

THE REALITY OF RESEARCH: MULTIPLE EXPECTATIONS ON THE CONTEMPORARY UNIVERSITY SERVING THE CONSTRUCTION SECTOR

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ABSTRACT

This paper challenges industry, academe and our professional institutions to come together and find consensus on how we should balance the multiple expectations on our university faculties to best serve society in the built environment arena. One purpose of this paper is as a prelude to a research experiment that hopes to identify new conclusions and directions for the reality of the built environment. It is a work in progress, providing background to some of the key issues to stimulate discussion in the ensuing panel and open discussion during AUBEA Industry Day.

INTRODUCTION

Recently I heard that the Australian Construction Industry Forum (ACIF) is lobbying Chancellors of Australian Universities to request that the education process in the professions “be amended to account for reality rather than research”.

At a time that academics in the vocational built environment disciplines find themselves in an employment environment with an increasing emphasis on research output and impact, there is conflicting reactionary push for ‘reality’ from the industry that our graduates will serve. There is resultant disillusionment from both academe and industry. Add to this the expectation from our accreditation bodies that lecturing staff, including part-time faculty with extensive industry expertise, must have a strong research profile and the dilemma is compounded.

Reality or Research? Troubled by the ACIF intent and inference, and realising that ignoring it will not make it go away, it was decided that we should use some time on AUBEA Industry Day to confront the reality of research and the multiple expectations on the contemporary university serving the construction sector.

Furedi suggests that the worst insult that can be directed at a university is that it is an elitist ivory tower out of touch with the real world (Furedi 2004). Our host institution for AUBEA, the University of Technology Sydney (UTS) has a concrete tower rather than an ivory one, symbolic in its role as the university *in* the city. In contrast, thirty-five years ago historian Edward Thompson condemned his institution by labelling it *Warwick University Limited* (1971). In a book of the same name, he criticised the University for having a corporate structure, a cosy relationship with business and an obsession with training students for the job market – all attributes that are today seen as desirable. For example, the current UTS entry in the ever-evolving *Wikipedia* highlights these attributes as in keeping with its former nature as a Technical Institute and its current name, “UTS designs its courses to contain a high level of practical technical knowledge as opposed to pure theory, and maintains close links with industries in order to do this. Its faculty structure also reflects this emphasis on technical knowledge”.

Alongside this image of a technical university, ranked 87th in the world by the Times Higher Education Review of 2005 (THES 2005), with vocational links and sought after graduates, are the expectations placed on contemporary academe that emphasise the importance of research. Indeed the major thrust of my own job description is to build success in attracting research grants and industry collaborations, increasing research degree enrolments and building the supervisory capacity of academics within the School of Construction, Property, and Project Management. Such is the environment in which we operate.

What I propose to do in this paper is set the background to the growing pains that result from change management within the university sector, the confused role of the representative professional institutions, and the expectations of our ‘industry’ to be provided with graduates who can immediately operate as competent

technicians within their organisations. Such an inquiry risks offending all parties, but that is not the intent. The purpose is to provoke and stimulate debate from our panel and the floor that may better inform how academe, the professions and the construction industry can move forward collaboratively with a shared vision.

UNIVERSITY EXPECTATION

The only certainty in the university sector is the certainty of change. By their nature, universities should be dynamic. Under the leadership of John Dawkins, the Commonwealth Minister of Education, the "Binary System" of higher education in Australia came under significant review in 1988. At that time Australia had 19 Universities 'proper' (to use Max Corden's phrase) and the 'others', which comprised 57 Colleges of Advanced Education and Technology. By completion of the review in 1992, the Unified National System consisted of 36 (later 39) universities. Significant in this process is that subsequently staff at former Colleges of Advanced Education have been expected to "do research" (Corden 2005). The growing pains of the post Dawkins universities in Australia are shared by many of their counterparts in the UK, which saw 32 polytechnics attain university status in 1992.

Academics are not without fault. Corden recounts that in the years before the Dawkins Revolution many enjoyed their life, working hard and productively, whilst others apparently just enjoyed their lives and did very little, albeit that the bad cases were a small minority. Such perceptions endure with the criteria of measurement emphasising research output, leaving some competent educators maligned in the contemporary system. Our elaborate appointment processes should minimise, in principle at least, the bad cases - albeit that it has little control over those who evolved from the CAE to the post-Dawkins university system.

Barnett reminds us that the teaching-research debate is both tired and tiresome (Barnett 2005). Whilst a convincing case can be made for a positive relationship between teaching and research, there is an opposite view that argues that they are quite distinct activities with little empirical evidence to suggest otherwise, a point explored in Hughes' five *myths* below. Barnett highlights that "facts, values *and*

hopes become inextricably intertwined" and the respective parties cannot appreciate the others stance as they are speaking from different value positions.

Hughes provides convincing arguments to dispel five 'myths' surrounding the teaching-research relationship (Hughes 2005):

(1) "The myth of the mutually beneficial relationship between research and teaching", highlights a lack of evidence to support the argument and suggests recent shifting debate towards research and learning (rather than teaching).

(2) "The myth of a generalizable and static relationship" between research and teaching. The argument differs for varying circumstances and disciplines.

(3) "The myth that scholarship is separate from research and teaching", whereas scholarship is an integral component of both. Hughes cites Elton's (1992) view that scholarship consists of "new and critical interpretations of what is already known" being a precondition of both research and teaching.

(4) "The myth of superiority of the lecturer as researcher", i.e. research active lecturers are superior to those who are not is not supported, thus far, by any empirical evidence; issue becomes discriminatory in career progression.

(5) "The myth of disinterested research into the relationship between research and teaching" - i.e. it is only research active staff that actually research such issues, and ironically such research often lacks quality.

Barnett questions if scholarship can be taken seriously in the contemporary university (Barnett 2005), or if it is sidelined by the contemporary discourses and ideologies of the university? There is common acceptance that academics have three core areas of activity: teaching, research and community service. Corden exchanges community service for "public discourse" and adds "scholarship" (Corden 2005), which arguably is intertwined at the research/teaching nexus and the role of the public intellectual if, according to Furedi, such an individual endures. He expands on scholarship as a "pre-requisite for passing on the intellectual heritage and culture of a country" (Furedi 2004) albeit that postmodernism does much to deconstruct the heritage.

Boyer pushed for an alternative conceptualisation of academic work, suggesting that individual institutions and individual academics would adapt to a different balance of what he referred to as the 'four scholarships' (Boyer 1990):

- (a) Scholarship of discovery - original research and the advancement of knowledge;
- (b) Scholarship of integration - connectivity of ideas across disciplinary boundaries;
- (c) Scholarship of application - assembling knowledge with interaction between intellectual and 'real world' problems of practice; and,
- (d) Scholarship of teaching - transforming knowledge through closing the gap between the scholar's understanding and the student's learning.

Ramsden identifies that the four are difficult, if not impossible, to quantify (Ramsden 1998). Corden argues that most students expect the teaching component to be vocational training, including fields where the "intellectual demands are very limited" (Corden 2005). He leaves unanswered the challenging question, that perhaps we should address at AUBEA, as to where the line should be drawn between TAFE training and university-level training. Pre-Dawkins there was a clearer four-tier hierarchy with universities above the colleges of advanced education and technology institutes, with the TAFE (technical and further education) institutes sitting below these two. The argument follows that, generally speaking, there is a breadth rather than depth in vocational undergraduate teaching programmes [which has ramifications on subsequent research potential].

Corden suggests that the emphasis on research is relatively new in Australian universities, with Rowe expressing concern over a general lack of it back in 1960 (Rowe 1960), albeit that research is now the "hallmark of a 'real' university in Australia (Corden 2005). Funds for research come predominantly from the Commonwealth government. If industry seeks to guide the research agenda, then they need to come to the funding party either individually or through ARC partnership and university linkage models and/or through the co-operative research centre model. Australian universities in general and the technical

universities in particular, lack the private endowments that serve to fund research in counterpart institutions in the US.

Criticising the Dawkins Revolution that required all universities to be engaged in research as an unwise idea given that CAEs were committed to teaching "less academically inclined" students, Corden's view is that it diverted the attention of dedicated teachers away from raising the skill sets of their students. Moreover, it could be argued that given the often vocational background of the educators the expectation to turn their attention to research activity leaves them insecure as their own vocational education may not have adequately prepared them for a research (as opposed to scholarship) component to their career, if indeed they are personally inclined towards research. We all know some worthy and very experienced teachers who entered CAEs as pre-Dawkins educators, but who feel further disenfranchised by the post-Nelson research emphasis (see Nelson 2002). It is certainly the case in my own institution where several colleagues in the later stages of their career feel increasingly negative towards the changes... others of a similar age, or more particularly those in their late forties and to mid-fifties saw the signs of inevitable change a decade ago and have in many cases obtained doctorates and become active researchers.

The criticism of industry, and of colleagues who have not pursued the doctoral career path, is that university recruitment places emphasis on higher degrees and demonstrated research and publication output at lecturer level and above at the expense of practical industry experience. This contrasts with the perspective of those who have completed a PhD 'in-service', who view their research as expanding their outlook and feeding back into teaching. The concern of industry is that university recruitment policies will risk losing the well-educated and vocationally experienced teachers out of the university system over the next decade and replace them by highly educated academics with little if any exposure to the construction site or business world that we are training our graduates to serve. The professions seem comfortable that the Dawkins Revolution of the late 1980s and early 1990s resulted in their education programmes being elevated from Diploma to Degree entry into the profession. Despite the supposed "dumbing down" of university education, there is no indication that the

professions want to revert to sub-degree entry via TAFE, albeit that the RICS globally added an alternative 'extra' technician entry level to, in part, accommodate the potential of an increased membership with diverse education experience.

Although much of Australian degree education is vocational training, it is perhaps unlikely that the construction professions would now argue that entry to their industry should be TAFE level. Related to this is the reality that the three or four year degree programme was never intended to be a 'complete' preparation for entry into the profession. In our competitive economically driven market place, employers expect their graduate employees to 'hit the ground running'. The most common criticism of 'course advisory boards' and 'industry accreditation panels' in the twenty years that I have been actively involved with them is that graduates lack applied technical skills. In one particularly challenging session the primary concern of a major employer in Brisbane was that graduates did not know how to answer the telephone properly, by which he meant in the style of his particular corporation. This is a familiar story for many of us in academe, and frustrating given that we are prone to react by countering that 'Telephony 101' is not a prerequisite for our graduates. In the eyes of the university, such competencies should be covered by the individual induction manual and staff training policy of a particular company.

Entry into the profession is a minimum five-year journey post secondary education, notionally with a three or four year degree programme plus two years professional experience. Subsequently an interview and assessment confirms adequate breadth of professional experience and technical knowledge to gain entry into the 'profession' as a member or associate. This applied probationary component is the real transition between gown and town, whereby the university educates graduates to "think and know", and industry trains them to "do". The hope, or expectation, has long been that this model pushes the individual undergraduate students intellectual boundaries and broadens their outlook on the world, safe in the knowledge that the industry partnership will provide them with the practical site experience and business 'savvy' to make them well rounded but relatively inexperienced professionals.

As educators and graduate employers, we sometimes forget that we have twenty or thirty years more experience under our belts than the average graduate. We cannot expect graduates to gain an equivalent level appreciation and understanding during a five year programme of entry into the profession, and nor should we. Moreover, it is important not to create or employ clones of our professional selves. The world of construction and property is a very different place to that which we entered some time ago as products of the baby-boomer generation. Generation X often comprise middle management and they are nervously looking over their shoulders at the Gen-Y graduates who are now leaving university (Sheahan 2005). Employers will recognise the Gen-Y employee, as they are the ones who want your job, today.

Research in context

The Expert Advisory Group for the Research Quality Framework model in Australia has agreed that, for the purposes of the RQF, the definition of research would be consistent with a broad notion of research and experimental development (R&D) (EAG 2005). They relied on the OECD Frascati Manual view of R&D as comprising “creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications” (OECD 2002). This is augmented by the Australian Bureau of Statistics (ABS) view that further classifies R&D into four types of activity: “pure basic research; strategic basic research; applied research including new ways of achieving specific and predetermined objectives such as clinical practice; and experimental development including creative work and performance insofar as they directly relate to original basic and applied research” (ABS 1998).

A core source of competitive research funding is through an Australian Research Council (ARC) Discovery or Linkage grant. The objective of Discovery grants is “develop and maintain a broad foundation of world-class research across a wide range of disciplines” (ARC 2006). Whereas Linkage grants are designed to “encourage and extend cooperative approaches to research and improve the use of

research outcomes by strengthening links within Australia's innovation system and with innovation systems internationally". There are four national research priority areas:

- an environmentally sustainable Australia;
- promoting and maintaining good health;
- frontier technologies; and,
- safeguarding Australia.

Only three ARC grants were awarded in the 'Architecture, Urban Environment and Building' (310000) category in the 2005 funding round, which reflects on the evolving nature of research in our discipline.

Our immature research discipline

The nature of our immature research discipline merits further explanation. "Postgraduate students in the built environment, as a general rule, because of the structure of their first degree, have no extensive training in a research discipline, have no well-developed understanding of a theoretical framework, have never worked at the 'frontiers of knowledge', have never had reason to critically analyse new theoretical developments or current research methods and have never been required to develop much skill in increasing the sum of knowledge" (Runeson and Skitmore 1999). Part of the challenge is that the vocational nature of our undergraduate programmes expose students to some law, economics, information technology, maths, physics within a construction context – but few of the subjects are developed above introductory level. In contrast, undergraduates in the sciences, economics, or medicine are exposed to strong theoretical frameworks, which build as the course of study develops, and by the later stages they are "working on the edge of development in their discipline". In contrast, our graduates leave armed with the skills that (supposedly) make them good professionals rather than good researchers.

I would argue that the breadth of our programmes and the emphasis on technical skills by industry and the profession are limiting our potential to push the

boundaries of understanding and in many cases limit potential. Unfortunately, the preponderance of taught post-graduate courses does little to address the limitation

The role of the academic

Those of us in universities are confronted by what Nillsen calls "the trivialisation of the role of the academic" (Nillsen 2004). As academics, we are in a difficult place especially in the relatively young post Dawkins university disciplines of the built environment. This has been described as "the marginalisation of intellectual passion in higher education [is] the unintended consequence of a new ethos of managerialism that dominates intellectual and cultural life..." (Furedi 2004). We have to accept, as Saunders argues, that the "real work of the university is whatever suits the universities interests..." and we have management structures in place to transfer 'directives' to those of my colleagues who find themselves at the chalk face (Saunders 2006).

Managers, rather than academics, are left to determine what the real work of the university is. Higher education teaching has been commoditised and, as Saunders argues, finds its integrity compromised by "priority being given to what is vocational rather than intellectual, to 'dumbing down', and to student evaluation of academic staff". This apparent 'dumbing down' of our higher education is not, as Furedi reminds us, limited to Australia as it is also the contemporary situation in the UK and US (Furedi 2004).

"The idea that the university - any university - should have as its main goal the pursuit of truth has been slowly eroded in favour of the notion that it ought primarily to be an instrument of micro-economic change" (Saunders 2006). The dominance of business schools as the most financially viable faculty of the contemporary university supports this view, with a corresponding decline in the humanities and foreign languages at many universities. Interestingly, those of us in built environment schools now have the opportunity to play our vocational expertise as a strength, but clearly need to complement that 'relevant' teaching capability with scholarship, intellectual rigour and research to provide leadership and guide future innovation for the industry.

Coady and Miller suggest "if we give up on truth and the possibility of objectivity, we abandon the intellectual life for fantasy, power-plays and propaganda" (Coady and Miller 1993). "The displacement of the thinker by the expert has also weakened the public's interest in debating big issues"... intellectuals find it difficult to find their voice and find an audience in this climate (Furedi 2004). Complacency, conformism, and conservatism are evident among professional academics. The academic professional has displaced the vocation of the intellectual. "Most academics tend to be intelligent professionals and astute experts, who sadly are not culturally equipped to play the role of the public intellectual". Knowledge has become vested in the specialist, the disciplinarian and the expert rather than the public. As objective knowledge appears to have technical character, the experts and technicians tend to displace those looking for more profound insights.

Given the relative immaturity, we do not have a history of the evolution of thought and theory within our built environment disciplines - instead, as is demonstrated largely by the nature of the papers presented at this AUBEA conference, we have an emphasis on technical, and to a degree scientific, content. Perhaps given our short heritage, in many cases coming from post Dawkins universities, we have felt constrained, downtrodden, undervalued, or insecure in the pursuit of ideas. As Furedi reminds us, the pursuit of truth has "always demanded that intellectuals question the sacred and mention the unmentionable". It is important to keep in mind that one of the roles of a university is to question conventional truth.

Undertaking a genuine journey of intellectual discovery runs the risk of being labelled as elitist or irrelevant. "Rather, intellectuals inside and outside the university must face up to the uncomfortable truth that they risk making themselves irrelevant if they allow institutional pressure to dominate their work" (Furedi 2004). Intellectuals need to reclaim their authority (and should be supported by the professions and industry in so doing). There is a battle to be waged for ideas... and we need a strategy to transform.

Universities have become one of the most intensely audited institutions in society. At AUBEA/COBRA in 2005, McCaffer addressed the UK Research Assessment Exercise and suggested the likely impact that the Research Quality Framework would have on Australian universities (McCaffer 2005). There is a view that external auditing erodes the autonomy of the university. Academics are now expected to work according to criteria established by the external adviser, civil servant and politician. Whilst at one level auditing provides reassurance and confidence, ultimately it transforms how a university works, as any of us who have experienced an AUQA audit of our institution can testify. Extraneous norms replace those particular to a discipline.

"Despite tensions, valuing knowledge and being interested in its application can co-exist. Pure and applied research, and abstract and empirical theory can thrive so long as the authority of knowledge is accepted in society" (Furedi 2004). We need to ask the question, does industry and the profession respect and accept the *knowledge* of the university?

PROFESSIONAL BODY EXPECTATION

Member organisations are not without their own conflicts between what the members want and what the staff think is best for the profession. I say this with authority having played an active and challenging role in the early growing pains of RICS Oceania.

Taking the UK example from the RICS "Future of surveying education" report (Wood and Ellis 2006), it is anticipated that after the Research Assessment Exercise (RAE) in 2008 only 15-20% of students will be studying in universities funded by research grants. This has significant ramifications on both the viability of the university departments and for the RICS accreditation policy, which requires partnership universities to be research active. The UK Government White Paper 'The future of higher education' (2003) supports the separation of research from teaching in higher education, encouraging universities to play to their diverse strengths. Ramsden (1998) argues that such either-or solutions are

illusory in Australian and UK universities, where we have not reached the clear division of top doctoral universities through comprehensive universities to community colleges that exists in the US. To balance the expectation that quantity will also be quality, the Australian RQF system searches for quality and impact as assessment criteria. Boyer (1990) highlighted the challenges of the US uni-dimensional view of quality in higher education as a crisis of purpose. He suggested that external imperatives of prestige and imitations of research centres blur the mission of many universities, faculties and departments, resulting in compromised research alongside diminished teaching and learning quality.

The RICS 'Policy and guidance on university partnerships' (3e) identifies four minimum thresholds related to selection, teaching, research, and graduate employability. In the UK centred RICS research the majority of [academic] respondents considered the theory based research favoured by the RAE "to have marginal relevance when compared to case-study, market-based or continuing professional development activity. Indeed many rail against the notion of blue-sky research (theory based research) believing it to be irrelevant" (Wood and Ellis 2006). Whether or not this view is shared in both pre- and post-Dawkins universities in Australia is not proven. It places a huge challenge on the endurance of professional entry standards under the RICS partnership expectations.

It is interesting to note that in a recent advertisement in RICS Business May 06 (the monthly magazine of the Royal Institution of Chartered Surveyors) my own *alma mater* The School of the Built Environment at Liverpool John Moores University, was advertising for two Lecturer/Senior Lecturers, one in Construction and Project Management, the other in Built Environment. The required skills for both were "a degree in a relevant subject and have experience in the construction industry either professional or practical. Teaching experience would be advantageous". All four 3-year BSc (with Honours) and all three MSc programmes in construction, building and real estate management at LJMU currently have RICS accreditation, although clearly that may be challenged after the 2008 RAE. Meanwhile they are seeking to recruit vocational staff who, without a higher degree and research potential, would not considered for

permanent appointment at Lecturer grade at my current university or others teaching built environment disciplines in Australia.

The RICS 'Future of surveying education' report highlights the urgency for the RICS to publish clear guidelines on how it will assess the research threshold. Transparent global expectations would assist those universities in the partnership process. UTS, by way of example, has been penalised on its vocational postgraduate programmes for using casual specialists in certain courses, who are clearly highly qualified for the UK system - usually with higher degrees, teaching experience and senior professional expertise, but with little or no research output given that they are senior members in professional practice. The issue of 'casualisation', the use of casual staff to deliver teaching cost effectively, is becoming endemic with evidence to suggest two-fifths of teaching is delivered by casual staff in the US (Macfarlane 2005).

The RICS report closes with the challenge, "if an accrediting body considers research performance to be an important indicator of educational quality, then it must surely satisfy itself that tangible links exist between such scholarly activity and the curriculum" (Wood and Ellis 2006). This is indeed challenging, given how Mark Hughes' (2005) dispelled myths relating to research and teaching.

INDUSTRY / EMPLOYER EXPECTATION

There is a longstanding conflict between the values of business and trade, and the pursuit of academic work. In business, the customer is supposedly always right. It is not the job of a trader to question the tastes or values of potential customers. In contrast, academics frequently educate student's tastes and encourage them to question their values. One of the most distinct and important features of academic and intellectual activity is precisely that which cannot be dominated by an instrumental ethos. Academic pedagogy does not seek to offer what the customer wants, but rather attempts to provide what the student needs (Furedi 2004). This is an important point to develop in the multi-discretionary advisory context of university / profession / industry relationship.

Despite the intensification of trends that attempt to restrain the authority of knowledge, society continues to need insights in order to deal with the complex problems that are thrown up in an uncertain world (Furedi 2004). Whilst the cultural relativism of postmodernism may be alive and well on university campuses, in the arts and media, government and business are continually looking for objective knowledge to settle the disputes facing society and the professions.

From an industry perspective "individual scholars pursuing their passionate interests increasingly risk labels such as 'irrelevant', 'elitist', 'out-of-touch' and 'marginal'" (Furedi 2004). Furedi cites the British Secretary of State for Education, Charles Clarke, as indicating that his government has no interest in supporting the 'mediaeval concept of a community of scholars seeking truth'. The AUBEA forum is an opportunity to lift out of the 'disorientation' that afflicts cultural institutions, universities and schools. The concept of objective knowledge and attainable truth are challenged by contemporary philosophical approaches of relativism, critical theory and post-structuralism that dominate the intellectual debate in our own Architecture and Design Schools (Barnett 1990). The public, our industries and professions deserve a high quality intellectual debate from our built environment institutions represented at AUBEA.

Relevance is a phrase often raised by advisory panels and accreditation panels. I am happy for us to further discuss relevance. It allows the opportunity to make a case of how the pursuit of scholarship and research of the reality of the built environment and construction sector is indeed relevant to the future of society.

When it comes to relevance, we need to question what it is that industry wants. Graduates modelled in their own image? Graduates who can walk into a work environment and 'pick up the ball running'? Technicians, professionals, managers? Educated graduates with a good level of preparedness for the future? Where does research occur – how does the industry move forward, embrace change and better prepare itself for the future?

Interestingly, tomorrow at the CIF Conference, which unfortunately coincides with AUBEA, Professor Ian Young, Vice Chancellor of Swinburne University of Technology, is leading a session on the *Quality of Industry Entrants*. Professor Young is addressing "Have the universities and technical colleges failed us in delivering high calibre entrants to the industry? Or, are we failing ourselves in not making the industry the first choice for the best and brightest of our young people? " (ACIF 2006a)

The ACIF Education Policy expects appropriately qualified industry professionals as representatives on course/curriculum advisory panels as part of Australian Universities Quality Audit (AQUA) program (ACIF 2006b). Such collaboration already exists and is welcome in most if not all of our universities represented by AUBEA. The fact that ACIF is lobbying Chancellors with their concerns rather than addressing them at faculty, school and department level suggests that collectively our collaboration, and communication, has broken down. It is to be hoped that the conversations that will ensue during and after AUBEA Industry Day will address this.

Where are our future leaders coming from – are they likely to come from outside the undergraduate programmes, with a non-cognate liberal arts, social science or science background where they have been stimulated to think and then picked up postgraduate qualification that allow accelerated entry into the profession? Fifteen years ago in the UK, we struggled to sell fast-track non-cognate Masters programmes. The challenge was not to the potential students, but to the profession where at that time many senior employers had entered with the RICS correspondence course or a diploma. The indication was that some were intimidated by taking on someone ‘bright’ with a Masters degree who had not worked their way up the professional ladder in the same way as they themselves had.

UTS, like other universities represented at AUBEA, aspires to be a leader in collaborative research and education (UTS 2005). ‘Close collaboration with the professions, business, industry, government and the wider community’ is one of nine Guiding Principles of the UTS Strategic Plan (2005-2008). Three other

Guiding Principles are directly relevant to our external relationships, and establish parameters for our engagement with industry:

- Sustainability – ecological, social and economic;
- Intellectual independence and sound ethical practice; and
- Critical commentary on public issues.

Similarly the role of the Cooperative Research Centre (CRC) for Construction Innovation is, "to enhance the collaboration between researchers, industry and government, and to improve efficiency in the use of intellectual and research resources" (CRC Construction Innovation 2006). Perhaps this is appropriate, from an industry perspective, as long as research is separate to teaching. It is evident that we need more discussion to encourage appreciation of the roles and expectations of the respective parties, and to strengthen collaboration to the mutual benefit of those involved in the built environment into the future.

THE WAY FORWARD

This paper has addressed some of the myths, challenges, concerns, and confusion surrounding the university/profession/industry partnership. Corden (2005) hoped that enlightenment is the outcome of controversy; what we need to do is acknowledge discord and collectively strive to transform the conflict, be it real or merely perceived. Furedi reminds us that "education involves challenging peoples perceptions of themselves, calling in to question their common sense, and at its best, demanding that they become something other than what they once were" (Furedi 2004).

Whilst it can be easier to react to change in the short term, in the long-term recalcitrance is a more painful response than embracing the ongoing and dynamic inevitable change that affects the university, the profession and industry. I am optimistic and like Furedi see an intelligent public as the product of intellectual and cultural ferment, followed by intense debate. Industry, the profession and academe need that ferment and intense debate to reach a shared vision of how we can best collectively serve the people, place and property that comprise the built

environment. Once we share the vision, we can collaborate on strategies and research to make it our reality. I will close this discussion paper on that optimistic note and allow the debate to ensue.

REFERENCES:

- ABS. *1297.0 - Australian Standard Research Classification (ASRC)* [ABS Website]. Australian Bureau of Statistics 1998 [cited 30/06/05. Available from <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/1297.0Main+Features11998?OpenDocument>].
- ACIF. *Australian Construction Industry Forum (ACIF) - The Construction Industry Leaders Conference: Profit for All* [Web brochure (PDF)]. ACIF 2006a [cited 27.06.06. Available from http://www.acif.com.au/ACIF%20Conference%20brochure%202006_.pdf].
- . *Australian Construction Industry Forum Education and Training Kill Development Policy* [Web PDF] 2006b [cited 27.06.06. Available from http://www.acif.com.au/Policy/Education%20and%20Training%20Policy_.pdf].
- ARC. 2006. Strategic Plan 2006-2008, edited by Australian Research Council: Commonwealth of Australia.
- Barnett, Ronald. 1990. *The Idea of Higher Education*. Buckingham: The Society for Research into Higher Education and the Open University Press.
- . 2005. Introduction. In *Reshaping the University: New Relationships between Research, Scholarship and Teaching*, edited by R. Barnett. Maidenhead: Society for Research into Higher Education & Open University Press.
- Boyer, Ernest L. 1990. *Scholarship reconsidered: priorities of the professoriate*. San Francisco: The Carnegie Foundation for the Advancement of Teaching.
- Coady, Tony, and Seamus Miller. 1993. Australian higher education and the relevance of Newman. *Australian Universities Review* 36 (2):pp. 40-44.
- Corden, Max W. 2005. Moscow, Markets, or Trust: the Uncertain Future of Australian Universities. *4th Annual Sir Leslie Melville Lecture in the ANU Toyota Public Lecture Series, 21 September 2005*, <http://www.economics.unimelb.edu.au/mcorden/melvilleAustralianuniversities.pdf>.
- CRC Construction Innovation. *CRC Construction Innovation: About Us - Vision, Mission, Objectives* 2006 [cited 27.06.06. Available from <http://www.construction-innovation.info/index.php?id=3>].
- EAG. *Research Quality Framework: Assessing the quality and impact of research in Australia. Final advice on the preferred RQF model. Endorsed by the Expert Advisory Group for the RQF.* [PDF]. Commonwealth of Australia 2005 [cited 30/06/06. Available from http://www.dest.gov.au/NR/rdonlyres/1A7E21B1-9C74-4AD8-9C8A-FFED7688A32B/9798/Final_Advice_Paper.pdf].

- Elton, L. 1992. Research, Teaching and Scholarship in an Expanding Higher Education System. *Higher Education Quarterly* 46 (3):pp.252-68.
- Furedi, Frank. 2004. *Where have all the intellectuals gone? Confronting 21st Century Philistinism*. London: Continuum.
- Hughes, Mark. 2005. The Mythology of Research and Teaching Relationships in Universities. In *Reshaping the University: New Relationships between Research, Scholarship and Teaching*, edited by R. Barnett. Maidenhead: Society for Research into Higher Education & Open University Press.
- Macfarlane, Bruce. 2005. Placing Service in Academic Life. In *Reshaping the University: New Relationships between Research, Scholarship and Teaching*, edited by R. Barnett. Maidenhead: Society for Research into Higher Education & Open University Press.
- McCaffer, Ronald. 2005. Research Assessment - the Emerging Experience. Paper read at The Queensland University of Technology Research Week International Conference in collaboration with COBRA, AUBEA and CIB, 4-8 July, at Brisbane.
- Nelson, Brendan. 2002. Higher Education at the Crossroads: an overview paper. edited by Commonwealth Department of Education Science & Training: Commonwealth of Australia.
- Nillsen, Rodney. 2004. Don't do what Australia has done. *Quadrant* XLVIII (11 - November).
- OECD. *Frascati Manual: The Measurement of Scientific and Technological Activities. Proposed Standard Practice for Surveys on Research and Experimental Development* [Web PDF]. Organisation for Economic Co-operation and Development 2002 [cited 30/06/06. Available from <http://www1.oecd.org/publications/e-book/9202081E.PDF>].
- Ramsden, Paul. 1998. *Learning to Lead in Higher Education*. London Routledge.
- Rowe, Albert Percival. 1960. *If the gown fits*. Melbourne: Melbourne University Press.
- Runeson, Göran, and Martin Skitmore. 1999. *Writing Research Reports: a Practical Guide for Students of the Built Environment*. Geelong: Deakin University Press.
- Saunders, Malcolm. 2006. The Madness and Malady of Managerialism. *Quadrant* L (3 - March):pp. 9-17.
- Sheahan, Peter. 2005. *Generation Y: thriving and surviving with Generation Y at work*. Prahran, Victoria: Hardie Grant Books.
- THES. *The world's top 200 universities* [Website]. The Times Higher Education Supplement (online) 2005 [cited 03/07/06. Available from http://www.thes.co.uk/statistics/international_comparisons/2005/top_unis.aspx?window_type=popup].
- UTS. 2005. UTS Industry Action Agenda: University of Technology Sydney.
- Wood, Gerard, and Robert Ellis. *The future of surveying education: A report commissioned for the RICS Education Trust golden jubilee* [PDF file]. RICS Research 2006 [cited 24/04/06. Available from <http://www.rics.org/NR/rdonlyres/759719DE-01E6-4021-8E11-35024D6238B4/0/FiBREsurveyingeducation.pdf>].