IS IT TIME TO CODIFY PRINCIPLES FOR OWNERSHIP OF ACADEMIC EMPLOYEE INVENTIONS? THE DISCONNECT BETWEEN POLICY AND THE LAW

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I INTRODUCTION

Australian patent law contains no express code for ascertaining ownership of employee inventions, other than to vest rights by statute in the first instance in the inventor.[1] The rights of an employer must derive from the inventor. In the private business sector, the usual way in which an employer will protect its rights to inventions that its employees are paid to create is with an express term in the employment contract. This will commonly involve some requirement to assign future inventions to the employer. In the past, where the owner of a business might have overlooked the need for an express claim, or where an express claim was found to be unenforceable, the courts have developed doctrines at common law and in equity to protect the entitlement of business owners to inventions that arose from work that the employee was paid to perform. At common law, a term was implied in law into employment contracts to the effect that the employer is entitled to the product of the work that the employee is paid to perform, even when the product is a patentable invention.[2]

The generality of the defined circumstances in which employees must assign inventions to their employer, such as 'in the course of employment' or 'in pursuance of the duties of employment' makes these rules very difficult to apply with certainty. The main difficulty has been to decide whether it was the employee's job to create the invention that is being fought over. The result is a lack of certainty in marginal cases that employment lawyers aim to minimise with carefully drafted contracts of employment.

It is within this broad context of relative uncertainty as to entitlement to employee inventions created in business environments that the courts were asked to determine the rights of university employers to the inventions of

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1 *Patents Act 1990* (Cth) s 15(1).

2 *Sterling Engineering Co Ltd v Patchett* [1955] AC 534, 543 (Viscount Simonds), 547 (Lord Reid); *Victoria University of Technology v Wilson* (2004) 60 IPR 392, [104]; *University of Western Australia v Gray* (2009) 179 FCR 346, [150], [158], [180]. See Catherine L Fisk, 'Removing the "Fuel of Interest" from the "Fire of Genius": Law and the Employee-Inventor, 1830–1930' (1998) 65 *University of Chicago Law Review* 1127, 1155; M A L Banks, *The British Patent System: Report of the Committee to Examine the Patent System and Patent Law* (HMSO, 1970) 132 [442].

their academic employees in *Victoria University of Technology v Wilson*,[3] and *University of Western Australia v Gray*.[4] Universities had embraced commercial activities since the 1990s,[5] following government pressure for them to be part of the wider innovation agenda. This engagement with the innovation agenda was accompanied with an expectation for universities to own and manage employee inventions 'to maximise the national benefits and returns from public investment in research'.[6] The *Wilson* and *Gray* cases show that this entry into the business of commercial exploitation of inventions has provided fertile ground for entitlement disputes with entrepreneurial academic inventors, despite institutional attempts to make express claims. However, it is important not to exaggerate the potential for problems in this area, because only a small quantity of academic employee inventions will be suitable for commercial exploitation through licensing or some other means, and most technology transfer activities will proceed without undue dispute as to appropriate terms. The bulk of university research is disseminated openly through the usual avenues of conference presentations, articles and books, staff transfers and teaching. Nevertheless, the *Wilson* and *Gray* cases remind us that valuable inventions are created, disputes do arise and that the legal principles developed in business contexts are not necessarily appropriate for the resolution of disputes in an academic environment. The cases warn that contractual assignments of future inventions in academic employment contracts are not always enforceable, that express conditions may not be construed as expected and that there is now precedent for universities to be treated as distinctive from other business enterprises. The result is not one that inspires confidence for effective management of university intellectual property resources and suggests that some review of policy and the law is due.

The question of ownership of employee inventions generally was raised by the Industrial Property Advisory Committee in its review of the patent system in 1984. The committee recommended that no change be made to the ownership position that prevailed under common law, even though the UK government had

3 (2004) 60 IPR 392, 436 ('*Wilson*'). For commentary on this decision see Gavin Moodie, '*Victoria University of Technology v Wilson & Ors*: The Supreme Court of Victoria Tries Some Socio-Legal Analysis in Reconceptualising the Role of Academics' (2004) 13(2) *Griffith Law Review* 225; William van Caenegem, '*VUT v Wilson*, *UWA v Gray* and University Intellectual Property Policies' (2010) 21(3) *Australian Intellectual Property Journal* 148; Chris Arup, 'Employee Inventions: Labour Law Meets Intellectual Property' (2008) 21(2) *Australian Journal of Labour Law* 208; Ann L Monotti, 'Ownership of Academic Employee Inventions: *Victoria University of Technology v Wilson*' [2004] 26(8) *European Intellectual Property Review* N-129; Tom Reid, 'Academics and Intellectual Property: Treading the Tightrope' (2004) 9(2) *Deakin Law Review* 759.

4 *University of Western Australia v Gray [No 20]* (2008) 246 ALR 603, [14] (French J) ('*Gray Trial*'); *University of Western Australia v Gray* (2009) 179 FCR 346 ('*Gray Appeal*').

5 As to other non-commercial environments see *Greater Glasgow Health Board's Application* [1996] 7 RPC 207; *Re Royal Children's Hospital* [2011] APO 94; *Pancreas Technologies Pty Ltd v Queensland* [2005] APO 1; *NewSouth Innovations Pty Ltd v Kaczmarek* (2010) 86 IPR 189.

6 Australian Research Council et al, *National Principles of Intellectual Property Management for Publicly Funded Research* (2001) 2 ('*National Principles*').

codified the principles in its *Patents Act 1977* (UK).[7] However, the *Gray* decision has changed the common law position for academic employee inventions with the result that the default position is no longer consistent with policy in this area. The author argues that the 'disconnect' between law and policy provides a reason for government to review its policies and if necessary to develop and codify the principles in the *Patents Act 1990* (Cth) to ensure consistency in approach and outcome.[8]

II GOVERNMENT POLICY AND RATIONALES THAT GUIDE UNIVERSITY OWNERSHIP OF EMPLOYEE INVENTIONS

An appropriate starting point for explaining the historical context in which universities claimed ownership of their academic employees' inventions is the early paper published by the Australian Vice-Chancellors' Committee ('AVCC') in 1993 entitled, *Ownership of Intellectual Property in Universities*. In July 1993, 'consideration of the treatment of intellectual property [had] become a matter of urgency'[9] for universities who sought guidance from the AVCC on how to deal with intellectual property that was generated by staff and students under agreements with third parties and under grants or sponsorship. The original paper and its later revisions in 1995 and 2001 (republished in 2002) became an important reference document for universities who sought '[c]lear policies on ownership of … intellectual property … to provide security, stimulation and incentive for sustained and enhanced performance'.[10]

The papers detailed options to guide universities in the formulation of policies 'according to individual need, activity, objectivity and ethos'.[11] These options generally accepted that it was reasonable for universities to claim inventions generated by academic staff in the course of employment on the basis that this would be consistent with the specific statutory provisions in copyright and designs legislation and with 'the common law position which applies in the case of patents

7 Sections 39–42. Other examples include the *Employee Inventions Act 2009* (Germany) as well as legislation in various other European jurisdictions. Industrial Property Advisory Committee, *Patents, Innovation and Competition in Australia* (1984) 53 [20], the only recommendation related to the need for further study of the desirability of 'introducing a scheme giving rights or opportunities to employee inventors'; Government Response to the Report of the Industrial Property Advisory Committee, 'Patents, Innovation and Competition in Australia' (1986) 56(47) *Official Journal of Patents, Trade Marks and Designs* 1462, 1473.

8 It is timely to do so, particularly in view of the debate surrounding the 30th anniversary of the US *Bayh-Dole Act of 1980* (*Patent and Trademark Act Amendments of 1980*), Pub L No 96–517, 94 Stat 3015 that allowed universities to take title to inventions created with federal funding: see Stephen A Merrill and Anne-Marie Mazza (eds), *Managing University Intellectual Property in the Public Interest* (National Academy Press, 2010). Legislative reform would be in order in any event to use consistent language in each of the IP statutes so that their scope is construed consistently: see David Vaver, 'Reforming Intellectual Property Law: An Obvious and Not-So-Obvious Agenda: The Stephen Stewart Lecture for 2008' [2009] *Intellectual Property Quarterly* 143, 155.

9 Australian Vice-Chancellors' Committee, *Ownership of Intellectual Property in Universities: Policy and Good Practice Guide* (2002) foreword.

10 Ibid.

11 Ibid [1.4].

… to the same effect'.[12] However, it was recognised that commercial exploitation of inventions and other intellectual property rights ('IPRs') was not a principal focus for universities who would waive or vest rights in a large proportion of intellectual property generated by their staff (or students). It was also recognised that universities would not claim legal ownership absolutely but would balance rights and responsibilities for the benefit of all parties.[13]

Universities were warned of the uncertainties present under the common law. Legal entitlement to any particular invention would depend upon the actual conditions of employment and in particular upon the clarity of the duties set out in contracts of employment. The examples given of clear entitlement were: 'the duties of a particular staff member mean that it is their job to invent or they are in charge of activities for projects which clearly involve the likelihood of inventions being made'.[14] A recommendation for achieving clarity of the duties of staff was to include these duties in internal legislation and guidelines that would then be incorporated by reference into the employment contracts. The nature of academic work, however, meant that the duty to perform research was necessarily expressed in general terms for most academic appointments, leaving universities vulnerable in the event that they found themselves having to rely upon an evaluation of employment duties to claim their entitlement.

The papers articulated reasons to support a policy that endorsed the legal rights of a university employer to its academics' employee inventions, namely to:

1 remove the perception that universities are a free resource that supports staff 'in their efforts to generate intellectual property which they can own and exploit for their personal financial gain';

2 enable universities to extract financial return from commercialisation of inventions to lessen their dependence upon public funds and to support further research and other related activities; and

3 supervise and control the development of any intellectual property in the interests of the broader institution so that desire for personal financial gain would not distort those research programs.[15]

The vesting of ownership of inventions in the university for it to manage IPRs for the benefit of the inventors and other interested parties is also central in the *National Principles of Intellectual Property Management for Publicly Funded Research*, published in 2001 to provide a consistent national framework for the management and exploitation of IPRs generated by publicly funded research. There was an assumption that universities were entitled to these inventions in any event, as is evident from Principle 4 which provides:

> Recognising the Common Law rights of research institutions as employers, the ownership and the associated rights of all IP generated by the NHMRC

12 Ibid [3.2.1], [5.2].
13 Ibid [3.2.2].
14 Ibid [5.2].
15 Ibid [3.2.2].

> and the ARC supported research will initially be vested in the research institutions administering the grants.[16]

By the commencement of the 21st century a pattern had emerged clearly in Australia: universities would claim institutional ownership of inventions created by their academic staff in the course of their employment using employment contracts and university legislation and policies to define the rights and obligations.[17] They pursued commercialisation for a select number of inventions through technology transfer licensing offices set up for this purpose. Australian universities were following a similar pattern to that which had commenced in the US in the 1980s following the enactment of the *Bayh-Dole Act of 1980*,[18] and that was being refined overseas as all governments attempted to harness the research effort within universities for the economic benefit of their countries.[19] As the ALRC concluded in the context of publicly funded research in its *Genes and Ingenuity* report:

> If research results are not protected effectively, they may fail to attract commercial developers and products that require considerable industry development may not be created. If valuable research is not identified and utilised appropriately, its value to the public may not be realised.[20]

Only one university, the University of Melbourne,[21] expressly abandoned any role in the application for and prosecution of patents, but later changed its policy to again embrace assertions of ownership and entitlement to employee inventions when it found the alternative policy was cumbersome for enabling commercial exploitation.[22] Whichever policy was adopted, it remains clear that the right could not be appropriated other than by assignment from the inventors.[23]

The entitlement of universities to make claims to academic employee inventions in their employment contracts continues to have general support in subsequent reviews both in Australia and in other jurisdictions but has become less prominent

16 Australian Research Council et al, *National Principles*, above n 6, 5.

17 Ann L Monotti with Sam Ricketson, *Universities and Intellectual Property: Ownership and Exploitation* (Oxford University Press, 2003) ch 7.

18 *Bayh-Dole Act of 1980* (*Patent and Trademark Act Amendments of 1980*), Pub L No 96–517, 94 Stat 3015.

19 Monotti and Ricketson, above n 17, ch 6 pt 1; Department for Education and Employment (UK) and Department of Trade and Industry (UK), *Opportunity for All in a World of Change: A White Paper on Enterprise, Skills and Innovation* (2001).

20 Australian Law Reform Commission, *Genes and Ingenuity: Gene Patenting and Human Health*, Report No 99 (2004) ch 11, [11.46].

21 University of Melbourne, Statute 14.1 — Intellectual Property 1999, s 14.1.3. Instead, its commercialisation arm at the time, Melbourne University Private, offered a technology commercialisation service to the academic community of the university.

22 Statute 14.1 — Intellectual Property, created 11 December 2006, approved by the Minister 12 March 2007, definitions of intellectual property principles, staff and student amended 8 November 2010, approved by the Minister 11 January 2011.

23 *Patents Act 1990* (Cth), s 15(1). *Gray Trial* (2008) 246 ALR 603, [86]–[91]; see *Board of Trustees of the Leland Stanford Junior University v Roche Molecular Systems Inc*, 563 US (2011).

in discussions on innovation policy.[24] The general consolidation of licensing practices that assume university entitlement has diverted attention to policies that improve innovation, specifically with collaborations between universities and industry. Recent reviews of innovation policy continue to note the crucial role that universities play for innovation systems, but tend to explore ways of generating more useful knowledge by engaging in collaborations with industry.[25] For instance, one recent report emphasised the role of universities to fuel 'the innovation system with new knowledge and ideas' and for researchers to 'work collaboratively to secure value from commercial innovation and to address national and global challenges'.[26] The cases of *Wilson* and, more particularly, *Gray* have returned the spotlight to the question of who should own academic employee inventions and the types of issues that might be relevant in this inquiry.[27]

III TESTING UNIVERSITY CLAIMS: *WILSON* AND *GRAY*

Although we expect universities to use express terms in contracts to establish their rights to ownership of inventions, there remains the potential for 'uncertainty surrounding their scope and application',[28] and uncertainty as to their validity if claims are made too broadly or beyond power.[29] This is particularly the position when the claims are to pre-assignment of future inventions created in performance of broad duties to perform research. This vulnerability was exposed in *Wilson* and *Gray* when the two universities asserted rights to employee inventions that came to their attention after the academic inventors had patented and developed them into valuable assets of companies established to promote their further research and development. Each case raised different issues for consideration that are discussed below, but the common features that fuelled the disputes were the creation of inventions that were suitable for commercial exploitation at the university and using its resources, the inability of universities to enforce express obligations to assign rights in inventions, an ability of the academic inventors to patent and exploit their inventions without university assistance, their failure to

24 Andrew F Christie et al, *Analysis of the Legal Framework for Patent Ownership in Publicly Funded Research Institutions* (DEST, 2003). As to the position in Canada, see *Public Investments in University Research: Reaping the Benefits — Report of the Expert Panel on the Commercialization of University Research* (Industry Canada, 1999).

25 See, eg, Richard Lambert, *Lambert Review of Business-University Collaboration: Final Report* (HMSO, 2003).

26 Department of Innovation, Industry, Science and Research (Cth), *Powering Ideas: An Innovation Agenda for the 21st Century* (2009); Terry Cutler, *Venturous Australia: Building Strength in Innovation* (Report, Department of Innovation, Industry, Science and Research, 2008).

27 See, eg, Arup, above n 3, 8–12.

28 *Gray Trial* (2008) 246 ALR 603, [14].

29 A further concern arises when the employment contract contains an agreement to assign future inventions as distinct from a present assignment of future inventions. The risk of inability to enforce the assignment was exposed in *Board of Trustees of the Leland Stanford Junior University v Roche Molecular Systems Inc,* 563 US (2011). The US Supreme Court held that an agreement by the employee inventor to assign rights to Stanford left the inventor in a position of retaining property rights in any inventions he developed until an assignment was effectuated. Hence, a subsequent assignment of rights to a third party was effective to pass property to that party.

follow university policy that required reporting of the inventions and their desire to exclude the university from any interest in the inventions. These were cases that involved academics who sought freedom to exploit the inventions and reap rewards to the exclusion of the university: freedoms that some would argue are appropriate.

The following discussion explores the rights of universities to employee inventions when they have no contractual rights to enforce or the contractual rights are unenforceable.

A *Implied Terms in Law as to Ownership of Academic Employee Inventions: The Problems Arising from a 'Duty to Research'*

The expectation in the past was that if express claims to entitlement were found to be unenforceable, other common law doctrines (especially the implied term in law as to employer ownership of employee inventions) would provide sufficient security for the employer who engaged employees to perform research. This sense of security was probably misguided following the AVCC warnings contained in its discussion papers,[30] wavered following the decision of Nettle J in *Wilson* and was dashed when the Full Federal Court in the *Gray Appeal* agreed with French J and negated the necessity to imply the term in law in general academic employment contracts.

Some of the practical difficulties associated with this implied term, in the context of academic employment, that arise from defining the scope of the employee's research duties with sufficient precision to be of any utility were exposed in *Wilson*. The case involved a claim by the university to ownership of an e-commerce invention relating to international trade facilitation that was created by two senior academics in the School of Applied Economics, Professor Wilson and Dr Feaver. The Court held:

> It is not enough that the process of invention can be characterised as one of research. It all depends upon the nature of the research that the employee is retained to perform. ... [T]he content of the duty to research is informed by the business of the employer or, in this case, the activities of the School of Applied Economics in which Professor Wilson and Dr Feaver were retained to conduct their research.[31]

The 'business' was not that of the university as an entity but of the School in which the academics perform their research. As the research performed within that School was confined to preparation and presentation of scholarly, peer reviewed articles,[32] and as the inventions had no connection with the School's activities, the

30 See especially Monotti and Ricketson, above n 17; Ann L Monotti, 'Who Owns My Research and Teaching Materials — My University or Me?' (1997) 19(4) *Sydney Law Review* 425.

31 *Wilson* (2004) 60 IPR 392, [108].

32 Ibid [110].

development of inventions was said to be unrelated to the employer's business. Hence, VUT had no claim to the inventions on the basis of the implied term in law.

It seems clear that Nettle J did not question the presumption that academic employment is within the broad class of employment contracts in which employer ownership of employee inventions is presumed. Having satisfied that assumption by implication, VUT failed in its argument because it was unable to satisfy the court that the duties of employment included a duty to invent. Nevertheless, Nettle J commented that the university might be entitled to own inventions created by academics working within a school such as physical science departments and the information technology departments in which it was common practice to develop computer based e-commerce systems.[33] The assumption appears to be that the research carried out commonly in the relevant departments would produce inventions and thus would arise from performance of work that they were paid to do. The fact that the relevant academics might choose to make these inventions publicly available and free to all (factors that became crucial in hindsight) was not a relevant consideration in determining where ownership vests under the implied term.

The second case of *Gray* involved, among other things, a claim by UWA that it had proprietary rights in inventions arising from Dr Gray's employment obligations in the university as a Professor of Surgery. His employment contract contained a duty 'to undertake research, to organise research and generally to stimulate research among the staff and students'.[34] As in *Wilson*, the dispute arose because Dr Gray's research resulted in inventions with potential commercial value. Without seeking the permission of UWA and without its knowledge, he applied during his employment for a number of patents for those inventions and later assigned rights in those inventions to a company that he established for the purpose of their commercial exploitation. The university had no enforceable express covenant in the employment contract that required Dr Gray to assign all or any subset of defined IPR which might arise from Dr Gray's employment duties.[35]

In contrast with the circumstances in which Professor Wilson and Dr Feaver commenced their commissioned research project and developed it in their chosen direction, the inventions here arose from self-directed research performed by Dr Gray and his colleagues with the financial support from various grants that they secured. Although Dr Gray's research carried with it the possible development of inventions, namely research that might discover new ways of administering cancer treatments, unlike the Wilson and Feaver invention of an e-commerce system, these were not the sole objective of the research. Both French J and the Full Court rejected any argument that 'at least in the applied sciences … a duty to

33 Ibid [111].

34 *Gray Trial* (2008) 246 ALR 603, [320].

35 Ibid [12]. The Court found that no inventions were created during Dr Gray's employment with UWA, so that even if UWA had been entitled to be assigned the inventions it would have no rights to inventions created prior to commencement of employment.

research … involves "a duty to make advances in the art" and that such a duty is, in fact, a duty to invent'.[36] As French J noted:

> The duty to undertake research could be discharged in a variety of ways. These were within the discretion of the researcher. One of the ways in which the duty could be discharged was the development and testing of new technologies. It could be said therefore that an invention made in the course of Dr Gray's research activities as an employee of UWA was an invention made within the scope of his employment and doing what he was employed to do. It does not follow that there was an implied term that the rights to which his invention gave rise belonged to UWA.[37]

It is clear that the absence of a duty to invent anything could have justified the dismissal of the claim on its own.[38] In other words, it would have been possible to maintain a presumption of the implied term in law in academic employee contracts but to reject its application because Dr Gray's employment duties did not extend to making inventions for the employer's business. However, all judges questioned the applicability of the implied terms in law in academic employment contracts and concluded that UWA had failed to satisfy the onus it bore of showing that 'the contract is of a class, type or kind to which the legal implication applies'.[39] The Full Court rejected the necessity for the presumption of an implied term to this effect in academic employment contracts merely because they were within the broad class of employment contracts and confirmed the decision of French J that:

> the university/academic staff relationship raised such distinctive considerations as to make it inappropriate to accept as a general proposition that there is a presumption at law that the university will be entitled to the rights to inventions developed by academic staff in the course of their research.[40]

Furthermore, the Full Court refused to accede to a request by UWA to frame an implied term in law that would be applicable to employment contracts of academic employees who performed research from which inventions might be expected to arise.[41]

Despite the negation of the implied term in general academic employment contracts, there remains some scope for presumption of the term to remain in special cases. The judgment in *Wilson* assumed that the implied term in law could apply to academic employment in two sets of circumstances. The first is when the employees are retained to perform the work that they undertook on the invention: when they are employed to invent. The decision of the Full Court in the *Gray Appeal* to negate the implied term in general academic contracts does not

36 *Gray Appeal* (2009) 179 FCR 346, [124].

37 *Gray Trial* (2008) 246 ALR 603, [1363].

38 The duty to research did not include a duty to invent: *Gray Appeal* (2009) 179 FCR 346, [61]; *Gray Trial* (2008) 246 ALR 603, [1360].

39 *Gray Appeal* (2009) 179 FCR 346, [205], [206].

40 Ibid [168].

41 Ibid [196]–[197].

change this conclusion. They agreed that a term could be implied in appropriate circumstances, one of which is the case of an academic who is employed under a special contract: 'to produce an invention or to do research directed to producing an invention. Such a contract may well warrant the implication in law of a term that the rights in relation to the invention produced would belong to [the employer]'.[42] Another example provided by French J in the trial decision is:

> if a post-graduate student is engaged by the university to design a particular device or an improvement to an existing device, any right to apply for a patent in relation to such device or improvement will belong to the university. That would accord with the established authorities relating to employees who have a duty to invent.[43]

If a university had employed academics under a special contract to produce an e-commerce system of the kind developed by Professor Wilson and Dr Gray, for example, it is likely that it would meet the conditions for a contract of the type that would warrant the implication that resulting inventions would belong to the employer.

The second circumstance in which Nettle J held that the implied term might arise is when the duties are expressed in general terms in the original contract of employment — such as to do research — but change over the period of employment when new duties may be deemed to be 'hired to invent'.[44] Nettle J accepted that in such cases 'the nature of the work which an employee is retained to perform at any point of time must be assessed by reference to the work performed at that point of time'.[45] On the assumption that academic employment contracts that contain a general duty to perform research fall within this category of unspecified duties, he concluded that the duties of Professor Wilson and Dr Feaver changed to include a duty to invent when Professor Wilson, as Head of the School of Applied Economics, determined to undertake the contract research to produce an e-commerce invention as a university project. Although the project from which the contested inventions arose was outside the scope of the usual research performed within his school, Professor Wilson had the necessary authority, power and autonomy to 'determine that he and Dr Feaver should work upon the system design as a university project and that, if he did so, that both men were for relevant purposes retained for the time being to invent the system'.[46] However, just as he could accept the project as a university project, '[p]aradoxical it may be', he 'also had authority to decide that it would cease to be a university project'.[47] From that point, neither he nor Dr Feaver were retained to invent the e-commerce system for the university and the university could not claim ownership of the inventions

42 Ibid [178].

43 *Gray Trial* (2008) 246 ALR 603, [163].

44 *Wilson* (2004) 60 IPR 392, [121], citing Pat K Chew, 'Faculty-Generated Inventions: Who Owns The Golden Egg?' (1992) *Wisconsin Law Review* 259, 264, n 20.

45 Ibid [120], citing *British Reinforced Concrete Engineering Co Ltd v Lind* (1917) 34 RPC 101; *Edisonia Ltd v Forse* (1908) 25 RPC 546; *French v Mason* [1999] FSR 597, 602.

46 *Wilson* (2004) 60 IPR 392, [122].

47 Ibid [139].

that eventuated from the research on the basis of any implied term arising from the duties of employment.[48]

There is no discussion in *Gray* of whether Dr Gray had the 'authority, power and autonomy' to alter his duties of employment to include a duty to invent in the way that occurred in *Wilson* when Professor Wilson undertook research for the university to create the e-commerce system. The facts of the cases are clearly distinguishable by the nature of the research projects; Professor Wilson was undertaking contract research to produce an invention whereas Dr Gray was undertaking research that he was publishing and which produced discoveries that led to inventions. Nevertheless, at some point he must have made a deliberate decision not to disclose all the essential features of his invention so that he could preserve the novelty of the invention. He had generated a patentable invention and had made the decision to pursue a patent application. Would this conduct during his employment and in the conduct of his research, combined with his status within the university and his position of authority and autonomy, effect an alteration in his duties to include a duty to invent? At this point there would no longer be a conflict between an obligation to maintain secrecy and a freedom to publish because he had chosen to maintain secrecy and to pursue commercial exploitation of the invention.

B *Implied Terms in Fact*

Another way in which a university employer might claim ownership of an academic employee's inventions is when an individual's factual circumstances raise the existence of an implied term in fact,[49] to the effect that his or her inventions were owned by the university employer either unconditionally or subject to the obligations set out in a university intellectual property regulation. This ground was not argued in *Gray* and the stringency of the general principles that govern its application suggest that it may be difficult to establish except in very clear cases.[50] One example might be where there is no past course of dealing with the academic employee's inventions. Considerations of policy, which influenced the trial and appeal judges to negate the implication of the usual term in law into Dr Gray's contract, are not relevant considerations for the implication of terms in fact.

The decision in *Gray* to negate the implied term in law as to employer ownership of employee inventions is likely to make it more difficult for a university to successfully argue that there is an implied term in fact. Given the finding that academic duties framed in general terms of performing 'research' do not include a duty to invent, it is likely that the courts would be slow to imply a term in fact

48 Ibid.

49 Implied terms in fact are 'individualised gap fillers, depending on the terms and circumstances of a particular contract': *Gray Appeal* (2009) 179 FCR 346, [135].

50 *BP Refinery (Westernport) Pty Ltd v Hastings Shire Council* (1977) 180 CLR 266, 282–3; *Codelfa Construction Pty Ltd v State Rail Authority of New South Wales* (1982) 149 CLR 337, 347 (Mason J, Stephen and Wilson JJ agreeing); *Byrne v Australian Airlines Ltd* (1995) 185 CLR 410, 422; *Hawkins v Clayton* (1988) 164 CLR 539, 573 (Deane J).

without clear evidence that the parties would have agreed to such a term without hesitation. Furthermore, 'there is the difficulty of identifying with any degree of certainty the term which the parties would have settled upon had they considered the question.'[51]

C *Duty of Good Faith and Fidelity*

The Full Court in the *Gray Appeal* did not consider the bearing that an employee's duty of fidelity may have on an employer's entitlement to claim an employee's invention, because it was not pleaded and UWA's 'late attempt to plead such a duty was refused.'[52] The precise limits of this duty are uncertain but it is clear that its extent will vary according to the nature of the contract.[53] The duty was considered briefly in *Wilson* and the comments of Nettle J are instructive as to the utility of this ground from a university's perspective in order to have rights in the invention itself. His Honour was of the view that a decision by Wilson and Feaver to take a job away from the university might amount to a breach of the contractual duty of good faith, but this would not entitle the university to an

> interest in or other relief in respect of the invention. As a matter of contract the university would not be entitled to the invention unless it were created by Professor Wilson and Dr Feaver in the course of work which they were retained to perform.[54]

D *Fiduciary Duties*

In *Wilson*, Nettle J ultimately found a remedy for the university on the grounds that both Professor Wilson and Dr Feaver, who occupied positions as heads of a School and Centre respectively,[55] breached fiduciary obligations to avoid conflicts of interest and duty and not to profit from their position at the expense of the university employer. Their positions as tenured senior academics with leadership roles were analogous to those of professional employees who owe these duties to their employer. It is clear that Dr Feaver owed the same duties as Professor Wilson despite the difference in their level of appointment. As the 'scope of an employee's fiduciary duties to the employer depends as much as anything upon the nature and terms of the employment',[56] it is possible to infer that their performance of

51 *Codelfa Construction Pty Ltd v State Rail Authority of New South Wales* (1982) 149 CLR 337, 346 (Mason J).

52 *Gray Appeal* (2009) 179 FCR 346, [149].

53 *Faccenda Chicken Ltd v Fowler* [1987] Ch 117, 135–6 [226]; *Vokes Ltd v Heather* (1945) 62 RPC 135; *Robb v Green* [1895] 2 QB 315, 319–20; *Edisonia Ltd v Forse* (1908) 25 RPC 546.

54 *Wilson* (2004) 60 IPR 392, [140].

55 Professor Wilson was Head of the university's School of Applied Economics; Dr Feaver was a senior lecturer in the School of Applied Economics and head of its Centre for International Business Research and Education (CIBRE).

56 *Wilson* (2004) 60 IPR 392, [145].

significant leadership roles was the equalising factor in otherwise very different levels of appointment.

Some explanation of the facts that influenced Nettle J to impose fiduciary duties is important in order to establish the limited extent to which fiduciary obligations might arise in future cases. Of paramount importance is the conclusion that Wilson and Feaver were offered the opportunity to design an e-commerce system because of the leadership positions they held at the university. Critical to the Court's finding of fiduciary duties and their breach was the determination that the project was undertaken as a university project. Secondly, although neither was employed under their employment contract to invent, Nettle J determined that it was 'within power for Professor Wilson to determine that he and Dr Feaver should work upon the system design as a university project and that, if he did so, that both men were for relevant purposes retained for the time being to invent the system.'[57] Consequently, VUT would have been entitled to own any inventions they created in the performance of that contract research. The decision to take the work on as a personal project reversed the nature of the duties of employment so that 'the work which they carried out on the project after that point was done on their own account.'[58] Removal of the opportunity from the university without any full and true disclosure to the university of their intentions and without seeking consent meant that the pursuit of the project as a private venture amounted to a breach of fiduciary duties.

For the purposes of understanding the extent to which universities might claim entitlement on these grounds, it is arguable that fiduciary obligations might be limited to Heads of Schools and Centres who have the authority to accept contract research on behalf of the university, and who commence the research in that capacity but subsequently convert the project to a personal venture without disclosure and permission from the university. The mere acceptance of contract research in a personal capacity without disclosure to the university is more likely to be viewed as a breach of a contractual obligation to have outside work approved.[59]

However, the full extent of this ground is yet to be determined. It is open to debate whether fiduciary incidents found in the employment relationship would have any application to cases where property rights in newly created property vest in the employee as inventor.[60] The claim for breach of fiduciary duties in *Gray* was pleaded as 'a duty to deal with the property rights and interests of UWA so as to protect and preserve that property and those rights and interests for UWA' and a duty not to make any secret profits.[61] This argument rested on the premise 'that

57 Ibid [122].

58 Ibid [139].

59 However, see the concerns expressed by Joellen Riley, 'Who Owns Human Capital? A Critical Appraisal of Legal Techniques for Capturing the Value of Work' (2005) 18 *Australian Journal of Labour Law* 1, 9.

60 See Elias J in *Nottingham University v Fishel* [2000] ICR 1462, [91], citing the leading Australian High Court authority on fiduciary duties in commercial relationships, *Hospital Products Ltd v United States Surgical Corporation* (1984) 156 CLR 41 for the principle that equity must not alter the terms of a freely negotiated contract.

61 *Gray Trial* (2008) 246 ALR 603, [1563].

Dr Gray was dealing for his own benefit with rights in various inventions which UWA owned or in which UWA had an interest.'[62] However, this premise was misconceived as UWA failed to establish the existence of the implied term in law that would vest in it any rights in those inventions.[63]

E *Summary*

The above discussion highlights that the assumption in Principle 4 of the *National Principles* as to the common law rights of universities as employers is no longer valid. Hence the common law default principles no longer reflect the policy development that recognises not only the need for certainty of entitlement but that it is appropriate to vest rights in academic employee inventions in the university employer for the reasons identified earlier. Furthermore, while other legal doctrines are available to provide remedies in individual circumstances, they do not assist in the assessment of where ownership of employee inventions vests as a matter of general principle.

IV CONCLUDING COMMENTS

The principal aim of this article is to establish a preliminary case that supports a review of the current law on ownership of employee inventions commencing with academic employee inventions. The inevitable (and obvious) conclusion following *Gray* is that universities must strengthen their contractual position in relation to rights in future inventions that they seek ownership of if they are to manage inventions in the manner expected by granting bodies and the government. However, this is not as simple as it may appear. Cases such as *Wilson* and *Gray* demonstrate the complex and diverse administrative and regulatory environments within universities, and of the conduct of academic research within them and how these will inevitably involve the risk that an express claim to future inventions may be unenforceable. If express terms fail, there remains a 'disconnect' between the default common law principles and the usual conditions that universities aim to enforce in their employment contracts. This is not conducive to clarity of ownership: a critical factor in maximising research productivity, knowledge creation and dissemination, as well as attracting investors to support further research and development. Some have suggested that clarity of ownership is best achieved by leaving it for negotiation after any suitable IPR have been created,[64] a position that accords with the views of French J in the *Gray Trial*,[65] when he suggested that universities might well consider offering expert commercialisation

62 Ibid [1567].

63 *Gray Appeal* (2009) 179 FCR 346, [214]; *Gray Trial* (2008) 246 ALR 603, [1567].

64 See, eg, van Caenegem, above n 3.

65 (2008) 246 ALR 603.

facilities that are then offered to the academic in return for a negotiated share in the IPR.[66] His Honour also observed pragmatically that:

> It would seem that the only secure way for UWA to acquire property rights from its academic staff in respect of intellectual property developed by them in the course of research at UWA is by express provision in their contracts of employment. Even then, as this case demonstrates, the transaction costs of administering and enforcing such provisions and the uncertainty surrounding their scope and application, raises a real question as to their utility.[67]

This view is also consistent with the Full Court's observation:

> If a less crude and more fair and reasonable result is to be achieved which balances the respective interests of a university and its academic staff members, this will need to be done by or under legislation or, if it could be devised, by an express contractual régime appropriate to the circumstances *of the individual case*.[68]

Some have expressed concerns as to the capacity of universities to exploit patents effectively.[69] Others warn that 'greater emphasis on developing IP in universities may divert research priorities towards short-term business needs.'[70] Leaving ownership in the inventors follows the long standing and fundamental principle of patent law that inventions belong to the inventors unless they choose to assign rights to a third party,[71] but is inconsistent with the usual implied term in law that operates in business employment relationships. In addition, it allows entrepreneurial academic inventors substantial latitude for pursuing these inventions alone and to the exclusion of the university if that is their wish. While this approach might enhance certainty,[72] it is inconsistent with the current policy directions of governments who expect universities to be in a position where they can balance the rights and responsibilities in a fair and reasonable manner.

The alternative approach rejects an outcome that allows the single 'winner' to leave the other party bereft of rights. It generally emphasises that only express

66 Ibid [14]; see also van Caenegem, above n 3. See the early warnings as to university entitlement in the UK in William R Cornish, 'Rights in University Inventions: The Herchel Smith Lecture for 1991' [1992] 1 *European Intellectual Property Review* 13, 16–17.

67 *Gray Trial* (2008) 246 ALR 603, [14].

68 *Gray Appeal* (2009) 179 FCR 346, [211] (emphasis added).

69 Australian Law Reform Commission, above n 20, [11.42]–[11.43]. However, the contrary view receives equal recognition: see, eg, Organisation for Economic Co-operation and Development, *Turning Science into Business: Patenting and Licensing at Public Research Organisations* (2003) 9.

70 Lambert, above n 25, [4.7]; Royal Society Working Group on Intellectual Property, *Keeping Science Open: The Effects of Intellectual Property Policy on the Conduct of Science* (Report, Royal Society, 2003); Aldo Geuna and Lionel Nesta, *University Patenting and Its Effects on Academic Research* (Science and Technology Policy Research Unit, 2003); Drew Gilpin Faust, 'The Role of the University in a Changing World' (Speech delivered at the Royal Irish Academy, Trinity College, Dublin, 30 June 2010) <http://www.harvard.edu/president/role-university-changing-world>.

71 *Patents Act 1990* (Cth) s 15(1).

72 See, eg, Australian Research Council, *Research in the National Interest: Commercialising University Research in Australia* (2000) 20.

contractual terms can overcome the pitfalls exposed in *Gray,*[73] and supports institutional entitlement with reference to the usual rationales: universities are generally in a better position to manage the rights for the benefit of all parties;[74] they can only afford to invest in technology transfer offices and staff to support academic entrepreneurs if they are assured of enforceable claims to own the inventions;[75] past practice has demonstrated that vesting ownership in the inventors might not be the most practical way of maximising returns from the research;[76] and third parties may insist on dealing with the university rather than with individual inventors.[77]

There are merits in both approaches, but the reality is that the current policy supports university claims to ownership. Until this policy is reviewed and changed, it is reasonable to expect that default principles will support the policy pursuant to which they manage and regulate their affairs. The primary objectives of teaching and learning, research and community engagement are supplemented now with objectives to engage in commercial activities that include exploitation of IPRs. Employment contracts purport to claim entitlement to a range of future academic employee inventions (and other intellectual property) along the lines set out in university intellectual property policies and internal legislation. To assist the implementation of these policies, universities have invested to a greater or lesser extent in an infrastructure that involves employment of technology transfer staff and often business managers situated in each faculty in which inventions might arise from research. Commercial activities are taking place within a research environment that is designed around that presumption of university ownership.

The author argues that a 'disconnect' now exists between the legal principles for vesting ownership in employee inventions on the one hand and a policy that directs government programs to include universities as active participants in the innovation agenda on the other. This 'disconnect' unnecessarily complicates the process of commercial exploitation of academic employee inventions by adding an undercurrent of uncertainty as to entitlement. That uncertainty has

73 See, eg, Tim Clark and Andrew Stewart, 'Securing Ownership of Employee Inventions' (2009) 31(1) *Bulletin (Law Society of SA*) 30; Ann L Monotti, 'Establishing Clear Rights in Academic Employee Inventions: Lessons Learnt from *University of Western Australia v Gray*' in Marilyn Pittard, Ann Monotti and John Duns (eds), *Business Innovation & the Law: Perspectives from IP, Labour, Competition & Corporate Law* (Edward Elgar, forthcoming); see also Arup, above n 3; Ann L Monotti, 'University Employees and Patent Ownership — Special Leave to Appeal Refused' [2010] 32(7) *European Intellectual Property Review* N54-55; Ann L Monotti, '*University of Western Australia v Gray* [2009] FCAFC 116' [2010] 32(1) *European Intellectual Property Review* N1-2; Riley, above n 59; Christie et al, above n 24.

74 See, eg, Christie et al, above n 24.

75 There is contradictory evidence on this issue: see Matthias Leistner, 'Farewell to the "Professor's Privilege" — Ownership of Patents for Academic Inventions in Germany under the Reformed Employees' Inventions Act 2002' (2004) 35(7) *International Review of Industrial Property and Competition Law* 859; Are Stenvik, 'University Employee Inventions in Scandinavian and Finnish Law' in Wolrad Prinz zu Waldeck und Pyrmont et al (eds), *Patents and Technological Progress in a Globalized World: Liber Amicorum Joseph Straus* (Springer, 2009) 339, 340, 350.

76 Monotti, 'Establishing Clear Rights in Academic Employee Inventions in Australian Universities', above n 73, [4.1].

77 Australian Law Reform Commission, above n 20, [11.32]; Organisation for Economic Co-operation and Development, above n 69, 11; Leistner, above n 75, 862.

the potential for encouraging employee inventors to challenge the validity of contractual claims when the default common law principles support their sole ownership.

Although the referral to the common law for resolution of ownership in business contexts may remain generally consistent with a result that the parties might negotiate, the same is not true with academic employee inventions. The decisions in *Wilson* and *Gray* expose the limited relevance and application of the implied term in law to academic employment contracts as well as the limited scope for a remedy to be available under other doctrines. The *Gray* decision highlighted that the distinctiveness of universities supports a different approach to ownership that requires a fair and reasonable balance of rights management for the mutual benefit of inventors and their communities as opposed to a 'winner-takes-all' approach.[78]

Ideally, if the essence of property rights 'is to regulate the interactions of competing groups of people',[79] the default principles must be consistent with broad policy objectives that guide those interactions. The commentary and decisions in *Wilson* and *Gray* suggest that the policy objectives for vesting ownership in future academic employee inventions with the university employer may no longer have the support they once enjoyed. The World Intellectual Property Organization ('WIPO') has recently joined the voices expressing uncertainty about the best ownership model for university innovation:

> The evidence is more ambiguous as to the best ownership model for public research. While the general trend has been towards institutional ownership, it is not clear whether this model is necessarily superior to others.[80]

When the Industrial Property Advisory Committee reviewed ownership of employee inventions in 1984 it recommended no change to the ownership position that prevailed under common law. However, the *Gray* decision has changed that common law position for academic employee inventions with the result that the default position is no longer consistent with policy that guides ownership models for public research. This 'disconnect' between policy and law necessitates a review of government policies and, if necessary, to re-establish the connection by codifying the principles in the *Patents Act 1990* (Cth).

78 Monotti and Ricketson, above n 17.

79 Robert P Merges, *Justifying Intellectual Property* (Harvard University Press, 2011) 70.

80 WIPO, *World Intellectual Property Report: The Changing Face of Innovation* (WIPO Economics and Statistics Series, 2011) 16.