

48. Creating the New University

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The Evolution of the University Enterprise

The original model of the university as it evolved in, say, medieval Oxford and Cambridge emphasised a tradition of scholarship and learning for personal development. This was the model of a teaching university focused on the transmission and interrogation of accrued knowledge so as to mould a person fit to manage a civilised life. The enterprise involved some substantial immersion by the student in the core arts and sciences, but left them to produce their own synthesis. The teachers were scholars who were specialists for the purpose of conveying their particular knowledge to their pupils who synthesised and assimilated the knowledge to customise it for themselves.

The modern research university was a later development, commonly associated with the so-called Humbolt model, where the creation of new knowledge, especially scientific knowledge, became the truly distinguishing characteristic of the university. Scholars became researchers, though the research was felt to also inform the learning and teaching functions that continued to occupy most academics: the 'teaching and research nexus'. This research focus and its link to advanced education cemented the role of systematic and organised disciplines as the vehicles for advancement of knowledge and specialisation and saw disciplinary training increasingly displace the notion of well-rounded personal development.

The American university tradition of the twentieth century, underpinned by the national affluence required to facilitate the investment, tried to combine general undergraduate education with advanced specialised postgraduate training. In Australia, the 'Melbourne Model' now seeks to emulate this for the Antipodes.²

The American university also added the distinctive gloss of the professional schools, which were multidisciplinary—for example, graduate business and government schools, the former being the most clearly accepted and adding

1 Glenn Withers was invited as a 'senior scholar of public policy and, currently, in leading thinking about how Australian universities can improve their involvement in tackling complex real-world problems'.

2 See <<http://theconversation.edu.au/in-defence-of-the-melbourne-model-1083>> (accessed 4 December 2012).

pedagogies of holism such as the case method to replace or complement more conventional teaching, especially disciplinary teaching. These professional schools though were devoted more to the training and production of employment-ready practitioners, their staff were as often consultants and advisers as academics, and the research that was conducted was as often still in underlying disciplinary fields that conveyed esteem as in any new emergence of serious interdisciplinary vehicles.

The Present Interdisciplinary Opportunity

Gabriele Bammer's project stands at a critical juncture in this evolution. The challenge ahead of us for the university today is whether the emergence of multidisciplinary can truly move from teaching, as in liberal arts and sciences undergraduate training and in professional schools such as business and government, to the research that is the source of academic standing. Also required is resolution of the challenge of whether the focus of multidisciplinary can move from professional training that develops logic and evidentiary capacities for managing change and interrogating problems to instead, or in addition, enable holistic approaches to research into the great problems and challenges of the day.

Why is this critical? Universities have proven to be amongst the most enduring and useful of human institutions. They can and will continue as functional centres for training in management and the professions, and for producing specific research of value, much of it curiosity driven and based in highly productive disciplinary frameworks, approaches and methods.

But there is nothing in the disciplinary research enterprise that ensures comprehensive coverage of the knowledge needs of human kind. Nor is there a clear, efficient mechanism for synergies in learning and knowledge transfer across disciplines. Equally, so much of the problems and concerns of the real world, beyond the more intrinsic imperatives of much disciplinary knowledge pursuit, are complex and holistic, relating to practical problems or concerns the dimensions of which clearly spread across disciplines. The solution of such problems or concerns may depend not just upon the aggregation and synthesis of disciplinary knowledge and the subject matters that such disciplines focus upon, but also upon understanding of their interdependence or synergy in relationships that transcend disciplinary boundaries. This may itself require new or distinctive forms of analysis or, at the very least, will involve wider understanding and sharing of the different and divergent methods used for generating knowledge across present disciplines.

The litmus test for the potential for interdisciplinarity exists in universities and it is to be found in the field of environmental studies. It is here that the holistic nature of the real-world challenges is recognised as immense and it is here that multi/inter/transdisciplinarity has been most pursued in formal university research and teaching. If this effort evolves as a success and multiplies then the modern university will be seen as truly worthy by the society of our age and in new and significant ways. But if the experiment does not advance well then universities may have fallen short of the adaptation that would and could generate a new stage in their contribution to humankind and to what one Australian prime minister termed its 'great moral challenges'.³

The Nature of Interdisciplinarity

The greatest weakness of Bammer's project thus far is that it is still grappling with the nature of interdisciplinarity without being clear and precise on what the counterpart, 'disciplinarity', is. 'Discipline' is approached like the blind men and the elephant. Contributors feel their way around the areas they are comfortable and familiar with and illustrate the nature of interdisciplinarity by extension from those areas. This may be essential and of itself very useful and constructive, but the absence of a clear and compelling definition of what a discipline is, as opposed to interdisciplinarity, is still confusing and inhibiting. We have some feeling for the nature of the beast, but not a compelling Platonic type for the base reference point.

The point is important because the fact is that disciplinary boundaries, their subjects and methods are dynamic and blurred, partly from internal evolution as knowledge advances and sometimes because of the tensions emanating from the reasons interdisciplinarity is sought. One possibility is that disciplines are indeed dynamically interdisciplinarity—but that interdisciplinarity emerges from a micro-evolution, bottom-up approach and often implicitly rather than explicitly. As weaknesses or opportunities for innovation emerge in present research within disciplines, researchers seek to adjust assumptions, methods and topics to embrace these. Thus economics moves into law once the importance of formal legal rules becomes apparent and the idea becomes clear that these too may be modelled as rational choices therefore taking advantage of the economic method but extending its domain. History moves into 'cliometrics' as better official statistics become available and permit extensive quantification as part of the historical narrative.

3 See <<http://www.youtube.com/watch?v=CqZvpRjGtGM>> (accessed 4 December 2012).

Sometimes intellectual curiosity seeks a more ‘big bang’ answer. Correspondingly in the Bammer project interdisciplinarity is top down rather than merely incrementalist. It wants overview, taxonomy, method and impact all at once as its overarching ambition. This is no mean ambition. Such a macro-approach can give context and connection in ways that iterative research evolution may not, except by serendipity. The ideal might be in the end for the macro-approach to have micro-foundations, and thus blend the incremental with the bigger picture.

Of course having a science of everything is unmanageable. But with the bulk of research continuing within the train tracks of incremental improvements in knowledge supplemented by the occasional paradigm shift from those who left the tracks to smell the flowers and augmented by those who are consciously seeking to add this up to holistic knowledge, a more balanced portfolio of knowledge generation can emerge and benefit the generation and understanding of the status of that knowledge. The agenda then is to nudge the system into opening its eyes a little wider, while retaining the core disciplinary strengths it has.

Enhancing the Interdisciplinary Agenda

What might be the most productive nudges towards both more ‘muddle through’ and genuine ‘big bang’ interdisciplinarity in research? Step one might be projects that codify taxonomies of knowledge, so that the way in which each discipline treats the logical development of theory, the assembly and examination of evidence and the consideration of values in assessment of evidence would be a start. All rational knowledge generation, as opposed to intuition and experience as sources of knowledge for action, must incorporate these elements. But the language and techniques by which these components are expressed are many and various. They can be assembled, explicated and evaluated for what they contribute.

From such an exercise—perhaps commencing separately in the STEM (science, technology, engineering and mathematics) disciplines and the HASS (humanities and social sciences) disciplines and then converging—a knowledge map would emerge. This in turn could form the basis for new courses for graduate students in methodology that would be the foundation for an elite interdisciplinary doctoral coursework program in major universities that would have core transdisciplinary courses as well as special fields.

Those who undertake such studies would need in those universities the establishment of departments of interdisciplinary studies that would reward appointment and promotion based on teaching and publication according to

interdisciplinary standards. Similarly the national competitive grants schemes would need to have panels and assessments that drew on this interdisciplinary expertise to encourage and award research support funding in this domain.

Extension of incentives and esteem into impact and engagement alone, as is being done in England currently⁴ and is now being belatedly anticipated in Australia, may be insufficient even though helpful. What is also needed is the basic intellectual work on the nature of interdisciplinarity, its theories and methods, from which holistic insight into problems can then emerge. The two together though will be powerful indeed.

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Brief Biography

Glenn Withers is currently Professor of Economics at The Australian National University. He was previously Chief Executive Officer of Universities Australia and before that Professor of Public Policy at The Australian National University and also Head of the Economic Planning Advisory Commission and Co-Chair of the National Population Council. His academic work is in public economics, economic history and labour economics. He has written books on conscription, population and immigration, and economics of the performing arts.

4 REF2014 website <www.ref.ac.uk> (accessed 4 December 2012).

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