – to become wise, and not just have knowledge.

Focus, collaborate, and thrive. If we do it right, we will ride the rising Asia Pacific tide. If not, we drown.

I do have hope. Asia was the birthplace of many of the Axial wisdom traditions that have guided humanity for more than two millennia. China's apparent disinterest in these traditions notwithstanding, I hope that the rest of us in Asia Pacific – Australia included – can help renew and adapt these traditions for the Knowledge Era, thus helping close the technology-culture divergence.

An interdisciplinary approach is needed – scientists and humanists, philosophers and pragmatists need to engage with one another to provide uniquely Asia Pacific responses to these questions of our times.

Now, let me challenge my fellow academics. As the best and brightest in Asia are often drawn towards the sciences and professional schools, often because of national policies, but also because of the personal rewards, it implies that a greater obligation is placed on our science and professional schools – that they must also engage in the broad social, humanistic and philosophical issues of our times.

As the tide rises in Asia Pacific, my hope is that the rise goes beyond science and commerce, to also embrace culture and the richest aspects of civilization.

I hope that as educational leaders in Asia Pacific, we will reclaim our duty in fulfilling this charge, so that we may all thrive in the fullest sense.

Thank you.