‘Sewing the Fly Buttons on the Statute:’ Employee Inventions and the Employment Context

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1. Introduction

Under section 7(2)(a) of the Patents Act 1977, the right to patent an invention lies primarily with its inventor(s). However, an exception exists for employee inventions to which section 39(1) applies.† According to that section:

† This is the preprint of an article forthcoming in (2012) 32 OJLS. The title quote is from Shanks (5) [32].

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† See Patents Act 1977 (PA 1977) s 7(2)(b); s 130(1) (defining ‘employee’ to mean ‘a person who works or (where the employment has ceased) worked under a contract of employment or in employment under or for the purposes of a government department or a person who serves (or served) in the naval, military or air forces of the Crown’ and ‘“employer” in relation to an
Notwithstanding anything in any rule of law, an invention made by an employee shall, as between him and his employer, be taken to belong to his employer for the purposes of this Act and all other purposes if –

(a) it was made in the course of the normal duties of the employee or in the course of duties falling outside his normal duties, but specifically assigned to him, and the circumstances in either case were such that an invention might reasonably be expected to result from the carrying out of his duties; or

(b) the invention was made in the course of the duties of the employee and, at the time of making the invention, because of the nature of his duties and the particular responsibilities arising from the nature of his duties he had a special obligation to further the interests of the employer's undertaking.  

The recent decision of the Full Court of the Federal Court of Australia in University of Western Australia v Gray\(^3\) raises a question regarding the application of this provision in the university context, in respect of regular academic employees. The reason is the Court’s reliance on UK authorities to support its conclusion that the University of Western Australia (UWA) had no rights in respect of certain inventions devised by its former Professor of Surgery. According to the Court, academic employment is sufficiently different from other kinds of employment to require that inventions devised by academic employees be treated differently from those devised by private sector employees. In

employee,’ to mean ‘the person by whom the employee is or was employed’).  

\(^2\) Cf Copyright, Designs and Patents Act 1988 (CDPA 1988) s 11(2) (providing for employer ownership of copyright in employee-authored works subject to contract).

so deciding it cast doubt over the widespread assumption that section 39(1) applies indiscriminately, without regard to the context of the inventor’s employment.\(^4\)

In this article I question this assumption. My starting point for doing so is the 2010 decision of the Court of Appeal in *Shanks v Unilever plc*.\(^5\) In that case, the compensation scheme for employee inventors contained in sections 40 and 41 of the 1977 Act was held to be built around the ‘paradigm case’ of an inventor working ‘for the same company as receives all the benefit of the invention’.\(^6\) According to the Court, this paradigm is also the point of reference for resolving ambiguities in the application of the scheme; a means of ‘sewing the fly buttons’ on an ‘ill-drafted statute’.\(^7\) The result

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\(^4\) For evidence of this assumption see, eg, C G Stallberg, ‘The legal status of academic employees’ inventions in Britain and Germany and its consequences for R&D agreements’ (2007) IPQ 489–530; W R Cornish, ‘Rights in University Innovations’ The Herchel Smith Lecture for 1991’ [1992] EIPR 13, 15; A Monotti and S Ricketson, Universities and Intellectual Property (OUP 2003) 245; HC Deb vol 1000, col 745 (10 March 1981); the published intellectual property policies of most UK universities, including the Universities of Bristol, Cambridge, Cumbria, Leicester, and Oxford. Cf HC Deb vol 337, col 280W (Secretary of State for Trade and Industry, expressing the Government’s commitment to ‘continue to work to ensure that clarity of ownership of intellectual property in the public sector encourages and simplifies exploitation of research in universities and public sector research establishments’) (4 November 1999). See also *Ultraframe UK Ltd v Fielding* [2003] EWCA Civ 1805, [2004] RPC 24 [19] (Waller LJ, rejecting that whether a person is an ‘employee’ may depend on the context, and the particular piece of legislation in which the term ‘employee’ appears). By contrast, the applicability of s 39(1)(b) to university employees has been questioned; see, eg, Stallberg (above) n 92.


\(^6\) Ibid [9].

\(^7\) Ibid [32].
was to preclude an interpretation of the scheme that would have involved treating the inventor ‘wildly differently from an inventor in the paradigm case’.\(^8\) According to the Court, ‘[n]o rational reason can be suggested or was advanced’ for such a ‘wholesale departure’ from the statutory paradigm.\(^9\)

The purpose of this article is to consider the implications of \textit{Shanks} for section 39(1). Specifically, is section 39(1) also built around a paradigm employee, and if it is, might there be a ‘rational reason’ for departing from it in a specific case? My suggested answer to both questions is ‘yes’ on two grounds. First, section 39(1) was enacted ‘to codify … the accumulated common law experience’ prior to 1977,\(^10\) which experience was confined to industrial employees. On the other hand, when determining the ownership of those employees’ inventions, pre-1977 courts emphasized the importance of context: the nature of the inventor’s particular employment, and the relation of the invention to the inventor’s and employer’s work. So too when the common law principles were adapted in respect of Crown-used and State-supported inventions in the second decade of the 20\(^{th}\) century, policy makers consistently emphasized the need for each case to be decided on its facts, including (in respect of State-supported inventions) the functions of the supporting Government Department. If this analysis is accepted, and if it is true (as was said in \textit{Harris’s Patent}\(^11\)) that in applying section 39, the courts may obtain ‘guidance’ from pre-1977 cases ‘as to how … the

\(^8\) Ibid [9].  
\(^9\) Ibid [30].  
\(^11\) Above (n 10).
duties of the employee in a particular case and particular circumstances’ have been assessed, it follows that there may exist a ‘rational reason’ for departing from the paradigm of the industrial employee when applying section 39(1) in a particular case. The implications of this are potentially far-reaching, and include the possibility of UK courts entertaining reasoning such as that in *UWA v Gray*, and the resolution of some of the problems created by the use of the employment contract as a means of resolving the ownership of this species of intellectual property.13

As the basis for my argument is pre-1977 law, history is the primary focus of my study. Still, it is motivated by several modern themes. One is the importance of legal analysis preceding business and regulatory practice in the intellectual property and employment fields, and of ensuring that the norms which govern the definition and allocation of intellectual property rights are subject to periodic legal and policy scrutiny. A second is the undesirability of building a statutory regime of intellectual property ownership in the employment context around a paradigm employee given the diverse public policy and other considerations that apply in different employment fields.14 Third is the recognition of

12 Ibid 28.
14 For recent perspectives on the employment contract and its (in)ability to accommodate diverse employment contexts see, eg, M Freedland, ‘Application of Labour and Employment Law beyond the Contract of Employment’ (2007) 146 ILR 1-20; M Freedland, ‘From the Contract of Employment to the Personal Work Nexus’
contract as a source of ‘intellectual property’; a means of creating exclusionary rights in respect of intellectual resources on public policy and private morality grounds. Fourth is the English common law view of patents as a species of consensual, if not contractual, property. And last is the pervasive influence of pragmatism in the development of that law, and its occasional priority over matters of social, legal and constitutional importance.

2. The Constitutional and Statutory Restrictions of Patent Grants to ‘True and First Inventors’

Unlike most provisions of the Patents Act, which derive from the requirements of the European Patent Convention, section 39(1) has its origins in pre-1977 law. Before 1883, patents for inventions were granted by the British (and earlier, the English) Crown in exercise of a discretionary monopoly-granting power. That power represented a limited exception to a constitutional prohibition against such grants, and was

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15 Convention on the Grant of European Patents (1973) 13 ILM 268 as amended. On employee inventions see Art 60(1).
17 See Darcy v Allin (1601) 11 Co Rep 84b, (1602) 77 ER 1260 (KB); Statute of Monopolies 1623 (21 Jac I, c 3) s 6. On the constitutional
restricted to the benefit of ‘true and first inventors’. When in 1883 it was replaced with a legislative right of a person to apply for a patent and have such application assessed on statutory grounds, this restriction was recast as a requirement that patent applications be accompanied by a declaration of true and first inventorship, later supported by a restriction on the right to apply for a patent to true and first inventors, whether alone or with another person. The question that arises from this, and from the Statute of Monopolies 1623 generally, is who was a ‘true and first inventor’ to whom a patent could validly be granted?

3. Employees’ Rights as ‘True and First Inventors’ Versus Their Duties as Employees (Before 1883)

Prior to the 1883 Act, the ‘true and first inventor’ of an invention was the person who had both first devised it or imported it from overseas, and first disclosed it within the realm. This was true even for inventions devised in the status of the Statute of Monopolies 1623 see Oakley Inc v Animal Ltd [2005] EWHC 210, [2006] Ch 337 (Ch) [22]–[25].

See Statute of Monopolies 1623, s 6; An Act to Amend the Law Touching Letters Patent for Inventions 1835 (Eng) s II; Patent Law Amendment Act 1852 (Eng) s X.

See Patents, Designs and Trade Marks Act 1883 (PA 1883), especially ss 6–17.

Ibid s 5(2).

Patents Act 1907 (PA 1907) s 1(1); see also Patents Act 1949 (PA 1949) s 1(1)(a).

See Edgeberry v Stephens (1691) Holt 475, 90 ER 1162 (KB); Beard v Egerton (1846) 3 CB 97 (CP) 128; 136 ER 39, 53. This has generally been regarded as consistent with pre-1623 principles of common law as expressed in the report of Darcy v Allin (n 17); see, eg, Beard. See also Tennant’s Patent (1802) 1 WPC 125 (KB); R v Arkwright
course of employment, which, unless made in execution of another’s plan, were regarded as resources of the employee. The point was made in Bloxam v Elsee,23 where it was said by Bayley J (citing Hill v Thompson24) that ‘if a servant make an improvement, his master is not entitled to take out a patent for it.’25 It followed that while a person who had engaged another to invent might have been causally responsible for the resulting invention (and its introduction within the realm), that did not constitute him its ‘true and first inventor’, either alone or with the employee.26

On the other hand, the 19th century employment contract was recognized as importing certain rights and duties which might conflict with an employee’s freedom to exploit his intellectual abilities. They included the rights of an employer to the products of his employees’ labour, and the duties of an employee not to harm his employer’s trade.27 That the combination of these was capable of displacing the rights of an employee as ‘true and first inventor’ was first suggested in 1813, in Makepeace v Jackson.28 There the Court refused an

(1785) 1 WPC 64 (NP); Hill v Thompson (1818) 8 Taunt 375 (NP) 395; 129 ER 427, 435–36.

23 (1825) 1 C & P 558, 171 ER 1316 (Assizes).

24 Above (n 22).

25 See (1825) 1 C & P 558, 568 (Bayley J); 171 ER 1316, 1320.

26 See also Arkwright (n 22); Barber v Walduck (1823) 1 C & P 567 (NP); Minter v Wells (1834) 1 WPC 127, 149 ER 1180 (Exch); Cornish v Keene (1835) 1 WPC 497 (NP); (1837) 1 WPC 513, 132 ER 530 (CP). See also WM Hindmarch, A Treatise on the Law relating to Patent Privileges for the Sole Use of Inventions; and the Practice of Obtaining Letters Patents for Inventions (Stevens & Norton and Benning & Co 1846) 21–22.


28 (1813) 4 Taunt 770, 128 ER 534 (CP).
application by a former employee of a calico printer to set aside a verdict in the printer's favour to recover a book of colour-mixing recipes on the ground that many of the recipes recorded in the book had been devised by the applicant *qua* employee. According to Heath J, 'it is clear from the evidence that the book was the property of the master, and though there might be inventions of the Plaintiff in [the book], yet they were the [master's] property.' According to Chambre J: 'The master has a right to something beside the mere manual labour of the servant in the mixing of the colours; and though the Plaintiff invents them, yet they are to be used for his master's benefit, and he cannot carry on his trade without his book.'

The premise of *Makepeace* is a view of the employment contract as 'propertising' the employee's inventive labour for the employer's benefit in carrying on his trade. That premise was consistent with the subsequent finding in *Yovatt v Winyard*, that an employee might be restrained from using information surreptitiously obtained from his employer against the same 'upon the ground of there having been a breach of trust and confidence'. Like *Makepeace*, *Yovatt* involved the recognition of exclusionary rights in respect of trade-related information arising from the contractual duties of the employee. So too the direction to the jury in *Allen v Rawson*, that a person who discovered a principle and

29 (1813) 4 Taunt 770, 771; 128 ER 534, 534.
30 Ibid.
32 (1820) 1 Jac & W 394, 37 ER 425 (Ch).
33 (1820) 1 Jac & W 394, 395; 37 ER 425, 427 (distinguishing *Newbery v James* (1817) 2 Mer 446, 35 ER 1011 (Ch) and *Williams v Williams* (1817) 3 Mer 157, 36 ER 61 (Ch)).
34 (1845) 1 CB 551, 135 ER 656 (CP).
employed others ‘to assist him in carrying [it] out’ would own any subordinate improvements which those employees might suggest ‘in the course of … that employment’. As clarified on appeal, whether improvements were ‘subordinate’ depended on their character and relation to the employer’s principle, with each case ‘depend[ing] upon its own merits.’

Soon after Allen v Rawson, the courts considered the ownership of copyright in employee-authored works and its implications (if any) for employee inventions. Under section 3 of the Copyright Act 1842 (UK), copyright in every book vested in its authors or their assigns, making authors analogous to inventors under patent legislation. On the other hand, section 18 contained a limited exception in respect of certain employee-authored works included in a periodical or similar publication. According to that exception, when works thus included had been authored on terms that the copyright would belong to and be paid for by the publisher or proprietor of the publication, such publisher or proprietor owned a qualified copyright in respect thereof.

The question that arose in Shepherd v Conquest was whether, independent of section 18, copyright in an employee-authored work might ‘become the property of an employer’ by reason of his having ‘hire[d] the author’s labour, and …

35 (1845) 1 CB 551, 567; 135 ER 656, 664.
36 (1845) 1 CB 551, 575; 135 ER 656, 667.
37 The qualification consisted in a reversion of the copyright to the author after 28 years for the purpose of inclusion in other publications of the same type, and in a prohibition against republication of the work by the original publisher or proprietor ‘separately or singly without the Consent previously obtained of the Author thereof, or his Assigns’.
38 (1856) 17 CB 427, 139 ER 1140 (CP).
‘[bought the author's] brains.’ The Court answered ‘no’ on the ground that to recognize anyone other than ‘the actual composer’ of a work as its author and copyright proprietor would undermine ‘the intention of the legislature ... to elevate and protect literary men’. If this advantaged authors as against inventors, the Court suggested, it was justified by the different origins and nature of the relevant legislation, as demonstrated by the different treatment of importers of inventions and re-printers of works. Hence the Court's conclusion, that whatever the situation regarding an initial patent grant, copyright could never vest ab initio in an employer who had ‘merely suggest[ed] the subject’ of a work, and had ‘no share in [its] design or execution’. The result was to underline the importance of a case's legal context when determining the rights (if any) in respect of an employee's inventive labour, in addition to its facts. On the other hand, the Court's implication that such context might explain the Makepeace premise is difficult to reconcile with the origins of the patent grant outlined above.

39 (1856) 17 CB 427, 444; 139 ER 1140, 1148. The argument was arguably supported (if not motivated) by the courts' earlier connection of section 18 to the principle from Yovatt and the quid pro quo of the employment agreement. See Sweet v Benning (1855) 16 CB 459, 139 ER 838 (CP), especially 480–82 (Jervis CJ), 848–49.

40 (1856) 17 CB 427, 444; 139 ER 1140, 1148.

41 Ibid.

42 (1856) 17 CB 427, 445; 139 ER 1140, 1148.
4. Employees’ Rights as ‘True and First Inventors’ Versus Considerations of Business Efficacy and Liberal Conceptions of Private Justice (After 1883)

In the 20 years after the 1883 Act, the courts consistently affirmed and applied the principles above. These included the principle from Yovatt, which was applied by the Court of Appeal in Lamb v Evans and Robb v Green to prevent the use of surreptitiously obtained materials by a former employee, and by Byrne J in Worthington Pumping Engine Co v Moore to disgorge from a person certain patents for inventions which he had devised qua employee. According to Byrne J in Worthington, to enable the employee to retain the patents and enforce them against his former employer would have been ‘inconsistent with an observance of that good faith which ought properly to be inferred or implied as an obligation arising from his contract’. Rather than invalidate the patents for having been wrongly granted, however, he declared them to be held on trust for the inventor’s employer.

An important factor in Worthington was the employee’s status and role within the company; he had been its ‘alter ego’

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43 See, eg, David & Woodley (1884) Griff LOC 26 (SG); Heald’s Applications for Patents (1891) 8 RPC 429 (SG); Marshall & Naylor’s Patent (1900) 17 RPC 553 (Ch); Smith’s Patent (1904) 22 RPC 57 (Ch).
44 [1892] 1 Ch 218 (CA).
45 [1895] 2 QB 315 (CA).
46 On employees’ duties of ‘fidelity’ in this context see Robb (ibid) 320 (AL Smith LJ); Hivac Ltd v Park Royal Scientific Instruments Ltd [1946] Ch 169 (CA) 180 (Morton LJ).
47 (1902) 20 RPC 41 (Ch).
48 Ibid 49.
49 Ibid. See also Richmond & Co Ltd v Wrightson (1904) 22 RPC 25 (Ch); Re Russell’s Patent (1857) De G & J 130 (Ch).
outside the United States.\textsuperscript{50} Similarly in \textit{Edisonia Ltd v Forse},\textsuperscript{51} the patented inventions had been devised by the applicant’s former workman and later manager, whose particular employment had required him to try to design products such as those which he had designed and patented. According to Warrington J, to permit the employee to retain the patents in these circumstances would have been inconsistent with his implied contractual duty of good faith,\textsuperscript{52} and/or his duty to use ‘the utmost of his skill and knowledge and inventive powers to produce in the business of the Company the best possible cylinders and in the most economical way.’\textsuperscript{53} The case is important for its confirmation that a person employed to use his inventive faculties for the benefit of his employer’s business held any invention he devised in the course of that employment on trust for his employer.\textsuperscript{54} Among other things, this recognized employers as having rights in employee inventions independent of any employee \textit{mala fides}. The existence of those rights and their contractual basis was subsequently confirmed in \textit{BRC v Lind}.\textsuperscript{55} In that case, the terms of the defendant’s particular employment included a duty to use his utmost industry and abilities to try to design a form of lining that would answer the requirements of his employer’s business, and in the event that he succeeded, to place that design at his employer’s disposal, and treat it as his employer’s

\textsuperscript{50} See \textit{Worthington} (n 47) 46. See also \textit{Hop Extract Company Ltd v Horst} (1919) 36 RPC 177 (Ch).

\textsuperscript{51} (1908) 25 RPC 546 (Ch).

\textsuperscript{52} Ibid 549.

\textsuperscript{53} Ibid 551–52.

\textsuperscript{54} For an oft-cited statement of this principle see \textit{Triplex Safety Glass Co v Scorah} [1938] 1 Ch 211 (Ch) 217 (Farwell J).

\textsuperscript{55} \textit{British Reinforced Concrete Engineering Co Ltd v Lind} (1917) 34 RPC 101 (Ch) 108. See also \textit{Vokes Ltd v Heather} (1945) 42 RPC 135 (CA) 141–42; \textit{Hivac} (n 46) 174; \textit{Lamb} (n 44) 229 (Bowen LJ); \textit{British Celanese Ltd v Moncrieff} [1948] 1 Ch 564 (CA) 578.
property. In obtaining the patent he was therefore acting as trustee for BRC.

The question raised by *Edisonia* and other cases was how to determine the obligations of an inventor’s ‘particular employment’ and their implications for rights in respect of his inventions. In *Adamson v Kenworthy* Farwell J considered this, and emphasized the importance of a fact-specific analysis focused on the position of the employee, the duties entrusted to him, and the relation of the invention to his and his employer’s work. That analysis was subsequently affirmed in *Vokes Ltd v Heather*, including the principle (which Farwell J had emphasized) that the prima facie duty of employees in certain positions to use their inventive faculties for their employers’ benefit – and the prima facie rights of employers in respect of the benefits of such use – might be rebutted having regard to the circumstances of the case. In *Vokes* that is exactly what occurred: the Court accepted that the employee draughtsman (and patentee) was obliged only to promote the sales of articles produced under certain of his pre-employment patents, and to devote his time and attention to the business connected with those patents, and neither to exercise his inventive faculties for the purpose of producing ‘something which is good patentable material’, nor to assign the rights to any inventions he happened to devise. In the Court’s judgment, the parties were not ‘intending that patents of this kind if they should be in fact ever taken out were to pass to the [employer]’. It followed that the inventions he did devise

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56 See BRC (n 55) 109.
57 (1931) 49 RPC 57 (Ch).
58 Ibid 68–69. See also *Hivac* (n 46) 174.
59 Above (n 55).
60 Ibid 140–141.
61 Ibid 141.
(and their associated patents) were fully his own, and not his employer’s.

Aside from affirming the principles above, Vokes demonstrates the continued willingness of the courts in the early 20th century to find in favour of employees. Further evidence of that willingness is Mellor v Beardmore, where the employee’s retention of his patents was held to be contrary neither to the good faith implied from his contract of service, nor to any relationship of trust implied from the terms of his particular employment. According to the Court of Session, the inventor – who had been employed by the defendant as a superintendent – was neither engaged to devise inventions or solve problems, nor directed to carry out a special operation that involved or resulted in the particular invention, nor consulted as an expert or treated as anything other than a subordinate official. As a result, the case did not attract the principle from Edisonia.

As these cases reflect, the employment contract did not ‘propertise’ for an employer’s benefit all products of his employees’ labour, but rather only ‘product[s] of the work which [his employees were] paid to do’. Nonetheless, it represented a shift from Yovatt, even if it shared the latter’s contractual basis. The question is how this shift came to pass, and why the solution in each case was to stand the employer in the place of the employee as though he were the ‘true and first inventor’ notwithstanding the constitutional implications of

63 Ibid 601 (upheld on appeal by the Inner House of the Court of Session).
64 See ibid.
65 See Sterling Engineering Co Ltd v Patchett [1955] AC 534 (HL) 547 (Lord Reid).
doing so, and the recognition it involved of a new species of ‘property’, viz in inventions (ie, industrial information\textsuperscript{66}). This is particularly given the alternative solutions that might have been adopted by the courts, which included denying the employee’s right to apply for a patent or otherwise to benefit from inventions devised \textit{qua} employee, and/or granting the employer a licence to use such inventions for the purposes envisaged at the time they (or the contract) were devised, either of which would have been consistent with the consensual logic of the cases.\textsuperscript{67} There was also the possibility of shared ownership of inventions, as existed for copyright in certain employee-authored works.\textsuperscript{68}

\textsuperscript{66} On inventions as information see \textit{Merrell Dow Pharmaceuticals Inc v Norton & Co Ltd} [1995] RPC 76 (HL) 86 (Lord Hoffmann).

\textsuperscript{67} Including on the principles of \textit{Moses v Macferlan} (1760) 2 Burr 1005, 97 ER 676 (KB) and \textit{Lamb} (n 44), and consistent perhaps with recent conceptions of equitable property as a right against a right (see B McFarlane and R Stevens, ‘The Nature of Equitable Property’ (2010) 4 J Equity 1–28). For an analysis of the issue with reference to restitutionary principles of unjust/unjustified enrichment see ‘Rights of an Employer in Patents Obtained by his Employee’ (1923) 36 Harvard L Rev 468–71.

\textsuperscript{68} See text to n 37; Gray (n 31) n 25 (describing the employment context as demonstrating ‘that two persons can both claim ‘property’ in the same resource: here the resource of labour-power generates two sets of choses in action’; the employee having property in his job, and the employer property in the employee’s labour-power). This would also have been consistent with the approach of US law, extensively analysed by Catherine Fisk in, eg, CL Fisk, ‘Removing the ‘Fuel of Interest’ from the ‘Fire of Genius’: Law and the Employee-Inventor, 1830–1930’ (1998) 65 U Chicago L Rev 1127–98; CL Fisk, Working Knowledge: Employee Innovation and the Rise of Corporate Intellectual Property, 1800–1930 (University of North Carolina Press 2009).
It is submitted that the most convincing explanation for the courts’ approach to emerge from the cases is a mix of public interest and private justice considerations. On the public interest side was a concern with ‘business efficacy’ and industrial relations. On the private justice side was a concern to ensure to employers the full benefit of that for which they had contracted, and not to allow an employee to be enriched by a patent for an invention for which he had already been remunerated. On the other hand, public interest and private justice concerns did not always support the same end, and nor were they always capable of being distinguished. Among other things, this appears from the treatment of salary as a determinant of property in inventions. On one view, the amount of salary received and paid denoted the sufficiency of the consideration for the invention, and was therefore relevant in allocating rights in respect of it. On another view, considerations of business efficacy and industrial relations supported an inference from the mere fact of salaried employment that employers owned property in their employees’ inventions, on the basis of the ‘almost impossible’ situation that would arise if an employee could prevent an employer from using something which he had paid (and otherwise supported) his employee to devise. Still, why this was perceived to require more than shared ownership or a licence is difficult to explain, other than with reference to the

69 See Lamb (n 44) 225 (Lindley LJ), 227 (Bowen LJ).

70 This view may be inferred from judicial references to an employee’s wage as an indication of his employment status, and thus of the implication to be drawn from his employment contract regarding the ownership of inventions he devised. See, eg, Worthington (n 47) 45; Adamson (n 57) 63; Hivac (n 46) 174. See also Pashley v Linotype Company Ltd (1903) 20 RPC 633 (KB).

71 See Adamson (n 57) 69. Other cases also inferred an agreement of employer rights from the fact of salaried employment; see, eg, Lamb (n 44).
complications and inefficiencies which those alternatives would have entailed.\textsuperscript{72}

Underlying the question of the relevance of an employee’s salary to the allocation of rights in respect of his inventions lay the deeper question of whether the consideration proffered for a patent needed to be adequate or merely sufficient. Before 1977, the most common account of the patent was a contractual one: patents were regarded as the State’s consideration for the inventor’s public disclosure of a meritorious industrial idea. On the other hand, whereas the private law of contract required that such consideration be sufficient but not necessarily adequate, the premise of the patent system was that it needed to be both; a fact that explains (among other things) the right of patentees to seek extensions of their grant for inadequate remuneration.\textsuperscript{73} One implication of this is that the amount of remuneration paid by an employer and received by an inventor in exchange for an invention – or at least for a \textit{patentable} invention – ought to have been relevant in allocating rights in respect of the same. Another is that patents in England and the UK have always been consensual – if not contractual – property.\textsuperscript{74}

\begin{itemize}
\item Such concern was influential in respect of copyright, in undermining the position established in \textit{Shepherd (n 38)}; see text to n 205.
\item See PA 1883, s 25; PA 1907, s 18; PA 1949, s 23. On the courts’ attitude to such applications see, eg, \textit{Extension of Whitehouse’s Patent} (1838) 1 WPC 473 (PC). The PA 1949 also provided for the extension of a patent on grounds of war loss (see s 24).
\item On the consensual/contractual nature of property see Gray (n 31) 302–3.
\end{itemize}
The First World War created a need within the Government for scientific advice and investigation in connection with munitions of war, and revealed the extent of Britain’s dependence on foreign industry for the supply of essential products and materials for trade and industry. The Government’s response included mechanisms for acquiring access to inventions, and a ‘Scheme for the Organisation and Development of Scientific and Industrial Research’. These initiatives represented unprecedented public intervention in private industry, and raised the issue of rights in inventions used by or devised with assistance of the State. Between 1919 and 1947 that issue was considered by the two Royal Commissions on Awards to Inventors, the Lee Committee of

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75 See Board of Education, ‘Scheme for the Organisation and Development of Scientific and Industrial Research’ (Chair: Sir WS McCormick) (Cd 8005, 1915) [1]–[2].
77 The 1919 Commission was established by three Royal Warrants dated 19 March 1919 (Original Warrant, reproduced in Royal Commission on Awards to Inventors. Second Report (Chair: CH Sargant) (Cmd 1782, 1922) (Second 1919 Commission Report) 20–22), 5 October 1920 (reproduced in Second 1919 Commission Report, 22–24), and 16 January 1932 (reproduced in Royal Commission on Awards to Inventors. Final Report (Chair: Lord Tomlin) (Cmd 5594, 1937) (Final 1919 Commission Report) 7–8). It received 1,834 applications (Final 1919 Commission Report [6]), delivered seven reports (in 1921 (Cmd 1112), 1922 (Cmd 1782), 1925 (Cmd 2275), 1926 (Cmd 2656), 1928 (Cmd 3044), 1931 (Cmd 3957), and 1938 (Cmd 5594) respectively), and terminated its work in 1937.
1922,\textsuperscript{78} the Whitley Committee of 1930, and the Swan Committee of 1947.\textsuperscript{79} Read together, their reports represent an important chapter in the history of the law of employee inventions, among other things for challenging the courts’ all-or-nothing approach and assumption of a private property paradigm.

The statutory context for the 1919 and 1946 Royal Commissions was the right of Crown officers and authorities to use a (patented or unpatented) invention ‘for the services of the Crown’ on terms agreed between the parties or, in default of such agreement, by the Treasury.\textsuperscript{80} The Commissions’ specific purpose was to make recommendations to the Treasury in respect of those terms, and in particular, to

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The 1946 Commission was established by Royal Warrant of 15 May 1946 (reproduced in Royal Commission on Awards to Inventors First Report (Chair: LL Cohen) (Cmd 7586, 1948) (First 1946 Commission Report) iii–vi). It received 729 applications (Royal Commission on Awards to Inventors Fourth and Final Report (Chair: LL Cohen) (Cmd 9744, 1956) app II), delivered four reports (in 1948 (Cmd 7586), 1949 (Cmd 7832), 1953 (Cmd 8743), and 1956 (Cmd 9744) respectively), and terminated its work in 1955. For a general discussion of the Commissions and their work see P Meinhardt, ‘British Royal Commission on Awards to Inventors’ (1949) 8 U Toronto LJ 72–82.

\textsuperscript{78} See Report of the Inter-Departmental Committee Appointed to Consider the Methods of Dealing with Inventions Made by Workers Aided or Maintained from Public Funds (Chair: K Lee) (HMSO 1922) (Lee Report).

\textsuperscript{79} See Board of Trade, ‘Final Report of the Swan Committee’ (Chair: KR Swan) (Cmd 7206, 1947) (Swan Report).

\textsuperscript{80} See PA 1907, s 29, reproducing PA 1883, s 27. See also s 30; Patents Act 1919, s 8.
consider claims for remuneration for Crown use of an invention during the two World Wars.81

In recommending awards for the use of a patented invention, the Commissions focused on the licence fee which hypothetical willing parties might have agreed.82 More difficult was the appropriate remuneration, if any, for the use of an unpatented invention.83 For the 1919 Commission, the statutory considerations governing patent extensions for insufficient remuneration84 – ‘the nature and merits of the invention in relation to the public, ... the profits made by the patentee as such and ... all the circumstances of the case’ – suggested a discretionary approach based on ‘a broad, general, untechnical method’.85 For the 1946 Commission, by contrast, ‘the wider perspective’ needed to be considered,86 including87 the Government’s policy of encouraging and rewarding inventors, the valuable contributions made by non-

81 Inventors of unpatented inventions had a right to apply for an award but no right to remuneration per se. See First 1919 Commission Report [18] et seq; Second 1919 Commission Report [16]; First 1946 Commission Report [68]. On the initial conditions for considering an award for the use of an unpatented invention see First 1946 Commission Report [40]–[62], summarizing also the conditions supported by the 1919 Commission.
82 See First 1919 Commission Report [8]–[10]; First 1946 Commission Report [27]–[37].
83 The ‘licence-fee’ analysis applied for patented inventions was obviously inappropriate in the context of unpatented inventions, other than in setting a high water mark; see First 1919 Commission Report, [32]; First 1946 Commission Report [67].
84 See above (n 73).
86 See First 1946 Commission Report [70].
87 See ibid [74].
inventors to winning the war, and the nature of invention as a matter of team-work.88

After determining an initial figure for award, the Commissions considered whether the invention in question had been devised in a context of Crown employment89 or with Crown support.90 In the first of these cases they agreed that a discount ought to be made to reflect its relation to the inventor’s employment and duties,91 and the ‘considerable advantage, in consequence of such service, of [an inventor] having had his attention brought more or less directly to the existence and nature of the problem and to certain of the conditions of its successful solution’.92 An important benchmark was the treatment of ‘civilian’ employees, such as

88 Ibid [70]–[73]. The view had traces of Shepherd (n 38) in it.
89 As explained in the First 1919 Commission Report ([13]), inventions devised by persons in naval or Military Service or in the employment of the Ministry of Munitions, or Air Ministry, were subject to special Regulations under which the invention was ‘held in trust for the Crown until disposition of the right has been decided by the inventor’s Department’ (See Board of Trade, ‘Report of the Committee to Examine the Patent System and Patent Law, The British Patent System’ (Chair: MAL Banks) (Cmd 4407, 1970) (Banks Report) [449]). For a more detailed description of the Regulations, and the courses adopted by Government departments when dealing with employee inventions and associated patents, see Lee Report [1].
90 See First 1919 Commission Report [34]–[35], [38].
91 See First 1919 Commission Report [35]; Second 1919 Commission Report [11]–[14]. A central difficulty, as both Commissions acknowledged, was determining the scope of an inventor’s employment duties. According to the 1919 Commission, a narrow and technical approach to that issue would have been inappropriate in times of war, particularly when others were ‘risking life and limb in the combative services of the Crown’ (Second 1919 Commission Report [11]).
92 First 1919 Commission Report [34].
workmen or scientific advisers employed by engineering or manufacturing companies, who were ‘ordinarily precluded by the terms of their employment from taking out patents for their own benefit’. On the other hand, even a person employed by the Crown expressly to research and discover was thought to be deserving of an award when his invention was of exceptional brilliancy and utility. The 1946 Commission agreed, though viewed the requirement for ‘exceptional brilliancy and utility’ as out of line with current tendencies for its excessive stringency. In the Commission’s view, a Crown research employee would be appropriately remunerated if his invention reflected outstanding initiative, foresight and resourcefulness; a position almost certainly influenced by its explicit concern to ensure equal or better treatment of Crown employees in comparison with those in private industry.

It may be that the 1919 Commission’s published principles governing its recommendations encouraged a view on the part of claimants that their chance (and level) of remuneration would depend on considerations of equity, and the adequacy of the remuneration already paid and received for their inventions. This would explain the reported attempts by some employees ‘to substantiate their claims to reward, either on the ground that they had incurred grave personal risk in their investigations … or on the ground that they had given their services either at an insufficient remuneration or purely

93 Ibid.
94 Ibid [35]; Second 1919 Commission Report [13]. See also Swan Report [156].
95 First 1946 Commission Report [66].
96 Ibid.
97 Ibid 73.
98 See Statement of the Principles Governing Assessment of Compensation Adopted by the Royal Commission on Awards to Inventors (HMSO 1929), reprinted in 1946.
voluntarily’. The Commission, however, did not feel ‘at liberty to take these special features into account’.100

In the case of unpatented inventions devised outside Crown employment but with Crown support, the Commissions’ policy was again to reduce the awards they recommended101 for the reason above, namely, the advantages to the inventor of receiving financial or other support in carrying out his work.102 On the other hand, even Crown-supported inventors might receive ‘a handsome award’.103

It is not surprising given the overlap in their focus and shared industrial and political contexts that when the Lee Committee was convened in 1922 to consider the treatment of inventions devised by State-supported workers, it was heavily influenced by the principles of the 1919 Commission.104 Noting the increased involvement of the Government ‘in the application of science to industrial processes’, and the increased number of inventions devised by government employees, the Committee described it as ‘inevitable that sooner or later the Government would have seriously to consider whether the existing regulations relating to inventions made by its servants were suitable for the conditions that had arisen as a consequence of the war.’105 This was particularly so after the establishment of the Department of Scientific and

99 Second 1919 Commission Report [12].
100 Ibid.
101 Cf for patented inventions: see First 1919 Commission Report [37]; Second 1919 Commissioner Report, [15].
102 First 1919 Commission Report [38]. The 1919 Commission’s policy on this issue was not questioned by the 1949 Commission.
103 First 1919 Commission Report [38].
104 See Lee Report [1]–[6].
105 Ibid [3].
Industrial Research (DSIR) in 1916, the inventions of which were perceived to require different regulations than the inventions of other Departments because of its focus on pure rather than applied research. A further albeit related factor of importance was the concern to protect the freedom of DSIR researchers to pursue and publish their research unfettered by political or administrative constraints.


108 On this concern see Keith (n 76) 97. On its influence on the Lee Committee see Lee Report [35] (noting the evidence from witnesses ‘that research workers employed by the State are placed at a serious disadvantage by reason of their not being allowed to publish freely accounts of their more important work’, and expressing in response the ‘strong[] … opinion that no obstacle should be placed in the way of research workers who wish to publish such results of research as can be published without detriment to the national interest’); text to ns 111–112 below. Concerns of this nature more generally are sometimes derived from the so-called ‘Haldane principle’, the origins of which lie in Ministry of Reconstruction, ‘Report of the Machinery of Government Committee’ (Chair: Viscount Haldane) (Cd 9230, 1918) [12]–[16], ch IV. See, eg, Keith (n 76) 97. But cf Lord Rothschild, ‘The Organisation and Management of Government R & D’ in A Framework for Government Research and Development (Cmd 4814, 1971) [49]–[55] (noting the invocation of the principle ‘to justify the independence of applied scientists from those who may benefit from the results of their work’, and rejecting it as
In its discussion of non-DSIR practices, the Lee Committee referred to the ‘right’ of Government Departments to share in the commercial benefits of inventions the evolution of which they had contributed to, and their practice of paying inventors for any use by them of the same.\textsuperscript{109} While the DSIR also required its employees to assign all patent rights in respect of their inventions to the Imperial Trust for the Encouragement of Scientific and Industrial Research,\textsuperscript{110} it supported the freedom of any worker in receipt of a Departmental grant ‘to extend the bounds of knowledge in a direction of his own choosing’ to publish ‘the results of his investigations’, and thereby render them ‘freely available to the general public’.\textsuperscript{111} Only if the worker wished to commercialise his results was he required first to consult with the Department, after which he was ‘generally given complete liberty in [the] matter, save in the case of negotiations with a non-British firm’, which required Departmental approval. Finally, there was a recognition that ‘[i]n some special and exceptional cases it may be advisable to expend public funds in taking out a patent jointly with the inventor in order to secure the adoption in industry of a meritorious invention.’\textsuperscript{112}

In addition to these practices, certain ‘complications’ were identified by the Committee as requiring consideration. One was that DSIR investigators often worked alongside employees from the ‘fighting Departments’, and that treating

\textsuperscript{109} See Lee Report [4].

\textsuperscript{110} The Imperial Trust was created to support the work of the Committee of Council for Scientific and Industrial Research; see the Committee’s 1917–1917 Report (n 107) [2], app II.

\textsuperscript{111} Lee Report [4].

\textsuperscript{112} Ibid.
them differently led to worker dissatisfaction and migration. Another was the considerable difficulties experienced by the Government in making arrangements for the commercial exploitation of its inventions due to its inexperience in that regard, and the preference of ‘men engaged in commerce and industry’ to deal in such matters with people of similar private sector experience. Consistent with this, the questions identified as requiring urgent settlement were how to treat inventors aided or maintained from public funds, and how to deal with their inventions ‘so as to secure their adequate and proper utilization in industry.’

Guided by the central aims of ensuring a fair reward to inventors and thereby encouraging further inventive efforts, protecting the national interest, and having a single procedure appropriate for adoption across all State Departments, the Committee distinguished two classes of Government workers. In the first were those ‘employed for the purpose of making investigations and … provided with equipment, accommodation and other facilities at the cost of the State’; and in the second were those ‘employed not specially on research’, who might be capable of fulfilling their contractual duties without producing any inventions, ‘since it was no part of the [employment] bargain … that they should make discoveries or inventions’. In the Committee’s opinion, an employee in the first class ‘should not, as a general rule, be entitled to a reward or to any rights in any invention made in the course of his duty’, and an employee in the second class should ordinarily have full rights in respect of his inventions. It also recognized that there would be exceptions and cases in between, the

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113 Ibid [5].
114 Ibid [6].
115 Ibid [7].
116 See generally ibid [8], [9], [17].
resolution of which should, it suggested, involve a division of rights between the Government and employee, and/or a special reward to the employee, calculated to reflect the invention’s proximity to his employment duties, and the special facilities or knowledge acquired by him as a result of his employment. Responding to a suggestion that ‘specially meritorious research workers should receive promotion to positions of greater responsibility and increased emoluments’, the Committee agreed that ‘it would be well to give to the head of each research establishment the power either to promote successful investigators or to recommend that such men should have special increases of salary, within certain limits, and without promotion out of their grade.’

As for the further suggestion that there existed ‘disparity between the remuneration of scientific workers and that of administrative officers’, the Committee declined to comment, other than by recording its opinion ‘that the remuneration of scientific workers should be adequate and that reasonable security of tenure should be given them.’

Considering the principles by which awards should be made in respect of individual inventions, it also took the opportunity to affirm its support of the practice adopted by the DSIR for publicly-funded researchers ‘aided by a grant for the sole purpose of enabling him to extend the bounds of knowledge’, by declaring them not to be covered by its recommendations.

To apply these principles, the Committee proposed the creation of an impartial and expert central organisation – an Inter-Departmental Patents Board, including a separately constituted Exploitation Committee with responsibility for the

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117 Ibid [21].
118 Ibid.
119 Ibid [23].
120 See ibid [11].
commercial exploitation of patents\textsuperscript{121} – that would also take 
over the functions of the Royal Commissions so far as 
inventions made by Government servants were concerned, 
with an initial direction that the Board treat the First 1919 
Commission Report as the ‘starting point for [its] work’.\textsuperscript{122} 
With respect to the vesting of rights \textit{per se}, the Committee 
further recommended that steps be taken to ensure that all 
inventions made by a Government worker be held in trust for 
the Government, subject to a right to claim before the Board 
that his invention had ‘not been produced in the ordinary 
course of his duty or with the aid of any assistance or facilities 
enjoyed by reason of his position’, and to have that claim heard 
by the Board, along with the question, if it arose, what if any 
commercial rights he ought to retain or share in his 
invention.\textsuperscript{123} That this recommendation was made 
notwithstanding the Committee’s view that not all inventions 
devised by persons employed or supported by the Crown 
would properly be regarded as Government property, and its 
further recognition that ‘[t]he question of the holding of the 
property raises … some difficult legal and constitutional 
questions which will need careful examination’, reflects its 
explicitly pragmatic orientation. In the view of the Committee, 
unless steps were taken to ensure the vesting in the Crown of 
property in all government employee inventions, ‘there is 
likely to be complexity of procedure and consequent delay’,\textsuperscript{124} 
which would be particularly regrettable given the need of the 
Exploitation Committee ‘to deal directly with industrial firms 
and … make quick decisions.’\textsuperscript{125}

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\textsuperscript{121} See ibid [12].
\textsuperscript{122} Ibid [10].
\textsuperscript{123} Ibid.
\textsuperscript{124} Ibid [115].
\textsuperscript{125} Ibid.
\end{flushleft}
In 1930, the Patents Committee of the Civil Service National Whitley Council\textsuperscript{126} offered broad endorsement of the Lee Report. In particular, it agreed that a central body ought to be established for dealing with certain questions relating to inventions made by Government workers,\textsuperscript{127} and that the rights of such workers in respect of their inventions ought to reflect ‘the remoteness or proximity of the invention[s] to the work for which [they were] engaged or for which [they] had special facilities or knowledge as the result of [their] employment.’\textsuperscript{128} On the other hand, it expressed the view that ‘it would be a matter of extreme difficulty to lay down rules which would enable any authorized tribunal to ascertain the respective rights of the inventor and the Government in any and every hypothetical case,’ adding that it ‘should deprecate any effort being made to formulate’ the same.\textsuperscript{129} Perhaps ironically, the result was further support for the pragmatic solution of the Lee Committee above, which it endorsed via the following principles.

(a) While awaiting a decision, all rights in inventions made by Government servants should be deemed to belong to and be held in trust for the Government.

(b) Inventors whose inventions are in all respects alien to their employment should normally be granted the full rights in such inventions, and

\textsuperscript{126} See Report of the Patents Committee (Chair: W St D Jenkins) (HMSO 1930) (Whitley Report).
\textsuperscript{127} Ibid [3].
\textsuperscript{128} Ibid [4].
\textsuperscript{129} Ibid.
(c) An inventor who is allowed to enjoy commercial rights, if any, is not thereby precluded from receiving an award.\textsuperscript{130}

In the event, realization of the Lee Committee’s proposal for a central body to co-ordinate Departmental action in relation to inventions would have to wait a further 18 years.\textsuperscript{131} On the other hand, the Departmental practice reported and supported by the Lee and Whitley Committees, involving a claim of beneficial ownership of all employee inventions ‘corrected’ by a system of individually-determined rewards, continued until the passage of the 1977 Act.\textsuperscript{132}

For present purposes four conclusions can be drawn from this discussion. The first is that, at the end of the First World War, the Government became more invested in scientific and industrial research in recognition of its value to the public and State, and concerned to maximize its rights in respect of the same. The second is that the mechanism preferred and adopted to that end was the trust, existing in respect of all employee inventions except those ‘in all respects alien to [the employee’s] employment’, and supplemented by a system of Departmentally-determined rewards (including shared commercial rights) reflecting the merits of the case, including the proximity of the invention to the inventor’s employment and the intellectual and material assistance he had received in devising it. Third, the reason for supporting this mechanism, notwithstanding the difficult legal and constitutional questions it was acknowledged to raise, was that

\textsuperscript{130} Ibid. On the procedure to be adopted see [5]–[6].
\textsuperscript{131} According to Keith, the reason for the Lee Report’s failure to win support in the 1920s was the threat it posed to Departmental autonomy; see Keith (n 76) 100–1. As he remarked, ‘[t]he very issues which the report attempted to address made for the eventual rejection of the proposals.’
\textsuperscript{132} See Swan Report [150] et seq; Banks Report [449].
it was the most efficient means of ensuring the Government’s ability to exploit inventions without delay, and to allocate rights in respect of the same having regard to all the facts of the case, including the functions of the employing Department. And finally, merely paying or otherwise supporting an inventor, including by means of a research grant, was regarded as insufficient to justify an assertion of rights by the Government in respect of his inventions; except perhaps in the ‘special and exceptional case’ of a person deciding to commercialize his research, and the relevant Department believing it would be ‘advisable to expend public funds in taking out a patent jointly with the inventor in order to secure’ its industrial adoption.133

Seventeen years later, the ownership of employee inventions was considered by a further government-appointed committee chaired by the Deputy-Chair of the 1946 Royal Commission as part of a general enquiry into the UK patent system.134 This time the focus was on non-government employees,135 whom the Swan Committee defined as people ‘employed in the ordinary way by some private individual, firm or company’.136 According to its Report, the inventions of such people and their ownership were properly divided into three classes, consistent with the principles applied by the 1919 and 1946 Royal Commissions and supported by the Lee and Whitley Committees.137 In those classes respectively were: (a) inventions with no connection to the employee’s duties or

133 Whitley Report [4].
134 See Swan Report, 3. The Swan Report was preceded by two interim reports published in 1945 (Cmd 6618) and 1946 (Cmd 6789) respectively.
135 See Swan Report [19].
136 Ibid [20].
137 See ibid [25].
employment, which the Committee described as beneficially owned by the employee; (b) inventions of an employee ‘expressly engaged and paid to exercise his skill in solving a particular problem’, which the Committee described as beneficially owned by the employer;\textsuperscript{138} and (c) inventions that fell somewhere in between, which the Committee described as owned jointly by the employer and employee.\textsuperscript{139} To accommodate (c) it recommended as follows:

[W]here a dispute arises as to the ownership of the invention of any employee, or a patent therefore, the tribunal should be expressly required, in any case in which it is not satisfied that either party is entitled to the whole benefit of the invention, or patent, to make an order apportioning the interest in or benefit derivable from the said invention or patent between the parties, in such manner as it may deem just.\textsuperscript{140}

The recommendation was accepted, resulting in section 56 of the 1949 Act.

That the ownership of employee inventions might need to be shared to ensure justice between the parties, consistent with the view of the Lee Committee, was soon rejected by the English courts. As expressed by Viscount Simonds in \textit{Sterling Engineering},\textsuperscript{141} the legal right to an invention lay with the inventor, unless the invention were made ‘in his employer’s time and with his materials’ pursuant to a duty so to make, in which case it lay with the employer.\textsuperscript{142} The result was to affirm the all-or-nothing approach of the courts, and thereby render section 56(2) ‘virtually a dead letter’ by ensuring that the

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\begin{tabular}{ll}
138 & Ibid. \\
139 & Ibid. \\
140 & Ibid [27]. \\
141 & Above (n 65). \\
142 & Ibid 543.
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\end{flushleft}
condition precedent to its operation would never be satisfied. The Government’s subsequent attempt to revive the section by introducing the Employees’ Inventions Bill failed when the Bill was rejected in the House of Commons.

Of note regarding the Swan Report is its narrow conception of non-government employees, which excluded certain potential inventors such as university academics and professional (eg, medical) employees. That academic and medical researchers were recognized at the time as potential inventors is clear from the history of the DSIR, the Sargant Report, and section 52(1) of the 1949 Act, which protected the ability of all inventors to read and publish papers before or in transactions of ‘a learned society’ without destroying the novelty of their inventions. The basis for that section seems to have been the Government’s assumption that faced with a choice between profit and publication, academic and other researchers could be expected to publish, and this potentially

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143 See Banks Report [447].
144 See HC Deb vol 716, cols 2227–28 (23 July 1965).
145 By ‘academics’ I mean regular academic employees, as distinct for example from contract-based researchers and students. By ‘professional employee’ I mean a person employed in a ‘profession’ as commonly defined; namely, in an occupation ‘in which a professed knowledge of some subject, field, or science is applied; a vocation or career, especially one that involves prolonged training and a formal qualification’ (OED). See also E C Hughes, ‘Professions’ (1963) 92 Daedalus 655–68, 655. On the status of medicine as a profession see A R Dyer, ‘Ethics, advertising and the definition of a profession’ in (1985) 11 J Med Ethics 72–78, 72.
146 See Board of Trade, ‘Report of the Departmental Committee on the Patents and Designs Act and on the Practice of the Patent Office’ (Patent Office Practice) (Chair: CH Sargant) (Cmdnd 3829, 1930–1931) (Sargant Report) [185]-[201].
147 See also Sargant Report [216]-[220].
to the detriment of the public and private industry.\textsuperscript{148} As suggested above,\textsuperscript{149} there is also evidence of its support of that choice, and its recognition of ‘the importance of the freedom of research work and of the freedom of the whole life of the universities’\textsuperscript{150}. Indeed, such recognition can be seen in the Swan Committee’s own suggestion that patents for State-subsidised inventions ought to be treated as ‘a public asset’.\textsuperscript{151} In light of such factors, the Committee’s conception of employees is arguably not surprising. It is also unsurprising given that, in 1947, universities were not yet focused on exploiting industrially their academics’ research,\textsuperscript{152} doctors and other professionals were largely self-employed and collectively dismissive (if not disapproving) of the patent system,\textsuperscript{153} and methods of medical treatment were not yet ‘inventions’ within the meaning of patent law.\textsuperscript{154} Given this, the Swan Report (following the Lee and Whitley Reports) can be said to have preempted the Development of Inventions Act

\textsuperscript{148} See also Lee Report [35] (n 108).
\textsuperscript{149} See text to ns 108, 111–112.
\textsuperscript{150} HC Deb vol 399, col 280 (Mr Edmund Harvey (Combined English Universities)) (19 April 1944). See, eg, n 148. This is also consistent with the centrality of the ‘Haldane principle’ to the Government’s research funding policies: see Keith (n 76) 97; but cf n 112. See also in this regard Nuffield College, Problems of Scientific and Industrial Research: A Statement (OUP 1944) 15.
\textsuperscript{151} See Swan Report [154]–[156].
\textsuperscript{152} For an overview of the history of university efforts in this regard see Cornish (n 4) 13.
\textsuperscript{154} See C & W’s Application (1914) 31 RPC 235 (SG); A & H’s Application (1927) 44 RPC 298 (SG); also Maeder v Busch (1938) 59 CLR 684 (HCA).
1948, as a means of encouraging ‘medical and university researchers’ to overcome their ‘pride in the disinterestedness of [their] research’, and their preference for publishing rather than commercializing their work, by creating a mechanism for their ideas to be patented ‘for other than private profit’.\textsuperscript{155} That mechanism was the National Research Development Corporation: the independent public body created by the Act to close the gap between publicly funded research and private industry by securing the development and exploitation of inventions resulting from such research, and acquiring and managing rights in respect of the same.\textsuperscript{156}

6. The Rights of Employers to Secure Property Rights in Employee Inventions by Express Provision in Employment Contracts

An important question that remained undecided at the time of the 1949 Act was whether employers in any field could secure exclusionary rights in employee inventions by express provision in a contract, rather than relying on the courts’ implication of a term. As the Lee Committee acknowledged, and the origins of the patent-granting power confirms, declaring true and first inventors to hold their inventions on trust for their employers raised ‘difficult legal and constitutional questions’. Nonetheless, by the mid-20\textsuperscript{th} century it was widely assumed that property in both patents and inventions could be contractually created and allocated.\textsuperscript{157} With respect to patents, English courts had long affirmed that a contractual obligation to disclose an invention to an employer and facilitate the employer obtaining a patent was specifically

\textsuperscript{155} HL Deb vol 155, cols 571, 573–574 (Viscount Hall) (29 April 1948).
\textsuperscript{156} See Keith (n 76) 116.
\textsuperscript{157} But cf Triplex (n 54) 214–16.
enforceable. With respect to inventions, the courts had repeatedly described them as ‘property’, and relied on contract and constructive trust to determine their ownership. The result was a body of law supporting the existence of property in inventions, secured if not created by the fact and/or terms of employment. That the initial motivation for that support may have been the pragmatic one of avoiding a declaration of invalidity for a patent obtained in breach of an equitable or contractual duty does not detract from this.

For these reasons, it might be said that by 1949, the early reluctance of Lord Eldon LC to allow contract to be used to create new species of industrial property had been overtaken by a concern with industrial relations, and/or a recognition (and acceptance) by the courts of the capacity of contract to propertise the labour of employees. The point is supported by *British Celanese*. At first instance in that case, Romer J had held that inventions were ‘item[s] of property’ (as choses in action) that could be defined and allocated contractually, aided by the courts’ recognition of a trust. The

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158 Ibid. Note also the suspicion with which some courts met claims based on an implied term to this effect; an example being the Court of Appeal in *Vokes* (n 55). On the US position in the early 20th century, see ‘Hardship in Specific Enforcement of Employers’ Contracts to Assign Inventions’ (1927) 40 Harvard L Rev 1000–3.

159 See text to n 49.


161 Above (n 55).

162 Ibid 569–70.
Court of Appeal agreed with the result but not with his Lordship’s analysis. Specifically, it disagreed that an invention was an item of property such as one usually finds a trust attaching to, but conceded that the language of trust was ‘convenient’ in this context, and that parties to an employment contract could validly constitute an invention ‘as the exclusive property of the company ... as between the two of them’ for the purpose of facilitating the employer obtaining a patent. The view was confirmed by the House of Lords in Sterling Engineering, and seemed to put to bed the ‘constitutional and legal difficulties’ referred to above. Thus it was that in 1970, when the Banks Committee undertook its own analysis of the treatment of employee inventions soon before the introduction of the current Act, it confidently asserted that ‘the law allows complete freedom of contract on this subject.’


In 1970 the Banks Committee published an extensive report into the UK patent system in advance of the introduction of the 1977 Act. Included as Chapter 16 was an analysis of the law pertaining to employee inventions, including a discussion of the practice in four employment fields: Crown service, the nationalised industries, the universities, and private industry. With respect to the law, the Committee described

163 Ibid 581.
164 Ibid.
165 Ibid 584–85.
166 Above (n 65) 547 (Lord Reid). See also Fine Industrial Commodities Ltd v Powling (1954) 53 RPC 253 (Ch) 257.
167 Banks Report [448].
168 Ibid [449]–[453].
the ‘respective rights of employers and employees regarding patentable inventions made by employees’ as having ‘been a matter of controversy over a long period,’\textsuperscript{169} and the erroneous assumption reflected in submissions from the latter that ‘all inventions made by an employee are the property of his employer.’\textsuperscript{170} It went on to clarify the position, relying principally on the opinions of Lord Reid and Viscount Simonds in \textit{Sterling Engineering}.\textsuperscript{171} According to Lord Reid in that case, in an excerpt reproduced in the Committee’s Report, it is ‘inherent in the legal relationship of master and servant that any product of the work which the servant is paid to do belongs to the master’, including where the product is ‘a patentable invention’, subject to contrary provision in the employment contract.\textsuperscript{172} On the juridical basis for the employer’s rights, his Lordship had referred to an ‘implied term in the contract of employment’, by which he had understood ‘a term inherent in the nature of the contract which the law will imply in every case unless the parties agree to vary or exclude it.’\textsuperscript{173} The result was to affirm the contractual basis of an employer’s property rights in respect of inventions (and other intellectual products) made by his employees in the course of their employment. Hence the following statement in the Banks Report:

\begin{quote}
In the absence of contractual provisions to the contrary, the principal test seems to be whether the inventor was or was not employed to make the invention. Sometimes the question is whether the invention was or was not made ‘in the course of employment which it was part of his duty to make’. Is it inconsistent with the good faith which ought properly to be inferred or implied as an obligation arising from
\end{quote}

\textsuperscript{169} Ibid [439].
\textsuperscript{170} Ibid.
\textsuperscript{171} See ibid [440]–[441].
\textsuperscript{172} Ibid [440], quoting from \textit{Sterling Engineering} (n 65) 547.
\textsuperscript{173} Ibid.
the contract of service that the employee should be entitled to retain the invention? Both these tests have been used. But all the circumstances must be considered in each case.\textsuperscript{174}

Of central importance in considering those circumstances were the position of the employee within his employing organisation, the proximity of the invention to his employment duties, and its relation to his employer’s work. This explains the Committee’s statements: (a) that a director of a company or manager of a business with no specific duties has ‘a general duty to forward the interests of the company or business and will accordingly hold any inventions made during their employment (at least so far as they relate to the relevant business) in trust for the employer;’\textsuperscript{175} (b) that a person employed as a research and development engineer ‘who makes an invention which it was his duty to make, will almost as certainly hold such invention as trustee for his employer;’\textsuperscript{176} (c) that if the same engineer were to make an invention ‘which it was not part of his duty to make’, he may well be entitled to its ownership;\textsuperscript{177} and (d) that a person employed to sweep the factory floor who in the course of doing so invents an improvement to one of his employer’s machines will ‘almost certainly’ be entitled to all rights in his invention.\textsuperscript{178} Each of these, the Committee suggested, was a ‘clear-cut situation’, between which certain difficult situations arose, such as ‘[t]he research and development engineer’ who makes an invention in his own time which is ‘nevertheless connected with his employer’s business’, or who ‘use[s] some

\textsuperscript{174} Banks Report [442]. It went on to quote extensively from the judgment from Fine Industrial Commodities (n 166) 257.  
\textsuperscript{175} Banks Report [443].  
\textsuperscript{176} Ibid.  
\textsuperscript{177} Ibid.  
\textsuperscript{178} Ibid [444].
of his employer’s materials and ... time to make an invention totally unconnected with his employer’s business’. There, it affirmed, citing English cases, the employee’s duties would be decisive.\textsuperscript{179} From this discussion it is apparent that the Banks Committee’s understanding of the common law was consistent with the early 19\textsuperscript{th} century principles: a person employed to use his inventive faculties for the benefit of his employer’s business, or to forward its interests, held any inventions which he thereby devised on trust for his employer, at least ‘so far as they relate[d] to the relevant business’, and where it would be ‘inconsistent with the good faith which ought properly to be inferred or implied as an obligation arising from the contract of service that the employee should be entitled to retain the invention’.\textsuperscript{180}

After confirming the common law position, and the fate of section 56(2) of the 1949 Act, the Banks Committee considered the practice in the four employment fields above. Consistent with the freedom of contract believed to exist, those practices varied, especially within private industry. Thus, while the Committee was able to identify a general practice within the universities of not claiming rights in academic employees’ inventions, or of claiming such rights but sharing any resultings benefits with their employees,\textsuperscript{181} it found ‘no common practice in the private sector of industry’: some firms relied on the common law, while others provided for the assignment of employee inventions to the employer, or for a sharing of rights and benefits; some firms operated award

\textsuperscript{179} Ibid [445].
\textsuperscript{180} Ibid [443].
\textsuperscript{181} Ibid [451]. By contrast the arrangements for ‘projects carried out in the Universities, but sponsored by outside bodies’ varied, and were ‘usually specified in the contract between the University and the sponsoring organization’.
schemes for patentable inventions and unpatentable ideas, while others recognised exceptional inventive contributions by other means. 182

After considering the practices of the Crown and employers in nationalised industries, 183 and reviewing evidence from employer and employee groups, 184 the Committee formulated three recommendations, in response to the following three specific questions:

Is there a need for legislation to provide for the case of the employee, including the research and development worker, who has made a patentable invention which, because of the nature of his work would be held at common law to belong to his employer, and, if so, what form should such legislation take? 185...

Should anything be done about the ‘grey area’ identified by the Swan Committee, that is, inventions made by an employee to which both the employer and the employee might reasonably be regarded as having a claim and where there is no contractual provision, and, if so, should Section 56(2) of the Patents Act be amended so as to make it effective? 186...

Is it right that an employer should be free to override by contract the basic common law position on employees’ inventions? 187

Its answer to each of these questions was ‘no’. In response to (1), it recommended against the introduction of a statutory compensation scheme that would entitle employees to a
special reward in respect of the inventions they made, and the
benefit of which their employers owned.\textsuperscript{188} In response to (2),
it recommended against the recognition of joint ownership on
practical grounds – \textit{viz}, it ‘could inhibit the future exploitation
of the invention, particularly with regard to licensing, and
might well create more difficulties than it solved’\textsuperscript{189} – and
proposed that section 56(2) of the 1949 Act be repealed.\textsuperscript{190} And
in response to (3), it affirmed the common law position on
employee inventions as ‘fair’, and recommended that attempts
to override that position be expressly prohibited, other than for
the benefit of an employee, or in respect of an existing
invention.\textsuperscript{191}

In its 1975 White Paper on Patent Law Reform, the
Government communicated its general approval of the Banks
Report,\textsuperscript{192} including its view that the

\ldots the common law on the ownership of inventions made by employees
is clear and straightforward: if an invention is made by an employee
in the course of his employment, the right to patent the invention
belongs to the employer; otherwise, the right to the invention belongs
to the inventor.\textsuperscript{193}

The exception concerned the introduction of a statutory
compensation scheme, which the Government was ‘prepared

\textsuperscript{188} Ibid [464]–[465].
\textsuperscript{189} Ibid [467]. The Committee went on to suggest that ‘the situation
could alternatively be met’ by a system of employer ownership and
employee awards, but concluded ‘that any question of an award
would be better determined in the framework of a voluntary
scheme than by statutory provisions.’
\textsuperscript{190} Ibid.
\textsuperscript{191} Ibid [469].
\textsuperscript{192} See Board of Trade, ‘Patent Law Reform’ (Cmnd 6000, 1975) [34]–
[35].
\textsuperscript{193} Ibid [34].
to give further consideration to’ if there were ‘substantial evidence to show that this would be fairer to employees generally’;194 and to that end it invited ‘further public comment.’195 The result was section 40(1) of the Act, which was described by Lord Elwyn-Jones LC at the time as ‘a major innovation’ that corrected an aspect of employment law ‘much criticized by inventors as being unclear and as leaning too heavily in favour of the employer’.196

As will be apparent, sections 40 to 42 contained the only substantive changes to the law concerning employee inventions, and were introduced to off-set the effects of section 39. As Lord Nelson put it, that section represented the Legislature’s attempt ‘to codify in a few lines the accumulated common law experience’197 so as to make it less ‘difficult to ascertain’.198 While some doubted the sense of such attempt, only Lord Elwyn-Jones LC questioned the drafting of section 39 itself. In his view it was insufficiently precise, and would have been improved by clearly distinguishing inventions: (a) devised by persons employed to research or invent, or specifically directed to inventive tasks; (b) devised with the inventor’s employer’s ‘materials, aid or assistance’, or on his employer’s time; and (c) the creation of which had no connection to the inventor’s employment duties. According to the Lord-Chancellor, an employer should only have a right to the whole interest in the first type of invention: in the second it

194 Ibid [37].
195 Ibid.
197 HL Deb vol 382, cols 1160-61 (Lord Nelson) (5 May 1977).
198 HC Deb vol 932, col 1442 (Mr Clinton Davis) (25 May 1977). The Legislature was likely influenced in this regard by the employee confusion described in the Banks Report; see n 170 and accompanying text.
should have a shop-right and an option to purchase further rights, and in the third a prior right of purchaser.\textsuperscript{199}

The question remains as to the policy rationale for the Legislature’s support of the common law. The rationale which emerges from the Hansard debates – consistent with the view of the Banks Committee, and the rationale for section 11(2) of the CDPA\textsuperscript{200} – is the longstanding view that business efficacy, industrial relations, and considerations of private justice required certain employers to receive the benefits of the productive (including intellectual) labour for which they had remunerated their employees.\textsuperscript{201} That employers were given full control over the benefits of employee inventions rather than a licence to exploit such inventions for the purposes envisaged when they (or the contracts) were made – consistent with the suggestion of Lord Elwyn-Jones LC – was, in 1977, unsurprising; pragmatism having long been regarded as more important than the ‘difficult legal and constitutional questions’ which declarations of employers’ property in employee inventions raised.\textsuperscript{202} Thus, just as the Court of Appeal in \textit{British Celanese} had accepted the language of ‘property’ and ‘ownership’ as an expedient way of ‘getting [an] invention from … the mind of the inventor into a patent in the name of the [employer]’ by means of a trust,\textsuperscript{203} so too the Legislature in 1977 used the corresponding legal concepts to achieve a more robust version of the same result. Similarly in the context of copyright, as emerges from the report of the Gregory

\textsuperscript{200} See HL Deb vol 490, cols 879–917 (30 November 1987). On CDPA s 11(2) see n 2.
\textsuperscript{201} See ibid. See also HL Deb vol 379, col 255 (Lord Lloyd) (24 January 1977).
\textsuperscript{202} See text to n 124.
\textsuperscript{203} \textit{British Celanese} (n 55) 584.
Committee, the reason that employers were granted copyright in their employees’ works, notwithstanding the decision in *Shepherd v Conquest*, was that a contractual licence would have produced a complex and impracticable result, and left employers vulnerable to third party claims. On the other hand, to the extent that granting employers copyright created a disjunctive between the terms of and rationale for the relevant legislation, it was offset by the journalist’s exception described above. In 1977 the Whitford Committee recommended that this exception be extended to have general effect. That recommendation was supported by the Government in 1981, and described as consistent with the fairly generally accepted view ‘that an employer is entitled to expect that copyright in a work produced by his employee as part of the daily activity for which he is paid should belong to him, at any rate for use in his business’. Nonetheless, it was not included in the Bill for the CDPA. Nor was an equivalent right proposed for the

204 Board of Trade, ‘Report of the Copyright Committee’ (Chair: HS Gregory) (Cmd 8662, 1952) (Gregory Report).
205 See text to n 37. Under this exception, employees retained the right to restrain the unauthorized publication of works they had created for inclusion in a newspaper, magazine or similar periodical in any other forum. See Gregory Report [268], [271].
206 See Copyright Act 1911, s 5(1)(b); Copyright Act 1956, s 4(2). The Gregory Committee rejected submissions that s 5(1)(b) ought to be enlarged or abandoned, recommending instead that it be clarified and retained; see Gregory Report [273].
207 See Board of Trade, ‘Copyright and Designs Law: Report of the Committee to consider the Law on Copyright and Designs’ (Chair: Mr Justice Whitford) (Cmd 6732, 1977) (Whitford Report) [574].
209 Ibid.
Patents Act, due, it would seem, to section 40(1), which was aimed at addressing the same legislative gap.\textsuperscript{210}

\textit{8. Conclusion: Section 39(1) and the Paradigm Employee}

In 1977, when the Patents Act took effect, the inventor whom law and policy makers had in contemplation was an employee in private industry. In the case of the Banks Committee, this is apparent among other things from: (a) the examples used to illustrate the Committee’s analysis, all of which involved private sector employees;\textsuperscript{211} (b) the Committee’s understanding of employees’ duties ‘to forward the interests’ of their employers, which was confined to the interests of the employers’ ‘business’;\textsuperscript{212} (c) the Committee’s description of the employer groups from which it received submissions as ‘industrialists’;\textsuperscript{213} and (d) the express starting point for the Committee’s recommendations, which was the importance ‘to the country that inventive ability should be encouraged to the full’,\textsuperscript{214} and the fact that ‘most inventors are today employed in

\textsuperscript{210} A proposal by Lord Lloyd to include an equivalent provision in the CDPA for reasons of ‘social justice’ and to ‘encourage the creation of more ideas in industry’ was rejected and consequently withdrawn. According to the Minister, Lord Beaverbrook, the proposal would have undermined the rationale for s 11(2) by entitling ‘an employed author to a share in the fruits of every copyright that belongs to his employer.’ When the error in his understanding of the proposal’s effect was noted, he criticized its unclear drafting. See HL Deb vol 490, cols 879–917 (30 November 1987). The capriciousness of the result is underlined by the dispute among the drafters over whether copyright ought to vest in employers (as distinct from authors) at all.

\textsuperscript{211} See Banks Report [444]–[445].

\textsuperscript{212} See ibid [443], referred to in text to n 175.

\textsuperscript{213} Banks Report [461].

\textsuperscript{214} Ibid [464].
industry.’215 In the case of the Legislature, it is apparent from the consistent description of and allusion to inventors in the Hansard debates as employees of a ‘firm’ or ‘industry’.216 So too the inventor around whom the common law principles governing ownership of employee inventions had been formulated was a private sector employee, as was the inventor around whom the Crown regulations governing ownership of State-supported inventions had been developed. Given this, it seems reasonable to conclude that section 39 is built on the same paradigm employee as sections 40 to 41 were declared in Shanks v Unilever plc to be.

On the other hand, if there is one thing that emerges clearly from the historical analysis above, it is the fact-intensive nature of this area of law, and the sensitivity on the part of courts and policy makers to the context in which the invention had been devised: the nature of the inventor’s particular employment, and the relationship of the invention to each party’s work. Such sensitivity to context was consistent with the early 19th century principles, and their basis in the considerations of public interest and private justice earlier discussed.

In conclusion, it is submitted that the common law experience of employee inventions which the Legislature expressly sought to codify in section 39 was premised on a context-specific approach to ownership. The implication of this for present purposes is that the application of that section might properly take account of the same contextual factors outlined above. This is consistent with the acceptance of

215 Ibid.
Falconer J in *Harris’s Patent*,\(^\text{217}\) that in applying the provisions of section 39 ‘guidance may be obtained from [pre-1977] cases as to how courts have assessed the duties of the employee in a particular case and particular circumstances’.\(^\text{218}\) If accepted, it provides a possible ‘rational reason’ for departing from the paradigm case of the industrial employee when determining the ownership of inventions under section 39, as at least one post-1977 court has done. That was in *Greater Glasgow Health Board’s Application*,\(^\text{219}\) where the Hearing Officer had held that an optical device invented by a junior registrar out of hours and at home was owned by his employer, the Western Infirmary Tennent Institute, on the basis of his contractual duties to treat patients and undertake research, the performance of which could reasonably be expected to result in ‘original ideas and … invention’ in satisfaction of section 39(1).\(^\text{220}\) On appeal Jacob J overturned this decision, reaching instead the ‘very, very clear conclusion’ that at the time of devising the invention the registrar ‘was not acting in the course of his normal duties’ within the meaning of the Act.\(^\text{221}\) Were it otherwise, he said, it would be ‘the duty of this doctor, and probably every other registrar in the country, to devise if he can new ways of diagnosing and treating patients’.\(^\text{222}\) So too if the Hearing Officer were correct in finding that an invention ‘might reasonably be expected to result from the [registrar’s] carrying out of his duties’, ‘considerable complications and difficulties’\(^\text{223}\) could arise:

\(^{217}\) Above (n 10).
\(^{218}\) Ibid 28.
\(^{219}\) [1996] RPC 207 (Pat).
\(^{220}\) Ibid 219.
\(^{221}\) Ibid 222.
\(^{222}\) Ibid 223.
\(^{223}\) Ibid.
Doctors frequently devise new and better treatments. Some of those will involve patentable inventions. Most doctors are employed. If, just because they are employed and because the invention could be used for the purpose of their employment, the invention belongs to the employer then many doctors would be placed in a very difficult position – ‘Can they publish what they have devised?’ ‘Do they have to get their employer’s permission to publish?’ At present they do not. I do not see why they should in the future.224

His Lordship’s conclusion was that just as justice and commonsense had been held by the Court of Appeal in Stephenson Jordan & Harrison Ltd v MacDonald & Evans225 to support academics’ ownership of copyright in their lectures, so too they required that employee doctors own their inventions.226 Implicit was a view of the principle in each case as being the same; namely, the importance of protecting academic and medical professional conventions, including the freedom to teach and publish research, unfettered by managerial and commercial constraints.227 As I have elsewhere suggested,228 one reason for that importance is the need to ensure the ability of academics and doctors to ‘place concern for the public good ahead of their [or their employer’s] self-interest’;229 a need recognised in the history above.

Hence my suggestion, that while the ‘rational reason’ advanced above is based on an argument from legislative intent – namely, the intent of the Legislature to codify the

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224 Ibid.
225 (1952) 69 RPC 10 (CA).
226 Greater Glasgow (n 219) 212.
229 Dyer (n 145) 73.
experience of common law\textsuperscript{230} – it is supported by additional legal and policy considerations. They include the special issues raised by the recognition of exclusionary rights of ‘property’\textsuperscript{231} in respect of academic and professional inventions,\textsuperscript{232} which pre-1977 courts and policy makers acknowledged,\textsuperscript{233} and the possibility of morality- and policy-based limits on such rights.\textsuperscript{234} They also include the inappropriateness and undesirability of an ownership regime based on a paradigm in which not all employment relationships can be readily or satisfactorily accommodated. Such considerations have particular weight if that paradigm is to become the means for ‘sewing the fly buttons on’ a statute widely regarded by post-1977 courts as having been poorly drafted,\textsuperscript{235} as it raises the risk of the common law principles which section 39 was intended to enshrine becoming subverted by parliamentary caprice. In this regard, it is difficult not to recall the remarks by Viscount Simonds in \textit{Sterling Engineering}, that the effect of the House of Lords construction of section 56(2) of the 1949 Act in ‘reduc[ing] its operation to negligible proportions’ and

\begin{itemize}
\item \textsuperscript{230} One might also refer to the Legislature’s presumed intent, being its intent in light of the changes that have occurred since the Banks Committee’s declaration in 1970 that ‘most inventors are employed in industry’.
\item \textsuperscript{231} See Gray (n 31), defining ‘property’ as ‘control over access’, and thus as constituted by ‘excludability’.
\item \textsuperscript{232} See n 219.
\item \textsuperscript{233} In the context of copyright see, eg, \textit{Shepherd v Conquest} (n 38), Whitford Report [569]; \textit{Stephenson Jordan} (n 225); \textit{Noah v Shuba} [1991] FSR 14 (HCJ). In the context of patents see, eg, text to ns 108, 111, 112, 150, 153.
\item \textsuperscript{234} See Gray (n 31) 280 et seq.
\item \textsuperscript{235} See, eg, \textit{Shanks} (n 5) [9]; \textit{Kelly v GE} [2009] EWHC 181, [2009] WLR (D) 50 (Pat) [7]; \textit{Liffe} (n 10) [102] (describing the second limb of section 39(1)(a) as ‘particularly incompetent wording, even by the standards of the Patents Act 1977.’)
\end{itemize}
disappointing expectations regarding its scope was ‘not the affair of the courts’, and was therefore not a reason for resiling from that construction.236

Two questions are central to this area of law. The first is who, as between employers and employees, have rights in respect of employee inventions? And the second is what are the nature of those rights, and their enforceability outside the employment relationship? These questions engage several areas of public and private law, including constitutional law, intellectual property, employment law, personal property, competition law, and the law of obligations. Given this especially, it is submitted that they deserve more considered attention from the Legislature and commentators than they have to date received.

236 Above (n 65) 545.