

JURIDIFYING THE SELF-REPLICATING TO COMMODIFY THE BIOLOGICAL NATURE FUTURE

Patents, Contracts and Seeds

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This article traces recent decisions about patents over seeds to examine the special property rules that maintain controls over the second and subsequent generation (or progeny) seeds derived from planting and harvesting the first-generation seeds. The analysis demonstrates (1) that licences might be used to avoid patent exhaustion and control the future uses of self-replicating seeds, and (2) failing this, that self-replication is a separate (re)making of the invention that maintains the patent and control. The effect of maintaining controls through contract and patents is then to juridify the self-replicating to commodify the biological nature future.

Traditionally, the composition, form and content of the phenomena of the physical world (or ‘nature’) have been traded, bought and sold, with each subsequent owner holding a complete title to decide how and what to do with their little piece of tangible nature.¹ The advances of technology and the advent of intellectual property in relatively recent times have confounded the tangible with recognition of its intangible components, and formally controlled dealings with the idea embodied in the natural product or process, together with control over how that product or process might be used.² The intellectual property traditionally being exploited relies on the privileges (sometimes called ‘rights’) that are conferred by statute.³ These privileges traditionally have then been sold or licensed to others through contracts so

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¹ How the common property of humankind evolved to become private property ‘remains a puzzle ... [although the proposition that] ... private property is more cost-beneficial once demand pressures are high enough, remains the conventional wisdom’: Dagan and Heller (2001), p 561. There are other, more persuasive, accounts for the evolution of property over genetic materials: see Safrin (2007); Raustiala and Victor (2004).

² The other notable advance comparable to intellectual property has been the Genetic Use Restriction Technologies (GURTs), although they are not considered in this article: see Caplan (2007).

³ The scope and duration of intellectual property has expanded dramatically in recent times, albeit ‘property’ limits may have consequences for these: see, for example, Carrier (2004).

that products embodying the intellectual property can be traded, bought and sold. According to this analysis the property rules define the privileges to resources, and contracts provide for the transfer and use of privileges.

The most engaging recent development in intellectual property has been in this area of licensing and the body of laws developed to regulate commercial dealings with goods and services. Instead of merely relying on the statutory privileges conferred by statute, the intellectual property owners have taken advantage of a range of other recognised contract laws so as to avoid fair use, avoid exhaustion, prevent on-sale to secondary markets, avoid (implied) warranties, protect vertical integrations, punish reluctant customers and so on. The most immediate effects are to avail what might otherwise be breaches of the contract's terms and conditions to a patent strict liability standard, make available the remedies of patent infringement (being treble damages in some jurisdictions)⁴ and sustain statutory privileges that apply to all (including innocent infringers). It is these contracts that have the significant effect for our purposes – to enable intellectual property holders to control uses of the property and the objects embodying the intellectual property in the hands of others. In effect, intellectual property owners arguably have extended the scope of their intellectual property privileges beyond the initial statutory privileges, using those privileges as a basis for controlling the first-generation seeds through contracts, and then as a basis for controlling subsequent self-replicating generations through the interplay between patents and contracts. This article examines this vision of private ordering in the context of seed licensing, with the basic argument being that the use of licences deploys another aspect of law to reach beyond the intellectual property grant to upset important public policy choices embodied in patent law (premised on an established balance of interests between owners and others) and consequently further bound nature. In short, this is a change in the relationship between intellectual property owners and the broader public in the domain of nature that reorders or redefines the privileges according to contract.

The next section of the article provides a context of the disputes over the uses of patented seeds by farmers and the saving of harvested seeds (the products of self-replication) for future uses. The analyses demonstrate contractual controls over the uses of patent protected first generation seeds including limiting the saving of subsequent generations (progeny) through purchase contracts that avoid exhaustion. The following section then provides a brief overview of the patent pact. Importantly, patents in Australia and the United States share their main features with some significant insights for Australian patent law from the United States decisions. The article then goes on to provide a detailed analysis of the laws of exhaustion in Australia and the United States, to demonstrate that in some circumstances a patent holder can avoid exhaustion in the ways they deal with their patent protected products. This is followed by a discussion considering the credibility of various arguments relied on in the various

⁴ See, for example, *In re Trantham*, 304 BR 298, 303 (2004).

decisions to show that contracts can and do avoid exhaustion by imposing conditions on sale. Failing this, the courts have also found a significant distinction between ‘using’ and ‘making’ patented inventions, and that this distinction applied to self-replicating seeds means that contracts can then be imposed on subsequent owners and users to control trade (imposing ‘intra-brand’ and ‘inter-brand’ vertical restraints on trade). The article concludes that contracts combined with patents have delivered control of the self-replicating seeds and control over the future uses of those seeds and their progeny – in effect commodifying the biological nature future.

The Problem

The classic problem posed by seed licences was illustrated in the dispute reported in *Monsanto Company v McFarling* (*McFarling*) and *Monsanto Company v Scruggs* (*Scruggs*) in the US Court of Appeals, Federal Circuit and *Monsanto Company v Bowman* (*Bowman*) in the District Court.⁵ In each case, Monsanto, under an agreement with various seed sellers, authorised the manufacture of seeds for sale to farmers who incorporated the Monsanto technology into their germplasm.⁶ As a part of this restrictive arrangement, the seed sellers were *only* allowed to sell seeds to farmers who also sign another agreement called a ‘Technology Agreement’ that was characterised as a ‘licence’:⁷

Monsanto’s restrictions on growers include: (1) requiring growers to use only seed containing Monsanto’s biotechnology for planting a single crop (‘exclusivity provision’); (2) prohibiting transfer or re-use of seed containing the biotechnology for replanting (‘no replant policy’); (3) prohibiting research or experimentation (‘no research policy’); and (4) requiring payment of a ‘technology fee’.⁸

In *Scruggs*, Scruggs was using the Monsanto technology in soybeans and cotton,⁹ and in *McFarling*, McFarling and in *Bowman*, Bowman were

⁵ *Monsanto Company v Bowman*, 686 F.Supp.2d 834 (2009); *Monsanto Company v Scruggs*, 459 F.3d 1328, 1333 (2006); *Monsanto Company v McFarling*, 302 F.3d 1291 (2002). This is no equivalent litigation in Australia, even though the contractual arrangements details in these disputes have been adopted and applied in Australia, suggesting that the same problems arise.

⁶ *Monsanto Company v Bowman*, 686 F.Supp.2d 834, 835-836 (2009); *Monsanto Company v Scruggs*, 459 F.3d 1328, 1333 (2006); *Monsanto Company v McFarling*, 302 F.3d 1291, 1293 (2002).

⁷ *Monsanto Company v Bowman*, 686 F.Supp.2d 834, 836 (2009); *Monsanto Company v Scruggs*, 459 F.3d 1328, 1333 (2006); *Monsanto Company v McFarling*, 302 F.3d 1291, 1293 (2002).

⁸ *Monsanto Company v Scruggs*, 459 F.3d 1328, 1333 (2006). See also *Monsanto Company v Bowman* 686 F.Supp.2d 834, 836 (2009); *Monsanto Company v McFarling*, 363 F.3d 1336, 1339 (2004); *Monsanto Company v McFarling*, 302 F.3d 1291, 1293 (2002).

⁹ *Monsanto Company v Scruggs*, 459 F.3d 1328, 1333 (2006).

using the Monsanto technology in soybeans.¹⁰ While there were some differences in the patented technology embodied in the germplasm used, the 'Roundup Ready' component was the same patented invention, being plants genetically modified to resist an herbicide (a glyphosate marketed by Monsanto as the brand 'Roundup'),¹¹ the seeds of such plants, their modifying genes and the methods of producing such plants.¹²

In *McFarling*, McFarling appealed against the decision awarding Monsanto an injunction preventing McFarling from using the patent-protected plant genes and seeds from crops obtained from Monsanto.¹³ McFarling had purchased some of Monsanto's patent-protected soybean seeds under a 'Technology Agreement' and paid a licence fee.¹⁴ The terms of the 'Technology Agreement' included that the seeds would be used 'for planting a commercial crop only in a single season' and that the licensee would not 'save any crop produced from this seed for replanting, or supply saved seeds to anyone for replanting'.¹⁵ McFarling did save some seeds from his crop and then used those seeds the following cropping season, and repeated this activity in subsequent cropping seasons.¹⁶ McFarling did not pay Monsanto any fees for the saved seeds and their subsequent use in cropping.¹⁷

Monsanto initially filed a suit alleging patent infringement and breach of contract.¹⁸ Importantly, McFarling did not dispute that he had violated the terms of the 'Technology Agreement' and stated that he intended to continue doing so unless prevented from doing so by a court.¹⁹ The US District Court for the Eastern District of Missouri awarded Monsanto a preliminary injunction prohibiting McFarling from using Monsanto's patented plant genes and seed obtained from crops grown from Monsanto patented seed.²⁰ On appeal, McFarling argued in part that the 'Technology Agreement' required him to purchase new seed each season from Monsanto and that this unreasonably broadened the patent grant as he was well able to produce his own seed from his existing purchases of Monsanto's patent-protected

¹⁰ *Monsanto Company v Bowman*, 686 F.Supp.2d 834, 835 (2009); *Monsanto Company v McFarling*, 302 F.3d 1291, 1293 (2002).

¹¹ 'ROUNDUP': Australian Registered Trade Mark 227919.

¹² *Monsanto Company v Bowman*, 686 F.Supp.2d 834, 835-836 (2009); *Monsanto Company v Scruggs*, 459 F.3d 1328, 1332-1333 (2006); *Monsanto Company v McFarling*, 302 F.3d 1291, 1293 (2002).

¹³ *Monsanto Company v McFarling*, 302 F.3d 1291, 1293 (2002).

¹⁴ *Monsanto Company v McFarling*, 302 F.3d 1291, 1293 (2002).

¹⁵ *Monsanto Company v McFarling*, 302 F.3d 1291, 1293 (2002).

¹⁶ *Monsanto Company v McFarling*, 302 F.3d 1291, 1293 (2002).

¹⁷ *Monsanto Company v McFarling*, 302 F.3d 1291, 1293 (2002).

¹⁸ *Monsanto Company v McFarling*, 302 F.3d 1291, 1294 (2002).

¹⁹ *Monsanto Company v McFarling*, 302 F.3d 1291, 1293 and 1296 (2002).

²⁰ *Monsanto Company v McFarling*, 302 F.3d 1291, 1292 (2002). See also *Monsanto Company v McFarling*, No 4:00CV84 CDP (2002).

seeds.²¹ The majority, Newman and Bryson JJ, rejected this proposition finding that other seeds were available to McFarling and that Monsanto's 'Technology Agreement' applied to 'the purchased seed for the purpose of growing crops and not for the purpose of producing new seed'.²² Thus:

A purchaser's desire to buy a superior product does not require benevolent behaviour by the purveyor of the superior product. Nor does an inventor of new technology violate the antitrust laws merely because its patented product is favoured by consumers.²³

McFarling's challenge was also, in part, that the 'Technology Agreement' violated the doctrines of patent exhaustion (or first sale), and the proposition that 'when a patented product has been sold the purchaser acquires "the right to use and sell it, and the authorized sale of an article which is capable of use only in practicing the patent is a relinquishment of the patent monopoly with respect to the article sold"'.²⁴ As a consequence, McFarling asserted that Monsanto's sale of the patent-protected seeds to McFarling exhausted the 'exclusive rights' over the seeds and products, and that this could not be restricted by the 'Technology Agreement'.²⁵ The majority accepted Monsanto's response that the seeds were not sold as, through the 'Technology Agreement', Monsanto had merely sold the use rights and not the rights to construct new seeds.²⁶ The majority relied on the earlier Federal Circuit decision in *Mallinckrodt Inc v Medipart Inc (Mallinckrodt)* for the proposition that 'use of a patented product "in violation of a valid restriction may be remedied under the patent law, provided that no other law prevents enforcement of the patent"'.²⁷ The conclusion was that Monsanto's authorised sale of the patent-protected seeds with the 'Technology Agreement' restriction did not exhaust the 'exclusive rights', but instead was a limited permission to use the seeds for specific purposes according to contract laws that might be remedied under patent law.²⁸

²¹ *Monsanto Company v McFarling*, 302 F.3d 1291, 1297 (2002).

²² *Monsanto Company v McFarling*, 302 F.3d 1291, 1298 (2002). This patent has been litigated extensively, finding that planting seeds containing the invented sequences is an infringement: see *Monsanto Company v David*, 516 F.3d 1009 (2008); *Monsanto Company v Parr*, 545 F.Supp.2d 836 (2008); *Monsanto Company v Vanderhoof*, 2007 WL 1240258 (2007); *Monsanto Company v Strickland*, 2007 WL 3046700 (2007); *Monsanto Company v Good*, 2004 WL 1664013 (2003); *Monsanto Company v Trantham*, 156 F.Supp.2d (2001); *Monsanto Company v Dawson*, 2000 WL 33953542 (2000) and so on.

²³ *Monsanto Company v McFarling*, 302 F.3d 1291, 1298 (2002).

²⁴ *Monsanto Company v McFarling*, 302 F.3d 1291, 1298 (2002) citing *United States v Univis Lens Co*, 316 US 241, 249 (1942).

²⁵ *Monsanto Company v McFarling*, 302 F.3d 1291, 1298 (2002).

²⁶ *Monsanto Company v McFarling*, 302 F.3d 1291, 1298-1299 (2002).

²⁷ *Monsanto Company v McFarling*, 302 F.3d 1291, 1298 (2002) citing *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700, 701 (1992).

²⁸ *Monsanto Company v McFarling*, 302 F.3d 1291, 1299-1300 (2002).

In dissent, Judge Clevenger reasoned that the forum selection clause imposed by Monsanto in the standard-form 'Technology Agreement' was adhesive and denied McFarling his constitutional rights.²⁹ The significance of the dissent, however, was in detailing the kinds of restrictions that might be imposed by contract that were not a part of the patent's 'exclusive rights':

No one perusing the Technology Agreement can doubt that its terms are decidedly one-sided in Monsanto's favour. A farmer signing the 1998 Technology Agreement did not merely agree to submit to the jurisdiction of the Eastern District of Missouri and to refrain from saving and replanting seed. Sale of Roundup Ready seed to the farmer was made on the condition that the farmer shall not use on that crop the glyphosate herbicides of any of Monsanto's competitors. The farmer further agreed that Monsanto's damages for saving and replanting seed shall include, in addition to Monsanto's other remedies, liquidated damages based on 120 times the applicable Technology Fee. The farmer further agreed to bear the costs of Monsanto's suit against him by paying all of Monsanto's legal fees and costs. By the terms of the Technology Agreement, all that the farmer received in exchange for these promises was the 'opportunity' to purchase and plant Roundup Ready seed and the 'opportunity' to participate in Monsanto's crop insurance programs. Should the farmer violate the terms of the Technology Agreement, these rights (which are not transferable without Monsanto's consent) terminate immediately and permanently, although the farmer's obligations to Monsanto do not. I do not mean to suggest that the substantive terms of the Technology Agreement are unenforceable. A patentee has every right to license its technology on only the most favourable terms possible and Monsanto is no exception.³⁰

The essential problem faced by McFarling was that Monsanto never transferred the bundle of rights of property,³¹ but instead sold only a part of that bundle and as a 'use' right for a limited period – 'for planting a commercial crop only in a single season'.³² This was then reinforced by the licensee undertaking not to 'save any crop produced from this seed for replanting, or supply saved seeds to anyone for replanting'.³³ Monsanto had taken its patent's 'exclusive rights' to control the sale and use of its patent-protected products and combined this with contract law to dramatically extend the reach of those patent's 'exclusive rights'.

This decision was confirmed in *Scruggs*, where another farmer challenged Monsanto's limitation on seed saving and replanting.³⁴ In this

²⁹ *Monsanto Company v McFarling*, 302 F.3d 1291, 1306–7 (2002).

³⁰ *Monsanto Company v McFarling*, 302 F.3d 1291, 1300–1 (2002).

³¹ This is probably the broadly accepted legal understanding of property: see, for example, Penner (1996).

³² *Monsanto Company v McFarling*, 302 F.3d 1291, 1293 (2002).

³³ *Monsanto Company v McFarling*, 302 F.3d 1291, 1293 (2002).

³⁴ *Monsanto Company v Scruggs*, 459 F.3d 1328 (2006).

case, Scruggs bought seeds containing Monsanto's patent-protected invention (in this case, also including insect resistance in addition to herbicide resistance), planted those seeds, saved the harvest and planted subsequent generations.³⁵ The important difference was that Scruggs *did not* sign the 'Technology Agreement'.³⁶ The seed company from which Scruggs bought the seed was not Monsanto but rather a company licensed to sell the Monsanto seeds, including the requirement to sell them with the signed 'Technology Agreement'.³⁷ Monsanto filed an infringement suit and was awarded a permanent injunction.³⁸ Scruggs lodged an appeal arguing, in part, that Monsanto's patent was exhausted because Scruggs had purchased the Monsanto seeds in an unrestricted sale.³⁹ Scruggs' argument was that because his purchase was an unrestricted sale, the patent exhausted on sale.⁴⁰ Despite this, Circuit Judge Mayer, with Circuit Judge Dyk concurring on this issue,⁴¹ rejected this proposition:

The doctrine of patent exhaustion is inapplicable in this case. There was no unrestricted sale because the use of the seeds by seed growers was conditioned on obtaining a license from Monsanto. Furthermore, the "first sale" doctrine of exhaustion of the patent right is not implicated, as the new seeds grown from the original batch had never been sold' ... Without the actual sale of the second generation seed to Scruggs, there can be no patent exhaustion. The fact that a patented technology can replicate itself does not give a purchaser the right to use replicated copies of the technology. Applying the first sale doctrine to subsequent generations of self-replicating technology would eviscerate the rights of the patent holder.⁴²

More recently, in *Bowman* a farmer bought seeds from a grain elevator (where seeds are delivered as a commodity after harvest for transport to markets) for the purposes of planting and harvesting a second-season crop.⁴³ Specifically, Bowman conformed with Monsanto's licensing arrangements for the first-season crop, but then planted a second-season crop using mixed

³⁵ *Monsanto Company v Scruggs*, 459 F.3d 1328, 1333 (2006).

³⁶ *Monsanto Company v Scruggs*, 459 F.3d 1328, 1333 (2006).

³⁷ *Monsanto Company v Scruggs*, 459 F.3d 1328, 1333 (2006).

³⁸ *Monsanto Company v Scruggs*, 459 F.3d 1328, 1333 (2006).

³⁹ *Monsanto Company v Scruggs*, 459 F.3d 1328, 1335 (2006).

⁴⁰ *Monsanto Company v Scruggs*, 459 F.3d 1328, 1335–36 (2006), citing *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700, 701 (1992). Notably, the decision also refers to the decision in *LG Electronics Inc v Bizcom Electronics Inc* 453 F. 3d 1364 (2006) that was expressly overruled on appeal in the Supreme Court in *Quanta Computer Inc v LG Electrics Inc*, 553 US 617, 638 (2008).

⁴¹ *Monsanto Company v Scruggs*, 459 F.3d 1328, 1342 (2006).

⁴² *Monsanto Company v Scruggs*, 459 F.3d 1328, 1336 (2006) citing *Monsanto v McFarling*, 302 F.3d 1291, 1299 (2002).

⁴³ *Monsanto Company v Bowman* 686 F.Supp.2d 834, 835 (2009).

seeds, some of which contained Monsanto's patented technology.⁴⁴ Bowman also saved some of the seed from the second season crop for planting in subsequent seasons' second-season crop.⁴⁵ Monsanto alleged patent infringement.⁴⁶ Bowman argued that:

when the soybeans from a licensed Roundup Ready crop are harvested and sold to a grain elevator or dealer, they are sold without restriction, mixed with all other soybean crops in from the area and, therefore, when purchased and used by farmers to plant as seed (commodity soybeans) for another crop, they are not protected by patent.⁴⁷

The District Court followed the earlier decisions in *McFarling* and *Scruggs* and found that Bowman had infringed Monsanto's patent because the seeds from the grain elevator containing the patented invention were expressly excluded by agreement from being sold for planting: 'No unconditional sale of the Roundup Ready trait occurred because the farmers could not convey to the grain dealers what they did not possess themselves.'⁴⁸

The significance of these decisions is to change the relationship between farmers and seed sellers, and to the kinds of relationships asserted over natural living organisms. In short, *McFarling*, *Scruggs* and *Bowman* establish that a patent can extend to subsequent generations of seeds, and that a contract can avoid the exhaustion of the patent's 'exclusive rights'. The next part examines the patent pact.

The Patent Pact

Around the world, patents generally comply with the minimum standards required by the World Trade Organization's Agreement on Trade-Related Aspects of Intellectual Property Rights (or TRIPS). Australia has adopted these standards,⁴⁹ and through the Australia-United States Free Trade Agreement has aligned Australian and US patent law and practice.⁵⁰ The effect has been to enhance the significance of US patent jurisprudence in Australia, and signal the likely direction of patent laws and practices in Australia following the lead of the United States.⁵¹

⁴⁴ *Monsanto Company v Bowman* 686 F.Supp.2d 834, 835–36 (2009).

⁴⁵ *Monsanto Company v Bowman* 686 F.Supp.2d 834, 836 (2009).

⁴⁶ *Monsanto Company v Bowman* 686 F.Supp.2d 834, 836 (2009).

⁴⁷ *Monsanto Company v Bowman* 686 F.Supp.2d 834, 836 (2009).

⁴⁸ *Monsanto Company v Bowman* 686 F.Supp.2d 834, 839 (2009) citing *Monsanto Company v Scruggs*, 459 F.3d 1328, 1336 (2006).

⁴⁹ See *Patents (World Trade Organization Amendments) Act 1994* (Cth).

⁵⁰ *Australia-United States Free Trade Agreement* [2005] ATS 1, Art 17.9(14).

⁵¹ For an overview of the effect of the Australia–United States Free Trade Agreement see Lawson and Pickering (2004).

The Australian *Patents Act 1990* (Cth) provides for both a ‘standard patent’⁵² and an ‘innovation patent’⁵³ that ‘a patent gives the patentee the exclusive rights, during the term of the patent, to exploit the invention and to authorise another person to exploit the invention’.⁵⁴ This also extends to independent invention of the patent protected product or process.⁵⁵ The ‘exclusive rights’ are ‘personal property and are capable of assignment and of devolution by law’.⁵⁶ The term ‘exploit, in relation to an invention, includes’:

- (a) where the invention is a product – make, hire, sell or otherwise dispose of the product, offer to make, sell, hire or otherwise dispose of it, use or import it, or keep it for the purpose of doing any of those things; or
- (b) where the invention is a method or process – use the method or process or do any act mentioned in paragraph (a) in respect of a product resulting from such use.⁵⁷

A patent is available following an application for an ‘invention’⁵⁸ that satisfies the threshold criteria of being suitable subject-matter,⁵⁹ non-obviousness,⁶⁰ novel⁶¹ and adequately described.⁶² There is some exclusion from patentability (so there is no ‘exclusive right’). These are ‘[h]uman beings, and the biological processes for their generation’;⁶³ ‘invention the use of which would be contrary to law’;⁶⁴ a mere mixture of known ingredients for use as food or medicine or a process for producing such an admixture;⁶⁵ inventions involving the design, production, operation, testing or use of equipment or plant for the production, enrichment, the reprocessing of

⁵² *Patents Act 1990* (Cth), s 61 and Sch 1 (‘standard patent’).

⁵³ *Patents Act 1990* (Cth), s 62 and Sch 1 (‘innovation patent’).

⁵⁴ *Patents Act 1990* (Cth), s 13(1).

⁵⁵ The *Patents Act 1990* (Cth), ss 13(1) and 43(2) gives ‘exclusive rights’ to the first to file’s ‘priority date’. See also Vermont (2006).

⁵⁶ *Patents Act 1990* (Cth), s 13(2).

⁵⁷ *Patents Act 1990* (Cth), s 3 and Sch 1 (‘exploit’). See also *Northern Territory v Collins* (2008) 235 CLR 619 at 648–50 (Crennan J).

⁵⁸ *Patents Act 1990* (Cth), ss 18(1) and (1A) and Sch 1 (‘invention’).

⁵⁹ Some subject-matters are not patentable: *Patents Act 1990* (Cth), ss 18(1)(a) (not a ‘manner of manufactures’), (1A) (not a ‘manner of manufactures’), (2) (‘human beings, and the biological processes for their generation’) and (3) (for an innovation patent – plants and animals, and the biological processes for the generation of plants and animals, that are not a microbiological process or a product of such a process).

⁶⁰ *Patents Act 1990* (Cth), ss 18(1)(b)(ii) (‘inventive step’ for a standard patent) and (1A)(b)(ii) (‘innovative step’ for an innovation patent).

⁶¹ *Patents Act 1990* (Cth), ss 18(1)(b)(i) (standard patent) and (1A)(b)(i) (innovation patent).

⁶² *Patents Act 1990* (Cth), s 40.

⁶³ *Patents Act 1990* (Cth), s 18(2).

⁶⁴ *Patents Act 1990* (Cth), s 50(1)(a).

⁶⁵ *Patents Act 1990* (Cth), s 50(1)(b)(i).

nuclear material nuclear explosive devices;⁶⁶ secret use;⁶⁷ and for innovation patents only, ‘plants and animals, and the biological processes for the generation of plants and animals’ that is not ‘a microbiological process or a product of such a process’.⁶⁸

Once granted, some provision is then made for restricting the ‘exclusive rights’. Significantly, these restrictions delimit the patent pact, providing an insight into the balance between patent owners and others, and define the scope of the ‘exclusive rights’. These restrictions might be categorised as:

- 1 *Limiting the circumstances when an ‘exclusive right’ might be exercised under the Patents Act 1990 (Cth)*. These are where ‘the reasonable requirements of the public with respect to the patented invention have not been satisfied’ (so-called ‘compulsory licensing’);⁶⁹ where a contractual provision ties a user either not to use another product or process or to acquire particular products (so-called ‘void conditions’);⁷⁰ exploitation by the Crown;⁷¹ use in or on foreign vessels, aircraft or vehicles;⁷² prior use;⁷³ acts for obtaining regulatory approval of pharmaceuticals;⁷⁴ and innocent infringement.⁷⁵
- 2 *Limiting the circumstances when an ‘exclusive right’ might be exercised outside the Patents Act 1990 (Cth)*. These are the various regulatory requirements addressing the uses of the invention or product of the invention: such as the *Therapeutic Goods Act 1989* (Cth) and related legislation for the evaluation, registration and control of various medicines and medical devices; the *Agricultural and Veterinary Chemicals Code Act 1994* (Cth) and related legislation for the evaluation, registration and control of agricultural and veterinary chemical products; and so on; and the *Competition and Consumer Act 2010* (Cth) for limiting various anti-competitive intellectual property licensing and assignment practices.
- 3 *Other practical limitations*. These are where a licence was entered into for a patent that no longer has force;⁷⁶ where a micro-organism

⁶⁶ *Patents Act 1990* (Cth), s 148(1).

⁶⁷ *Patents Act 1990* (Cth), ss 9, 18(1)(d) (‘standard patent’) and 18(1A)(d) (‘innovation patent’)

⁶⁸ *Patents Act 1990* (Cth), ss 18(3) and (4).

⁶⁹ *Patents Act 1990* (Cth), s 133(2).

⁷⁰ *Patents Act 1990* (Cth), ss 144(1) and 146.

⁷¹ *Patents Act 1990* (Cth), ss 163–72.

⁷² *Patents Act 1990* (Cth), s 118.

⁷³ *Patents Act 1990* (Cth), s 119(1).

⁷⁴ *Patents Act 1990* (Cth), s 119A(1).

⁷⁵ *Patents Act 1990* (Cth), s 123.

⁷⁶ *Patents Act 1990* (Cth), ss 145(1) and 146.

deposit ceases to be reasonably available;⁷⁷ and where various procedural requirements have not been satisfied.⁷⁸

Central to the justification for a patent is a limited term⁷⁹ and an adequate disclosure (description and definition) of the nature and operation of the invention or innovation.⁸⁰ This is so competitors can avoid infringement⁸¹ and the invention can be performed after the term has expired.⁸² Patent exhaustion before the patent term expires, so that the patent's 'exclusive rights' cease to have effect, means the protected invention enters the public domain as a part of the inherent balance maintained in intellectual property laws. Exhaustion is now examined in more detail.

Patent Exhaustion

As a general proposition, goods and chattels may be traded freely so that a purchaser takes a title subject only to the express and implied terms and conditions imposed by the seller. If that purchaser A subsequently sells those goods or chattels to purchaser B contrary to the express and implied terms and conditions imposed by the original seller, then the dispute is between the seller and purchaser A in contract as the terms and conditions do not run with the goods or chattels (to purchaser B).⁸³ Meanwhile, where the articles are protected by a patent, there is an important distinction as the statutory patent privileges may run with the goods or chattels into the hands of third

⁷⁷ *Patents Act 1990* (Cth), s 42.

⁷⁸ *Patents Act 1990* (Cth), ss 141, 142, 143, 143A.

⁷⁹ See *Patents Act 1990* (Cth), ss 67 ('standard patent') and 68 ('innovation patent'). This may be reduced if the renewal fees are not paid: *Patents Act 1990* (Cth), ss 143 ('standard patent') and 143A ('innovation patent').

⁸⁰ See *Kimberly-Clark Australia Pty Ltd v Arico Trading International Pty Ltd* (2001) 207 CLR 1 at 16 (Gleeson CJ, McHugh, Gummow, Hayne and Callinan JJ), citing *No-Fume Ltd v Frank Pitchford & Co Ltd* (1935) 52 RPC 231 at 243 (Romer LJ).

⁸¹ See *AMP Inc v Utilux Pty Ltd* (1971) 45 ALJR 123 at 128 (McTiernan J). The defining and describing requirements of the *Patents Act 1990* (Cth) also have important consequences for ensuring that undisclosed information about the invention does not enjoy the benefits of a statutory monopoly – see, for example, *American Cyanamide Co v Ethicon Ltd* (1979) RPC 215 at 269 (Graham J) – that disclosing information may benefit competitors seeking to substitute or imitate the patented invention during its term (and using the invention at the end of its term) promoting greater competition and benefits for consumers (see *Proctor & Gamble Inc v Unilever Plc* (1995) 33 IPR 627 at 637 (Stone JA)), and maintaining the integrity of the registration scheme so that the application can be distinguished from the prior art and as a benchmark against future claims of infringement: see Lawson (2004), p 374.

⁸² See *Kimberly-Clark Australia Pty Ltd v Arico Trading International Pty Ltd* (2001) 207 CLR 1 at 16 (Gleeson CJ, McHugh, Gummow, Hayne and Callinan JJ), citing *No-Fume Ltd v Frank Pitchford & Co Ltd* (1935) 52 RPC 231 at 243 (Romer LJ).

⁸³ The exception will be where the purchaser B has some notice of the terms and conditions attaching to the goods or chattels, and then there may be remedies available in equity.

parties. The following examines the case law in Australia and the United States to demonstrate this special role for patented inventions and the products of patented processes.

Australia

This special role for patent-protected articles was articulated in *National Phonograph Co of Australia v Menck* (*National Phonograph*), where the Privy Council stated:

In their Lordships' opinion, it is thus demonstrated by a clear course of authority, first, that it is open to the licensee, by virtue of his statutory monopoly, to make a sale *sub modo*, or accompanied by restrictive conditions which would not apply in the case of ordinary chattels; secondly, that the imposition of these conditions in the case of a sale is not presumed, but, on the contrary, a sale having occurred, the presumption is that the full right of ownership was meant to be vested in the purchaser; while thirdly, the owner's rights in a patented chattel will be limited if there is brought home to him the knowledge of conditions imposed, by the patentee or those representing the patentee, upon him at the time of sale ... On the one hand, the patented goods are not, simply because of their nature as chattels, sold free from restriction. Whether that restriction affects the purchaser is in most cases assumed in the negative from the fact of sale, but depends upon whether it entered the conditions upon which the owner acquired the goods. On the other hand, restrictive conditions do not, in the extreme sense put, run with the goods, because the goods are patented.⁸⁴

The explanation for this special treatment of patented articles is provided in a landmark copyright case. In *Interstate Parcel Express Co v Time-Life International (Nederlands) BV*, the copyright owner exclusively licensed an Australian bookseller, Time-Life, to sell the copyright-protected books in Australia.⁸⁵ A separate entity legitimately purchased books in the United States in the course of trade, and Interstate Parcel imported them into Australia for resale in Australia knowing that the copyright owner and its exclusive licensee, Time-Life, considered that this infringed copyright.⁸⁶ Importantly, the books were sold in the United States without any restriction on resale, either in the United States or elsewhere.⁸⁷ Time-Life asserted that by Interstate Parcel importing books subject to a copyright of which Time-

⁸⁴ *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 28 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJ).

⁸⁵ *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534 at 536–38 (Gibbs J), 545 (Stephen J).

⁸⁶ *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534 at 536–37 (Gibbs J), 546 (Stephen J).

⁸⁷ *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534 at 537 (Gibbs J), 546 (Stephen J). Notably, any of these forms of restriction would have been a breach of United States anti-trust laws (at 537).

Life was the exclusive licensee in Australia, there was an act of copyright infringement.⁸⁸ The issue before the High Court was whether Interstate Parcel, when importing the books into Australia for sale, did so without the license of the copyright owner⁸⁹ – or, put more simply, whether the legitimate purchase of the books in the United States exhausted the copyright so that Interstate Parcel did not need a licence (consent) to resell the books in Australia. The High Court found that Interstate Parcel had infringed copyright because the import into Australia of the legitimately purchased books was not sanctioned by the copyright owner.⁹⁰ The usefulness of this case lies in the distinctions drawn between the copyright and patent cases dealing with exhaustion demonstrating the role and place of exhaustion in patent cases.

Interstate Parcel asserted that any licence or consent had been given by the copyright owner when the books were purchased in the course of trade and without restrictions on resale anywhere.⁹¹ Further, Interstate Parcel asserted that the sale gave the purchaser and subsequent purchasers the copyright owner's consent to use the books however and wherever they pleased, including importing them into Australia.⁹² Significantly, Interstate Parcel asserted that the same principle that applied to patents also applied to copyright,⁹³ the principle of the patent cases being:

A sale of a patented article made by a patentee gives to the purchaser, in the absence of notice to the contrary, licence under the patent to exercise in relation to that article all the normal rights of an owner, including the right to re-sell ... [And i]n the absence of any express term to the contrary, when a patented article is sold by or with the consent of a patentee (or the proprietor of a registered design) the purchaser will take it together with a full licence to deal with it as if it were not patented. Further, any person into whose hands it may later come is entitled to assume that such a full licence has been given with it; it makes no difference that he may later discover that this was not so, if he was ignorant of it at the time of purchase.⁹⁴

⁸⁸ *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534 at 538–39 (Gibbs J), 547 (Stephen J).

⁸⁹ *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534 at 538–9 (Gibbs J), 547–48 (Stephen J).

⁹⁰ *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534 at 536 (Barwick CJ), 545 (Gibbs J), 555 (Stephen J), 555–56 (Jacobs J), 562 (Murphy J).

⁹¹ *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534 at 538–40 (Gibbs J), 547–48 (Stephen J).

⁹² *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534 at 538–40 (Gibbs J), 547–48 (Stephen J).

⁹³ *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534 at 540 (Gibbs J), 548 (Stephen J).

⁹⁴ *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534 at 540 (Gibbs J), citing White (1974) at [3-219] and [10-104].

For the judges, the distinction between the copyright and patent cases was to be found in the nature of the statutory privilege conferred, and this distinction was decisive in limiting the use of the intellectual property-protected articles.⁹⁵ Justice Gibbs explained the distinction using the language of implied terms:

By the grant of a patent in traditional form, a patentee is granted exclusive power to 'make, use, exercise and vend' the invention. The sale of a patented article, by the patentee, would be quite futile, from the point of view of the buyer, if the buyer was not entitled either to use or to resell the article which he had bought. It therefore seems necessary, in order to give business efficacy to such a sale, to imply a term that the patentee consents to the use of the patented article by the buyer and those claiming under him. The law accordingly does ordinarily imply the consent of the patentee 'to an undisturbed and unrestricted use' of the patented article.⁹⁶

Similarly, Justice Stephen explains why a patent sale requires either an express or implied licence:

[The existing cases] should, I think, be seen as confined to the quite special case of the sale by a patentee of patented goods and as turning upon the unique ability which the law confers upon patentees of imposing restrictions upon what use may after sale be made of those goods. If the patentee, having this ability, chooses not to exercise it and sells without imposing any such restrictions, the purchaser and any successors in title may then do as they will with the goods, for they are then in no different position from any purchaser of unpatented goods. But, to ensure that consequence despite the existence, albeit in the instance unexercised, of this power on the patentee's part, the law treats the sale without express restriction as involving the grant of a licence from the patentee authorizing such future use of the goods as the owner for the time being sees fit. The law does this because, without such a licence, any use or dealing with the goods would constitute an infringement of the patentee's monopoly in respect of the use, exercise and vending of the patent. A sale of goods manufactured under patent is thus a transaction of a unique kind because of the special nature of the monopoly accorded to a patentee; the licence, whether absolute or qualified, which arises upon such a sale is attributable to the existence and character of that monopoly. Absent that monopoly, peculiar to patents, there is no occasion for any licence. The buyer of monopoly-free goods, goods not the subject of patent rights, obtains by his purchase title to and possession of the goods and with it, of course, goes the ability, subject to the relevant laws of the jurisdiction in question, to use and

⁹⁵ *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534 at 536 (Barwick CJ), 542–43 (Gibbs J), 548–53 (Stephen J), 555–56 (Jacobs J).

⁹⁶ *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534 at 542 (Gibbs J), citing *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 24 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJ).

deal with the goods as he sees fit. But this is only the consequence of chattel ownership and nothing in the nature of a licence is involved.⁹⁷

The outcome of this case was to confirm the distinctive nature of patents and the decision in *National Phonograph* that patent exhaustion can be avoided because of the implied term or licence accompanying the sale of a patent protected product.⁹⁸ In that case, National Phonograph was the proprietor of three patents dealing with phonographs and sound records and blanks.⁹⁹ National Phonograph made phonographs, sound records and blanks that were then sold to jobbers (or distributors) under jobbers' contracts; the jobbers could then sell on to dealers.¹⁰⁰ Dealers were required to enter into a separate agreement with National Phonograph.¹⁰¹ The clear intention or 'main object' of these jobbers' and dealers' agreements was directed in particular to maintaining the sale price of the patented phonographs, sound records and blanks.¹⁰² Another intention of these agreements was to prevent the introduction of rival goods into the market in competition with National Phonograph patented products.¹⁰³ Menck, a dealer, had various agreements with National Phonograph, including an agreement that provided for Menck to be removed from a 'dealers list' if he violated any of the conditions of sale, and that he undertook that if he was removed from the dealers list, he would 'in no way handle, sell, or deal in, or use, either directly or indirectly' any of the phonographs, sound records and blanks without written authorisation.¹⁰⁴

National Phonograph asserted that Menck breached the dealers' agreement by exchanging one of National Phonograph's phonographs for another of National Phonograph's phonographs and some sound records at lower than the sale price required by the agreements.¹⁰⁵ As a consequence of this alleged breach, National Phonograph removed Menck from its dealers

⁹⁷ *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534 at 552–53 (Stephen J).

⁹⁸ See *Interstate Parcel Express Co v Time-Life International (Nederlands) BV* (1977) 138 CLR 534 at 536 (Barwick CJ), 542 (Gibbs J), 550–51 (Stephen J), 555–56 (Jacobs J).

⁹⁹ *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 16 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJJ). See also *National Phonograph Co of Australia v Menck* (1908) 7 CLR 481 at 492–503 (Isaacs J).

¹⁰⁰ *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 17 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJJ).

¹⁰¹ *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 17 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJJ).

¹⁰² *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 19 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJJ).

¹⁰³ *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 19–20 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJJ).

¹⁰⁴ *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 17–18 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJJ).

¹⁰⁵ *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 20 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJJ).

list.¹⁰⁶ Menck then considered himself free of the contractual obligations in dealing and selling National Phonograph's patented products.¹⁰⁷ National Phonograph sought to limit Menck's dealing and selling, relying on the patent's statutory exclusivity. National Phonograph argued:

that they, as owners of the letters patent, could sell their goods upon terms and conditions importing only a limited right to deal with the goods ... [and] ... that such a limited licence 'runs with such goods in the hands of all persons into whose possession they may come, and whether such persons acquired such goods with or without notice of the terms of such limited licence'.¹⁰⁸

As a counter, Menck argued:

that a patentee imposing conditions upon the use or sale of his patented articles is not entitled 'to enforce such conditions upon a subsequent purchaser of those articles apart from any contract with such subsequent purchaser'.¹⁰⁹

After considering a range of authorities their Lordships stated the basic principles: (1) a patent owner can sell with less than the complete title (a sale *sub modo*) while retaining control over the remaining title, including sales involving restrictive terms and conditions; (2) there is a presumption that the sale is unfettered and that on sale a patent exhausts; and (3) the presumption is rebutted by notice to the purchaser (and subsequent purchasers) of the terms and conditions limiting title on sale.¹¹⁰ Applying this to the particular circumstances, their Lordships concluded that there was no contract violation and that as a consequence of the contract, Menck knew of the conditions imposed by the patent holder and was bound by them.¹¹¹ The effect of the decision was to confirm the proposition that any communicated restrictions avoid exhaustion, and run with the patented product subject to communication of the restrictions:

All that is affirmed is that the general doctrine of absolute freedom of disposal of chattels of an ordinary kind is, in the case of patented chattels, subject to the restriction that the person purchasing them, and in the knowledge of the conditions attached by the patentee,

¹⁰⁶ *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 20 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJJ).

¹⁰⁷ *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 21 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJJ).

¹⁰⁸ *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 21 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJJ).

¹⁰⁹ *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 21 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJJ).

¹¹⁰ See *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 28 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJJ).

¹¹¹ *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 29 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJJ).

which knowledge is clearly brought home to himself at the time of sale, shall be bound by the knowledge and accept the situation of ownership subject to the limitations. These limitations are merely the respect paid and the effect given to those conditions of transfer of the patented article which the law, laid down by statute, gave the original patentee a power to impose. Whether the law on this head should be changed and the power of sale *sub modo* should be withdrawn or limited is not a question for a court. It may be added that where a patented article has been acquired by sale, much, if not all, may be implied as to the consent of the licensee to an undisturbed and unrestricted use thereof. In short, such a sale negatives in the ordinary case the imposition of conditions and the bringing home to the knowledge of the owner of the patented goods that restrictions are laid upon him.¹¹²

The basic proposition is therefore, simply stated, that a patent owner can avoid exhaustion by dealing with less than the complete title being careful to bring the limitations to the notice of purchasers. In the alternative, a patent exhausts on the sale of a good or chattel embodying the patent, unless the patent owner, with notice to the purchaser, sells less than the complete title. The problems then arise in actually determining an authorised sale for the purposes of exhaustion and the legal means of avoiding patent exhaustion.¹¹³ The lack of litigation in Australia since these early cases probably now reflects the general acceptance that any limitation on title is sufficient to avoid exhaustion. This might, however, need to be modified to take into account the developments in the United States. This is now necessary following the Australia–United States Free Trade Agreement, which agreed that Australia and the United States ‘shall endeavour to reduce differences in law and practice between their respective systems, including in respect of differences in determining the rights to an invention’.¹¹⁴ The consequence is that exhaustion may no longer be uncontested, albeit the outcome for the self-replicating may be more entrenched by excluding the exhaustion altogether as a limitation.

United States

The United States provides an engaging illustration of a possible evolution, or perhaps revision, of these exhaustion principles. In the United States in *Quanta Computer Inc v LG Electrics Inc (Quanta)*, LG Electrics Inc purchased a portfolio of computer technology patents and licensed these patents to the Intel Corporation.¹¹⁵ The critical patents were methods for

¹¹² *National Phonograph Co of Australia v Menck* (1911) 12 CLR 15 at 24 (Macnaghten, Atkinson, Shaw, Mersey and Robson LJJ).

¹¹³ This task has been made more complex by the courts in various jurisdiction blending patent exhaustion with competition defences such as restraint of trade concerns and patent misuse: see generally Smith Rinehart (2010), pp 490–503.

¹¹⁴ *Australia–United States Free Trade Agreement* [2005] ATS 1, Art 17.9(14).

¹¹⁵ *Quanta Computer Inc v LG Electrics Inc*, 553 US 617 at 621–23 (2008).

dealing with data exchanges between components within computers.¹¹⁶ Importantly, the LG Electronics Inc patents were incorporated by the Intel Corporation in its manufactured microprocessors and chipsets, which were then supplied to others in the manufacture of computers and the like.¹¹⁷ The licence agreement provided for the Intel Corporation to ‘make, use, sell (directly or indirectly), offer to sell, import or otherwise dispose of’ Intel Corporation products practising the LG Electronics Inc patents,¹¹⁸ subject to the limitation that the Intel Corporation could not license third parties to combine products practicing the LG Electronics Inc patents with other third-party products.¹¹⁹ The licence agreement also provided:

Notwithstanding anything to the contrary contained in this Agreement, the parties agree that nothing herein shall in any way limit or alter the effect of patent exhaustion that would otherwise apply when a party hereto sells any of its Licensed Products.¹²⁰

In a separate and different arrangement Quanta purchased microprocessors and chipsets from the Intel Corporation with notice that it could not combine those microprocessors and chipsets practicing the LG Electronics Inc patents with third-party products.¹²¹ Quanta did, however, use the Intel Corporation microprocessors and chipsets in combination with third-party products.¹²² The Court of Appeals for the Federal Circuit decided that (1) the doctrine of patent exhaustion did not apply to method claims, and (2) exhaustion did not apply because the licence expressly excluded Intel Corporation microprocessors and chipsets practicing the LG Electronics Inc patents in combination with third-party products.¹²³ The Supreme Court addressed both of these conclusions.

First, the Supreme Court expressly rejected the notion that the doctrine of patent exhaustion does not apply to method claims: ‘It is true that a patented method may not be sold in the same way as an article or device, but methods nonetheless may be “embodied” in a product, the sale of which exhausts patent rights.’¹²⁴ The second conclusion was more complicated. To practise the LG Electronics Inc patents, other components were required so the question was ‘the extent to which a product must embody a patent in order to

¹¹⁶ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 622–23 (2008).

¹¹⁷ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 623–24 (2008).

¹¹⁸ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 623 (2008).

¹¹⁹ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 623–24 (2008).

¹²⁰ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 624 (2008).

¹²¹ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 624 (2008).

¹²² *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 624–25 (2008).

¹²³ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 624 (2008).

¹²⁴ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 628 (2008). This rejected the decision of the Federal Circuit in *LG Electronics Inc v Asustek Computer Inc*, 248 F Supp. 2d 912 at 915 (2003). See also *LG Electronics Inc v Bizcom Electronics Inc*, 453 F.3d 1364 at 1370 (2006)

trigger exhaustion'.¹²⁵ Quanta argued, following the earlier authority in *United States v Univis Lens Co (Univis)*,¹²⁶ that:

although sales of an incomplete article do not necessarily exhaust the patent in that article, the sale of the microprocessors and chipsets exhausted [LG Electrics Inc patents] in the same way the sale of the lens blanks exhausted the patents in *Univis*.¹²⁷

In *Univis*, Univis held a patent over lenses. Univis licensed a manufacturer to produce lens blanks and then provide them to another licensee to grind the blanks into the patented finished lenses and another licensee to sell the finished product to consumers.¹²⁸ In this case, the Supreme Court held that the first sale of lens blanks exhausted the patent so that royalties could not be collected from subsequent licensees down the chain.¹²⁹ The Supreme Court accepted that the Univis patents were practised in part by each of the licensees and held that the sale of the lens blanks exhausted the patents on the finished lenses.¹³⁰ The Supreme Court in *Quanta* accepted Quanta's argument that the sale of the microprocessors and chipsets exhausted LG Electrics Inc patents, as they could only function when combined with memory and buses in a computer system,¹³¹ and concluded that the only reasonable and intended use by Quanta of the Intel Corporation microprocessors and chipsets was to practise the LG Electrics Inc patents, because they embodied the essential features of the patented invention.¹³² Quanta argued:

that exhaustion doctrine will be a dead letter unless it is triggered by the sale of components that essentially, even if not completely, embody an invention. Otherwise, patent holders could authorize the sale of computers that are complete with the exception of one minor step—say, inserting the microprocessor into a socket—and extend their rights through each downstream purchaser all the way to the end user.¹³³

The critical features here were that Intel Corporation's patent-protected products could not be used by Quanta other than by incorporating them into a computer to practise the patents,¹³⁴ and the additional steps by Quanta were

¹²⁵ *Quanta Computer Inc v LG Electrics Inc*, 553 US 617 at 630 (2008).

¹²⁶ *United States v Univis Lens Co (Univis)* 316 US 241 (1942).

¹²⁷ *Quanta Computer Inc v LG Electrics Inc*, 553 US 617 at 630 (2008).

¹²⁸ *United States v Univis Lens Co*, 316 US 241 at 243–46 (1942).

¹²⁹ *United States v Univis Lens Co*, 316 US 241 at 250–51 (1942).

¹³⁰ *United States v Univis Lens Co*, 316 US 241 at 248–49 (1942).

¹³¹ *Quanta Computer Inc v LG Electrics Inc*, 553 US 617 at 630 (2008).

¹³² *Quanta Computer Inc v LG Electrics Inc*, 553 US 617 at 631 (2008).

¹³³ *Quanta Computer Inc v LG Electrics Inc*, 553 US 617 at 630–31 (2008). Notably, '[Intel Corporation] all but practiced the patent itself by designing its products to practice the patents, lacking only the addition of standard parts' (p 634).

¹³⁴ *Quanta Computer Inc v LG Electrics Inc*, 553 US 617 at 631–32 (2008).

adding the Intel Corporation patent-protected chip to a computer system applying a common process and using standard parts that then enabled the chip embodying the invention to function.¹³⁵

Having concluded that the patent could be exhausted, the final question was then whether it had been exhausted.¹³⁶ LG Electronics Inc argued that its agreement with Intel Corporation prohibited the sale of Intel Corporation microprocessors and chipsets for use in combination with third-party products¹³⁷ – that is, ‘[Intel Corporation] could not convey to Quanta what both knew it was not authorized to sell, ie, the right to practice the patents with non-Intel parts’.¹³⁸ The Supreme Court rejected this characterisation of the agreements, and instead concluded that:

The License Agreement authorized [the Intel Corporation] to sell products that practiced the [LG Electronics Inc patents]. No conditions limited Intel’s authority to sell products substantially embodying the patents. Because Intel was authorized to sell its products to Quanta, the doctrine of patent exhaustion prevents [LG Electronics Inc] from further asserting its patent rights with respect to the patents substantially embodied by those products.¹³⁹

In short, LG Electronics Inc had licensed Intel Corporation to manufacture microprocessors and chipsets practising the LG Electronics Inc patents and sell them to others. There was ‘nothing’ in the agreement between LG Electronics and Intel Corporation that limited Intel Corporation’s ‘right to sell its microprocessors and chipsets to purchasers who intend to combine them with non-Intel parts’.¹⁴⁰ As a consequence, the sale of the microprocessors and chipsets embodying the inventions to Intel Corporation therefore exhausted LG Electronics Inc patents, because ‘exhaustion turns only on [Intel Corporation]’s own license to sell products practicing the [LG Electronics] Patents’.¹⁴¹ This was a narrow question of contract interpretation, and undoubtedly ‘a triumph of formalism over intent’.¹⁴² The principle from this decision, however, remains: ‘The authorized sale of an article that substantially embodies a patent exhausts the patent holder’s rights and prevents the patent holder from invoking patent law to control post sale use of the article.’¹⁴³

Here, [LG Electronics] licensed [Intel Corporation] to practice any of its patents and to sell products practicing those patents. [Intel

¹³⁵ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 633 (2008).

¹³⁶ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 635–37 (2008).

¹³⁷ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 636 (2008).

¹³⁸ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 636 (2008).

¹³⁹ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 637 (2008).

¹⁴⁰ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 636 (2008).

¹⁴¹ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 637 (2008).

¹⁴² Stern (2008), p 531.

¹⁴³ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 638 (2008).

Corporation]’s microprocessors and chipsets substantially embodied the [LG Electronics] Patents because they had no reasonable non-infringing use and included all the inventive aspects of the patented methods. Nothing in the License Agreement limited [Intel Corporation]’s ability to sell its products practicing the [LG Electronics] Patents. [Intel Corporation]’s authorized sale to Quanta thus took its products outside the scope of the patent monopoly, and as a result, [LG Electronics] can no longer assert its patent rights against Quanta.¹⁴⁴

In other words, LG Electronics Inc’s sale of the patent protected products to the Intel Corporation was unconditional, and so the Intel Corporation’s dealing with Quanta was not affected because LG Electronics’ patents had exhausted. This precluded a remedy in patent infringement, even though remedies in contract might have been available, with the Supreme Court stating:

Whether a patentee may protect himself and his assignees by special contracts brought home to the purchasers is not a question before us, and upon which we express no opinion. It is, however, obvious that such a question would arise as a question of contract, and not as one under the inherent meaning and effect of the patent laws.¹⁴⁵

Contrasting with the Supreme Court’s decision in *Quanta* was the earlier decision of the US Court of Appeals, Federal Circuit in *Mallinckrodt*.¹⁴⁶ The Supreme Court did not mention this decision, instead relying on its own earlier decisions. This earlier Federal Circuit decision was significant because it apparently changed a long line of authority in patent exhaustion cases and recognised that conditional sales of patent-protected products did not necessarily exhaust the patent.¹⁴⁷ This Federal Circuit decision is also important as it is not entirely clear whether *Quanta* overrules this line of decisions, or if *Quanta* will be narrowly confined by the peculiar facts of its contract.¹⁴⁸

In *Mallinckrodt*, Mallinckrodt’s patent-protected device for delivering a radioactive or therapeutic aerosol mist to the lungs (comprising a nebuliser, a manifold, a filter, tubing, mouthpiece and nose clip) was sold to hospitals subject to a ‘single use only’ notice on the devices (together with

¹⁴⁴ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 638 (2008).

¹⁴⁵ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 637–8, n 7 (2008), quoting *Keeler v Standard Folding Bed Co*, 157 US 659 at 666 (1895).

¹⁴⁶ 976 F.2d 700 (1992).

¹⁴⁷ *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700, 709 (1992). For an analysis, see for example Stern (1994).

¹⁴⁸ Notably, there is some authority for *Quanta Computer Inc v LG Electronics Inc* overruling *Mallinckrodt Inc v Medipart Inc*: see *Static Control Components Inc v Lexmark International Inc*, 615 F.Supp.2d 575, 585–86 (2009) the District Court of Central Kentucky stated: ‘After reviewing *Quanta*, *Mallinckrodt*, and the parties’ arguments, this Court is persuaded that *Quanta* overruled *Mallinckrodt sub silentio*’. Academic commentary is not always so certain: for example, see Stern (2008). Others are more definitive: for example, see Hovenkamp (2011); Leaven (2008).

‘Mallinckrodt’ and ‘UltraVent’ trademarks).¹⁴⁹ After use, the device was supposed to be sealed and disposed of as biohazardous waste.¹⁵⁰ Instead of this, however, the used devices were sent to Medipart for decontamination and servicing before being returned to the hospital for further use.¹⁵¹ Mallinckrodt asserted that Medipart had infringed the patent and had induced infringement by the hospitals.¹⁵² At first instance, the District Court held that patent infringement was not available to enforce the ‘single use only’ notice, and that Medipart’s decontamination and servicing constituted permissible repairs.¹⁵³ The court’s ‘premise was that even if the notice was sufficient to constitute a valid condition of sale, violation of that condition can not be remedied under the patent law’.¹⁵⁴

In the Court of Appeals, Mallinckrodt argued that the ‘single use only’ notice was a valid restriction and enforceable under the patent law ‘because the use was within the scope of the patent grant, and the restriction does not seek to enlarge the patent grant’, and that a licence to less than full use of a patented article was a well recognised and valid practice under patent laws.¹⁵⁵ In response, Medipart argued that, following a line of cases, no restrictions were enforceable under patent law once an article had been purchased.¹⁵⁶

The court rejected Medipart’s characterisation of the cases as holding that no post-sale restrictions were enforceable under patent law, instead distinguishing between the patent misuse cases that sought to limit patent holders extending their patent beyond the statutory patent right¹⁵⁷ and the general proposition that parties to a contract can set whatever terms and conditions they desire so long as they are not invalidated by other laws or policies, such as anti-trust laws.¹⁵⁸ In *Mallinckrodt*, the question was simply whether the ‘restriction is reasonably within the patent grant’.¹⁵⁹ The court considered that the ‘single use only’ notice did not violate any laws or policy (specifically patent misuse or antitrust laws (being price fixing and tying)

¹⁴⁹ *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700 at 701–2 (1992).

¹⁵⁰ *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700 at 702 (1992).

¹⁵¹ *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700 at 702 (1992).

¹⁵² *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700 at 701 (1992).

¹⁵³ *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700 at 702 (1992).

¹⁵⁴ *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700 at 703 (1992).

¹⁵⁵ *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700 at 703 (1992).

¹⁵⁶ *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700 at 703 (1992).

¹⁵⁷ *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700, 704 (1992). For example, in *Motion Picture Patents Co v Universal Film Manufacturing Co*, 243 US 502 at 516 (1917), a patent-protected movie projector was licensed subject to not using the machine with any films not leased from the patent holder. The Supreme Court found that the patent-protected movie projector could be used with films leased from other than the patent holder as that term was an illegal tie-in that increased the scope of the statutory patent right beyond the invention.

¹⁵⁸ *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700 at 708 (1992).

¹⁵⁹ *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700 at 708 (1992).

and was within the patent grant, and that Medipart's reconditioning was therefore an infringement.¹⁶⁰ In other words, *Mallinckrodt* decided that a condition on a sale can avoid patent exhaustion if the condition does not violate law or policy and the condition is reasonably within the patent grant.¹⁶¹ In effect, this decision accedes to a patent owner extending their statutory patent right though the simple ruse of imposing a condition on the initial sale to avoid exhaustion.¹⁶² Meanwhile, the *Quanta* decision avoided addressing this proposition by finding that the sale of the patent-protected products between LG Electronics Inc and the Intel Corporation was unconditional in the terms of the agreements. But if the LG Electronics Inc's sale of the patent-protected products to the Intel Corporation was conditional and there was *no* exhaustion – which seems to be the likely outcome from applying the *Mallinckrodt* decision¹⁶³ – then Quanta's use would have been an infringement of LG Electronics Inc's patent. In other words, the *Quanta* decision does not appear to have limited the broad application of the *Mallinckrodt* decision.

These cases demonstrate that a patent holder can, with a vary careful choice of words, control the downstream uses of its patent-protected products with contracts, and that the patent only exhausts when the patent owner relinquishes all its indices of ownership – an unrestricted sale of the patent product triggers patent exhaustion. The cases, however, do not establish a bright-line test for what constitutes an unrestricted sale and hence exhaustion.

Discussion

The analysis so far shows that a patent grant of statutory privileges enables special property rules to apply to 'intra-brand' (limiting the way a product can be distributed or used mainly through tying and exclusive dealing) and 'inter-brand' (territorial limits, customer segregation, resale conditions, and so on, mainly through field of use restrictions) vertical restraints on trade using the patent-protected goods or chattels.¹⁶⁴ *McFarling* (seeds bought with trade restraints in the 'Technology Agreement') and *Scruggs* and *Bowman* (seeds bought without trade restraints in the 'Technology Agreement') illustrate the vertical restraints where there were licence agreements between

¹⁶⁰ *Mallinckrodt Inc v Medipart Inc*, 976 F.2d 700 at 709 (1992).

¹⁶¹ See also Stern (1994).

¹⁶² Importantly, this is dealing only with an allegation of patent infringement, meaning that where the patent exhausts then patent infringement is not a ground of challenge, although there might be other remedies available for breach of the term of a contract, and so on: see *Motion Picture Patents Co v Universal Film Manufacturing Co*, 243 US 502 at 516 (1917).

¹⁶³ Although, perhaps notably, the Supreme Court has only once found that a post-sale condition avoided exhaustion in *Henry v AB Dick Co*, 224 US 1, 11 (1912) and this was expressly overruled in the later decision in *Motion Picture Patents Co v Universal Film Manufacturing Co*, 243 US 502 at 518 (1917).

¹⁶⁴ See Hovenkamp (2011), p 488.

Monsanto and seed sellers and then separate licence agreements between Monsanto and the farmers. In each of the cases, the restraints on distribution and use imposed on the farmers requiring them to use the seeds only for a single crop and prohibiting them from reusing the resulting harvested seeds for further crops were upheld.¹⁶⁵ The effect of these decisions was that, through the agreements (or lack of an agreement) between Monsanto and the seed sellers and farmers, there were never sales that exhausted the patent privileges. The only other options argued in both *McFarling* and *Scruggs* would have been to establish one of the other two grounds in the troika against distributional restraints on trade using the patent-protected articles – anti-trust and patent misuse. In both cases, these avenues did not provide a remedy.¹⁶⁶ The end result is that *McFarling*, *Scruggs* and *Bowman* are cases where patent infringement was a remedy available because the patent privileges survived the transactions.

According to the Australian authority in *National Phonograph*, an Australian court would undoubtedly reach the same decision as the Federal Circuit in *McFarling*, *Scruggs* and *Bowman*. Almost certainly, the licence to the seeds sellers and the farmers involves dealing with less than the complete title that was brought to the notice of the farmers, and in these circumstances the patents over the seeds are unlikely to have exhausted. Perhaps significantly, an Australian court would also be very *unlikely* to limit the contractual terms through anti-trust means in almost any circumstances.¹⁶⁷

The remaining issue is to assess the likely consequences of the US Supreme Court decision in *Quanta*, and its failure to address *Mallinckrodt* while apparently affirming the earlier authority that post-sale conditions could not be remedied by an action for patent infringement.¹⁶⁸ The reasoning in *McFarling*, *Scruggs* and *Bowman* perhaps suggests that avoiding the *Mallinckrodt* decision is of little consequence. This is perhaps confirmed by: (1) the Supreme Court denying certiorari in *Scruggs v Monsanto Corporation* just before the *Quanta* decision;¹⁶⁹ (2) the District Court rejecting a motion to Reconsider Denial of Summary Judgment after the *Quanta* decision on the basis that the infringing seeds were never sold,

¹⁶⁵ *Monsanto Company v Bowman*, 686 F.Supp.2d 834 at 839 (2009); *Monsanto Company v Scruggs*, 459 F.3d 1328 at 1333 and 1336–37 (2006); *Monsanto Company v McFarling*, 302 F.3d 1291 at 1293 and 1298 (2002).

¹⁶⁶ See *Monsanto Company v Scruggs*, 459 F.3d 1328 at 1338–41 (2006); *Monsanto Company v McFarling*, 302 F.3d 1291 at 1293 and 1298 (2002). See also *Monsanto Company v McFarling*, 363 F.3d 1336 at 1341–44 (2004).

¹⁶⁷ See Lawson (2009) pp 101–25.

¹⁶⁸ See, for example, *United States v Univis Lens Co*, 316 US 241 at 249–51 (1942); *Motion Picture Patents Co v Universal Film Manufacturing Co*, 243 US 502 at 516 (1917); *Bloomer v McQuewan*, 55 US 539 at 549 (1853) and so on. But note *General Talking Pictures Corporation v Western Electric Co*, 304 US 175 at 181 (1938) where an appropriately worded condition in a manufacturer's licence, as opposed to a direct purchaser, can avoid exhaustion.

¹⁶⁹ See *Scruggs v Monsanto Corporation*, 549 US 1342 (2007).

saying ‘the *Quanta* decision in no way undermines the basis for the Federal Circuit’s holding on the issue of patent exhaustion’,¹⁷⁰ and (3) denial of an appeal to the Federal Circuit stating ‘we affirmed the trial court’s infringement and patent exhaustion determinations, holding that the patent exhaustion doctrine was inapplicable because [(a)] the initial sale from Monsanto was not an “unrestricted sale” and [(b)] the second generation of seeds were never “sold”’.¹⁷¹ A more detailed examination of the rejected arguments is insightful.

In rejecting McFarling’s argument in *McFarling*, Justice Newman stated:

The ‘first sale’ doctrine of exhaustion of the patent right is not implicated, as the new seeds grown from the original batch had never been sold. The price paid by the purchaser ‘reflects only the value of the “use” rights conferred by the patentee’ ... The original sale of the seeds did not confer a license to construct new seeds, and since the new seeds were not sold by the patentee they entailed no principle of patent exhaustion.¹⁷²

Similarly, in *Scruggs*, Justice Mayer stated:

The doctrine of patent exhaustion is inapplicable in this case. There was no unrestricted sale because the use of the seeds by seed growers was conditioned on obtaining a license from Monsanto. Furthermore, the “‘first sale” doctrine of exhaustion of the patent right is not implicated, as the new seeds grown from the original batch had never been sold’. See *Monsanto v McFarling* ... Without the actual sale of the second generation seed to Scruggs, there can be no patent exhaustion. The fact that a patented technology can replicate itself does not give a purchaser the right to use replicated copies of the technology. Applying the first sale doctrine to subsequent generations of self-replicating technology would eviscerate the rights of the patent holder.¹⁷³

Most significantly, however, McFarling’s argument in *McFarling* was framed in the context of the Supreme Court’s decision in *Univis*¹⁷⁴ that was expressly relied on in *Quanta*.¹⁷⁵ McFarling argued:

that when a patented product has been sold the purchaser acquires ‘the right to use and sell it, and ... the authorized sale of an article which is capable of use only in practicing the patent is a

¹⁷⁰ See *Monsanto Corporation v Scruggs*, 2009 WL 536833 (2009), citing *Monsanto Corporation v Scruggs*, 459 F.3d 1328 at 1336 (2006).

¹⁷¹ *Monsanto Company v Scruggs*, 345 Fed.Appx 552 (2009), citing *Monsanto Company v Scruggs*, 459 F.3d 1328, 1336 (2006).

¹⁷² *Monsanto Company v McFarling*, 302 F.3d 1291 at 1299 (2002).

¹⁷³ *Monsanto Company v Scruggs*, 459 F.3d 1328 at 1336 (2006).

¹⁷⁴ See *Monsanto Company v McFarling*, 302 F.3d 1291 at 1298 (2002).

¹⁷⁵ See *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 630–35 (2008).

relinquishment of the patent monopoly with respect to the article sold'.¹⁷⁶

In *Quanta*, the decision considered the extent to which a product must embody the invention to 'trigger' exhaustion.¹⁷⁷ Recall that the invention in *Univis* was a lens where a manufacturer was *licensed* by Univis to make the lens blanks and then sell them at fixed rates to another firm that was *licensed* by Univis to grind the blanks into the finished patented invention and make sales at fixed rates.¹⁷⁸ The outcome in *Univis* was to find that the essential features of the invention were only embodied in the finished lenses, and that:

where one has sold an uncompleted article which, because it embodies essential features of his patented invention, is within the protection of his patent, and has destined the article to be finished by the purchaser in conformity to the patent, he has sold his invention so far as it is or may be embodied in that particular article.¹⁷⁹

McFarling's argument in *McFarling* was that his purchase of the seeds exhausted Monsanto's patent over the seeds and their products, and that these could not be restricted by agreement.¹⁸⁰ The outcome in *Univis* was that the first sale to the manufacturer *licensed* by Univis to make the lens blanks exhausted the patent, and royalties were not then payable by licensees down the chain.¹⁸¹ Similarly, in *Quanta*, Quanta argued that the sale of the microprocessors and chips sets was like the lens blanks in *Univis* and that the first sale to Intel exhausted the patents.¹⁸² Further:

Quanta also argue that exhaustion doctrine will be a dead letter unless it is triggered by the sale of components that essentially, even if not completely, embody an invention. Otherwise, patent holders could authorize the sale of computers that are complete with the exception of one minor step – say, inserting the microprocessor into a socket – and extend their rights through each downstream purchaser all the way to the end user.¹⁸³

While not deciding the matter in *Quanta*, the Supreme Court agreed with Quanta:

¹⁷⁶ *Monsanto Company v McFarling*, 302 F.3d 1291 at 1298 (2002), quoting *United States v Univis Lens Co*, 316 US 241 at 249 (1942).

¹⁷⁷ See *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 630 (2008).

¹⁷⁸ *United States v Univis Lens Co*, 316 US 241 at 243–46 (1942).

¹⁷⁹ *United States v Univis Lens Co*, 316 US 241 at 250–51 (1942) and cited in *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 627–28 (2008).

¹⁸⁰ *Monsanto Company v McFarling*, 302 F.3d 1291 at 1298 (2002).

¹⁸¹ *United States v Univis Lens Co*, 316 US 241 at 250–51 (1942).

¹⁸² *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 630 (2008).

¹⁸³ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 630–31 (2008).

We agree with Quanta that *Univis* governs this case. As the Court there explained, exhaustion was triggered by the sale of the lens blanks because their only reasonable and intended use was to practice the patent and because they ‘embodie[d] essential features of [the] patented invention’.¹⁸⁴

Meanwhile, in *Bowman* the District Court distinguished both *Quanta* and *Univis*:

In both cases, the patent exhaustion doctrine was found to apply because the patent holder had licensed the article at issue to another entity without sufficient conditions to protect its patent rights. The distinction found by the Federal Circuit in *McFarling*, and which exists here as well, is that the Monsanto licenses (and the agreements its licensees required from farmers) for Roundup Ready soybeans specifically excluded saving seed or otherwise providing anyone progeny soybeans for purposes of planting ... No unconditional sale of the Roundup Ready trait occurred because the farmers could not convey to the grain dealers what they did not possess themselves.¹⁸⁵

The distinction appears to presume the initial transaction did not exhaust the patent. This seems to contradict both *Quanta* and *Univis*, as in *Univis* it was the first transaction that exhausted the patent,¹⁸⁶ and in *Quanta* the court agreed with Quanta’s argument that the patent exhausted on the sale to Intel.¹⁸⁷ As the Supreme Court specifically points out in *Quanta*:

But the question whether third parties received implied licenses is irrelevant because Quanta asserts its right to practice the patents based not on implied license but on exhaustion. And exhaustion turns only on Intel’s own license to sell products practicing the [LG Electronics] Patents.¹⁸⁸

A second distinction made by the District Court in *Bowman*, asserting lineage to the Federal Circuit in both *McFarling*¹⁸⁹ and *Scruggs*,¹⁹⁰ was the proposition that the first-generation seeds obtained from Monsanto’s licensed seed sellers did not include provision to ‘construct new seeds’, being the second-generation (or progeny) seeds derived from planting and

¹⁸⁴ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 631 (2008) quoting *United States v Univis Lens Co*, 316 US 241 at 249–51 (1942).

¹⁸⁵ *Monsanto Company v Bowman*, 686 F.Supp.2d 834 at 839 (2009).

¹⁸⁶ See *United States v Univis Lens Co*, 316 US 241 at 250–51 (1942). Notably this is consistent with a range of earlier authority: see Van Houweling (2007), pp 910–14 and the citations therein.

¹⁸⁷ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 630–31 (2008).

¹⁸⁸ *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 637 (2008).

¹⁸⁹ *Monsanto Company v McFarling*, 302 F.3d 1291, 1299 (2002).

¹⁹⁰ *Monsanto Company v Scruggs*, 459 F.3d 1328 at 1335–36 (2006).

harvesting the first-generation seeds.¹⁹¹ This might be a distinction between *using* the patent-protected product and *making* the patent protected product. In both *Quanta* and *Univis*, the invention was embodied in the product and the licences were an attempt to limit the *uses* of the product.¹⁹² In contrast, *Bowman*, *McFarling* and *Scruggs* involved *making* the second-generation (or progeny) seeds. Arguably, *making* is fundamentally different from *using* in the context of patents and exhaustion,¹⁹³ and the authority of *Quanta* and *Univis* arguably does not apply to *making*. This seems to be an argument with some credibility.

In both *Quanta* and *Univis*, material was either added to (additional memory and buses) or removed from (grinding and polishing the lenses) the object that embodied the invention.¹⁹⁴ In contrast, *Bowman*, *McFarling* and *Scruggs* all involved another separate and (arguably) new object that embodied the invention. Perhaps significantly, the manufacturing process for both the patented first-generation seeds and the second-generation seeds was the same, so in essence the ‘making’ in entirety occurred in the same way as the original patented invention was made or manufactured.¹⁹⁵ The important distinction here is:

The patentee may surrender his monopoly in whole by the sale of his patent or in part by the sale of an article embodying the invention. His monopoly remains so long as he retains the ownership of the patented article. *But sale of it exhausts the monopoly in that article* and the patentee may not thereafter, by virtue of his patent, control the use or disposition of the article (emphasis added).¹⁹⁶

Unfortunately, the decisions in *Bowman*, *McFarling* and *Scruggs* do not articulate this proposition in any detail, even though it is likely to be the main argument in support of Monsanto’s position, and will almost certainly (continue to) avoid the exhaustion of patents over self-replicating

¹⁹¹ *Monsanto Company v Bowman* 686 F.Supp.2d 834 at 839 (2009). Notably, another important distinction might be that international patent exhaustion also survived the *Quanta Computer Inc v LG Electronics Inc* decision so that sales outside the United States do not exhaust United States patent rights following the authority of *Jazz Photo v United States International Trade Commission*, 264 F.3d 1094 (2001), certificate denied, 536 US 950 (2002).

¹⁹² *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 630 (2008); *United States v Univis Lens Co*, 316 US 241 at 250–51 (1942).

¹⁹³ This is a distinction accepted in English patent law, applying an infringement standard for ‘make’ of whether the acts of a defendant amount to manufacture of the product: see, for example, *United Wire Ltd v Screen Repair Services (Scotland) Ltd* [2001] RPC 438, 455–56 (Bingham of Cornhill LJ), 458 (Hoffmann LJ) and the other agreeing judgments.

¹⁹⁴ See *Quanta Computer Inc v LG Electronics Inc*, 553 US 617 at 633–34 (2008); *United States v Univis Lens Co*, 316 US 241 at 244 (1942).

¹⁹⁵ This is probably significant, as it is a distinction from the repair and reconstruction cases: see *Wilson v Simpson*, 50 US 109 (1850) and the line of authorities following that decision.

¹⁹⁶ *United States v Univis Lens Co*, 316 US 241 at 250 (1942).

inventions.¹⁹⁷ A similar argument will almost certainly be successful in Australia too.¹⁹⁸

In short, the problem at issue in this article is the way to deal with inventions that are combined with other materials – microprocessors and chips sets with standard computer parts in *Quanta*, lens blanks requiring grinding grind for the finished lens in *Univis* and genetic constructs with germplasm in *McFarling*, *Scruggs* and *Bowman*. As the analysis demonstrates, the significant difference with genetic constructs combined with germplasm is that the product embodying the essential features of the invention is itself self-replicating, so that once planted (and fertilised) it will reproduce (arguably) another embodiment of the invention. The question is how the property disputes should be resolved, either through patent infringement with the consequent privileges and controls retained by the patent owner, or through contract without the auspices of property and control. The key difference is that the patent applies the statutory privileges to all (including innocent infringers), while the contract requires privity between the parties and will only apply to the parties (and some on-notice third parties). In other words, patent infringement actions run with the goods and chattels while contract actions are limited by privity.

There are a whole range of concerns about the utility, in the sense of promoting competition and innovation, of whether to favour contracts or patents in post-sale distribution and use restraints.¹⁹⁹ The concern of this article, however, is about the potential scope of applying the *McFarling*, *Scruggs* and *Bowman* decisions to self-replicating organisms. In short, Monsanto's invention is a series of genetic elements that are inserted into self-replicating germplasm, claiming both the elements and the organism into which the elements were integrated. The consequence is that Monsanto's invention is embodied in the self-replicating organism and will continue to be embodied in that material as it replicates in subsequent generations, albeit it is the same invention in different genetic backgrounds. Following the Australian and pre-*Quanta* decisions, for that material and its subsequent generations the statutory patent privileges will continue to apply. In *Scruggs*, this was framed as '[t]he fact that a patented technology can replicate itself does not give a purchaser the right to use replicated copies of the technology',²⁰⁰ and '[a]pplying the first sale doctrine to subsequent

¹⁹⁷ Notably, this argument that collecting seeds from plants is necessarily 'making' the invention has not been universally accepted. The Supreme Court of Canada stated, while not definitively deciding the matter: 'We are not inclined to the view that Schmeiser "made" the cell within the meaning of s 42 of the *Patent Act*. Neither Schmeiser nor his corporation created or constructed the gene, the expression vector, a plant transformation vector, or plant cells into which the chimeric gene has been inserted': *Monsanto Canada Inc v Schmeiser* [2004] 1 SCR 902, [26] (McLachlin CJ and Major, Binnie, Deschamps and Fish JJ).

¹⁹⁸ See *Pinefair Pty Ltd v Bedford Industries Rehabilitation Association Incorp* (1998) 87 FCR 458 (Foster, Mansfield and Goldberg JJ) and the analysis therein.

¹⁹⁹ See, for example, Hovenkamp (2011).

²⁰⁰ *Monsanto Company v Scruggs*, 459 F.3d 1328 at 1336 (2006).

generations of self-replicating technology would eviscerate the rights of the patent holder'.²⁰¹ While this may be appropriate, the point of this analysis has been to show that this has consequences so that self-replicating technology remains in the control of the patent owner, with the ability to impose contractual controls over each subsequent generation.

Conclusions

The basic argument is that contracts have been combined with patents, and that together this allows a patent holder to avoid the consequences of patent exhaustion and then assert controls over the future generation of self-replicating seeds. This happens because the patent delivers control over the particular self-replicating seed; the contract then avoids exhaustion and allows the patent holder to limit the regeneration of that seed. With no authority to regenerate the seed (including a characterisation of regeneration as making the intention), and a fundamental requirement to have the seed to be able to regenerate the seed, this means that the seed never enters the public domain. This is so even after the patent might have expired because the contractual terms will continue to apply. Regenerating the seeds will thus be either both a patent infringement and a breach of contract with the patent infringement suite of remedies during the term of the patent, or a breach of contract after the patent term expires. With a careful management of the property, these controls might last forever – this is juridifying the self-replicating to commodify the biological nature future.

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