

**SUBMISSION TO THE HOUSE OF REPRESENTATIVES STANDING COMMITTEE
ON INDUSTRY, SCIENCE AND INNOVATION INQUIRY INTO RESEARCH
TRAINING AND RESEARCH WORKFORCE ISSUES IN AUSTRALIAN UNIVERSITIES**

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by

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Submission No:19.....

Declaration of Interests and Affiliations

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Introduction

The House of Representatives Standing Committee on Industry, Science and Innovation has initiated an inquiry into research training and research workforce issues in Australian universities. The inquiry will examine the contribution that Australian universities make to research in Australia, and the challenges faced by Australian universities in training, recruiting and retaining high quality research graduates and staff. The Federal Government has also recently conducted a review of the National Innovation that may also provide some insights into the matters to be considered by this inquiry.

I recently co-authored a paper with the respected scientist and inventor, Dr Joseph Patroni, which poses a remedy to a fundamental weakness in strategic policy governing the pathway to commercialisation of innovation and the prosecution of intellectual property rights in Australia. The lack of incentive to early career researchers within the public education system, given the present lack of an effective incentive and reward structure for inventors, may have a significant impact on the recruitment and retention of research graduates in Australian universities. The weakness in strategic policy manifests as two, perhaps subtle but interrelated problem areas which are now becoming increasingly apparent, as noted below:

1. Returns on investment to all parties associated with scientific research.

Economists ponder the merits and complexities of investment in R & D often to reflect only on the uncertainty of outcome. On the latest statistics, with investment of \$15.8 billion, researchers devoted 81,739 person-years of effort in 2004-05, but for what return? Investment in R & D is a risky proposition for all concerned; increasingly it seems, for the scientists themselves. At a time when Australia needs ever more creativity and innovation beyond the resources boom, fewer students are willing to take a career in science as they perceive their personal investment will underperform given the many years of training and application in pursuit of the advancement of knowledge. Applicable new knowledge equates to intellectual property, an illusive form of property which accrues natural or acquired rights and can be transacted, negotiated and disputed as any other form of property. In this quest, scientists, their employers/investors and the Nation are all seeking in some way to prosper from trade in this property

The local path to commercialising scientific creativity in a modern world quickly joins the international intellectual property superhighway, a complex passageway of rules, confidentialities, negotiation and disputation en route to potential prosperity.

The long era of public respect and academic career for scientists through open publication of discoveries has now been displaced by a modern era of research enterprise. Now each researcher must at the outset engage in contractual arrangements governing their intellectual property. By and large, scientists -and for that matter students- remain unfamiliar with the business model that now dominates scientific development; they are often unclear as to their rights in intellectual property. Yet should they find themselves at any time in dispute, the remedies available to both researcher and investor/employer/research institution would appear under current national policy to be limited by their financial resources available to litigate. Certainly the bargaining capacity of students or young graduates in negotiation is minimal at that stage of their career; on the other hand their mobility is at a peak and flight a viable option.

Notably, the problem is most acute within the primary institutions of creativity and incubators of new knowledge, the public universities and research bodies, where dispute resolution by litigation is, in fact, fundamentally impractical.

And perhaps so it is that Australia, by international comparisons, suffers low levels of innovation commercialisation on a per capita basis yet, in apparent irony, historically high levels of creativity as research publications per capita.

2. The ease and efficiency with which intellectual property rights are disclosed and transacted.

In the UK, an intellectual property dispute can take 1-2 years to get to trial with appeals a further 1-2 years. Periodic surveys of the American Intellectual Property Law Association indicate that patent litigation costs – now millions of dollars for each party- are increasing at double-digit annual rates. So, were litigation to be even possible at the resource level, the uncertainties and costs are prohibitive and often not a viable option for the public institutions that Australia depends upon. Apart from chancing losses or failure, is there another way forward?

Interestingly, the Australian Commercial Disputes Centre claimed that the cost of resolving a dispute by the process of mediation was 10 per cent of that for litigation. Given Australia's *innovation paradigm*, this process surely is a more viable alternative to litigation.

In 2006, a joint project of the Institute of Arbitrators and Mediators Australia (IAMA), the Australian Computer Society and the Project Management Institute reviewed 400 professionals in the ICT industry, and obtained data on the number and management of disputes. 46% of contracts surveyed resulted in disputes. Resolution of these disputes by litigation and arbitration was less than 30% with mediation most popular method. Most disputes involved sums between \$50 000 and \$500 000. More than 50% of disputes were resolved for less than \$50 000, with the majority of these less than \$20 000, making the cost comparison with litigation extremely favourable. Furthermore the satisfaction rate with ADR

processes was 70% while that for litigation was predictably 50%. Over half of the ICT industry respondents had no formal dispute resolution process in place, and lack of understanding of available DR processes points again to the benefits of training. It is noteworthy that 85% of respondents expressed interest in attending training in DR.

Ownership of IP in universities follows the common law principle in that any intellectual property created by an employee in the course of his or her employment belongs to the employer. Universities typically protect their rights to IP developed or created by staff or students by means of industrial agreements, contracts of employment, statutes, regulations, policies and procedures, individually or in combination, which establish complex processes for employees and students to assert IP rights or resolve disputes.

Yet, in what may prove a landmark case, Justice French, in his decision in *University of Western Australia v Gray and Ors [2008] FCA 498, 17 April 2008*, only this month, highlighted the problems of reliance on such practices and litigation. In a case where an academic staff member of the University invented a treatment for liver cancer, and created a company to exploit the technology, and in which invention the University subsequently claimed ownership of the intellectual property, by reason of Professor Gray being an employee of the University, the University sued its employee, commencing proceedings on 21 December 2004. The events leading up to the claim spanned 20 years. The trial ran to 50 days (paragraph 8), there were 4 586 pages of transcript and more than 1 000 documentary exhibits. The costs for all parties were, and will be, substantial.

The Court held at paragraph 13 that "such provisions of the UWA Regulations purporting to vest intellectual property rights in it or interfere with the intellectual property generated by its academic staff, are not valid".

At paragraph 1360 of the judgment Justice French stated that "Dr Gray had no duty to invent anything. He had a duty to undertake research and to stimulate research amongst staff and students at UWA".

His Honour Justice French went on to suggest that an appropriate way forward was for universities "to consider the alternative of deriving benefits from inventions produced by their staff by offering highly competent and experienced commercialisation services in exchange for a negotiated interest in the relevant property" (Paragraph 14)

This highly significant case will cause all universities to closely review their IP policies and processes as a matter of high priority. The attached paper contains a preliminary review of the differing IP policies of 4 Western Australian universities, and highlights the inconsistencies and varying approaches to dispute settlement. There is much need for a coherent single framework that can apply where multiple organisations collaborate, for example in CRCs or Centres of Excellence.

The parties in an IP dispute usually include senior managers and scientists or technical specialists and legal representatives. In addition to being more cost-effective, the process of mediation accommodates all such parties but offers better prospects for maintenance of

those vital relationships within a research community that often need to endure for decades for successful innovation outcomes to eventuate.

Disputes over intellectual property rights are by definition technically complex and at the cutting-edge of knowledge. It follows that parties may be more comfortable with a mediator who has professional knowledge of a particular discipline or area of practice, and mediators themselves often develop expertise and thus a preference for certain types of dispute or subject matter. IP matters could greatly benefit from a customised dispute resolution model that provided the parties, not just with a process consultant, but also with a technical expert.

While the co-mediation model is familiar to the family law jurisdiction and to neighbourhood disputes, its applicability to IP disputes may be less obvious today. Nonetheless the mediation option should be readily available, mandated by national policy and better understood by scientists and public administrators engaged in the delivery of research outcomes.

These points are abstracted from the attached paper, which was prepared for, and delivered to the National Conference of the Institute of Arbitrators and Mediators Australia at Fremantle, Western Australia on 13 April 2008 focusing on "The Boom and Beyond". The paper identifies the present scope and economic significance of publicly funded research, limitations to the development and exploitation of intellectual property ("IP") rights, and proposes the development and implementation of a consistent and transparent IP dispute resolution process for researchers that will encourage and support the commercialisation of IP by publicly funded research bodies, thus enhancing the development and retention of intellectual capital in Australia

The full text of the paper is attached.

Su Lloyd

30 May 2008