

The Public Domain

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This article explores whether it is possible to identify and delineate the public domain in intellectual property law. It was born of frustration with the commons/enclosure analogy that dominates definitions of the public domain, and frustration that most of the discussion focuses on copyright law, to the expense of other fields of intellectual endeavour. Frustration also that so much of the conversation is US-centric – understandable given that many of the scholars writing are US-based,¹ but nevertheless not reflective of the different settlement reached in the EU-influenced UK. Finally, frustration that the prevailing model of the public domain rests on medieval real property holdings, and so fails to capture the nuances of intangible property, particularly in the internet age. Ultimately, I conclude that it is impossible to draw a complete map of the public domain in terms of what should not be propertised. Instead, I advocate for a positive conception of the public domain, based on individual uses that should always remain free, and the general public interests underlying those uses. This more flexible approach allows the law to evolve in response to specific changes in technology and social conditions, while at the same time maintaining a focus on core non-negotiable freedoms. I also consider whether this methodology can apply to tangible property.

Part I reviews scholarship analogising the public domain to the commons. Part II seeks (unsuccessfully) an alternative rhetoric in ‘no property’ – tangible objects which cannot be propertised. Part III suggests a potential analogy with public rights of access to land. Part IV suggest how this could be supplemented by reference to positive rights and by identifying the underlying justifications for the existing exceptions and exclusions to protection. Part V considers how this reasoning may apply to tangible property. Part VI concludes.

I: THE PUBLIC DOMAIN AS COMMONS

(a) The Commons in IP literature

Modern rhetoric concerning the public domain can be traced back to David Lange’s 1981 article.² Given the intangible and hence fluid nature of intellectual property, he proposes the recognition of ‘something

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¹ But see: C. Waelde & H. MacQueen (eds), *Intellectual Property: The Many Faces of the Public Domain* (Edward Elgar, 2007).

² D. Lange, ‘Recognizing the Public Domain’ 44 *Law & Contemp Probs* 147 (1981).

akin to a “no-man’s land” at the boundaries’.³ Giving examples from publicity rights, sponsorship and endorsement confusion under §43a of the US Lanham Trademark Act and trade mark dilution, he expresses particular concern in relation to ‘property-equivalent theories which are appearing in sporadic, ad hoc fashion’ in the academic literature and courts.⁴ In these cases, he claims that there is little evidence of either entitlement by the claimant, or a genuine ‘taking’ by the defendant. He draws an analogy to the public grazing land of the Western Plains in the US, or even to the Alaskan North which, while vast, was unsuited to colonisation.⁵ He notes that would-be users of such land must first prepare an impact statement and proposes that impact statements might serve a similar role to preserve the intellectual commons. Although the field of IP law is large, and appears inexhaustible, he notes similar beliefs were held a century ago about the now endangered buffalo.⁶ In a pre-digital age, Lange uses the concept of common never-propriated land as an analogy for a field of intangibles that it would be dangerous to place into private hands.

Fast-forward 20 years to the age not only of the internet,⁷ but also of patents over human genes, the US Digital Millennium Copyright Act (protecting anti-circumvention measures), protection against trade mark dilution and the EU’s Database Directive. Lange’s nightmare come true. Boyle⁸ labels this the ‘second enclosure movement’.⁹ During the first enclosure movement in 15th to 19th Century England, common land was fenced off into private parcels of land.¹⁰ Although depriving commoners access to their livelihood, these acts were justified as averting the ‘tragedy of the commons.’ In a commons, where everyone have access to everything, the incentive is for all the commoners to *overwork* the land. No one individual has any incentive to invest in improving the land’s quality because they know that the benefit of any investment would be appropriated by the other commoners.¹¹

Boyle points to the same argument applying to the ‘second enclosure movement’, with the loss of liberties pitted against the purported economic efficiency of privatisation. However, the difference is

³ Ibid, p.150.

⁴ Ibid, p.158.

⁵ Ibid, p.176.

⁶ Ibid, p.178.

⁷ Although others were writing on the subject in the interim, notably: Y. Benkler, ‘Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain’ 74(2) *NYU L Rev* 354 (1999) 354 (from a freedom of speech perspective) and J. Litman, ‘The Public Domain’ 39 *Emory LJ* 965 (1990) (reviewing historical and theoretical notions of the public domain by tracing its vital role in enabling authorship which builds on the work of others).

⁸ J. Boyle, ‘The Second Enclosure Movement and the Construction of the Public Domain’ 66 *Law and Contemp Probs* 33 (2003).

⁹ Ibid, p.38.

¹⁰ The history is documented in W. Holdsworth, *A History of English Law* (Methuen/Sweet & Maxwell, 1945) p.364 onwards.

¹¹ G. Hardin ‘The Tragedy of the Commons’ 162 *Science* 1243 (1968). This justification for enclosure is controversial. Alternative narratives, e.g. E. Ostrom, *Governing the Commons* (CUP, 1990); H. Dagan & M. Heller, ‘The Liberal Commons’ 110 *Yale LJ* 549 (2001), point to the possibility of less selfish (and arguably more rational) attitudes on the part of commoners in moderating their usage.

that IPRs are non-rival: they can be accessed by multiple users at the same time. Equally, Boyle notes the increased ease of copying, but emphasises that *detecting* copying is also easier. He also notes the ‘tragedy of the anticommons’ - a phrase first used by Heller in relation to tangible property¹² - whereby a proliferation of IPRs makes using the material difficult because of the need to obtain consent from multiple rights-holders. Thus, ‘enclosure’ should not be an inevitability as the economic arguments in its favour are not proven, and the pre-existing system of science has, to date, worked well.

Boyle identifies Lange’s article as the beginning of the contemporary study of the public domain.¹³ However, he notes that Lange leaves questions unanswered about who holds rights in the public domain, what it is, and whether it consists of works which are entirely unprotected or includes aspects (such as expressions) which are unprotected. After tracking post-Lange scholarship, Boyle records the resurgence of commons language as ‘the wellsprings of creation that are outside of, or different from the world of intellectual property’.¹⁴ He sees the internet as a commons because of its open protocols and the surrounding rhetoric that focussed on common production. For him, open-source software has showed traditional property paradigms were unnecessary to incentivise creativity. However, open-source software is covered by the General Public Licence and therefore is not truly public domain because developers are bound by that licence, and the ability of originators to enforce that licence depends on IPRs. However, he views this as consistent with contemporary property-based literature on the commons, where not every commons is a tragedy, but where successful commons are not entirely free.

(b) Problems with the Commons

The medieval commons analogy seems binary compared to the IP landscape. The land is either open to the public (a common) or is private (enclosed in private ownership). Indeed, earlier conceptions of multi-user property, such as the Roman law definition (discussed below)¹⁵ allowed for a good deal more subtlety between different ‘ownerless’ uses with different levels of access/usage rights for members of the public. The intellectual landscape is arguably too complicated for a binary model. What is the content of the intellectual commons? Is it abstract fundamental ideas and principles? Or does it include their reduction into useable form, such as solutions to technical problems or expressive works?¹⁶ While

¹² M. Heller, ‘The Tragedy of the Anticommons: Property in the Transition from Marx to Markets’ 111 *Harv L Rev* 621 (1998). Heller uses the concept for IP in M. Heller & R. Eisenberg, ‘Can Patents Deter Innovation? The Anticommons in Biomedical Research’, *Science* 698 (1998).

¹³ Though Boyle, n.8, pp.60-61, identifies earlier isolated recognitions in the literature and jurisprudence.

¹⁴ *Ibid*, 62.

¹⁵ Namely *res nullius*, *res communes*, *res publicae*, *res universitatis*, and *res divini juris*. See C. Rose’s account in, ‘Romans, Roads, and Romantic Creators: Traditions of Public Property in the Information Age’ 66 *Law and Contemporary Problems* 89 (2003), and the IP analogies therein.

¹⁶ Litman, n.7, suggests this may be a false distinction and decries originality, seeing the public domain’s role as distinguishing basic facts from original works.

the former may feel like the more natural role of a commons, arguably access to the latter will be just as necessary. Also, in relation to the intellectual commons, the property may revert to public usage once the term expires. Alternatively, third parties need to retain rights to use the protected subject-matter in certain ways, such as fair use in copyright. There is no obvious parallel for these scenarios in the tangible commons. Perhaps most importantly, it seems inappropriate for a medieval conception of real property to dominate debate taking place in a very different landscape. This is particularly true given that, in the UK, much of IP law is harmonised across the EU. It seems anachronistic for the limits of this very different system to be dominated by Anglo-Saxon notions of property.

(c) Creative commons as commons – a credible alternative?

One iteration of public domain as commons can be seen in the Creative Commons. Lessig describes the Creative Commons as a ‘permission free zone’,¹⁷ inspired by the open-source movement. Creators are provided with ‘a set of free copyright licenses with which they could mark their work and signal the freedoms they intended their work to carry’.¹⁸ This allows authors to indicate that their works can be freely used in certain ways. At the same time, there are four restrictions (that need not be applied concurrently), based on attribution, commercial use, derivative uses and that any derivative be similarly licenced under a free licence. While the project has the power to indicate to the world that certain works are free to use which consequently decreases the transaction costs of would-be third-party users, Lessig readily admits that the Creative Commons is not a true public domain, but an ‘effective public domain’ instead.¹⁹ Creative Commons licences are only enforceable, and even exist, if copyright protection is in place. Increased access is not guaranteed. For example, Elkin-Koren notes that (a number of years ago) 60% of CC licences included the ‘no commercial use’ clause.²⁰ While this impulse is understandable on an instinctive level, the commercial nature of a work or invention is not the measure of its social utility, or indeed of its need to build on earlier work. A cure for cancer is likely to come from a commercial, or at least university laboratory, rather than a lone scientist working in his garden shed. Of course, in legal terms, the CC licence does nothing to undercut the IPR owner’s pre-existing right to withhold a licence, but in terms of creating a vibrant and accessible public domain which maximises chances of further innovation, discriminating against commercial third-party users must be questionable. Indeed, in giving authors the power to restrict commercial copying and the creation of derivative works, the Creative Commons licence will sometimes be more restrictive than copyright law and its exceptions. For example, the facts of *Campbell v Acuff Rose*,²¹ a rap parody of Roy Orbison’s

¹⁷ L. Lessig, ‘Recrafting a Public Domain’ 18 *Yale J. L. & Human* 56, 75 (2006).

¹⁸ *Ibid.*

¹⁹ *Ibid.*, 74.

²⁰ N. Elkin-Koren, ‘What Contracts Cannot Do: The Limits of Private Ordering in Facilitating a Creative Commons’ 74 *Fordham L. Rev.* 375, 401 (2005).

²¹ *Campbell v Acuff Rose* 510 U.S. 569 (1994).

'Pretty Woman' seems to fall foul of the 'no-derivative works' and 'no commercial works' clauses of the most restrictive form of Creative Commons licence, even though the US Supreme Court found it to be permitted fair use. Even if such a provision were unenforceable, it may have a chilling effect on those users with little knowledge of copyright law, who encounter the CC licence and treat it at face value. Thus, it is argued that neither the Commons as it is traditionally understood, nor the Creative Commons offer a satisfactory explanation of what the public domain in IP law should look like. Instead, we will look for other property-based alternatives.

II: NO PROPERTY

(a) Human body parts

Rather than focussing on shared property, a better analogy for objects that should stay in the public domain might be found in tangible property, concerning a thing which can *never* be the subject of property rights. The most prominent example of 'no property' is human body parts. Property in such objects is thought to be distasteful both *per se*, and because there is a line to be drawn between ownership of persons and slavery. Ownership of body parts can also potentially lead to exploitation – for example, a live donor may be pressured to donate an organ for remuneration. Thus, in *Doodeward v Spence*, the High Court of Australia noted that the authorities 'appear to assert a general rule that when a human being dies property in his body does not vest in anyone'.²²

However, not recognising property rights in human body parts creates its own problems. It leaves the person, or their successors, without recourse if a third party appropriates a body part without consent or fails to look after biological materials with which they have been entrusted. For example, in *Yearworth*,²³ six men undergoing chemotherapy entrusted the defendant NHS Trust with sperm samples in order to maintain their fertility. When the storage refrigerator malfunctioned, the samples were destroyed. The Trust claimed that it could not be held liable for negligent damage to property because the sperm samples could not be owned. In finding a negligence action possible, the Court of Appeal rehearsed the authorities for 'no property' in live humans, corpses and parts thereof,²⁴ but concluded that it was necessary to re-assess the common law's treatment of ownership of such matter in light of developments in medical science. In this case, the men 'owned' their sample because: (i) they had used their bodies to generate and ejaculate the sperm with (ii) the sole object that it might later be used for

²² *Doodeward v Spence* [1908] HCA 45, (1908) 6 CLR 406, 413. However, there is a 'quasi-property' right, vesting in the successors of the deceased, to ensure that their corpse receives a decent burial, which is not alienable as standard property might be, see S. Balganes, 'Quasi-Property: Like, But Not Quite Property', 160 *U Pa. L Rev* 1889, 1895-1897 (2012) for the development of this doctrine in the US. Indeed, the dissent in *Doodeward* discusses the US case law.

²³ *Yearworth v North Bristol NHS Trust* [2009] EWCA Civ 37.

²⁴ *Ibid*, [30]-[44].

their benefit, which was protected by a statutory scheme ensuring their negative control over the sperm.²⁵

Indeed, the undercutting of the ‘no property’ rule has a surprising basis in *Doodeward v Spence* itself – the case to which the rule is often attributed. At issue was a still-born two-headed foetus. The doctor attending the birth removed and preserved the foetus. After his death, the foetus was sold by auction to the claimant who exhibited it for gain. However, the defendant seized foetus and donated it to a university museum. The claimant sued for detinue (wrongful detention of goods), which could only lie if the claimant had property in the foetus. Although the defendant relied, inter alia, on the principle of no property in a corpse or human body part, the Court found that this rule was not absolute. Griffith CJ identified that an action lay for interference with the right of possession in the foetus because ‘work and skill had been bestowed by [the attending doctor] upon the foetus, and that it had acquired an actual pecuniary value’.²⁶ Thus, far from being a ‘no property’ rule, this case vests property in someone other than the body part’s original holder as a result of the labour he has expended on the object. *Doodeward* was applied in the UK in *R v Kelly*,²⁷ where an artist who had removed preserved body parts from the Royal College of Surgeons was tried for theft. There could be no theft unless the Royal College had property in the body parts. The Court of Appeal held that, while the default is that there is no property in a corpse, property could arise as a result of ‘the application of skill, such as dissection or preservation techniques, for exhibition or teaching purposes’. The Royal College had applied such skill and so Kelly’s conviction for theft stood.

Such reasoning is equally apparent in *Moore v Regents of University of California*,²⁸ a case where (no) property in body parts and intellectual property intersect. Mr Moore, suffering from hairy-cell leukaemia sought treatment from Dr Golde at the UCLA Medical Centre. Dr Golde withdrew blood and bone marrow from Moore, but the doctor failed to inform the patient of his plans to use these samples for conducting research. Subsequently, Dr Golde established a cell line from Moore’s cells. UCLA sought patent protection for the cell line and its methods of use, and Dr Golde became a paid consultant in relation to the cell line’s commercial development. Moore sued for conversion on the basis that he had a property right in his cells. The Supreme Court of California found that he did not. Moore had no expectation of retaining his cells following their removal and there was no precedent for owning the cells. As for the patented cell line and the products derived from it, these were factually and legally distinct from the cells because the cell line was an invention - a ‘product of “human ingenuity.”’ Once again, far from being unpropertisable, the human body parts in question - or at least a derivative thereof

²⁵ Ibid, [45].

²⁶ *Doodeward v Spence*, n.22, p.413.

²⁷ *R v Kelly* (2000) 51 BMLR 142, [1998] EWCA Crim 1578.

²⁸ *Moore v Regents of University of California* 51 Cal.3d 120 (1990).

- became the property of a third party (this time in the form of a patent), since Dr Golde had exercised his skill on the extracted cells and converted them into something different from their original form.

These cases suggest that, far from enabling us to identify an area of such fundamental importance that it cannot be propertised, instead, even the most sacrosanct area which impinges on the fundamental human need for autonomy will become the subject of property once skill and/or labour is exercised upon it. Thus, the search for a guiding analogy continues.

(b) Wild creatures and water courses

Carol Rose²⁹ draws an analogy between the Roman property system and the public domain of IP. Under Roman property law, wild animals were *res nullius* – owned by no one.³⁰ However, Justinian, in his Statutes, states that ‘so soon as they are taken by anyone, immediately become by the law of nations the property of the captor; for natural reason gives to the first occupant that which had no previous owner’.³¹ Thus, occupying the unowned thing created property rights vesting in the occupying individual. Such reasoning is understandable in that it allows the objects of nature to be reduced into useable form. However, it does not provide an analogy for property that must remain free for all to use since the first person to control the thing becomes its owner.

A more contemporary (in relative terms) example of such reasoning is the 19th Century US case of *Pierson v Post*.³² Post had been pursuing a fox as part of a fox-hunting party on an uninhabited beach. Pierson saw the fox, killed it and took it. The Court rejected Post’s argument that, since he was already in pursuit, he was the rightful owner of the fox. Tompkins J’s starting point was that an animal *ferae naturae* would be acquired by occupation. Following recourse to Justinian, Bracton, Bynkershoek, Grotius and Puffendorf, the Court concluded that mere pursuit did not amount to occupancy. Again, the ‘no property’ is converted into property through sufficient human intervention. An interesting IP analogy can be drawn from this case in relation to *removing* concepts from the public domain, rather than identifying what should remain in the public domain or be included there in the first place. This case suggests the mere pursuit of ideas should not be rewarded until they are reduced into useable form.³³ Such reasoning supports, for example, the idea/expression dichotomy and debates over patent-

²⁹ Rose, n.15.

³⁰ See further B. Nicholas, *Introduction to Roman Law* (OUP, 1962), p.130.

³¹ Justinian, I.II.12.

³² *Pierson v Post* 3 Cal. R. 175 2 Am. Dec. 264 (1805).

³³ See L. Larimore Oulette, ‘*Pierson*, Peer Review, and Patent Law’ 69 *Vand L Rev* 1825 (1996), who analogises the case as denying patent protection to ‘early chasers’ who have not done enough to demonstrate that the invention works. More generally, see C. Rose, ‘Possession as the Origin of Property’, 52 *U Chi. L Rev* 73, 85 (1985) and J. Putnam, ‘The Law and Economics of International Intellectual Property: a Primer’, in K. Markus (ed), *Intellectual Property, Growth and Trade*, (Elsevier, 2008), p.29 onwards.

racers where multiple researchers pursue the same objective but only the first to ‘win the race’ is rewarded with a patent.³⁴

Roman law does in fact recognise a species of property that can never be owned.³⁵ However, this is limited to sacred objects,³⁶ and thus does not map on to intellectual property’s public domain, save in relation to exceptional works. Macmillan argues that some symbols have so much power that they cannot be appropriated and should be analogised to *res divini juris*.³⁷ Similarly, Rose³⁸ argues that the ‘canon’ or ‘icons’ might fall into this category. Perhaps so, though this only catches the ‘classics’ - intellectual endeavours that have proven their worth because of the time that has elapsed since their creation, and indeed are the sorts of actualised creations that, had they been created now, would have been protected by copyright – rather than ideas and concepts which, although newly discovered, are fundamental building blocks.

Similar to wild animals, water also transcends man-made boundaries imposed by property rights over land.³⁹ Thus, water was seen as a form of public property by both the Romans⁴⁰ (in the form of *res communes*) and, by Blackstone.⁴¹ However, not recognising individual use rights in water would mean that no person could abstract and use water. Obviously, this would be unsustainable – for example, drinking a glass of water would be an impossibility. Thus, Blackstone allowed for the propertisation of water via occupation. Interestingly, he viewed these rights as ‘transient’.⁴² While Blackstone’s analysis does not provide an analogy for things which can *never* be propertised, it perhaps provides an analogy for one element of the public domain: IPRs which expire and thus are returned to the public domain. However, the time limitation implied in Blackstone’s transience depends on the amount of time that the water is on any owner’s land, rather than on a fixed term.⁴³ What is interesting about the transience is that it stems from the nature of the water – it is a ‘moveable, wandering thing, and must of necessity continue’.⁴⁴ One could say the same about ideas since there is no physical barrier that can stop them.

³⁴ See, e.g., G. Loury, ‘Market structure and innovation’ [1979] *QJE* 395; D. Fudenberg et al, ‘Preemption, leapfrogging and competition in patent races’ 22 *EER* 3 (1983).

³⁵ Justinian, II.I.7.

³⁶ See further M. Crawford, ‘*Aut sacrom aut publicom*’, in P. Birks, *New Perspectives in the Roman Law of Property* (OUP, 1989).

³⁷ Although see F Macmillan, ‘Copyright, the Creative Industries and the Public Domain’, in C. Jones, M. Lorenzen and J. Sapsed (eds), *Oxford Handbook of Creative Industries* (OUP, 2014).

³⁸ Rose, n.15.

³⁹ There is a nexus between the two in the Irish case *Barlow v Minister for Agriculture, Food and the Marine & ors* [2016] IESC 62. Thanks to Niamh Connolly for suggesting this.

⁴⁰ Justinian, II, 1.

⁴¹ W. Blackstone, *Commentaries on the Law of England* 4 vols. (1/e, Oxford, 1765–9; 15/e by E. Christian, 1809) and ‘Blackstone’s and Hale’s Doctrines of Land and Water Use’, in J. Getzler, *A History of Water Rights at Common Law* (OUP, 2004). The link between IPRs and Blackstone’s approach to water law is critiqued by R. Epstein, ‘Intellectual Property: Old Boundaries and New Frontiers’ 76 *Indiana Law Journal* 803 (2001).

⁴² This contrasts with Riparian Rights, where the *extent* of the rights, not their duration, is limited.

⁴³ Blackstone, ii.,14.

⁴⁴ Blackstone, ii., 17-81.

(c) The failure of ‘no property’

‘No property’ provides us with an analogy, but with something rather different from the public domain. If anything, it tells us how to *remove* objects from the public domain, rather than which objects should stay there for all time. In *Doodeward v Spence*, the doctor was recognised to have property in the foetus, rather than the mother from whose body it originated. The basis of this right was the doctor’s skill and labour in transforming it from a mere corpse, and indeed the case has become known for creating the ‘work and skill’ exception to their being no property in the human body.⁴⁵ In the words of Griffith CJ:

when a person has by the lawful exercise of work or skill so dealt with a human body or part of a human body in his lawful possession that it has acquired some attributes differentiating it from a mere corpse awaiting burial, he acquires a right to retain possession of it.⁴⁶

Similar reasoning is apparent in *R v Kelly*.⁴⁷ Likewise in *Moore*, property in the cell line did not vest in Mr Moore, despite the cells originating from his body. Instead the patent was recognised to be the property of the University because of the difficulty of successfully growing a cell line.⁴⁸ Even in *Yearwood*, the Court of Appeal’s statement that ‘By their bodies, they alone generated and ejaculated the sperm,’⁴⁹ given as the basis of the recognition of their owner in the semen, could be viewed as a form of labour. Likewise, in relation to wild creatures, the act of *taking* reduces the creature to private property, and indeed, in the case of *Pierson v Post*, trumps the intention to possess. With water, the act of occupation creates the property right (although this is dynamic because of the transient nature of water). The reasoning is distinctly Lockean:⁵⁰ the mixing of labour with the hitherto unpropertised object justifies its transformation into property. Now, there is a rich body of scholarship justifying the creation of IP rights by reference to Lockean analysis,⁵¹ but this seeks to justify the *existence* of IP

⁴⁵ See K. Greasley, ‘Property Rights in the Human Body: Commodification and Objectification’, in I. Goold, K. Greasley, J. Herring and L. Skene (eds) *Persons, Parts and Property How Should We Regulate Human Tissue in the 21st Century?* (Hart, 2014), p.74

⁴⁶ *Doodeward v Spence* n.22, p.413.

⁴⁷ *R v Kelly* n.27, ‘parts of a corpse are capable of being property within section 4 of the Theft Act, if they have acquired different attributes by virtue of the application of skill, such as dissection or preservation techniques, for exhibition or teaching purposes’. Although merely fixing a tissue sample in paraffin for post-mortem purposes is *insufficient* to vest property in the surgeon – see *Dobson v North Tyneside Health Authority* (1997) 33 BMLR 146, [1996] EWCA Civ 1301.

⁴⁸ *Moore v Regents of University of California* 51 Cal.3d 120 (1990).

⁴⁹ *Yearworth* n.23, [45], although the Court in *Yearwood* sought to distance itself from the reasoning in *Doodeward*. See also *Re H (No 2)* [2012] SASC 177, [58]-[60] where the preservation of sperm extracted by testicular biopsy on a corpse provided the effort required to propertise the sperm. Interestingly, here the property vested not in the laboratory technician who undertook the process, but in the deceased partner who sought the court order that led to the sperm extraction.

⁵⁰ J. Locke, ‘Labour as the Basis of Property’ in M. Rosen and J. Wolff *Political Thought* (OUP, 1999), p.190.

⁵¹ See J. Hughes, ‘The Philosophy of Intellectual Property, 77 *Geo LJ* 287 (1988); P. Drahos *A Philosophy of Intellectual Property* (Aldershot, 1996); R. Merges, *Justifying Intellectual Property* (HUP, 2011) to name but a few.

rights, rather to identify situations when IPRs should not exist, or should be limited. While it is true that Locke limits acquisition under his theory to situations where there is ‘enough and as good’ left for others, the Lockean proviso is weak. In the IP context, the Lockean proviso may not provide a sufficient limitation on acquisition because IPRs are public goods, in the sense that they can physically be used by more than one person and there is anyway a potentially unlimited pool of ideas from which others can choose.⁵² Indeed, the ‘commons’ may be enriched by the creation of these IPRs as their creation could be a driver towards ideas being more widely disseminated,⁵³ and they will, in any event, but available to the public once they reach the end of their term of protection.

III: PUBLIC PROPERTY

Public property may provide another possible analogy. Here, rather than saying that no one can have rights as is the case in ‘no property’ (strictly defined), or that the rights are held by a closed group (as in the commons), for public property, these rights tend to be positive rights, held by all by virtue of being members of the public. There is an attraction to this, as it could open the way for access to use of certain fundamental ideas and concepts to remain accessible for all.

Historically, public rights have not been particularly strong. They are labelled in a leading textbook as ‘towards the weaker end of the property spectrum’ and ‘quasi proprietary’ since they exhibit only tentatively the conventional characteristics associated with ‘property in land’.⁵⁴ Indeed, in what was until recently the leading case, the rights of the public over the highway were limited to a ‘public right of passage’, namely a “right for all her Majesty's subjects at all seasons of the year freely and at their will to pass and repass without let or hindrance.”⁵⁵ Thus, in *Ex parte Lewis*, the Court upheld an order from the Commissioner of the Metropolitan Police to ban a public assembly in London’s Trafalgar Square, since there was no public right to assemble or hold meetings in public places; only a right to pass and repass.⁵⁶

More recently in *DPP v Jones*,⁵⁷ the House of Lords dismissed the narrow approach in *Ex parte Lewis* as unrealistically restrictive, and has recognised a wider range of public use rights. Acknowledging, for example, that children playing in the street, or individuals collecting for charity would not amount to passing and repassing, a restatement of the test was deemed necessary. Thus, Lord Irvine recognised that the public have ‘the right to use the public highway for such reasonable and usual

⁵² Drahos, n.51, p.50; Hughes, n.51, n.124.

⁵³ Hughes, n.51, n.153.

⁵⁴ K. Gray and S. Gray *Elements of Land Law* (OUP, 2009), 10.7.1.

⁵⁵ *Ex parte Lewis* (1888) 21 QBD 191, 197.

⁵⁶ This was extended in *Harrison v. Duke of Rutland* [1893] 1 QB 142. to include rights ancillary to passing and repassing, though the approach remained narrow.

⁵⁷ Thus, *DPP v Jones* [1999] UKHL 5, [1999] AC 240, stopping to blow one’s nose was given as an example of an ancillary right.

activities as are consistent with the general public's primary right to use the highway for purposes of passage and re-passage.⁵⁸ Thus, contrary to the finding in *Ex parte Lewis*, a public assembly would not amount to trespass providing it was reasonable in terms of its size and duration etc.⁵⁹ There is an attraction to this reasoning. The list of what the public can do is open and can be tailored to what is necessary to exercise their primary right of accessing the highway. If we analogise this to the public domain, this could be suggestive of a continuing right to access *and* use certain ideas and concepts as needed to achieve recognised beneficial purposes, for example, for the purpose of education, research or fair competition.⁶⁰

However, public property rights are vulnerable because they exist only for as long as the land in question remains in public hands. Given the financial pressures on local authorities and other public landowners, there is a trend towards the privatisation of public land so that formerly public spaces are in the hands of private owners who grant the public access to their land.⁶¹ These quasi-public spaces may appear to be public property in physical form. However, because the property is privately owned, the landowner retains the right to exclude persons or activities of which it disapproves in the same way as any other owner of private land can exclude others from his property without showing any justification, or that the landowner has suffered any harm. As Antonia Layard puts it 'There is a profound lack of spatial differentiation within English land law: in both a bedroom and a privately-owned square, the trespass/licence binary applies.'⁶² There is perhaps an analogy to be made with IP, both in terms of the expanding scope of IP rights⁶³ and in terms of increasing focus on the commercialisation and protection of publicly funded research.⁶⁴

⁵⁸ *Ibid*, 254.

⁵⁹ *Ibid*, 257.

⁶⁰ It may be possible to conceive positive rights to protect the rights of individual members of the public to pass and re-pass, see J. Neyers, 'Reconceptualising the Tort of Public Nuisance' (2017) *CLJ* 87, 92-102.

⁶¹ See: www.theguardian.com/cities/2017/jul/24/revealed-pseudo-public-space-pops-london-investigation-map h documenting fifty 'pseudo public' spaces in central London, i.e. 'large squares, parks and thoroughfares that appear to be public but are actually owned and controlled by developers and their private backers'.

⁶² A. Layard, 'Public Space: Property, Lines, Interruptions,' 2(1) *JL Prop & Soc'y* 1 (2016), 12.

⁶³ See, e.g. L. Lessig *The Future of Ideas* (Random House, 2001); J. Litman *Digital Copyright* (Prometheus Books, 2001).

⁶⁴ See, e.g. P. Zungia and S. Wunsch-Vincent 'Harnessing the Benefits of Publicly-Funded Research' *WIPO Magazine* 3/2012. Equally, there is a push towards making publicly funded research Open Access, e.g. submissions to the latest Research Excellence Framework are required to have been included in the home institution's repository, – see www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/2016/201635/HEFCE2016_35.pdf.

IV: A TAXONOMY OF THE PUBLIC DOMAIN

(a) Mapping the public domain – focusing on freedoms

It is never fun to admit defeat. However, while analogies are rife in the public domain scholarship, parallels with tangible property do not quite work. Perhaps because of the scarcity of physical resources, and the instinct of the courts to reward labour it is very difficult to find examples of tangible property that are completely unowned. Moreover, while IP is extensively harmonised at both the international level and by the EU, the laws and principles of real property remain purely national. Consequently, there is something artificial about imposing, for example, a UK, or even Anglo-American real property template on EU intellectual property law.

The upside is that if we cannot find an analogy based on things that *cannot* be propertised, it forces us to refocus our efforts to find a *positive* definition of the public domain, consisting of things that must remain free for all to use. Efforts to do so have often focussed on freedom of speech,⁶⁵ but it is argued that there are other forms of freedom that are necessary for society to thrive. Attempting to create a comprehensive *ex ante* list of the forms of use which must remain free would be futile as it would fail to reflect inevitable changes in technology. It also would run into problems given that, despite the relatively high level of harmonisation apparent in IP, the law does remain jurisdictional, so there are some differences between the exceptions and exclusions from protection, as well as the definitions of infringement. Instead, I have attempted to group together the existing defences in order to identify the underlying interests which they protect. I take inspiration from Pamela Samuelson's extensive writing on mapping the public domain. Samuelson's public domain is dynamic, recognising that the public domain consists of 'a vast and diverse assortment of contents'⁶⁶, which changes over time because of legal developments (such as the creation of the database right) and the expiry of individual IPRs. She sees the value in creating the map because it can be used to assess the impact of both legal and technological developments on the public domain, and also as a tool to sift the public domain works which are 'useful' from those which are 'detritus'.⁶⁷ Samuelson's initial 2003 map is relatively abstract, and arguably does not capture the depth and breadth of the public domain.⁶⁸ On revisiting the public

⁶⁵ See, e.g., J. Rubinfeld, 'The Freedom of the Imagination: Copyright's Constitutionality' 112 *Yale L.J.* 1 (2002-2003), arguing for recognition of the 'freedom of the imagination'. See also the heavy focus on freedom of speech and communication as a limitation on tangible and intangible property in K. Gray, 'Property in Thin Air' (1991) 50 *CLJ* 252. In the European context, it is questionable how much the ECHR (or at least its interpretation by the ECtHR) is willing to intervene in the field of copyright – see D. Spielman, 'Copyright and human rights' in D. Edwards et al (eds) *Ian S. Forrester QC LL.D. A Scot without Borders: Liber Amicorum - Vol 1* (Institute of Competition Law, 2015), p.269.

⁶⁶ P. Samuelson 'Mapping the Digital Public Domain: Threats and Opportunities' 66 *Law & Contemp Probs* 147, 148 (2003).

⁶⁷ *Ibid*, 150.

⁶⁸ *Ibid*, 151 (recognising just nine categories of public domain information including 'scientific and mathematical information' and 'rights expired').

domain in 2006,⁶⁹ Samuelson changes position somewhat. She considers the possibility of multiple public domains, ranging from information wholly free from IP to contractually constructed information commons to communicative sphere to publication of government information, with various other conceptions in between.⁷⁰ The recognition of these multiple overlapping public domains suggests more of an open dialogical public domain, rather than one that it is capable of *ex ante* definition. While Samuelson sees many benefits from this multifaceted definition, her key benefit is:

that one gains deeper insights about public domain values by looking at public domains from different perspectives. Distilling insights from the broad-ranging public domain scholarship, one can discern that the public domain serves many positive functions for society: as a building block for the creation of new knowledge, and as an enabler of competitive imitation, follow-on creation, free or low-cost access to information, public access to cultural heritage, education, self-expression and autonomy, various governmental functions, or deliberative democracy. This recognition, in turn, may foster interdisciplinary work to extend understanding of public domains and the values they serve.⁷¹

In other work, she labels these ‘insights’ as the ‘social values’ of the public domain that may one day shape international consensus on the subject.⁷²

To a jurisprudential purist, deriving a normative ‘ought’ from a descriptive ‘is’ may be ‘bad science’. However, examining existing freedoms, allows us to see what is needed to maintain the current system, while not ruling out further iterations of those freedoms as the need arises. In adopting an approach to the public domain concentrating on what is needed to preserve culture based on current practices, rather than a formalist *a priori* approach, I have also drawn inspiration from the work (predominantly in the copyright sphere) of Julie E Cohen.⁷³ She sees ‘creativity as a social phenomenon manifested through creative practice’, informed by the current and emerging cultural landscape as populated by artists and ordinary people rather than an *ex ante* economic theory of what ‘should’ be in the public domain because economics focuses on abstract prediction, rather than inspiration that will stimulate creativity. In keeping with this ‘realist’ approach to the public domain, I have included uses of IPRs covered by defences and exceptions, as well as phenomena that cannot be protected by IPRs, and those where the term of the IPR has expired. While this approach is not uncontroversial,⁷⁴ I am

⁶⁹ P. Samuelson ‘Enriching Discourse on Public Domains’ 55 *Duke LJ* 783 (2006).

⁷⁰ *Ibid*, 786-813.

⁷¹ *Ibid*, 827.

⁷² P. Samuelson, ‘Challenges in Mapping the Public Domain’ in L. Guibault and B. Hugenholtz (eds), *The Future of the Public Domain: Identifying the Commons in Information Law* (Kluwer, 2006), p.22/p.25.

⁷³ J Cohen ‘Copyright, Commodification, and Culture’ in Guibault and Hugenholtz, *ibid*, p.166.

⁷⁴ See, e.g. Litman, n.7, 968.

persuaded by Benkler's observation that 'The limited, term-of-art "public domain" does not include some important instances that, as a descriptive matter, are assumed generally to be permissible.'⁷⁵ What is important here is what, in practice, third parties are able to use (even if, as is the case with an affirmative defence, they have the burden of proof), rather than formalistic legal categories. Moreover, if, going forward, the freedoms recognised are view as the minimum that has to be respected for a workable public domain, there is a strong public interest reason for adopting a maximalist view of what can be included.

(b) Mapping the UK's public domain

The approach that I have taken to understanding the shape of the UK's public domain is to look at the existing freedoms recognised in the UK's patent, trade mark, copyright and design legislation. This provides us with a snapshot of what is currently recognised as open to third-party use. It is my contention that IPRs should not expand in a way that diminished any of these use rights. However, I have gone further and, like Samuelson, sought to identify the meta-interests that underlie these broad groups of third-party use rights in terms of the 'freedoms' that they protect. In this way, future exceptions to IPRs may be crafted in order to better protect these freedoms, and if new forms of IPRs or *sui generis* rights be created, the need not to impinge on these freedoms will be respected.

While limiting this exercise to the UK may seem parochial, it is necessary because despite harmonising efforts at both international and regional/EU-level, there remain significant pockets of intellectual property law that remain either unharmonised, or are harmonised in outline only (e.g. requiring compliance with the three-step test⁷⁶). Consequently, every jurisdiction's public domain is likely to look at least slightly different.

The freedoms identified are:

- Freedom of competition
- Freedom of research
- Freedom of education
- Freedom of speech
- Freedom of communication

⁷⁵ Benkler, n.7, p.361. Likewise P. Samuelson, 'Enriching Discourse', n.70, p.798 and A. Peukert, 'A Doctrine of the Public Domain' Research Paper of the Faculty of Law of the Goethe University Frankfurt/M No.1/2016, [14].

⁷⁶ Originally incorporated into the Berne Convention in 1967, and subsequently into other international treaties concerning IPRs, the test establishes three cumulative conditions to the limitations and exceptions of IPRs. For example, Art.13 of TRIPS states that members must confine limitations and exceptions to 'certain special cases which do not conflict with a normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the rights holder.'

- Freedom to archive
- Freedom of access for the disabled
- Freedom of technology
- Freedom of medicine
- Freedom of agriculture
- Freedom of architecture
- Freedom of panorama
- Freedom to make private use
- Autonomy and identity-based uses
- Freedom to make official use in the public interest.

(c) **The freedoms in detail**

Freedom of competition

Freedom of competition is the most diffuse of all of the freedoms. I have taken it to cover the range of exclusions from, and limitations on, the term of IPRs, given that both of these measures are designed to allow third-party access. It also covers defences specifically designed to retain the ability for competitors to access the subject-matter of the IPR in order to offer competing products, as well as various public powers to interfere on competition grounds.

The most effective way to allow competition is to deny the object protection in the first place. Thus, in patent law, so-called ‘inventions’ which either lack novelty or are obvious are not patentable.⁷⁷ Moreover, there are specific exclusions from protection for things so fundamental that they should not be in the hands of one person, namely discoveries, scientific theories and mathematical methods.⁷⁸ Also, schemes, rules or methods for performing mental acts, playing games and doing business cannot be patented, nor can computer programs as such,⁷⁹ or ways of presenting information.

There are not the same explicit reservations of certain types of work under copyright law, although literary, dramatic, musical and artistic works, will only be protected if they are ‘original’.⁸⁰ Ostensibly, this means that unoriginal works should be in the public domain, although this is not an absolute limitation, since originality has been interpreted to mean that the work has not been copied⁸¹ or latterly, under the EU’s influence, that it is the author’s own intellectual creation.⁸² What the

⁷⁷ S.1(1) UK Patents Act 1977 (hereafter ‘PA’).

⁷⁸ S.1(2)(a) PA.

⁷⁹ S.1(2)(c) PA.

⁸⁰ S.1(1)(a) UK Copyright, Designs and Patents Act 1988 (hereafter ‘CDPA’).

⁸¹ E.g. *Ladbroke v William Hill* [1964] 1 WLR 273.

⁸² C-05/08 *Infopaq International A/S v Danske Dagblades Forening* ECLI:EU:C:2009:465.

originality requirement does ensure is that prior works cannot be re-propriated, and retain these in the public domain.

In trade mark law, the CJEU has explicitly stated that the intention behind the descriptiveness, genericity⁸³ and functionality grounds⁸⁴ of refusal is to keep certain marks free for other traders to use.⁸⁵ Additionally, marks which are devoid of distinctive character cannot be registered.⁸⁶ While the CJEU proffers the rationale for this provision is to ensure that indicia which are incapable of identifying the origin of goods are not registered, it serves a secondary function of denying protection to ‘basic’ shapes, words etc. which coincide with those that other traders may need to use.

Similarly, the law pertaining to registered designs requires that protectable designs are new and have individual character.⁸⁷ This ensures that competitors retain access to designs that are the same as or close to the existing design corpus. Moreover, there is a specific exclusion from registration for features of the appearance of a product which are solely dictated by the product’s technical function,⁸⁸ and for those which ‘must fit’ another product in order to enable either product to perform its function.⁸⁹ This ensures that competitors are free to offer products which are interoperable with those of the would-be design-holder.

If a design is unregistered, it will only be protected if it is original.⁹⁰ ‘Originality’ is defined differently from copyright as not ‘commonplace in the design field in question at the time of its creation’.⁹¹ This extends beyond denying protection to existing designs and requires decision-makers to evaluate *how* different they are. The need for others to access certain designs is also protected by exclusions for the protection of methods or principles of construction,⁹² aspects of a product that ‘must fit’ or ‘must match’ another product⁹³ and surface decoration.⁹⁴

Once protection is granted, perhaps the most powerful way that competitors’ needs are respected is that (except for trade marks),⁹⁵ the term of protection is finite. Thus, patents are granted for

⁸³ S.3(1)(c) and (d) UK Trade Marks Act 1994 (hereafter ‘TMA’).

⁸⁴ S.3(2) TMA. This provision encompasses not just technical functionality, but also shapes resulting from the nature of the goods, and shapes which add substantial value to the goods.

⁸⁵ E.g. C-53/01 *Linde v Rado Uhren AG* ECLI:EU:C:2003:206, [73]-[74],

⁸⁶ S.3(1)(b) TMA.

⁸⁷ S.1B(1) UK Registered Design Act 1949 (hereafter ‘RDA’).

⁸⁸ S.1C(1) RDA.

⁸⁹ S.1C(2) RDA, except if the design feature is part of a modular system per s.1C(3) RDA.

⁹⁰ S.213(1) CDPA.

⁹¹ S.213(4) CDPA. Though see *Whitby Specialist Vehicles Ltd v Yorkshire Specialist Vehicles Ltd* [2014] EWHC 4242 (Pat) [43].

⁹² S.213(3)(a) CDPA.

⁹³ S.213(3)(b) CDPA.

⁹⁴ S.213(3)(c) CDPA.

⁹⁵ Even then, trade mark protection continues only as long as 10-yearly renewal fees are paid, s.42 TMA.

20 years,⁹⁶ copyright for the author's life plus 70 years for original works⁹⁷ (and significantly less for certain types of entrepreneurial works⁹⁸), registered designs for a maximum of 25 years⁹⁹ and unregistered designs for a maximum of 15 years.¹⁰⁰ Indeed, it is possible to see this arrangement as an example of IPRs *enriching* the public domain: inventors, authors and designs are incentivised by the grant of IPRs to disclose their inventions/creations, which, as the end of a finite period, will enter into the public domain. It is worth noting that, in a similar vein, attempts to lengthen the IP protection given to finite IPRs through the use of 'infinite' trade mark and unfair competition protection have received an increasingly hostile reception from both domestic courts in the UK¹⁰¹ and the CJEU.¹⁰²

There are also specific carve-outs built into each of the IPRs in the form of exclusions/exceptions designed to maintain access for competitors to the types of use that competitors need to be allowed to continue in order to realistically maintain a position on the market. The defences to patent infringement appear to primarily target specific publicly beneficial uses, rather than competition generally. A notable exception is that the offering of 'staple commercial products' is excluded from patent infringement, which prevents any form of chilling effect on the market for such products.¹⁰³

Trade mark law offers more in the way of defences designed to ensure freedom to compete. Use to describe the defendant's goods enables him to more effectively describe his offering to consumers, even if the description contains a third-party trade mark.¹⁰⁴ Use to describe the intended purpose of the defendant's goods allows defendants who offer spare parts for, or products which are interoperable with, the protected brand to communicate this to consumers.¹⁰⁵ Both of these defences are subject to an honest practices proviso, which has been interpreted in a way that is potentially restrictive on third-party use. An analogous defence is available to registered design infringement whereby a registered design right in a component part that can be used to repair a complex product will not be infringed by use for that purpose (effectively allowing for competition on the market for spare parts for

⁹⁶ S.25 PA.

⁹⁷ S.12 CDPA.

⁹⁸ SS.13A-15 CDPA.

⁹⁹ S.8 RDA.

¹⁰⁰ S.216 CDPA.

¹⁰¹ E.g. *London Taxi Corporation v Frazer-Nash Research Ltd* [2016] EWHC 52 (Ch), [212] (finding the 3-D marks for the shape of a London taxi invalid as adding substantial value to the goods, noting that the same shape was registered as a design.)

¹⁰² C-48/09 P *Lego Juris A/S v OHIM et al* ECLI:EU:C:2010:516; C-205/13 *Hauck GmbH & Co KG v Stokke A/S* ECLI:EU:C:2014:2233. See analogously, C-395/16 *DOCERAM GmbH v CeramTec GmbH* ECLI:EU:C:2018:172, [30] interpreting a 'design dictated solely by a technical function' more broadly that one lacking any alternative, otherwise design protection would be equivalent to patent protection while bypassing its more stringent requirements.

¹⁰³ S.60(3) PA. It also seems to protect those who have little reason to suspect that their products might be used for infringing purposes.

¹⁰⁴ S.11(2)(b) TMA.

¹⁰⁵ S.11(2)(c) TMA.

complex products).¹⁰⁶ Returning to trade mark law, there is a defence to dilution and unfair advantage where the junior user has ‘due cause’ to use the mark in question.¹⁰⁷ This has been interpreted by the CJEU to include situations where the defendant is seeking to draw attention to the fact that his product is equivalent to that offered by under the protected mark.¹⁰⁸ For the most part, the defences to copyright infringement protect specific interest-based freedoms, which I will consider in turn below. However, one might identify certain defences as designed to protect competition generally, e.g., the right to copy or issue copies to the public of an artistic work in order to advertise the sale of the work;¹⁰⁹ the fact that an author of an artistic work who is not its owner cannot infringe the work by copying it unless he imitates the main design of the earlier work¹¹⁰ and assumptions regarding the expiry of copyright when it is not possible to identify the identity of the authors of a film.¹¹¹ It should be noted that the exceptions to unregistered design infringement focus on public interest uses, and will be considered below.

Additionally, exhaustion of rights facilitates intra-brand competition, by allowing third parties to market genuine marked goods sourced from another EEA Member State.¹¹² The same is true in copyright law, where exhaustion allows for third parties to resell the physical goods embodying copyright works once they have been put on the market by the copyright owner¹¹³ and registered design law, where there is no infringement for acts which relate to a product incorporating a design where the product has been put on the mark in the EEA by the registered proprietor or with his consent.¹¹⁴

A further mechanism which protects the public domain is the ability to invalidate a registered IPR post-grant, if subsequently it is found not to comply with the competition-protecting measures put place. Thus, a registered design can be invalidated if it is not novel, lacks individual character or is dictated by technical function.¹¹⁵ Likewise, a registered trade mark can be invalidated if it is descriptive, lacks distinctiveness, or was generic at the time of application.¹¹⁶ Moreover, since consumer perceptions of marks change over time, a mark which may have been valid at its filing date can be revoked if later becomes generic because of the owner’s subsequent actions or inactivity.¹¹⁷ This guarantees access to the basic names of goods or services which competitors will need to use. Further, a registered mark that not used for a continuous period of five years is liable to be revoked.¹¹⁸ This prevents owners from

¹⁰⁶ S.7A(5) RDA.

¹⁰⁷ S.10(3) TMA.

¹⁰⁸ C-323/09 *Interflora Inc. v Marks & Spencer plc* ECLI:EU:C:2011:604, [91].

¹⁰⁹ S.63 CDPA.

¹¹⁰ S.64 CDPA.

¹¹¹ S.66A CDPA.

¹¹² S.12 TMA.

¹¹³ S.18 CDPA.

¹¹⁴ S.7A(4) RDA.

¹¹⁵ S.11ZA(1)/(2) RDA.

¹¹⁶ S.47(1) RDA.

¹¹⁷ S.46(1)(c) TMA.

¹¹⁸ S.46(1)(a)/(b) TMA.

‘warehousing’ marks in order to block competitor access, and also ensures that those which the owner decides not to use subsequent to registration are returned to the public domain.

As with the other registered IPRs, a patent can also be revoked if it transpires that it fails to meet the competition-protecting requirements of novelty, inventive step, industrial applicability, or it is comprised of excluded subject-matter.¹¹⁹ In addition, a patent will be revoked if the specification does not disclose the invention clearly and completely enough for it to be performed by a person skilled in the art. This ensures that once the term of the patent has ended, the invention enters into the public domain with enough information to allow competitors to work it and make competing offerings.¹²⁰ This provision acts as a companion to s.14(3) of the Patents Act, which requires that the specification is, at its filing date, clear and complete enough for the invention to be performed by a person skilled in the art.

Freedom to compete is also protected by a network of provisions allowing for either compulsory licensing of certain IPRs, or interference by public authorities with licence terms. These provisions focus on patents and designs, which will often cover functional aspects of products, meaning there is arguably the greatest need for competitor access and the maintenance of supply to the market. In relation to patents, competitors can apply to the Comptroller after three years for a licence.¹²¹ Such licences will only be granted where: (i) the invention is not being worked in the UK, or is not being worked to the fullest extent reasonably practicable; (ii) the demand in the UK is not being met, or is being met substantially through imports; (iii) the refusal of the grant of a licence is preventing the market for the export of any patented product in the UK; (iv) the refusal is preventing the working in the UK of another patented invention which makes a contribution to the art or (v) the establishment or development of commercial or industrial activities in the UK is unfairly prejudiced. Finally, the licence conditions imposed by the patentee unfairly prejudices the manufacture, use or disposal of materials not protected by the patent, or prejudices the establishment of commercial or industrial activities in the UK. There are also powers for the Competition and Markets Authority or the Secretary of State to intervene where conditions in licences are too restrictive, or licences are refused outright. Additionally, the patentee himself can publicly declare to competitors via entry on the register that licences under the patent are available as of right (albeit for negotiated remuneration).¹²²

In relation to designs, where a design is unregistered, *any person* is entitled to a licence as of right to use the design in the last five years of its term.¹²³ Prior to that period, there is a power for the

¹¹⁹ S.72(1)(a) PA.

¹²⁰ S.72(1)(c) PA.

¹²¹ S.48 PA and s.50 PA applies to patentees from WTO and non-WTO Members, respectively.

¹²² S.46 PA.

¹²³ S.237 CDPA. For infringing activities occurring in the last five-year term of protection, a licence is available as of right per s.239 CDPA.

Secretary of State for Competition and Markets Authority to remedy refusals to grant licences on reasonable terms, or at all, where a breach of competition rules has taken place.¹²⁴ There are no longer¹²⁵ compulsory licensing provisions in relation to registered designs, perhaps because the functionality exclusion to protection means that the designs that competitors will most need to access will not be protected as registered designs.

Freedom of research

There is a loose network of defences allowing third parties to make use of IPRs in their own research. These crucial defences aim to ensure that the creation and discovery of new knowledge can take place. Given this objective, the defences tend to focus on the more ‘technical’ IPRs – thus, there is no research defence to trade mark infringement.

For patent infringement, a defence is available for acts done for experimental purposes relating to the subject-matter of the invention.¹²⁶ For copyright, fair dealing with a copyright work for the purposes of non-commercial research is permitted.¹²⁷ Likewise, neither registered¹²⁸ nor unregistered designs¹²⁹ are infringed by acts done for experimental purposes.

There is also a defence designed to facilitate the potential gains from new methods of analysing information. Thus, it is permitted for a person who has lawful access to that work to make a copy of that work in order to carry out a computational analysis of what is recorded in that work, i.e. text and data mining.¹³⁰ In a similar vein, there is a defence for observing, study or testing the functioning or a computer programme in order to determine the ideas and principles underlying the program.¹³¹

What is striking is that, with the exception of the computer program defence, all of the research-based defences to copyright infringement are limited to where the research is non-commercial. This is overly narrow since, as has been recognised in relation to both patents and designs, the social benefits of research occur regardless of how a specific piece of research is funded.

Freedom of education

Closely related to freedom of research is freedom of education. In crude terms, while research seeks to push the boundaries of knowledge, education seeks to inculcate existing knowledge. Given the

¹²⁴ S.238 CDPA.

¹²⁵ S.10 RDA was repealed following the transposition of the Design Directive into UK law.

¹²⁶ S.60(5)(b) PA.

¹²⁷ S.29(1) CDPA.

¹²⁸ S.7A(2)(b) RDA.

¹²⁹ S.244A(b) CDPA.

¹³⁰ S.29A(1)(a) CDPA.

¹³¹ S.50BA(1) CDPA.

information-rich nature of copyright, and also the fact that what is protected by copyright is so all-encompassing that it will be relevant to those of pre-school age up until university and beyond, it is unsurprising that the education-based defences centre primarily around this IPR.

Much of ‘formal’ education takes place in the context of an educational establishment, such as a school, college or university and with a significant element of instruction by a teacher or lecturer. Thus, there are defences for fair dealing with a work for the purposes of instruction (including setting exam questions),¹³² creating anthologies for use by educational establishments¹³³, performing works¹³⁴ and playing or showing sound recordings, films or broadcasts for teachers and pupils at educational establishments,¹³⁵ recording broadcasts by educational establishments,¹³⁶ copying extracts of works by educational establishments for the purposes of instruction¹³⁷ and lending copies of the work by an educational establishment.¹³⁸

While these defences are designed to cover the basic running of schools, and places of higher learning, they are narrowly defined, and tend to only cover non-commercial uses¹³⁹ (a significant restriction in a time when there are an increasing number of private education providers), are limited in some situations where licences are available,¹⁴⁰ and are focussed on the core educational purpose, e.g. a school play would not be covered by the performance in public exception.¹⁴¹

An allied defence is the exception covering fair dealing for the purposes of private study, given that a significant amount of the education process (particularly at the university level) consists of students engaging in individual study.¹⁴²

There are also defences to acts of reproduction for the purposes of teaching for both registered¹⁴³ and unregistered designs,¹⁴⁴ provided the act of reproduction is compatible with fair trade practice and does not unduly prejudice normal exploitation of the design. As is the case in relation to research, no distinction is made as to the commercial nature or otherwise of the teaching.

¹³² S.32 CDPA.

¹³³ S.33 CDPA.

¹³⁴ S.34(1) CDPA.

¹³⁵ S.34(2) CDPA.

¹³⁶ S.35 CDPA.

¹³⁷ S.36 CDPA.

¹³⁸ S.36A CDPA.

¹³⁹ S.32(1)(a); s.36(1)(a) CDPA.

¹⁴⁰ S.35(4) and s.36(6) CDPA.

¹⁴¹ S.34(3) CDPA.

¹⁴² S.29 CDPA.

¹⁴³ S7A(1)(c) RDA.

¹⁴⁴ S.244A(c) CDPA.

Freedom of speech

Controlling the dissemination of copyright works (and, to a lesser extent, trade marks) inherently involves a restriction on the speech of third parties. However, this is tolerated in order to reward and incentivise the creation of copyright works, which should, ultimately ensure that there is more ‘speech’ available to the public. Nonetheless, the law has recognised that in certain circumstances, there is an overriding need to ensure the freedom of certain forms of speech by individual third parties. Indeed, the defences in this area have recently been enhanced in relation to copyright.

Fair dealing for the purposes of criticism or review of a copyright work is permitted,¹⁴⁵ as is fair dealing for the purposes of reporting current events.¹⁴⁶ A complement to this defence is the provision that creates an exception to infringement of the literary work in a recording of spoken words for the purpose of reporting current events.¹⁴⁷ Likewise, there are exceptions to moral¹⁴⁸ and performers’ rights¹⁴⁹ designed to cover news reporting. The residual public interest defence may play a role in exceptional cases.¹⁵⁰ A relatively newly introduced defence allows fair dealing with a work for the purposes of caricature, parody or pastiche.¹⁵¹ A niche defence enables artists to incorporate aspects of their earlier works in which they do not own the copyright without infringing, as long as they do not repeat or imitate the main design of the earlier work.¹⁵² This facilitates the creation of future works by artists. Another, lesser-known defence states that there is no infringement of the copyright in the artistic work consisting of the design of a typeface in using that typeface in the ordinary course or typing, composing text, typesetting or printing or doing anything with words that contain that typeface. This effectively insulates the speech contained in such works from being blocked through copyright issues related to the typeface.¹⁵³

In relation to trade mark law, the defences which allow for senior trade marks to be used to describe junior goods,¹⁵⁴ or to indicate the intended purpose of junior goods (such as spare parts)¹⁵⁵ allow for a degree of free speech, at least in the commercial context. There is a similar purpose behind the rules permitting comparative advertising, though the subsequent interpretation of the rules on permissible comparative advertising¹⁵⁶ involving trade marks found in the *Misleading and Comparative*

¹⁴⁵ S.30(1) CDPA.

¹⁴⁶ S.30(2) CDPA.

¹⁴⁷ S.58 CDPA.

¹⁴⁸ S.81(3) and s.81(4)(a) CDPA.

¹⁴⁹ S.205E(3), s.205E(5)(a) and s.205G(2) CDPA.

¹⁵⁰ S.171(3) CDPA, as interpreted in *Ashdown v Telegraph Group* [2002] RPC 5.

¹⁵¹ S.30A CDPA.

¹⁵² S.64 CDPA.

¹⁵³ S.54(1) CDPA.

¹⁵⁴ S.11(2)(b) TMA.

¹⁵⁵ S.11(2)(c) TMA.

¹⁵⁶ Directive 2006/114/EC of the European Parliament and of the Council of 12 December 2006 concerning misleading and comparative advertising. Art.4 allows comparative advertising, subject to certain conditions.

Advertising Directive have arguably come into conflict with this objective.¹⁵⁷ It should also be noted that the fact that trade mark infringement is limited to situations where there is ‘use in the course of trade’ removes some more creative and political uses¹⁵⁸ from the scope of infringement.¹⁵⁹

Freedom of communication

Freedom of communication is intimately connected with freedom of speech. For the sake of clearly describing the two separate but overlapping interests, this article uses freedom of speech to refer to use of another’s IPR to create a *new* work, and freedom of communication to refer to the dissemination or communication of the IPR-holder’s own work in an unchanged form. As with freedom of speech, this freedom impacts largely on copyright.

Many of these exceptions cover acts by institutions, particularly libraries. There is an exception to the rental/lending right for most LDMA works, films and sound recordings where there is making available between establishments which are accessible to the public.¹⁶⁰ Public libraries or not for profit libraries and archives do not infringe copyright when they lend books, audiobooks or e-books.¹⁶¹ There are also provisions for the creation of a licensing scheme for the lending to the public of the more creative forms of copyright works.¹⁶² Likewise, libraries, archives, museums and educational establishments do not infringe copyright by making works available through dedicated terminals on their premises when this is for the purposes of research and private study by those using the terminals and if the works have been lawfully acquired and used in compliance with the licensing terms to which they are subject.¹⁶³ Librarians may make single copies of published works to supply them to other libraries and of published¹⁶⁴ and unpublished works¹⁶⁵ to supply them to members of the public under certain conditions.¹⁶⁶ Librarians, archivists and curators of museums may also make a copy of the item to preserve the item, or to replace a lost item in the collection of another library, archive or museum.¹⁶⁷ There are also provisions for the making available and digitisation of orphan works by libraries, archives, heritage institutions and other relevant bodies.¹⁶⁸

¹⁵⁷ C-487/07 *L’Oreal SA v Bellure NV* ECLI:EU:C:2009:378.

¹⁵⁸ *Unilever plc v Griffin* [2010] EWHC 899 (Ch).

¹⁵⁹ Presumably inclusion in, e.g. a commercial book, newspaper or song would still be ‘in the course of trade’.

¹⁶⁰ S.18A(4) CDPA.

¹⁶¹ S..40A CDPA.

¹⁶² S.66 CDPA.

¹⁶³ S.40B CDPA.

¹⁶⁴ S.41 CDPA.

¹⁶⁵ S.43 CDPA.

¹⁶⁶ S.42A CDPA.

¹⁶⁷ S.42 CDPA.

¹⁶⁸ S.44B and s.76a CDPA, read in conjunction with Schedule ZA1.

In terms of enjoyment of cultural artefacts, there is an exception for the reading or recitation in public of a reasonable extract of a published literary or dramatic work.¹⁶⁹ Likewise, showing or playing a broadcast in public to an audience who have not paid for admission does not infringe copyright in the broadcast or sound recording included therein.¹⁷⁰ It is also not an infringement of copyright in an artistic work to copy it, or issue copies to the public in order to advertise the work for sale.¹⁷¹ In relation to scientific works, there is an exception to copyright for the copying and issuing to the public of abstracts of scientific or technical articles, though this does not apply if a licensing scheme is put in place.¹⁷²

Freedom to archive

The preservation of literary and cultural artefacts is also recognised as a protected interest under UK copyright law. This is particularly so in relation to specific types of work which may be otherwise lost. While depositing of publications is dealt with under separate legislation,¹⁷³ the CDPA specifically creates an exception for the copying of material from the internet by legal deposit libraries.¹⁷⁴ Folksongs of unknown authorship can be recorded by not-for-profit archives, even though they could, in principle, still be in copyright,¹⁷⁵ as can broadcasts.¹⁷⁶ An analogous interest can be seen in the exception allowing the copying of articles of cultural or historical importance by libraries or archives where such articles cannot be lawfully exported from the UK without such a copy being made.¹⁷⁷

Freedom of access for the disabled

A disabled person who has lawful possession of a copyright work can make an accessible copy or have a copy made on his behalf in order to be able to enjoy the work to the same degree as a person without a disability.¹⁷⁸ Additionally, an authorised body can make and supply accessible copies on a larger scale for the personal use disabled persons.¹⁷⁹ However, this exception cannot be exercised if similarly accessible works are commercially available on reasonable terms by or with the authority of the copyright owner.¹⁸⁰ There is no similar provision under any of the other IP rights, even though one can envisage a situation where a disabled person may not be able to use an object protected by a design or patent without adaptations being made.

¹⁶⁹ S.59 CDPA.

¹⁷⁰ S.72 CDPA.

¹⁷¹ S.63 CDPA.

¹⁷² S.60 CDPA.

¹⁷³ The Legal Deposit Libraries Act 2003.

¹⁷⁴ S.44A CDPA.

¹⁷⁵ S.61 CDPA.

¹⁷⁶ S.75 CDPA.

¹⁷⁷ S.44 CDPA.

¹⁷⁸ S.31A CDPA.

¹⁷⁹ S.31B and s.31BA CDPA.

¹⁸⁰ SS.31A(2)(c); 31B(2), (4) CDPA.

Freedom to use technology

There are a number of exceptions that allow the furtherance of technology through use. Most focus on computer programs, where the acts of running or studying programs will often involve the making of a copy and so will *prima facie* infringe copyright. Thus, lawful users of computer programs are entitled to make back-up copies of programs if needed for the lawful use,¹⁸¹ to convert computer programs from lower to higher level languages (decompilation) to create interoperable programs,¹⁸² to observe, study or test the functioning of the program to determine the underlying ideas and principles while engaged in lawful uses of that program,¹⁸³ and to copy or adapt a program where necessary for its lawful use, and in particular to correct errors in it.¹⁸⁴ There is also an exception to the right to object to derogatory treatment where the work is a computer program, meaning moral rights should not stand in the way of further development of the program.¹⁸⁵

Outside the sphere of computer programs (which are specifically excluded), there is an exception¹⁸⁶ for transient copies involved in the technological process of transmitting works by an intermediary for lawful use. This protects internet service providers (ISPs) from liability for browsing and caching by their clients, which inevitably involve the making of temporary copies of webpages as part of the way that they work. Also on a more general level, there is an exception to copyright, allowing the copying and issuing to the public of abstracts of periodical articles on scientific or technical subject-matter.¹⁸⁷ The way in which the IPRs encourage the proliferation of technological developments should also be thought of in conjunction with the exceptions described under freedom of research, as research will frequently be on scientific or technological subject-matter.

Freedom of medicine

One of the (arguably) most important categories of invention protected under patent law is pharmaceuticals. From the point of view of incentivising the significant investment that goes in to researching and developing these products, there is a clear need for them to be protected. At the same time, given the significant impact on human health of medical inventions, and the moral issues concerned in proprietising aspects of the human body, the Patents Act contains a number of provisions that balance incentivisation and the desire to make medical treatment accessible. There is an exclusion from patentability for methods of treatment of the human or animal body by surgery or therapy, and for

¹⁸¹ S.50A CDPA.

¹⁸² S.50B CDPA.

¹⁸³ S.50BA CDPA.

¹⁸⁴ S.50C CDPA.

¹⁸⁵ S.81(2) CDPA.

¹⁸⁶ S.28A CDPA.

¹⁸⁷ S.60 CDPA, other than when a certified licensing scheme is in place.

methods of diagnosis practised on the human body.¹⁸⁸ This covers basic methods, but expressly does not cover pharmaceutical substances, which remain patentable.¹⁸⁹ Even where a patent has been granted for pharmaceutical, the Patents Act empowers any government department (or person authorised by a government department) to sell or offer to sell medication without the proprietor's consent¹⁹⁰ in certain circumstances and to produce specified drugs and medicines.¹⁹¹ However, compensation must be paid by the Crown to the patentee.¹⁹² Similarly, in relation to unregistered designs, the Crown retains a right to do anything to supply articles for health service purposes subject to a royalty.¹⁹³ A defence to patent infringement exists enabling applicants for marketing authorisation for both human and veterinary medicine to conduct studies, trials or tests to demonstrate that their product is essentially similar to a medical product which has prior marketing authorisation, thus speeding up the time with which such medications can come to market.¹⁹⁴ On a more domestic level, a defence exists to patent infringement for pharmacists making up medication prescribed by doctors or dentists.¹⁹⁵

Freedom of agriculture

Exceptions exist to patent law which enable farmer who have been sold either plant or propagating material to reuse the products of that harvest for future propagation.¹⁹⁶ A parallel defence exists for livestock farming where the farmer has been sold breeding stock or animal reproductive material.¹⁹⁷ There is also a general defence for the use of biological materials for breeding, discovering and developing other plant varieties.¹⁹⁸

Freedom of architecture

Works of architecture involves the interface of copyright and land use. Although architectural plans and models of buildings are protected by copyright, as indeed are buildings themselves,¹⁹⁹ the CDPA privileges third parties in relation to this form of copyright, stating that acts conducted to reconstruct a building do not infringe copyright in the building or any drawing or plans created for the building's construction.²⁰⁰ There is also an exception to the right to object to derogatory treatment where the work

¹⁸⁸ S.4A PA.

¹⁸⁹ S.4A(2) PA.

¹⁹⁰ S.55 PA.

¹⁹¹ S.56(2)(b) PA.

¹⁹² S.57A PA.

¹⁹³ S.240 and S.241 CDPA.

¹⁹⁴ S.60(5)(i) PA.

¹⁹⁵ S.60(5)(c) PA.

¹⁹⁶ S.60(5)(g) PA.

¹⁹⁷ S.60(5)(h) PA.

¹⁹⁸ S.60(5)(j) PA.

¹⁹⁹ S.4(1)(b) CDPA.

²⁰⁰ S.65 CDPA.

in question is a work of architecture. Any other approach could enable the architect of a building to objection to modifications or extensions of the building.²⁰¹

Freedom of panorama and incidental inclusion

The CDPA includes a defence to infringement²⁰² where the work in question is a building, sculpture, model for a building or work of artistic craftsmanship and where it is permanently situated in a public place or premises open to the public. In such situations, there will be no infringement where a third party photographs the work, makes a graphic work (e.g. a drawing representing it) or makes a broadcast of a visual image of it. Importantly, this defence means that third parties retain the freedom to take photographs of street scenes and other public places which incidentally (or indeed on purpose) capture copyright-protected buildings and/or sculptures.

There is an analogy to be made with the incidental inclusion defence in that both are needed to enable authors to create works in the context of the real world, which is populated by objects covered by pre-existing copyright works.²⁰³ Where a work is incidentally included in an artistic work, sound recording, film or broadcast, the inclusion does not infringe, nor does the issuing to the public of copies, playing, showing or communicating to the public the work in which the copyright work is included.

Freedom to make private use

The freedom for individuals to make private use of the subject-matter of IPRs pervades the major intellectual property rights. This has been particularly prominent in relation to copyright, where a new exception, allowing individuals to make personal copies of works which have been lawfully acquired.²⁰⁴ Even prior to the introduction to this exception, there was a defence to copyright infringement for ‘time-shifting’, which allowed individuals to make a private copy of a broadcast (such as a video) allowing them to watch or listen to the broadcast at a more convenient time.²⁰⁵ A somewhat more esoteric defence allows private individuals to take photographs of images forming part of a broadcast.²⁰⁶ In all instances, the individual is not allowed to deal with the private copy produced under these exceptions.

Patent law,²⁰⁷ registered design law²⁰⁸ and unregistered design law²⁰⁹ all have straightforward exceptions, stating that there is no infringement by an act which is done ‘privately and for purposes

²⁰¹ S.80(5) CDPA.

²⁰² S.62 CDPA.

²⁰³ S.31 CDPA.

²⁰⁴ S.28B CDPA.

²⁰⁵ S.70 CDPA.

²⁰⁶ S.71 CDPA.

²⁰⁷ S.60(5)(a) PA.

²⁰⁸ S.7A(2)(a) RDA.

²⁰⁹ S.244A(a) CDPA.

which are not commercial'. There is no such defence to trade mark law because it is not necessary: trade mark infringement is limited to 'use in the course of trade'.²¹⁰ Private non-commercial use will not be in the course of trade and so will not infringe in the first place.

Autonomy and identity-based uses

Trade mark law contains a defence to infringement where the junior user is making use of his own name or address.²¹¹ Although this has recently been narrowed so that it is limited to one's own *personal* name or address, rather than that of one's company,²¹² it ensures that trade mark law does not prevent third parties from being able to use an important part of their identity in the commercial sphere. An arguably analogous interest can be seen in the exception to trade mark infringement which covers earlier local rights that predate the senior registered trade mark.²¹³ This allows third parties to retain their (innocently acquired) 'commercial identity' even when it conflicts with another trade mark. A similar approach has been taken in allowing the 'due cause' proviso to dilution/unfair advantage to be used by junior users whose use of a mark predates that of the registered trade mark owner.²¹⁴

Freedom to make official use in the public interest

The various IPRs recognised a number of exceptions allowing use to be made of the subject-matter of IPRs by public bodies. The exceptions are often expressed in terms of powers for the 'Crown' to undertake certain activities. The Crown is widely defined, and expressly includes bodies such as the NHS and the Care Quality Commission.²¹⁵

One objective is for these materials to remain accessible for public functions and duties to take place. Thus, copyright cannot be infringed by anything done for parliamentary or judicial proceeding,²¹⁶ not for the conduct or reporting of Royal Commissions or statutory inquiries.²¹⁷ There is also a defence for copying of the literary and factual aspect of material open to public inspection pursuant to a statutory requirement or on a statutory register²¹⁸ and for copying public records.²¹⁹ Furthermore, materials communicated to the Crown in the course of public business can be used by the Crown for the purpose for which it was communicated, or related purposes stemming from that original communication. There

²¹⁰ S.10(1)-(3) TMA.

²¹¹ S.11(2)(a) TMA.

²¹² Art.14(1)(a), Directive (EU) 2015/2436 of the European Parliament and of the Council of 16 December 2015 to approximate the laws of Member States relating to trade marks. The same autonomy is not at stake in one's choice of *company* name, whereas our personal name is our parents' choice.

²¹³ S.11(3) TMA.

²¹⁴ S.10(3) TMA; C-65/12 *Leidseplein Beheer & Vries v Red Bull GmbH* ECLI:EU:C:2014:49.

²¹⁵ E.g., s.48(6) CDPA.

²¹⁶ S.45 CDPA.

²¹⁷ S.46 CDPA.

²¹⁸ S.47 CDPA.

²¹⁹ S.49 CDPA.

are also certain exceptions to the moral rights where the work is being used for parliament, judicial proceedings, royal commissions or statutory inquiries.²²⁰ Additionally, OFCOM and other regulators can do acts necessary to monitor broadcasts.²²¹

A second objective is that certain works should remain useable by the Crown where they are of exceptional importance (e.g., certain pharmaceuticals) or in times of national emergency. We have touched on these sorts of situations in relation to Crown use of drugs and medicines. More broadly, there is a general provision allowing for use of patented inventions,²²² subject to compensation for lost profit for the use of patented material for the services of the Crown.²²³ The meaning of ‘services of the Crown’ is left open, but includes foreign defence purposes, the supply of drugs and medicine and research, production and use of atomic energy.²²⁴ There is also a wider exception²²⁵ covering periods of emergency, allowing government departments or persons authorised by them to use inventions for any purpose which appears necessary or expedient to further a war, maintain essential services, enhance productivity of industry, commerce or agriculture, foster exports and reduce imports or assist with the relief of suffering and restoration of supplies in other countries afflicted by war. Similar provisions, covering general Crown use,²²⁶ and use in a national emergency²²⁷ provide an exception to unregistered designs, whereas there is a broad exception for Crown use for registered designs.²²⁸

Loose ends

Certain issues are difficult to fit in to this framework. One thing which is difficult to map is that certain of the IP rights overlap. For example, the same subject-matter could, in some cases be protected by both registered and unregistered design. These different systems could leave different aspects unprotected and free, so that what is free under one system may be proprietised under another. A slightly different categorisation problem arises with things like the royal and state emblems or the Olympic symbol which, although unprotectable through IPRs, cannot be used by others because there are *sui generis* systems in place to stop anyone, bar a small number of authorised users, from using them.

It is difficult to place excluded subject-matter which is not protected because the legislature feels that this is not appropriate subject-matter to be protected. For example, immoral trade marks cannot be registered, not because it is felt that these marks should remain free for others to use, but rather because it is felt that no one should ideally be using them. Likewise, certain biological invention,

²²⁰ S.85(2)(b)-(d) CDPA; s.205E(5)(d)-(e) CDPA.

²²¹ S.69 CDPA.

²²² S.55 PA.

²²³ S.56(2) PA.

²²⁴ S.57A PA.

²²⁵ S.59 PA.

²²⁶ SS.240-243 CDPA.

²²⁷ S.244 CDPA.

²²⁸ S.12 and First Schedule, RDA.

such as processes for cloning human being, for modifying the germ line genetic identity of humans, for modifying the genetic identity of animals in a way where their suffering will outweigh the benefits and uses of human embryos for industrial or commercial purposes are all given as examples of inventions that are unpatentable of morality grounds.²²⁹ However, the practical result of not offering protection is that (at least from the IP standpoint) third parties remain free to use them.

A final form of exception that defies categorisation is that certain of the defences, particularly in the field of copyright, only apply where there is no licensing system in place. Analogously, compulsory licensing and certain Crown uses require remuneration to the IPR holder. We might question whether there is truly a freedom to use if the user needs to pay to make that use. It is argued that these remunerated uses nevertheless belong in the map of the public domain. The general rule is that IPR holders can decide, essentially at a whim, whether or not to allow third parties to use their works. In contrast, these remunerated defences ensure that in the identified situations, there will always be an avenue open to third-party users, even if there is a cost involved.

It is argued though that these ‘loose ends’ are relatively minor and confined to specific circumstances. As such, they do not undercut the viability of drawing up a taxonomy of the freedoms protected in the public domain.

V: APPLYING THIS APPROACH TO TANGIBLE PROPERTY

Much of this article has investigated whether it is possible to draw an analogy between tangible property principles and the public domain of intellectual property. Now that we have found what I would argue is a workable way forward in defining the intangible public domain, it is worth considering whether an approach based on identifying the interests underlying positive freedoms recognised in the law can be used in a way that enhances our understanding of desirable limitations on tangible property. Arguably, there is a significant parallel with Gray’s notion of ‘morally non-excludable resources’, found in ‘Property in Thin Air’.²³⁰ Gray argues that there are three grounds which will prevent resources from being propertised: physical, legal and moral non-excludability. The first is where it is not physically possible or practical to prevent others from benefitting from the resource, e.g. the light from a lighthouse. The second is where the law regulates access to the resource, e.g. through a contract restricting the ability of attendees at an event from photographing the event. The third covers ‘those social conventions or *mores* which promote integrative social existence [rather] than with any normative

²²⁹ Art. 6, Directive 98/44/EC of the European Parliament and the Council of 6 July 1998 on the Legal Protection of Biotechnological Inventions.

²³⁰ Gray, n.66.

judgment about individual human conduct'. Underlying this ground is that belief that there are certain resources that are 'so central or intrinsic to constructive human coexistence that it would be severely anti-social that these resources should be removed from the commons'.²³¹ While this might look like an *ex ante* definition of the public domain, Gray identifies his morally non-excludable resources by working by analogy from the case law. In particular, he identifies knowledge and information, as non-excludable,²³² and also draws attention to linguistic exclusion, via the use of *Davis v Commonwealth of Australia*,²³³ where a public authority failed to monopolise various phrases connected with the bicentenary of the founding of Australia. He also discusses territorial exclusion through a case excluding all but the Pitjantjajaraku people from certain land in Australia and US cases²³⁴ suggesting that certain landowners may only be able to exclude people from private property where a reasonableness standard was satisfied. If anything, Gray's methodology in working by analogy from the cases would seem to tie in with the approach advocated for in this article, that identifies what should be excluded from protection by reference to what *lawmakers* have identified as interests that should remain free, rather than to an *ex ante* normative definition of 'morally non-excludable resources'.

It is tempting to see Gray's work as the beginnings of an attempt to map out a public domain of tangible property. Two things stand out though: many of his examples of limitations on property (both in this section and other sections of his article) are limitations on *intangible* property – most often on ideas, information and copyright. Incidentally, Gray's concentration on *intangible* property, rather than tangible property, as giving key examples of non-excludable resources rather supports my earlier thesis that it is difficult to draw assistance in defining the limitations on IP from tangible property. Secondly, his examples drawn from tangible property are narrow in focus. There is no reason *per se* why it should not be possible to draw a map of the public domain of tangible property in the UK, but as Gray's work demonstrates, it may be a good deal more limited. A key distinction between IP and tangible property in this jurisdiction is that (with the exception of breach of confidence/privacy and passing off), IP law owes its existence to a series of monolithic statutes, each setting out a complete code that governs that particular right. Each code clearly sets out what can and cannot be propertised, how long the right is to last and what exceptions/defences apply. The law governing tangible property is not so neat, and rests on a complex framework of case law, interspersed with specific statutory interventions. Moreover, access rights tend to have come about through individual land uses (e.g. easements) or exceptionally through the rather tenuous categories of common or public property, rather than the creation of general defences, although there have been scholarly calls for the recognition of defences to use akin to those found in copyright.²³⁵ It is hard to see a parallel to the limited duration of

²³¹ Ibid, 280.

²³² Ibid, 281, via *Victoria Park Racing* (1937) 58 CLR 479.

²³³ (1988) 166 CLR 79.

²³⁴ Gray, n.66, p.291.

²³⁵ See, e.g. B. Depooter, 'Fair Trespass' 111 *Colum L Rev* 1090 (2011).

many IP rights. This is not to say that it is impossible to map out such a public domain, but rather that it may be rather smaller, and a more complicated endeavour. If anything though, it might be even more valuable, given the lack of a clear articulation of the interests lying because the multifarious sources of limitations on tangible property. A freedoms-based approach, such as the one I have argued for in relation to the public domain of intellectual property, may provide a clearer basis for identifying a coherent set of limitations on the reach of tangible property.

VI: CONCLUSION

I began writing this piece in the hope of being able to produce a definitive picture of all the intellectual endeavours that should not be propertised and hence which make up the public domain. I hoped that I would find an analogy in the realm of real property that would act as the key to unlocking this all-encompassing definition. The more I delved, the more I realised that this would not work: the nature of real property and the way that it is held did not capture the multifaceted nature of intangibles that exist at multiple levels of abstraction from ideas and discoveries to concrete expression and detailed inventions. Real property law remains very territorial, tied to specific countries, whereas the geographical sphere of influence of IPRs is sometimes national, sometimes regional and sometimes international. Moreover, the real property rights did not provide a 'safe' model for things that should remain property-free, given that they were often subject to exceptions whereby the subject-matter fell into private hands. Instead, I have tried to put forward a different model, one that is positive in the sense that it highlights what must remain free to use, rather than a negative view of what should never be protected. The freedom-based model is fluid, rather than definitive. While this lacks the reassurance of a list of what is in the public domain, it is argued that by recognising the underlying freedoms that must always be respected, we are better able to adapt the law to respond to new challenges of technology and social change. It may also have something to teach tangible property about how to map the public domain.