THE PRODUCTIVITY COMMISSION

A SUBMISSION ON THE RIGHT TO REPAIR

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EXECUTIVE SUMMARY

Recommendation 1
The Productivity Commission is to be congratulated for producing a comprehensive discussion paper on the complex and tangled topic of the right to repair. Taking an interdisciplinary, holistic approach to the issue, the Productivity Commission shows a strong understanding that the topic of the right to repair is a multifaceted policy issue. Its draft report covers the fields of consumer law, competition policy, intellectual property, product stewardship, and environmental law. The Productivity Commission displays a great comparative awareness of developments in other jurisdictions in respect of the right to repair. The policy body is also sensitive to the international dimensions of the right to repair – particularly in light of the United Nations Sustainable Development Goals. The Productivity Commission puts forward a compelling package of recommendations, which will be useful in achieving law reform in respect of the right to repair in Australia.

Recommendation 2
There is a strong body of evidence that intellectual property restrictions do impact upon the right to repair. The evidence is more than merely anecdotal or patchy (as suggested by Draft Finding 5.1). There has been threats of litigation in respect of copyright relating to repair manuals. The High Court of Australia and the Australian Parliament have expressed concerns about the breadth of technological protection measures. There has been major litigation over the spare parts exception under designs law. There has been major litigation over patent law, and the distinction between repair and refurbishment. There has been policy discussion about repair information and trade secrets – resulting in action by Treasury and the Australian Parliament.

Recommendation 3
This submission agrees with draft finding 5.1 that 'copyright laws that prevent third-party repairers from accessing repair information (such as repair manuals and diagnostic data) appear to be one of the more significant intellectual property-related barriers to repair.' The submission would also contend that other forms of intellectual property do also create significant barriers to repair, which need to be addressed by policy-makers.

Recommendation 4
This submission agrees with the recommendation of the Productivity Commission in Draft Finding 5.2 to 'amend the *Copyright Act* 1968 to allow for the reproduction and sharing of repair information, through the introduction of a fair use exception or a repair-specific fair dealing exception'. The submission notes, though, that the Australian Federal Court has read the defence of fair dealing in a narrow fashion – and that could be problematic for a specific defence of fair dealing for repair. The submission contends that a broad defence of fair use under copyright law would be the best possible option.

Recommendation 5
This submission agrees with the recommendation of the Productivity Commission in Draft Finding 5.2 to 'amend the *Copyright Act* 1968 to allow repairers to legally procure tools required to access repair information protected by technological protection measures (TPMs), such as digital locks'. This submission agrees with that the Productivity Commission that the Australian Government should 'clarify the scope and intent of the existing (related) exception for circumventing TPMs for the purpose of repair.' This submission notes the parallel development that the Parliament of Canada is currently considering a bill to amend its copyright regime to ensure that technological protection measures do not interfere with the right to repair.

Recommendation 6
This submission agrees with the recommendation of the Productivity Commission in Draft Finding 5.2 that 'to reduce the risk of manufacturers using contractual arrangements (such as confidentiality agreements) to 'override' the operation of any such reforms, it may also be beneficial to amend the *Copyright Act* 1968 to prohibit the use of contract terms that restrict repair-related activities otherwise permitted under copyright law.' This submission that this problem of contracting-out of repair is also apparent in other fields of intellectual property – such as designs law, trade mark law, patent law, and trade secrets law. It would be useful to prohibit the use of contract terms that restrict repair-related activities otherwise permitted under intellectual property law.

Recommendation 7
Unlike some of the other Australian intellectual property regimes, Australian designs law has a defence in respect of spart parts. The scope of this defence has been recently considered in the case of *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019). Even though such a defence was effective in this particular case, the existing provisions in relation to spare parts are complicated and convoluted. The Productivity Commission should avail itself of the opportunity to design a broad defence for the right to repair under designs law.

Recommendation 8
In light of the Norwegian trade mark dispute between Huseby and Apple, and South African trademark litigation over replacement parts, and United States disputes over Lexus advertising cars, there is a need to ensure that trade mark law respects the right to repair. In its draft report, the Productivity Commission suggests that such an action for trade mark infringement against an independent repairer would be much harder. It would be helpful to clarify this position under Australian trade mark law by providing for an express defence or exception or limitation in respect of repair.

Recommendation 9
While the High Court of Australia has recently ruled on patent exhaustion, it would be helpful to clarify that the provision of repairs does not amount to patent infringement. Australian patent law recognises a defence of experimental use. However, it is not clear that the defence extends to repairs. A specific patent defence for repairs would provide reassurance about the legitimacy of conducting repairs. The compulsory licensing regime remains unwieldy at the moment – but in exceptional circumstances could be used to provide access to inventions for the purposes of repair on competition grounds.

Recommendation 10
Australia provides for civil remedies in respect of trade secrets, as well as criminal offences in respect of violation of trade secrets by foreign principals. However, the nature and scope of defences for trade secrets remains unclear. There has been debate as to whether there is a general interest defence (as espoused by Kirby J) or a narrow defence related to exposing wrongdoing and iniquity (as recommended by Gummow J). In this context, there is currently a lack of clarity as to whether using trade secrets for the purposes of repair would be allowable. The Productivity Commission should consider making recommendations regarding defences in respect of trade secrets relating to repair.

Recommendation 11
Treasury has established a motor vehicle service and repair information sharing scheme. However, it is problematic that this information sharing scheme has been industry-specific. There was also a failure to consider how that scheme would interact with other disciplines of law – like intellectual property. There is a need for a more general system regarding the sharing of repair information for all technologies and industries. It would be desirable to go beyond the model of self-regulatory codes of conduct, and establish binding standards in respect of sharing repair information.

Recommendation 12
This submission supports the finding 3.1 of the Productivity Commission that ‘there is scope to enhance consumers’ ability to exercise their rights when their product breaks or is faulty

— by providing guidance on the expected length of product durability and better processes for resolving claims.' This submission also supports the recommendations of the Productivity Commission in respect of guidance on reasonable durability of products (draft recommendation 3.1); powers for regulators to enforce guarantees (draft recommendation 3.2); and enabling a super complaints process (draft recommendation 3.3). The Productivity Commission has also asked for information as to whether consumers have reasonable access to repair facilities, spare parts, and software updates (information request 3.1). There is a need to ensure that businesses are required to hold physical spare parts and operate repair facilities for fixed periods of time. It is also important to ensure that software updates are provided by manufacturers for a reasonable period of time after the product has been purchased.

Recommendation 13

This submission notes the finding of the Productivity Commission that there have been misleading terms in warranties for mobile phones, gaming consoles, washing machines, and high-end watches regarding independent repairs. This submission supports the recommendation of the Productivity Commission (draft recommendation 4.2) that 'the Australian Government should amend r. 90 of the Competition and Consumer Regulations 2010, to require manufacturer warranties ('warranties against defect') on goods to include text (located in a prominent position in the warranty) stating that entitlements to consumer guarantees under the Australian Consumer Law do not require consumers to use authorised repair services or spare parts.' This submission supports the suggestion of the Productivity Commission that Australia should adopt provisions similar to the Magnuson-Moss Warranty Act in the United States, which prohibit manufacturer warranties from containing terms that require consumers to use authorised repair services or parts to keep their warranty coverage.

Recommendation 14

There is scope for the Australian Competition and Consumer Commission to deploy competition law to address repair issues. As Draft Finding 4.3 notes, 'there are existing remedies available under Part IV of the Competition and Consumer Act 2010 to address anti-competitive behaviours in repair markets, such as provisions to prevent the misuse of market power, exclusive dealing or anti-competitive agreements.' The Productivity Commission has highlighted in Draft Finding 4.2 that limits to repair supplies could be leading to consumer

harm in some repair markets – including agricultural machinery, and mobile phones and tablets. A positive obligation to provide access to repair supplies could be a useful means of mandating access to repair supplies – including repair information, spare parts, and diagnostic tools.

Recommendation 15

The submission would argue that additional policies to prevent premature product obsolescence would have net benefits to the community (cf the Productivity Commission's Draft Finding 6.1). This submission notes that a product labelling scheme could address information gaps in respect of product repairability, durability, and environmental impact (Information Request 6.1). There are various precedents in respect of energy labelling, eco-labelling, and carbon labelling. The submission supports the adoption of a French-style 'repairability index' in Australia. The submission would argue that e-waste is a significant problem in Australia, and there is a need to shift towards the adoption of sustainable production and consumption as part of a circular economy. The submission supports the recommendation 7.1 of the Productivity Commission that the Australian Government should amend the National Television and Computer Recycling Scheme (NTCRS) to allow e-waste products that have been repaired or reused by co regulatory bodies to be counted towards annual scheme targets.

Recommendation 16
Australia should reform the *Product Stewardship Act* 2011 (Cth) in order to promote the right to repair, reduce e-waste, and support a circular economy and the Sustainable Development Goals.

Recommendation 17
The Productivity Commission should be encouraged to develop a bold package of proposals to support a right to repair in Australia – especially given the recent, rapid developments on the right to repair at a state and a federal level in the United States. The Australian Competition and Consumer Commission should prioritize enforcement action in respect of repair restrictions – like its counterpart the United States Federal Trade Commission.

Recommendation 18
The Productivity Commission should take note of proposal in the Parliament of Canada to recognise a right to repair under copyright law and technological protection measures, which has received broad support from the various quarters of political parties in the Canadian political system.

Recommendation 19
The Productivity Commission should take note of the developments in the United Kingdom in respect of the right to repair – which are intended to mirror the European Union.

Recommendation 20
The Productivity Commission should take into account developments on the right to repair in the European Union – particularly given their strong focus on promoting eco-design, green business, a circular economy, and the United Nations Sustainable Development Goals.

Recommendation 21
The Productivity Commission should take into account the push for a broader and stronger right to repair in South Africa – particularly in response to the coronavirus public health epidemic. The Productivity Commission should also consider how the prospect of a WTO TRIPS waiver would enable access to medical technologies (including for repair) during the public health emergency.

Recommendation 22
Given that New Zealand has been lagging in this field, Jacinda Ardern's New Zealand Government should adopt a package of reforms to realise a right to repair in New Zealand.

Recommendation 23
Australian governments should support repair cafes and social enterprises, makerspaces and fab labs, research centres and innovation networks, which are focused on responsible production and consumption. NSW Circular could be a model for the Federal Government, and other states and territories in Australia. There is a need to recognise a right of repair in Australia in order to help implement Sustainable Development Goal No. 12, which is focused on responsible production and consumption. As a funder, host, and participant, Australia should support the UNDP Accelerator Labs Network programme.

Recommendation 24
3D printing and additive manufacturing are already playing a significant role in respect of repair across a number of sectors and technologies. There is a need to ensure that intellectual property law enables the use of such technologies for the purposes of repair. Product liability may have an impact in respect of defective repairs conducted with 3D printing (much like in other fields of technology). The development of standards will also be important to ensure the quality, reliability and durability of repairs undertaken with 3D printing.

Recommendation 25
The draft report by the Productivity Commission briefly discusses in passing some of the impacts of the coronavirus pandemic upon the topic of the right to repair. It would be helpful and useful if the Productivity Commission could devote a chapter or a sub-chapter to the topic of public health and the right to repair (much like it has in respect of intellectual property, consumer rights, competition policy, product design, and e-waste). There has been much discussion of the necessity of law reform during the coronavirus emergency – including in respect of intellectual property and the right to repair.

1. Introduction

Historically, there was a strong tradition of repair and recycling in colonial Australia – especially given the distance from the imperial centre of the United Kingdom.

There has also been a significant history of the use of repair by Indigenous communities – particularly in remote and regional Australia. The 2001 television show Bush Mechanics – and a subsequent touring exhibition – has highlighted ingenuity of Indigenous car mechanics in Australia.[1] The right to repair, accordingly, could be seen as part of the larger framework of issues in respect of Indigenous intellectual property.[2]

The topic of the right to repair cuts across the various fields of intellectual property. There have been conflicts over copyright law, technological protection measures, and the right to repair.[3] Australia's design laws have recognised a right to repair – and there has been litigation over the nature and scope of this spare parts exception.[4] There have been similar questions elsewhere about the right to repair under designs law.[5] There has been a consideration of whether the larger interest in social welfare has been adequately addressed in designs law.[6]

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1 *Bush Mechanics – The Series,* 2001, https://shop.nfsa.gov.au/bush-mechanics-the-series and *Bush Mechanics – The Exhibition*, https://motor.history.sa.gov.au/events/bush-mechanics-the-exhibition/

2 Matthew Rimmer (ed.), *Indigenous Intellectual Property: A Handbook of Contemporary Research*, Cheltenham (UK) and Northampton (Mass.): Edward Elgar, December 2015; and Terri Janke, *True Tracks: Respecting Indigenous Knowledge and Culture*, Sydney: NewSouth Publishing, 2021.

3 Andy Sun, 'Blocking Repair or Fair Use of Software? The U.S. Perspectives on Anticircumvention', in Christopher Heath and Anselm Kamperman Sanders (ed.), *Spares, Repairs and Intellectual Property Rights*, Alphen aan den Reijn: Kluwer Law International, 2009, 105-124; and Matthew Gault, 'Nintendo Threatens Repair Shop for Advertising Switch Mod Chip Installs', *Vice*, 18 June 2020, https://vice.com/en_us/article/7kpxbb/nintendo-threatens-repair-shop-for-advertising-switch-mod-chip-installs

4 Section 72 of the *Designs Act* 2003 (Cth); and *GM Global Technology Operations LLC* v. *S.S.S. Auto Parts Pty* Ltd [2019] FCA 97.

5 David Llewelyn and Veronica Barresi, 'Right Holders' Control over Repair and Reconditioning', in Christopher Heath and Anselm Kamperman Sanders (ed.), *Spares, Repairs and Intellectual Property Rights*, Alphen aan den Reijn: Kluwer Law International, 2009, 3-20. This chapter looks at the right to repair in the context of design law in the European Union and the United Kingdom.

6 Alison Firth, 'Repairs, Interconnections, and Consumer Welfare in the Field of Design', in Christopher Heath and Anselm Kamperman Sanders (ed.), *Spares, Repairs and Intellectual Property Rights*, Alphen aan den Reijn: Kluwer Law International, 2009, 147-180.

There has been debate over trade mark law and the right to repair[7] – most notably, in the context of recent litigation by Apple against a repair store in Norway.[8] There has been discussion in a range of jurisdictions about how the patent system deals with patent infringement and the right to repair. There has increasingly also been conflict over trade secrets and data protection related to repair.[9] Accordingly, it is important that the Productivity Commission crafts a solution for the right to repair, which spans the various fields of intellectual property. It would be insufficient to merely make recommendations for law reform in respect of copyright law, technological protection measures, and contracting out. Given the importance of industrial forms of property, it is imperative to also consider law reform in the fields of designs law, trade mark law, patent law, confidential information and trade secrets, and data protection.

As acknowledged by the Productivity Commission, the topic of the right to repair also appears in a number of fields of industry and technology. There has been a longstanding debate over access to spare parts for motor vehicles in Australia. There has also been an intense discussion over the repair agricultural machinery and vehicles as well. Developments in respect of consumer electronics have also raised issues in respect of repair. The information and communications technology revolution has created new contexts for discussions around repair. In the sphere of telecommunications, there has been a lot of discussion in respect of fixing mobile phones and tablets. The public health crisis in respect of the coronavirus has highlighted the importance of medical repairs. The rise of Industry 4.0 technologies – such as 3D printing, robotics, and advanced manufacturing – have provided new contexts, in which to consider the topic of repair. Indeed, it could be said that the right to repair is growing in importance, as a result of the evolution of a number of forms of technology. One of the strengths of the Productivity Commission report is that it takes a holistic, inter-disciplinary approach to the

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[7] Michael Pendleton, 'Trademarks and Reconditioned Goods in Greater China and at Common Law', in Christopher Heath and Anselm Kamperman Sanders (ed.), *Spares, Repairs and Intellectual Property Rights*, Alphen aan den Reijn: Kluwer Law International, 2009, 127-146.

[8] *Huseby* v. *Apple Inc.,* HR-2020-1142-A, Norway Supreme Court - https://assets.documentcloud.org/documents/6936580/Norway.pdf For commentary, see Karl Bode, 'Norway Supreme Court Signs Off On Apple's Harassment Of An Independent Repair Shop', *TechDirt*, 5 June 2020, https://www.techdirt.com/articles/20200604/11170944646/norway-supreme-court-signs-off-apples-harassment-independent-repair-shop.shtml

[9] Treasury, *Mandatory Scheme for the Sharing of Motor Vehicle Service and Repair Information: Consultation Paper*, Canberra: Treasury, 2019, https://treasury.gov.au/consultation/c2019-t358022

topic of the right to repair – rather than only providing limited industry-specific recommendations.

This submission concentrates on matters of intellectual property and the right to repair – considering copyright law, technological protection measures, designs law, trade mark law, patent law, trade secrets, and sui generis information-sharing laws. It does, though, offer some addition submissions in respect of consumer law, competition policy, product stewardship, and sustainable development. As well as considering the position in Australia, this submission considers key comparative jurisdictions – such as the United States; Canada; the United Kingdom; the European Union; South Africa; and New Zealand. This policy paper also explores the international dimensions of the topic of the right to repair – particularly highlighting larger questions about trade and sustainable development.

This submission encourages the Productivity Commission to be bold and confident in putting together a substantive package of recommendations to support the right to repair in Australia. This submission builds upon, expands, and updates a previous earlier submission by the author in respect of the Treasury inquiry into access to repair information.[10] This submission is informed by research undertaken as part of an ARC Discovery Project on intellectual property and 3D Printing, which was conducted from 2017 till 2021. This project included quantitative analysis of intellectual property registrations; qualitative analysis of interviews with members of 3D printing members; fieldwork visits to makerspaces, fab labs, and innovation hubs; analysis of intellectual property litigation; and investigation of intellectual property law reform. This submission is intended to be a public policy output of the ARC Discovery Project on intellectual property and 3D Printing.

Recommendation 1
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[10] Matthew Rimmer, *The Right to Repair: Mandatory Scheme for the Sharing of Motor Vehicle Service and Repair Information*. Canberra: Treasury, 2019, QUT ePrints: https://eprints.qut.edu.au/127446/

The policy body is also sensitive to the international dimensions of the right to repair – particularly in light of the United Nations Sustainable Development Goals. The Productivity Commission puts forward a compelling package of recommendations, which will be useful in achieving law reform in respect of the right to repair in Australia.

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There is a strong body of evidence that intellectual property restrictions do impact upon the right to repair. The evidence is more than merely anecdotal or patchy (as suggested by Draft Finding 5.1). There has been threats of litigation in respect of copyright relating to repair manuals. The High Court of Australia and the Australian Parliament have expressed concerns about the breadth of technological protection measures. There has been major litigation over the spare parts exception under designs law. There has been major litigation over patent law, and the distinction between repair and refurbishment. There has been policy discussion about repair information and trade secrets – resulting in action by Treasury and the Australian Parliament.

2 (a). Copyright Law and the Right to Repair

Copyright law provides protection to a range of cultural subject matter, which satisfies threshold requirements in relation to originality. Computer programs, manuals, and databases can be protected under copyright law. The topic of repair has been a longstanding one – particularly in the context of reverse engineering in the computer software industry.[11]

Copyright law has become particularly significant in respect of the right to repair with the rise of information and communications technologies. As it has matured, the information technology company Apple has shifted from an open platform of innovation to a closed, walled

[11] Pamela Samuelson and Suzanne Scotchmer, 'The Law and Economics of Reverse Engineering' (2002) 111 (7) *The Yale Law Journal* 1575-1663; and Pamela Samuelson, 'Staking the Boundaries of Software Copyrights in the Shadow of Patents' (2018) 71 (2) *Florida Law Review* 243-302.

garden ecosystem.[12] Apple has become increasingly hostile to the recognition of the right to repair – including under intellectual property law.[13]

Manufacturers have argued that right of repair legislation will impact copyright law.[14] For instance, they have argued:

> Consumer electronics use on-board software (i.e., firmware) to help control the product. That firmware is subject to copyright under federal law, and Section 1201 of the Digital Millennium Copyright Act, a related federal law, ensures that bad actors cannot tamper with the digital rights management that copyright owners use to protect this software. The problem is that making repairs to hardware components may necessitate modifying the firmware so that the product will work again. Importantly, however, firmware controls many other product functions, and opening it up for repair purposes exposes to potential tampering other, more sensitive functions, such as security features.[15]

As discussed by the Productivity Commission, there have been copyright threats in respect of the publication of repair manuals in Australia.

There has been controversy over information technology companies bringing copyright action in respect of repair manuals. Kyle Wiens of iFixit has highlighted the case of Australian Tim Hicks and Toshiba.[16] Tim Hicks has a website – called 'Tim's Laptop Service Manuals' – which posts free and accessible PDFs of manufacturer service manuals online.[17]

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[12] Matthew Rimmer, *Digital Copyright and the Consumer Revolution: Hands off my iPod*, Cheltenham (UK) and Northampton (Mass.): Edward Elgar, July 2007; and Jonathan Zittrain, *The Future of the Internet and How to Stop It,* New Haven: Yale University Press, 2008.

[13] Ashley Carman, 'Apple Was Conflicted Over Right-to-Repair Stance, Emails Show', *The Verge*, 30 July 2021, https://www.theverge.com/2020/7/30/21348240/apple-right-to-repair-legislation-antitrust-investigation-policy

[14] API, 'Subject Electronic Products Manufacturers Opposition to HB 2279', 8 January 2018, https://api.ctia.org/docs/default-source/legislative-activity/coalition-letter-in-opposition-to-washington-hb-2279---digital-right-to-repair.pdf

[15] Ibid.

[16] Kyle Wiens, 'The Shady World of Repair Manuals: Copyrighting for Planned Obsolescence', Wired, 12 November 2012, https://www.wired.com/2012/11/cease-and-desist-manuals-planned-obsolescence/

[17] Tim's Laptop Service Manuals, http://www.tim.id.au/blog/tims-laptop-service-manuals/

Toshiba's lawyers sent a cease-and-desist letter to Tim Hicks, maintaining that he was engaged in copyright infringement, and in breach of the laws of confidential information.[18] The letter stressed:

> On your website we are able to read and see that you are distributing, by download, copyright repair manuals (the Manuals)

The letter also suggested: 'We are also concerned by providing the Manuals to unqualified person [sic] you may be endangering their well-being.'[19]

Tim Hicks reflects upon his position under copyright law:

> Copyright law does give other parties some rights to copyright material in certain circumstances under fair dealing exceptions (fair use in the United States). These exceptions are along the lines of granting access to educational institutions, or making personal copies of copyright material for the purpose of creating backups. There currently appears to be no such exception, however, to either Australian or US copyright law that would apply to repair manuals for computers. As a result, we have no specific rights to any official documentation Toshiba have created that might allow us to more easily and economically repair or upgrade laptop computers.[20]

Tim Hicks observed: 'I have investigated the possibility of pursuing action through legal channels'.[21] He feared: 'The long and short of it is that I cannot afford the legal representation necessary to even question Toshiba in a court of law'.[22] Tim Hicks commented: 'I cannot personally risk taking this route myself, and so as a private citizen I am left with no alternatives.'[23]

Tim Hicks nonetheless urged consumers to take into account Toshiba's position: 'If you have been affected by Toshiba's decision in refusing to allow me to share their repair manuals with you, I urge you to contact your local Toshiba representatives and let them know

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18 Toshiba, 'Toshiba Copyright Repair Manuals', 31 July 2012, https://www.wired.com/wp-content/uploads/blogs/opinion/wp-content/uploads/2012/11/toshiba_timhicks_takedownletter.jpeg

19 Ibid.

20 Tim Hicks, 'Toshiba Laptop Service Manuals and the Sorry State of Copyright Law', 2012, http://www.tim.id.au/blog/2012/11/10/toshiba-laptop-service-manuals-and-the-sorry-state-of-copyright-law/

21 Ibid.

22 Ibid.

23 Ibid.

what impact this has had on you, your business or your livelihood.'[24] He observed: 'Let them know that you will avoid Toshiba products in the future, and will not recommend them to others, until they are as open with their information as are other competing companies.'[25] Tim Hicks noted that other companies were much more congenial about sharing their repair manuals: 'Dell, HP and Lenovo are three companies that have made the decision to allow us the privilege of accessing their repair manuals anyway – a decision that is 100% in the interests of their customers, and in their own, as people are more likely to buy a product they know they can easily fix if it goes awry'.[26]

Thinking about this case, Kyle Wiens of iFixit was concerned about the implications of this action 'for the lifetime of our devices, the future of repair and e-waste, and the abuse of copyright law as a weapon for planned obsolescence.' [27] He editorialized:

> Keeping manuals off the internet ensures the only path for beleaguered customers is sending broken devices back to high-priced, only-manufacturer-authorized service centers. By making it so expensive and inconvenient to repair broken electronics, this policy amounts to planned obsolescence: many people simply throw the devices away.[28]

Kyle Wiens commented: 'Toshiba has discovered a new way to enforce such planned obsolescence by cutting the repair market off from critical service information'.[29] He warned: 'But the cost to society is significant: The e-waste problem is growing; we're losing thousands of domestic jobs as independent repair shops shut down; and consumers are being forced to replace their hardware much frequently than they should have to.'[30]

It is notable that the Australian case of *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019) had a copyright dimension, as well as a designs law dimension.[31] The judge noted: 'In relation to Holmart, SSS contends that GMH sent 3 letters containing unjustified threats within the meaning of s 202 of the Copyright Act,

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24 Ibid.

25 Ibid.

26 Ibid.

27 Kyle Wiens, 'The Shady World of Repair Manuals: Copyrighting for Planned Obsolescence', Wired, 12 November 2012, https://www.wired.com/2012/11/cease-and-desist-manuals-planned-obsolescence/

28 Ibid.

29 Ibid.

30 Ibid.

31 *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).

because Holmart had a complete defence to copyright infringement in respect of the product identified.'[32] The judge held: 'SSS has also established an unjustified threat in relation to copyright infringement in the case of Holmart.'[33]

Strangely, although there is an explicit right of repair under designs law, there is no equivalent in respect of Australian copyright law. At present, Australia has a purpose-specific defence of fair dealing under copyright law. None of the current purposes (criticism and review, research and study, reporting the news, judicial proceedings, parody and satire, disability rights) would easily cover repairs. Australia could add a further defence of fair dealing in respect of the right of repair. It is worth noting, though, that the courts have read the defence of fair dealing quite narrowly in recent litigation.[34] So it would be important to ensure that any new defence of fair dealing for the purposes of repair was broadly constructed.

As a counterpoint, it should be noted that the judiciary in Canada has interpreted the defence of fair dealing in a much more broad fashion – compared to its Australian counterparts.[35] There has been significant scholarship about the expansive approach to the defence of fair dealing in Canada.[36]

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[32] *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).

[33] *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).

[34] See Matthew Rimmer, 'An Elegy for Greg Ham: Copyright Law, the Kookaburra Case, and Remix Culture' (2012) 17 (2) *Deakin Law Review* 385-423; *TCN Channel Nine Pty Ltd* v. *Network Ten Pty Ltd* [2001] FCA 108; 108 FCR 235; *TCN Channel Nine Pty Ltd* v. *Network Ten Pty Ltd* [2002] FCAFC 146; 118 FCR 417; *AGL Energy Limited* v. *Greenpeace Australia Pacific Limited* [2021] FCA 625 (8 June 2021); and *Universal Music Publishing Pty Ltd* v. *Palmer (No 2)* [2021] FCA 434.

[35] *CCH Canadian Ltd.* v. *Law Society of Upper Canada*, [2004] 1 SCR 339, 2004 SCC 13 (CanLII); *Entertainment Software Association* v. *Society of Composers, Authors and Music Publishers of Canada*, 2012 SCC 34 (July 12, 2012); *Rogers Communications Inc.* v. *Society of Composers, Authors and Music Publishers of Canada*, 2012 SCC 35 (July 12, 2012); *Re: Sound* v. *Motion Picture Theatre Associations of Canada*, 2012 SCC 38 (July 12, 2012); *Society of Composers, Authors and Music Publishers of Canada* v. *Bell Canada*, 2012 SCC 36 (July 12, 2012); and *Alberta (Education)* v. *Canadian Copyright Licensing Agency (Access Copyright),* 2012 SCC 37 (July 12, 2012).

[36] Ysolde Gendreau (ed.), *An Emerging Intellectual Property Paradigm: Perspectives from Canada*, Cheltenham and Northampton (MA): Edward Elgar Publishing, 2008; Laura J Murray, and Samuel Trosow, *Canadian Copyright: A Citizen's Guid*e, Toronto: Between the Lines, 2013 (Second Edition); Sara Bannerman, *The Struggle for Canadian Copyright: Imperialism to Internationalism, 1842-1971*, Vancouver: UBC Press, 2013; Michael Geist (ed.), *The Copyright Pentalogy: How the Supreme Court of Canada Shook the Foundations of Canadian Copyright*, Ottawa: the University of Ottawa Press, 2013; Laura J Murray, S. Tina Piper and Kirsty Robertson (ed.), *Putting Intellectual Property In Its Place: Rights Discourses, Creative Labor, And the Everyday*,

Better still, as recommended by the Australian Law Reform Commission, the Harper Review, and the Productivity Commission, Australia could adopt a defence of fair use – which could conceivably apply to repairs.[37] The defence of fair use in the United States is focused upon supporting transformative uses of copyright works. While the legislation has a number of indicative purposes, the defence is open-ended, and could apply to a wide range of purposes. The defence of fair use has been a flexible and adaptable doctrine to deal with new developments in respect of new technologies.[38] As Bryan Bello and Professor Patricia Aufderheide have noted, variety of cultural communities and professional organisations have developed their own local guidelines about the operation of fair use in their communities: 'Since then, many professional communities have articulated their own standards to apply fair use in a digital era, finding it a crucial tool for creating new culture'.[39]

It is worth noting that there have been a number of submissions to the Productivity Commission, supporting a right to repair under copyright law. CHOICE Australia argued: 'CHOICE believes that intellectual property restrictions should never be used to prevent a business or consumer from refurbishing a product.'[40] The Australian Digital Alliance has

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Oxford: Oxford University Press, 2014; and Abraham Drassinower, *What's Wrong with Copying*, Cambridge, Massachusetts: Harvard University Press, 2015.

[37] On law reform recommendations for the recognition for a defence of fair use in Australia, see Australian Law Reform Commission, *Copyright and the Digital Economy*, Sydney: Australian Law Reform Commission, 2014; https://www.alrc.gov.au/publication/copyright-and-the-digital-economy-alrc-report-122/; Ian Harper, Peter Anderson, Sue McCluskey and Michael O'Bryan, *Competition Policy Review*, Canberra: The Treasury, 2015, https://treasury.gov.au/publication/p2015-cpr-final-report and Productivity Commission, *Intellectual Property Arrangements*, Melbourne: Productivity Commission, 2016, https://www.pc.gov.au/inquiries/completed/intellectual-property#report

[38] For commentary, see Matthew Rimmer, 'A Fair Use Project for Australia: Copyright Law and Creative Freedom' (2010) 28 (3) *Copyright Reporter* 165-212; and Matthew Rimmer, 'The Foxfire of Fair Use: The Google Books Litigation and the Future of Copyright Laws' (2017) *Oxford Research Encyclopedia of Communication* http://communication.oxfordre.com/view/10.1093/acrefore/9780190228613.001.0001/acrefore-9780190228613-e-274

[39] Bryan Bello and Patricia Aufderheide, 'The DMCA, Database Protection, and Right to Repair: The Long Tail of Public Interest Activism in the First Digital Copyright Decade', (2021) 56 (1) *Information & Culture* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3740187

[40] CHOICE Australia, 'Submission to the Productivity Commission Issues Paper on the Right to Repair', Submission 126 to the Issues Paper, February 2021, https://www.pc.gov.au/__data/assets/pdf_file/0013/273010/sub126-repair.pdf

supported copyright exceptions for repair in a variety of inquiries.[41] The National Farmers Federation submitted: 'The *Copyright Act* 1968, for example, will likely require a new exception to allow for non-infringing uses of copyright material for the purpose of repair.'[42] The Law Council of Australia noted that the recent High Court of Australia decision on patent exhaustion may be applied in the future in respect of copyright law and repairs. [43]

In the United States, there has also been copyright threats over repair manuals during the coronavirus public health pandemic.[44] Steris sent a letter to iFixit asking the repair organisation to remove from its website repair information for Steris equipment. iFixit had published the medical device repair information in order to help hospitals and other medical organisations through the COVID-19 pandemic.

In response, the Electronic Frontier Foundation responded to Steris on behalf of its client, iFixit.[45] First, the legal advocacy group noted that 'iFixit is protected by Section 512 of the *Digital Millennium Copyright Act*, which allows online platforms to host content contributed by users provided they comply with the Act's requirements, which iFixit does.'[46] Second, the Electronic Frontier Foundation maintained that iFixit was protected under the defence of fair use:

> The fair use doctrine authorizes iFixit and contributors to the Database to share the repair information they are providing. The Database provides a novel, user-friendly archive of repair information for mission-critical medical equipment. Thanks to this project, biomedical technicians can quickly and easily access the information they need to keep medical equipment up and running, saving time, money, and lives.[47]

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41 Australian Digital Alliance, 'ACCC Agricultural Machinery After Sales Markets Inquiry Submission', 2020 https://digital.org.au/resources/accc-agricultural-machinery-after-sales-markets-inquiry-submission/

42 The National Farmers Foundation, 'Re: Submission to the Productivity Commission "Right to Repair" Inquiry', Submission 55 to the Issues Paper, 1 February 2021, https://www.pc.gov.au/__data/assets/pdf_file/0004/272335/sub055-repair.pdf

43 Law Council of Australia, 'Submission to the Productivity Commission – Right to Repair Issues Paper (December 2020)', Submission 114 to the Issues Paper, Productivity Commission, 12 February 2021, 12, https://www.pc.gov.au/__data/assets/pdf_file/0007/272896/sub114-repair.pdf

44 Jared Paben, 'OEM and iFixit engage in Copyright Law Spat', *E-Scrap News*, 18 June 2020, https://resource-recycling.com/e-scrap/2020/06/18/oem-and-ifixit-engage-in-copyright-law-spat/

45 Electronic Frontier Foundation, 'Letter from EFF to Steris on Behalf of iFixit', 26 May 2020, https://www.eff.org/document/letter-eff-steris-behalf-ifixit-5-26-2020

46 Ibid.

47 Ibid.

The Electronic Frontier Foundation considered the various factors involved in a fair use determination, and maintained that such factors favoured iFixit. The Electronic Frontier Foundation concluded: 'The Medical Device Repair Database promotes the public interest by improving access to information to help technicians, and the strapped hospitals they work for, do their jobs more effectively.'[48] The Electronic Frontier Foundation commented: 'Given that the market for medical devices is about medical devices, it would be difficult for Steris to plausibly argue that it lacks adequate other incentives to document how to maintain the devices that are its bread and butter.'[49] The Electronic Frontier Foundation concluded: 'The benefit to the public far outweighs any speculative harm to any legitimate interest in restricting their availability via the Database.'[50]

No doubt this skirmish was one of the reasons why Senator Ron Wyden and representative Yvette Clarke introduced the *Critical Medical Infrastructure Right-to-Repair Act* 2020 (US).[51] Amongst other things, the bill would 'protect equipment owners, lessees, and servicers from liability under federal copyright law for creating an incidental copy of service materials or for breaking a digital lock during the course of equipment repair in response to COVID-19.'[52] Ron Wyden commented: 'It is just common sense to say that qualified technicians should be allowed to make emergency repairs or do preventative maintenance, and not have their hands tied by overly restrictive contracts and copyright laws, until this crisis is over.'[53]

Recommendation 3
This submission agrees with draft finding 5.1 that 'copyright laws that prevent third-party repairers from accessing repair information (such as repair manuals and diagnostic data) appear to be one of the more significant intellectual property-related barriers to repair.' The

48 Ibid.

49 Ibid.

50 Ibid.

51 *Critical Medical Infrastructure Right-to-Repair Act* 2020 (S. 4473, H.R. 7956), https://www.congress.gov/bill/116th-congress/house-bill/7956/all-info

52 Senator Ron Wyden, 'Wyden and Clarke Introduce Bill to Eliminate Barriers to Fixing Critical Medical Equipment During the Pandemic', 6 August 2020, https://www.wyden.senate.gov/news/press-releases/wyden-and-clarke-introduce-bill-to-eliminate-barriers-to-fixing-critical-medical-equipment-during-the-pandemic-

53 Ibid.

submission would also contend that other forms of intellectual property do also create significant barriers to repair, which need to be addressed by policy-makers.

Recommendation 4

This submission agrees with the recommendation of the Productivity Commission in Draft Finding 5.2 to 'amend the *Copyright Act* 1968 to allow for the reproduction and sharing of repair information, through the introduction of a fair use exception or a repair-specific fair dealing exception'. The submission notes, though, that the Australian Federal Court has read the defence of fair dealing in a narrow fashion – and that could be problematic for a specific defence of fair dealing for repair. The submission contends that a broad defence of fair use under copyright law would be the best possible option.

2 (b). Technological Protection Measures and the Right to Repair

The Clinton White House pushed for international protection of digital copyright. Technological protection measures and electronic rights management information were recognised under the *WIPO Internet Treaties* 1996. The *Digital Millennium Copyright Act* 1998 (US) provided for broad protection of technological protection measures and electronic rights management information. The *Copyright Amendment (Digital Agenda) Act* 2000 (Cth) provided for protection of technological protection measures and electronic rights management information. The United States Government has lobbied other nations to emulate its provisions in respect of technological protection measures and electronic rights management information under bilateral trade agreements, such as the *Australia-United States Free Trade Agreement* 2004 and regional arrangements, like the *Trans-Pacific Partnership* 2015. There has been debate about the efficacy of technological protection measures in preventing or at least preventing copyright infringement. There has long been concern about how technological protection measures and digital rights management systems will impact upon innovation, consumer rights, competition, and freedom of speech.[54]

[54] See for instance: Jessica Litman, *Digital Copyright: Protecting Intellectual Property on the Internet*, Amherst (NY): Prometheus Books, 2001; Fred von Lohmann, 'Measuring the Digital Millennium Copyright Act against the Darknet: Implications for the Regulation of Technological Protection Measures', (2004) 24 (4) *Loyola of Los Angeles Entertainment Law Review* 635-648; and Matthew Rimmer, *Digital Copyright and the Consumer Revolution: Hands off my iPod*, Cheltenham (UK) and Northampton (Mass.): Edward Elgar, July 2007.

Bryan Bello and Professor Patricia Aufderheide from the American University have explored public interest activism in the digital copyright debate.[55] They observed that the Digital Future Coalition's role in the negotiations over the *Digital Millennium Copyright Act* 1998 (US) laid the foundation for the right to repair movement:

> And as a result of the DFC's wins in the DMCA negotiations, a now-lively new movement has formed: the "Right to Repair." This movement advocates for interoperability broadly but especially in consumer and personal devices. It seeks DMCA exemptions from anti-circumvention from the Copyright Tribunal, for the breaking of encryption in order to conduct repairs. While TPMs are not necessarily difficult to crack, the act of doing so (barring a codified exception) still constitutes a crime under Sec. 1201. Selling tools that break TPMs is also illegal under Sec. 1201, a provision Right to Repair has also sought to remove from the law. Like the DFC, which emphasized a balance between public and private interests in copyright protections, Right to Repair steeps its consumer rights agenda in a commercial argument. Tinkering, modification, and personal repair, the movement argues, facilitates a robust secondary market for tools, aftermarket parts, repair services, and fixit guides.[56]

The right to repair movement has been particularly active in debates over exceptions in respect of the technological protection measures scheme in the United States.

In 2018, the United States Copyright Office recognised a right of repair as an exception to technological protection measures:

> Multiple organizations petitioned to renew the exemption for computer programs that control motorized land vehicles, including farm equipment, for purposes of diagnosis, repair, and modification of the vehicle. The petitions demonstrated the continuing need and justification for the exemption to prevent owners of motorized land vehicles from being adversely impacted in their ability to diagnose, repair, and modify their vehicles as a result of TPMs that protect the copyrighted computer programs on the electronic control units ("ECUs") that control the functioning of the vehicles Motor & Equipment Manufacturers Association, which during the sixth triennial rulemaking initially opposed any exemption that would impact the software and TPMs in vehicles, now supports the exemption as striking an appropriate balance between encouraging marketplace competition and innovation while mitigating the impact on safety, regulatory, and environmental compliance. The petitioners demonstrated personal knowledge and experience with regard to this exemption; each either represents

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55 Bryan Bello and Patricia Aufderheide, 'The DMCA, Database Protection, and Right to Repair: The Long Tail of Public Interest Activism in the First Digital Copyright Decade', (2021) 56 (1) *Information & Culture* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3740187

56 Ibid.

> or gathered information from individuals conducting repairs or businesses that manufacture, distribute, and sell motor vehicle parts, and perform vehicle service and repair.[57]

There was much debate about the nature and the scope of such exceptions. The Acting Register recommended that, first, there be an exemption for 'Computer programs that are contained in and control the functioning of a lawfully acquired motorized land vehicle such as a personal automobile, commercial vehicle or mechanized agricultural vehicle, except for programs accessed through a separate subscription service, when circumvention is a necessary step to allow the diagnosis, repair or lawful modification of a vehicle function, where such circumvention does not constitute a violation of applicable law, including without limitation regulations promulgated by the Department of Transportation or the Environmental Protection Agency, and is not accomplished for the purpose of gaining unauthorized access to other copyrighted works.' The Acting Register also recommended that there be an exemption for 'Computer programs that are contained in and control the functioning of a lawfully acquired smartphone or home appliance or home system, such as a refrigerator, thermostat, HVAC or electrical system, when circumvention is a necessary step to allow the diagnosis, maintenance or repair of such a device or system, and is not accomplished for the purpose of gaining access to other copyrighted works'. There were further definitions of key terms, such as 'maintenance' and 'repair' – 'The "maintenance" of a device or system is the servicing of the device or system in order to make it work in accordance with its original specifications and any changes to those specifications authorized for that device or system' and 'The "repair" of a device or system is the restoring of the device or system to the state of working in accordance with its original specifications and any changes to those specifications authorized for that device or system.'

However, there remains concern that the approach taken by the United States Copyright Office remains too narrow. The Electronic Frontier Foundation lamented that 'the agencies denied EFF's broader proposal that would end this expensive, piecemeal approach requiring individual repair requests on behalf of each new kind of device, and instead create an exemption to permit repair of all devices that contain software'.[58] The Electronic Frontier Foundation also

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[57] United States Copyright Office, *Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies*, 26 October 2018, 17-18 https://s3.amazonaws.com/public-inspection.federalregister.gov/2018-23241.pdf

[58] Electronic Frontier Foundation, 'EFF Wins DMCA Exemption Petitions for Tinkering With Echos and Repairing Appliances, But New Circumvention Rules Still Too Narrow To Benefit Most Technology Users',

noted 'They also rejected EFF's proposal to allow for lawful modification and tinkering with digital devices that goes beyond repair.'[59] Electronic Frontier Foundation Senior Staff Attorney Mitch Stoltz commented:

> Software-enabled machines and devices surround us. Most of us own and use several every day. Section 1201 prevents people from tinkering with products they purchase, and prevents researchers, scientists, educators, and creators from looking for new ways to improve, create, and innovate. This expensive regulatory process of seeking individual permission for each kind of device is a tremendous drag on innovation.[60]

The Electronic Frontier Foundation maintained: 'We will continue to advocate for exemptions to Section 1201 so that people—not manufacturers— control the appliances, computers, toys, vehicles, and other products they own, but this process is unreasonable.'[61]

Cory Doctorow commented: 'The Copyright Office likes to make these exceptions ridiculously narrow, with so many terms and conditions that you have to hire a lawyer just to figure out if they apply to you.'[62] He observed: 'And while the Copyright Office granted some really great exceptions for repair, preservation, security research, and more - but larded these exceptions with so much copyrightese that the average person is going to struggle to figure out what they really permit.'[63]

Bryan Bello and Professor Patricia Aufderheide from the American University have interviewed Kyle Wiens from iFixit about his advocacy on exceptions for technological protection measures.[64] They commented:

> Like others who participate in the exemption process, iFixit's Wiens is under no illusion about the limits of DMCA exemptions. They take enormous resources of time and legal knowledge, and they result in

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Press Release, 26 October 2018, https://www.eff.org/press/releases/eff-wins-dmca-exemption-petitions-tinkering-echos-and-repairing-appliances-new

59 Ibid.

60 Ibid.

61 Ibid.

62 Cory Doctorow, 'The Copyright Office's DMCA-defanging is nice, but man, there are: So. Many. Hoops to jump through', *Boing Boing*, 26 October 2018, https://boingboing.net/2018/10/26/your-stuff-your-rules.html

63 Ibid.

64 Bryan Bello and Patricia Aufderheide, 'The DMCA, Database Protection, and Right to Repair: The Long Tail of Public Interest Activism in the First Digital Copyright Decade', (2021) 56 (1) *Information & Culture* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3740187

> narrow exemptions. Nevertheless, he sees the hearings as an opportunity to gain a public interest foothold and push for legislation at a state and national level. The Repair Association has used the Sec. 1201 exemption process to address issues from election security to environmental health (implicated in 1201 rules affecting the recycling of technology). The Repair Association is using the DMCA exemption process systematically; it has targeted ten areas in which it will file exemptions under Sec. 1201 before the Copyright Tribunal. One of the right-to-repair movement's high-profile issues, farm equipment repair, became an issue in the 2020 Democratic primaries.[65]

Bello and Aufderheide observed that the Repair Association was seeking to provide greater balance in the United States copyright regime.

MC Forelle has commented that there are colliding visions of the public good in the anti-circumvention proceedings.[66] The development of autonomous vehicles, smart cars, and robotic automobiles have raised further complications in the field of copyright law and technological protection measures.

In addition to the United States, there has also been a concerted push in Canada to reform copyright law to ensure that technological protection measures do not interfere with the right to repair. A broad cross-section of the Parliament of Canada has expressed support for a proposal to amend the laws regarding technological protection measures to allow for repair.[67]

In Australia, there has been disquiet amongst the judiciary over the expansive approach taken to technological protection measures. The High Court of Australia expressed concerns about the over-broad protection of technological protection measures in the case of *Stevens* v. *Sony*.[68] Kirby J in particular was alarmed by the competition impacts of a broad approach to technological protection measures.

> By their line the Popes of old divided the world into two spheres of influence. Sony, it appears, has divided the world (for the moment) into at least three spheres or markets. By the combined operation of the CD ROM access code and the Boot ROM in the PlayStation consoles, Sony sought to impose restrictions on the ordinary rights of owners, respectively of the CD ROMS and consoles, beyond those relevant to any copyright infringement as such. In effect, and apparently intentionally, those restrictions

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65 Ibid.

66 MC Forelle, 'Copyright and the Modern Car: Colliding Visions of the Public Good in DMCA Section 1201 Anti-Circumvention Proceedings' (2021) *New Media & Society 1*-18.

67 *C-272, An Act to Amend the Copyright Act (diagnosis, maintenance or repair)* (Canada).

68 *Stevens* v. *Kabushiki Kaisha Sony Computer Entertainment* [2005] HCA 58. For commentary, see Matthew Rimmer, *Digital Copyright and the Consumer Revolution: Hands off my iPod*, Cheltenham (UK) and Northampton (Mass.): Edward Elgar, July 2007.

> reduce global market competition. They inhibit rights ordinarily acquired by Australian owners of chattels to use and adapt the same, once acquired, to their advantage and for their use as they see fit.[69]

Kirby J elaborated later in his judgment: If the present case is taken as an illustration, Sony's interpretation would permit the effective enforcement, through a technological measure, of the division of global markets designated by Sony.' [70] Kirby J observed: 'It would have the effect of imposing, at least potentially, differential price structures in those separate markets.'[71] Kirby J commented: 'In short, it would give Sony broader powers over pricing of its products in its self-designated markets than the Copyright Act in Australia would ordinarily allow.'[72] Kirby J predicted that future cases may 'explore the limits that exist in the powers of the Australian Parliament, by legislation purporting to deal with the subject matter of copyright, to encumber the enjoyment of lawfully acquired chattel property in the supposed furtherance of the rights of copyright owners.' [73]

The Australian Parliament, though, has further enlarged the scope of technological protection measures, particularly in response to trade agreements such as the *Australia-United States Free Trade Agreement* 2004,[74] and the *Trans-Pacific Partnership* 2015.[75] There has been disquiet, though, about the impact of technological protection measures upon consumer rights and competition policy. The IT Pricing inquiry, in particular, expressed deep concerns that Australian consumers were being disadvantaged compared to their United States counterparts.[76]

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69 *Stevens* v. *Kabushiki Kaisha Sony Computer Entertainment* [2005] HCA 58 – Kirby J at [175].

70 *Stevens* v. *Kabushiki Kaisha Sony Computer Entertainment* [2005] HCA 58 – Kirby J at [211].

71 *Stevens* v. *Kabushiki Kaisha Sony Computer Entertainment* [2005] HCA 58 – Kirby J at [211].

72 *Stevens* v. *Kabushiki Kaisha Sony Computer Entertainment* [2005] HCA 58 – Kirby J at [211].

73 *Stevens* v. *Kabushiki Kaisha Sony Computer Entertainment* [2005] HCA 58 – Kirby J at [216].

74 Matthew Rimmer, 'Robbery Under Arms: Copyright Law and the Australia-United States Free Trade Agreement' (2006) 11 (3) *First Monday* http://firstmonday.org/ojs/index.php/fm/article/view/1316

75 Matthew Rimmer, *The Trans-Pacific Partnership: Intellectual Property and Trade in the Pacific Rim,* Cheltenham (UK) and Northampton (Mass.): Edward Elgar, December 2020.

76 House of Representatives Standing Committee on Infrastructure and Communications, At What Cost? IT Pricing and the Australia Tax, Canberra: Australian Parliament, 2013, https://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=ic/itpricing/report.htm; Matthew Rimmer, 'Clash of the Titans: Apple, Adobe, and Microsoft Under Fire at the IT Pricing Inquiry', *The Conversation*, 22 March 2013, https://theconversation.edu.au/clash-of-the-titans-apple-adobe-and-microsoft-under-fire-at-it-pricing-inquiry-12878; and Matthew Rimmer, 'IT Pricing: Copyright Law, Consumer Rights, and Competition Policy', A submission to the House of Representatives Standing Committee on

A number of submissions to the Productivity Commission in 2021 have highlighted the threat posed by technological protection measures to the ability of consumers to engage in repair. The Law Council of Australia has expressed concern that repairers could be subject to civil remedies and criminal offences under the technological protection measures scheme.[77] The Law Council of Australia commented:

> Technological protection measures (TPMs) may pose a barrier to repair in some cases. The *Copyright Act* 1968 (Cth) creates both civil and criminal liability for anyone who circumvents a TPM (sections 116AN, 132APC), manufactures a circumvention device for a TPM (sections 116AO, 132APD) or provides a circumvention service for a TPM (sections 116AP, 132APE). Maximum penalties for these offences reach 550 penalty units (currently $122,100) and/or five years imprisonment.[78]

The Australian Digital Alliance has also called for exceptions for repair under technological protection measures in a range of inquiries. [79] Anthony Rosborough has discussed the push for law reform in Canada on copyright, the right to repair, and technological protection measures, which has received broad support from several of the main parties in the Parliament of Canada.[80]

Infrastructure and Communications Inquiry into IT Pricing, 19 September 2012, http://works.bepress.com/matthew_rimmer/121/

77 Law Council of Australia, 'Submission to the Productivity Commission – Right to Repair Issues Paper (December 2020)', Submission 114 to the Issues Paper, Productivity Commission, 12 February 2021, https://www.pc.gov.au/__data/assets/pdf_file/0007/272896/sub114-repair.pdf

78 Ibid., 13.

79 Australian Digital Alliance, 'ACCC Agricultural Machinery After Sales Markets Inquiry Submission', 2020 https://digital.org.au/resources/accc-agricultural-machinery-after-sales-markets-inquiry-submission/

80 Anthony Rosborough, 'Unscrewing the Future: The Right to Repair and the Circumvention of Software TPMs in the EU' (2020) 11 *Journal of Intellectual Property, Information Technology & E-Commerce Law* 26-48 https://www.jipitec.eu/issues/jipitec-11-1-2020/5083

Recommendation 5
This submission agrees with the recommendation of the Productivity Commission in Draft Finding 5.2 to 'amend the *Copyright Act* 1968 to allow repairers to legally procure tools required to access repair information protected by technological protection measures (TPMs), such as digital locks'. This submission agrees with that the Productivity Commission that the Australian Government should 'clarify the scope and intent of the existing (related) exception for circumventing TPMs for the purpose of repair.' This submission notes the parallel development that the Parliament of Canada is currently considering a bill to amend its copyright regime to ensure that technological protection measures do not interfere with the right to repair.

2c. Contracting out of Copyright Law

There has been a longstanding public policy debate in Australia about contracting out of copyright exceptions.[81] It is important that the recognition of a right to repair under copyright law and technological protection measures is not undermined by private contracts and agreements.

It should also be noted that the Free Software Foundation, the open source movement, the Creative Commons community, and open source hardware advocates have sought to use open licensing terms to promote the right to repair.[82] Free Software Melbourne discussed the need for open access to repair information in its submission.[83] The submission contends:

> We need legislation that would mandate the Fair and Open Access to information required to perform repairs on modern devices. While not every Australian would be able to make use of such information, the fact that independent electronics repairs are possible benefits the whole community in the form of

[81] Copyright Law Review Committee, *Copyright and Contract*, Canberra: Copyright Law Review Committee, 2002, https://webarchive.nla.gov.au/tep/49721

[82] Matthew Rimmer, 'Lady Ada: Limor Fried, Adafruit Industries, Intellectual Property and Open Source Hardware' (2021) *Journal of Intellectual Property Law and Practice* https://academic.oup.com/jiplp/advance-article-abstract/doi/10.1093/jiplp/jpab041/6322410#.YPS882iIuL4.twitter

[83] Free Software Melbourne, 'A submission to the Productivity Commission on the Right to Repair', Submission 43, Issues Paper, 31 January 2021, https://www.pc.gov.au/__data/assets/pdf_file/0005/272318/sub043-repair.pdf

> jobs at those establishments and the enhanced value of our devices through improved lifetimes and extended productivity of devices.[84]

Moreover, the organisation contends: 'Open Access to this kind of data also enhances the security of our devices by enabling another level of independent auditing, analysis and research.'[85]

Recommendation 6
This submission agrees with the recommendation of the Productivity Commission in Draft Finding 5.2 that 'to reduce the risk of manufacturers using contractual arrangements (such as confidentiality agreements) to 'override' the operation of any such reforms, it may also be beneficial to amend the *Copyright Act* 1968 to prohibit the use of contract terms that restrict repair-related activities otherwise permitted under copyright law.' This submission that this problem of contracting-out of repair is also apparent in other fields of intellectual property – such as designs law, trade mark law, patent law, and trade secrets law. It would be useful to prohibit the use of contract terms that restrict repair-related activities otherwise permitted under intellectual property law.

84 Ibid.

85 Ibid.

3. Designs Law and the Right to Repair

Unlike some of the other Australian intellectual property regimes, Australian designs law has a defence in respect of spare parts. Section 72 of the *Designs Act* 2003 (Cth) lays down some elaborate, convoluted rules in respect of certain repairs not infringing registered designs**.**

Section 72 (1) of the *Designs Act* 2003 (Cth) provides:

> (1) Despite subsection 71(1), a person does not infringe a registered design if:
> (a) the person uses, or authorises another person to use, a product:
> (i) in relation to which the design is registered; and
> (ii) which embodies a design that is identical to, or substantially similar in overall impression to, the registered design; and (b) the product is a component part of a complex product; and (c) the use or authorisation is for the purpose of the repair of the complex product so as to restore its overall appearance in whole or part.

Section 72 (2) of the *Designs Act* 2003 (Cth) provides:

If: (a) a person uses or authorises another person to use a product:
(i) in relation to which a design is registered; and
(ii) which embodies a design that is identical to, or substantially similar in overall impression to, the registered design; and
(b) the person asserts in infringement proceedings that, because of the operation of subsection (1), the use or authorisation did not infringe the registered design;
the registered owner of the design bears the burden of proving that the person knew, or ought reasonably to have known, that the use or authorisation was not for the purpose mentioned in paragraph (1)(c).

Section 72 (3) of the *Designs Act* 2003 (Cth) provides:

For the purposes of subsection (1):

(a) a repair is taken to be so as to restore the overall appearance of a complex product in whole if the overall appearance of the complex product immediately after the repair is not materially different from its original overall appearance; and
(b) a repair is taken to be so as to restore the overall appearance of a complex product in part if any material difference between:
(i) the original overall appearance of the complex product; and
(ii) the overall appearance of the complex product immediately after the repair;
is solely attributable to the fact that only part of the complex product has been repaired.

Section 72 (4) of the *Designs Act* 2003 (Cth) provides: 'In applying subsection (3), a court must apply the standard of the informed user.'

Section 72 (5) of the Designs Act 2003 (Cth) provides some further definitions of key terms:

In this section: "repair" , in relation to a complex product, includes the following:
(a) restoring a decayed or damaged component part of the complex product to a good or sound condition;
(b) replacing a decayed or damaged component part of the complex product with a component part in good or sound condition;
(c) necessarily replacing incidental items when restoring or replacing a decayed or damaged component part of the complex product;
(d) carrying out maintenance on the complex product.

"standard of the informed user" , in relation to the overall appearance of a complex product, means the standard of a person who is familiar with the complex product, or with products similar to that product.

"use" , in relation to a product, means:
(a) to make or offer to make the product; or
(b) to import the product into Australia for sale, or for use for the purposes of any trade or business; or
(c) to sell, hire or otherwise dispose of, or offer to sell, hire or otherwise dispose of, the product; or
(d) to use the product in any other way for the purposes of any trade or business; or
(e) to keep the product for the purpose of doing any of the things mentioned in paragraph (c) or (d).

There has been debate about how these rather complicated provisions are to be applied in practice.

The scope of this defence has been recently considered in the Federal Court of Australia case of *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).[86] Burley J discusses the nature of the conflict in this matter:

> Some car enthusiasts, particularly young men, like to upgrade, enhance or "up-spec" the appearance of their standard vehicles to make them look different and, in their view, better. Some buy lower specification Holden Commodores and upgrade them with parts designed for use on the top level Holden Special Vehicle (HSV) and certain sports models of the VE Commodores so that they appear more like these more expensive versions. Owners of genuine HSV or VE Commodores apparently object to such mutton dressed as lamb, and Holden implements controls over the sale of its HSV parts in part to try and discourage such practices.
>
> In 2013, Holden learnt that someone was importing replica body parts for HSV and VE parts and selling them without any controls. It sent aggressive letters of demand to numerous spare parts suppliers that it perceived had offered these parts for sale. Subsequently, it identified the source of the replicas and commenced these proceedings against various entities that trade under the name "SSS Auto Parts", alleging that the replicas infringe some of its designs registered under the Designs Act 2003 (Cth).[87]

The respondents argued that the terms of s 72, which provides that certain repairs do not infringe registered designs, provided a complete answer to the claim.

Burley J held that the GM Global Technology Operations had failed to establish that the importation of parts was not for a repair purpose:

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86 *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).

87 *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).

> I have concluded that, in relation to the GMGTO claim, GMGTO has failed to establish that the importation, keeping for sale or offer for sale of the impugned SSS parts was not for a repair purpose within the meaning of s 72 of the Designs Act. It has also failed in respect of all representative transactions nominated for the purpose of considering infringement by selling the impugned parts with the exception of; transactions 1, 6, 7 and 8 (in relation to W & G Smash Repairs only) involving SSS Sydney; transactions 15 and 17 (in relation to sales (1), (2), (3) and (5) only) involving SSS Melbourne; and transactions 25 and 26 involving SSS Queensland. [88]

The judge noted: 'As a broad observation, I note that the case as presented by GMGTO in relation to its claim tended to be based on what I consider to be unrealistic expectations as to what individuals (whose knowledge could be attributed to an SSS party) knew or ought reasonably to have known about a transaction.' [89] The judge reflected: 'As a result of legitimate concerns that GMH would commence lengthy, detailed and expensive proceedings against it, SSS introduced a series of policies designed to ensure and demonstrate that sales made were for a repair purpose.' [90] The judge said: 'This ultimately led to SSS implementing controls on the sale of the impugned parts that appear to be similar to the controls implemented by GMH itself.' [91] The judge commented: 'It is difficult to imagine that the legislators had this in mind when s 72 was enacted'. [92] The judge found: 'Nevertheless, in order to consider the application of the s 72 defence, it has been necessary to consider each transaction, and the purpose of SSS in the context of each alleged act of infringement'. [93] The judge held: 'Ultimately, GMGTO has succeeded in respect of a relatively small number of representative transactions, the value of which (seen in the context of this litigation) is likely to be small compared to the costs involved.' [94]

In relation to the cross-claims, the judge held that there were 'unjustified threats to bring design infringement proceedings in relation to the Panel House, CarParts and Torq parts suppliers by reason of the fact that Designs 7 and 12 were never certified'. [95] The judge also

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88 *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).

89 *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).

90 *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).

91 *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).

92 *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).

93 *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).

94 *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).

95 *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).

held that there was 'an unjustified threat to bring copyright infringement proceedings was made in relation to the relevant letters of demand to Holmart.' [96]

Reflecting upon the significance of the case, Wrays comments: 'We now have greater clarity with respect to how this defence operates, and it is mostly good news for those manufacturing, selling or using spare parts'.[97] The law firm stresses: 'The repair defence has a broad application.'[98] Clayton Utz lawyers also discussed the importance of the precedent:

> The spare parts defence was the subject of considerable debate before it was introduced in the new *Designs Act* in 2003, and was strongly resisted by manufacturers including the motor vehicle industry. Typically the onus to prove knowledge (or a lack thereof) falls upon the person whose state of knowledge is in issue.[99]

The lawyers commented: 'Some significant changes to Australia's registered designs laws are currently on the agenda, and it remains to be seen whether industry will agitate for the repair defence to be added to the list of items under review.'[100]

There have been a number of law reform inquiries into Australia's designs regime, although there has not necessarily been much progress in overhauling the regime. The Advisory Council on Intellectual Property has undertaken a review of the designs regime. [101] In its final report in 2015, the Advisory Council discussed the spare parts exception:

> In order to address concerns about the potential impact on competition of registered designs for component parts of complex products like cars or mining machinery, section 72 provides that it is not infringement of a registered design to use, or authorise another person to use, a product which is a component part of a complex product, 'for the purpose of the repair of the complex product so as to restore its overall appearance in whole or part'. 'Repair' is defined to include restoring or replacing

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96 *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019).

97 Wrays, 'Unraveling the Repair Defence to Design Infringement', *Lexology*, 26 February 2019, https://www.lexology.com/library/detail.aspx?g=f8ee6d27-8ffa-4b4b-b665-323bb0457982

98 Ibid.

99 Richard Hoad and Sarah Martine, 'Green light for the "spare parts" defence to design infringement', Clayton Utz, 21 February 2019, https://www.claytonutz.com/knowledge/2019/february/green-light-for-the-spare-parts-defence-to-design-infringement

100 Ibid.

101 Advisory Council on Intellectual Property, *Review of the Designs System*, Canberra: Advisory Council on Intellectual Property, 2015, https://www.ipaustralia.gov.au/sites/default/files/acip_designs_final_report.pdf

> decayed or damaged components, as well as carrying out maintenance. Use of products embodying registered designs for other purposes can still be an infringement.[102]

Rather tersely, the Advisory Council noted: 'Issues around design protection for spare parts were discussed in the Options Paper'.[103] The Advisory Council noted that there were a diversity of views about the exception: 'Unsurprisingly there were mixed views in the submissions to the Options Paper, primarily in the key markets.'[104] The Advisory Council observed: 'For example, aftermarket providers agree with no change, and representatives of the vehicle market indicated the repair defence is detrimental to the designs system.'[105] The Advisory Council declined to make any recommendation regarding reform to the repair defence: 'ACIP has not been informed of or found any additional information to be influential in changing its view.'[106] In the author's view, this was a rather unadventurous report, which did not really resolve the larger need for the modernisation of the designs regime.

In addition to the review by the Advisory Council on Intellectual Property, IP Australia have recently conducted a review of the Australian designs regime.[107] There has been a concern that the designs regime has been somewhat anachronistic, and has not kept pace with new technological developments. IP Australia has undertaken a number of procedural reforms in relation to designs regime.[108] However, it is not clear that the Australian Government has decided yet on a course of action in respect of the larger reform of designs law.

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102 Ibid., 40-41.

103 Ibid., 41.

104 Ibid., 41.

105 Ibid., 41.

106 Ibid., 41.

107 IP Australia, *Defining Design: Design's Role in the Australian Economy*, Canberra: Australian Government, 2020, https://www.ipaustralia.gov.au/sites/default/files/defining_design_ip_australia_report.pdf ; IP Australia, *Talking Design*: *Views from Australia's Visual Design Ecosystem,* Canberra: Australian Government, 2020, https://www.ipaustralia.gov.au/sites/default/files/talking_design_ip_australia_report.pdf ; IP Australia, *Valuing designs: Economic Impact of Design Rights in Australia,* Canberra: Australian Government, 2020, https://www.ipaustralia.gov.au/sites/default/files/valuing_design_ip_australia_report.pdf and IP Australia, *Protecting Designs: Design Innovation, Copying and Enforcement in Australia,* Canberra: Australian Government, 2020, https://www.ipaustralia.gov.au/sites/default/files/protecting_design_ip_australia_report.pdf

108 IP Australia, 'Design Reform Project – Outcomes of the Review', 2021, https://www.ipaustralia.gov.au/sites/default/files/design_reform_project_-_outcomes_of_the_review.pdf

The Productivity Commission certainly has a role to play in the modernisation of designs law in its present inquiry. Noting the Federal Court precedent, the Law Council of Australia has identified the current strange construction of the spare parts exception in its submission:

> That decision illustrated the difficulty faced by registered design owners against whom the defence is raised, in light of the fact that the Act places the onus on the design holder to establish that the use was not for repair purposes. In that case, the design owner failed to do so except in relation to a small number of transactions, with the result that the 'repair' defence was largely made out.[109]

There is an opportunity for the Productivity Commission to recraft the spare parts exception under designs law to ensure that there is a broad fair use defence for repair under designs law.

There have been other disputes over automobiles, designs, and replacement parts in other jurisdictions. In South Africa, there was a significant dispute, involving BMW. [110] BMW applied to the North Gauteng High Court for orders interdicting the alleged infringements, and for related relief so far as the designs are concerned. In response to the claims of design infringement Grandmark counterclaimed under s 31 of the Act for revocation of their registration, on the grounds that the designs did not qualify for registration under s 14. The judge at first instance upheld the claim for revocation. On appeal, the court observed:

> The designs now in issue are designs of individual components, and must be judged for the qualities of the individual components, independently of the design of the built-up vehicle. The articles embodying the designs are not selected by customers for their appeal to the eye. They are selected solely for the function they perform – which is to replace components so as to restore the vehicle to its original form.[111]

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[109] Law Council of Australia, 'Submission to the Productivity Commission – Right to Repair Issues Paper (December 2020)', Submission 114 to the Issues Paper, Productivity Commission, 12 February 2021, 10, https://www.pc.gov.au/__data/assets/pdf_file/0007/272896/sub114-repair.pdf

[110] *Bayerische Motoren Werke Aktiengesellschaft v Grandmark International* (722/12) [2013] ZASCA 114 (18 September 2013)

[111] *Bayerische Motoren Werke Aktiengesellschaft v Grandmark International* (722/12) [2013] ZASCA 114 (18 September 2013)

The judge observed: 'There is no suggestion that the purpose of the BMW components is to be fitted, upon selection by customers, to vehicles of a different kind.' [112] The judge commented: 'The purpose they are intended to serve is solely to replace the components of the respective BMW vehicles.' [113] The judge held: 'In those circumstances the designs are purely functional and were rightly held not to qualify for registration as aesthetic designs.' [114]

There has been further discussion as to how the right to repair will operate in respect of 3D printing and additive manufacturing. [115]

Mitchell Adams from Swinburne Law School has considered how the Australian right to repair under designs law would operate in respect of 3D printing of parts:

> Accordingly, 3D printing of objects that solely restore the overall appearance of a product would not constitute an infringement of a registered design. Bradshaw, Bowyer and Haufe identified the printing of spare parts as a likely application of consumer 3D printing. The authors assert that the printing of spare parts could provoke intellectual property disputes. Spare parts are an attractive use for 3D printing, and in Australia the 3D printing of spare parts would remain an acceptable activity provided it restores the overall appearance of the product. The provision of spare parts on online file-sharing services therefore becomes a legitimate activity for users.[116]

Adams argues that there is a need for Australian designs law to better reflect new industrial developments in advanced manufacturing.[117]

Likewise, Dr Tyrone Berger has considered how Australian designs law would work in the context of 3D printing.[118] He contends that many forms of 3D printing parts would not

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112 *Bayerische Motoren Werke Aktiengesellschaft v Grandmark International* (722/12) [2013] ZASCA 114 (18 September 2013)

113 *Bayerische Motoren Werke Aktiengesellschaft v Grandmark International* (722/12) [2013] ZASCA 114 (18 September 2013)

114 *Bayerische Motoren Werke Aktiengesellschaft v Grandmark International* (722/12) [2013] ZASCA 114 (18 September 2013)

115 Mitchell Adams, 'The "Third Industrial Revolution" 3D Printing Technology and Australian Designs Law", (2015) 24 (1) *Journal of Law, Information, and Science* 56-84.

116 Ibid.

117 Mitchell Adams, '3D Printing Technology and Australian Designs Law', QUT Designs Law and 3D Printing Symposium, YouTube, 30 August 2017, https://www.youtube.com/watch?v=WuRHuaHGQLs

118 Tyrone Berger, '"Substantial Similarity" under Australian Design Law: Application to 3D Printing', in Dinusha Mendis, Mark Lemley, and Matthew Rimmer (ed.), *3D Printing and Beyond: Intellectual Property and Regulation*, Cheltenham and Northampton (MA): Edward Elgar Publishing, 2019, 294-307 at 304.

constitute design infringement: 'In Australia, the 3D printing of spare parts would not attract any infringement under the *Designs Act* (Cth) provided the component part made restored the overall appearance of the product.'[119] He suggests that 'many such relevant scenarios have been identified, for example where household or commercial appliances require unique or often expensive spare parts to maintain functionality.'[120] He comments: 'Obvious consumer goods would include door parts for washing machines, lids for food processes, and camera lens accessories.'[121]

Dr Tyrone Berger has written a further case note on the significance of the Federal Court of Australia decision on the spare parts exception under designs law.[122] He commented: 'This case proves a good illustration of the difficulties ahead for registered owners to establish that a relevant party knew or ought reasonably to have known that use of the impugned part was not for the repair purpose'.[123] Berger noted that the case had general significance – beyond the particular factual scenario of motor vehicles: 'Whilst this case is concerned only with spare parts for motor vehicles, it is potentially an issue in relation to any complex product where there is, or could be, a separate market for repair and replacement parts.'[124]

Thomas Margoni observes that there is a mismatch between designs law and 3D printing.[125] He contends that 'industrial, professional, amateur, individual, corporate, digital, handicraft, distributed-manufacturing, centralised manufacturing, designers and makers will hardly benefit from the current inefficient, intricate, redundant and uncertain theoretical and legal frameworks.'[126] In his view, 'this comes at the cost of both innovation and the promotion of creativity in the single market.'[127]

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119 Ibid., 304.

120 Ibid., 304.

121 Ibid., 304.

122 Tyrone Berger, 'A First Look at the Designs Repair Defence in Australia' (2019) 14(5) *Journal of Intellectual Property Law & Practice* 358

123 Ibid.

124 Ibid.

125 Thomas Margoni, 'Design Rights and 3D Printing in the UK: Balancing Innovation and Creativity in a (Dis)harmonised and Fragmented Legal Framework', in Dinusha Mendis, Mark Lemley, and Matthew Rimmer (ed.), *3D Printing and Beyond: Intellectual Property and Regulation*, Cheltenham and Northampton (MA): Edward Elgar Publishing, 2019, 77-98.

126 Ibid., 98.

127 Ibid., 98.

Elizabeth Ferrill and her collaborators have expressed concerns about the impact of 3D printing on the enforcement of design rights.[128]

In a discussion of 'intelligent design', Christopher Buccafusco, Mark Lemley and Jonathan Masur express concern about the over-protection of designs – both through design patents and other forms of intellectual property.[129] They argue: 'Designers are able to obtain powerful IP protection over the utilitarian aspects of their creations without demonstrating that they made socially valuable contributions.'[130] Moreover, they observe that designers are also 'able to do so without paying substantial fees that might weed out weaker, socially costly designs.'[131] In their view, 'This is bad for competition and bad for consumers.'[132] The writers contend: 'We can make it more expensive for designers to insulate themselves from competition.'[133] They conclude: 'Perhaps perversely, one of the ways to encourage good design may be to make protecting it more expensive.'[134]

There has also been discussion of whether designs law could be reformed to promote sustainable development and a circular economy. Professor Maree Sainsbury from the University of Canberra has argued that there is a need for legal system to promote green designs.[135] Griffith University researchers have also made the case that designs law should be reformed in order to promote a circular economy.[136] The Design Institute of Australia, in its submission to the Productivity Commission, commented: ''Designers and the design industry

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128 Elizabeth Ferrill, Robert MacKichan, Christopher McKinley, and Kelly Horn, 'Integrating a Classic Tool for a Modern Challenge: US Designs Patents Implications for 3D Printing', in Dinusha Mendis, Mark Lemley, and Matthew Rimmer (ed.), *3D Printing and Beyond: Intellectual Property and Regulation*, Cheltenham and Northampton (MA): Edward Elgar Publishing, 2019, 185-202.

129 Christopher Buccafusco, Mark Lemley and Jonathan Masur, 'Intelligent Design' (2018) 68 *Duke Law Journal* 75-139.

130 Ibid.

131 Ibid.

132 Ibid.

133 Ibid.

134 Ibid.

135 Maree Sainsbury, 'The Power of Visual Appeal: Designs Law and Clean Energy' in Matthew Rimmer (ed.), *Intellectual Property and Clean Energy*: *The Paris Agreement and Climate Justice*, Singapore: Springer, 2018, 323-340.

136 Leanne Wiseman and Kanchana Kariyawasam, 'Revisiting the Repair Defence in the Designs Act (2003) in Light of the Right to Repair Movement and the Circular Economy', (2020) 31 *Australian Intellectual Property Journal* 133-146.

have a key role to play in transitioning to a circular economy, where the life, value and functionality of products (and materials) is prolonged.' [137]

Recommendation 7
Unlike some of the other Australian intellectual property regimes, Australian designs law has a defence in respect of spart parts. The scope of this defence has been recently considered in the case of *GM Global Technology Operations LLC* v *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97 (11 February 2019). Even though such a defence was effective in this particular case, the existing provisions in relation to spare parts are complicated and convoluted. The Productivity Commission should avail itself of the opportunity to design a broad defence for the right to repair under designs law.

4. Trademark Law and the Right To Repair

There has even been right to repair issues emerging in the field of trade mark law. Litigation by major information technology companies such as Apple highlight the need for trade mark law reform to properly account for the right to repair, and to promote larger objectives in respect of product stewardship, the treatment of e-waste, and sustainable development.

In 2017, Apple sued an unauthorised repair shop owner Henrik Huseby in Norway, arguing that it had violated its trademark by using aftermarket iPhone parts.[138] Apple was first alerted to the issue, after Norway's customs officials had seized a shipment of 63 iPhone 6 and 6S replacement screens on their way to Henrik's shop from Asia. Apple maintained that the replacement screens were counterfeit. Through its lawyer Frank Jogensen, Apple demanded Huseby provide 'copies of invoices, product lists, order forms, payment information, prints from the internet and other relevant material regarding the purchase [of screens], including copies of any correspondence with the supplier … we reserve the right to request further

[137] Design Institute of Australia, 'Productivity Commission Inquiry on the Right to Repair – The Importance of Good Design', Submission 108 to the Issues Paper, Productivity Commission, 1 February 2021, https://www.atse.org.au/wp-content/uploads/2021/01/SUB-2021-02-01-Inquiry-into-the-Right-to-Repair-within-Australia-FINAL.pdf

[138] Jason Koebler, 'Apple Sued an Independent iPhone Repair Shop Owner and Lost', *Vice*, 14 April 2018, https://www.vice.com/en_us/article/a3yadk/apple-sued-an-independent-iphone-repair-shop-owner-and-lost

documentation at a later date.' The letter included a settlement agreement, which required the destruction of the goods, agreement by Huseby 'not to manufacture, import, sell, market, or otherwise deal with any products that infringe Apple's trademarks,' and the payment of 27,700 Norwegian Krone.

Initially, Henrik Huseby defended the matter in the court, and prevailed over Apple.[139] The court held that Norwegian law 'does not prohibit a Norwegian mobile repair person from importing mobile screens from Asian manufacturers that are 100 percent compatible and completely identical to Apple's own iPhone screens, so long as Apple's trademark is not applied to the product.'[140]

After Huseby won in Oslo District Court, on appeal, Apple prevailed in the litigation in Norway's Court of Appeal in 2019.[141]

Maja van der Velden, informatics professor at the University of Oslo, commented: 'The core of the case is the right of repairers to access spare parts without Apple approval.'[142] The professor observed: 'This right is under attack by Apple's drive to control how and whom can repair the Apple products you own.'[143] Maja van der Velden expressed concern about the larger implications of the decision for sustainable development:

> All this suggests that in the case of Apple versus Huseby, the Court of Appeal did not take into account the bigger picture, and that is a big problem for sustainability. Our research in the EU-financed SMART project, which is led by the University of Oslo, shows that the end of life of electronic products is associated with severe social and environmental impacts. Electronic waste is the fastest growing waste stream in the world. We produced more than 44 million metric tonnes e-waste globally in 2016, with Norway producing the highest amount of e-waste per capita. Repair shops provide an important service to the emerging circular economy in Norway. They make phone repair more affordable and they offer repair solutions that have a much lower environmental impact than the ones offered by companies like Apple.[144]

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139 Copy of the lawsuit, https://www.documentcloud.org/documents/4437126-Dom-Apple-2.html

140 Jason Koebler, 'Apple Sued an Independent iPhone Repair Shop Owner and Lost', *Vice*, 14 April 2018, https://www.vice.com/en_us/article/a3yadk/apple-sued-an-independent-iphone-repair-shop-owner-and-lost

141 *Apple* v. *Huseby* (2019) Court of Appeal.

142 Maja van der Velden, 'We all lose in the Case that Apple Won', Blogging for Sustainability, 17 July 2019, https://www.smart.uio.no/blog/we-all-lose-in-the-case-that-apple-won.html

143 Ibid.

144 Ibid.

The professor concluded: 'Hindering repair through legal actions, design, a lack of spare parts, and high repair fees, will only undermine the shift to a sustainable circular economy'.[145] She warned: 'We all stand to lose when technology giants can dictate the conditions under which we use and repair our electronics.'[146]

Huseby engaged in crowdfunding to appeal against the decision, pleading for help and assistance in his dispute with Apple:

> This is the ultimate David vs Goliath fight, and it's a struggle we can't afford to lose. Repairing and extending a phone's lifespan is always the greenest option. No manufacturer is able to cater for the repair needs of all users of its products, including Apple! Independent repairers plan a crucial role in reducing unnecessary electrical waste, and often perform repairs that manufacturers aren't doing themselves.[147]

Huseby commented: 'What's at stake is our Right to Repair – in Norway and everywhere else'.[148] He observed that other independent repairers had also received legal threats from Apple: 'I've been in touch with repair businesses in other countries, which have been threatened by Apple in similar ways.'[149] Huseby cautioned: 'If they win this case, all independent repair businesses will be weaker when confronted by Apple or other manufacturers.'[150]

In June 2020, Norway's Supreme Court further held that the import of mobile screens which had contained the Apple logo ink constituted a trademark infringement under section 4 of Norway's Trademark Act.[151] The Supreme Court decision orders Huseby to destroy the 62 phone screens seized by customs officials and to pay Apple's legal costs, 247,500 NOK.[152]

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145 Ibid.

146 Ibid.

147 Henrik Huseby, 'Support the Right to Repair', GoGetFunding, https://gogetfunding.com/support-the-right-to-repair/?show_desktop=1

148 Ibid.

149 Ibid.

150 Ibid.

151 *Huseby* v. *Apple Inc.* HR-2020-1142-A, (sak nr. 19-141420SIV-HRET) https://s3.documentcloud.org/documents/6936580/Norway.pdf

152 Thomas Claburn, 'Repair store faces hefty legal bill after losing David and Goliath fight with Apple over replacement iPhone screens', *The Register*, 4 June 2020, https://www.theregister.com/2020/06/04/apple_repair_norway/

Commenting on the decision, Henrik Huseby lamented:

> This is a big victory for companies like Apple who want to shut down small businesses like mine and control the prices of repair. They can claim that the cost of changing a screen will be the same as buying a new one, so there is no value in repairing. They are blocking their competition and creating a monopoly.[153]

Huseby expressed his concern that the company Apple was trying to use intellectual property law 'to make my job and the job of millions independent repair businesses almost impossible.'[154]

Chloe Mikolajczak, a campaigner with the European Right to Repair campaign, commented: 'Clearly the law is failing people and the planet. It's time the law catches up," said in a statement.'[155] She observed: 'This case was both about Apple using its power to pressure Norwegian authorities and control the process, and about the letter of the law being inappropriate to the moment we are living'.[156] Mikolajczak reflected: 'Extending mobile lifecycles via repair is the best way to reduce their environmental impact, and refurbished parts are the greenest and cost-effective option.'[157]

Karl Bode was deeply critical of the decision of the Norwegian Supreme Court.[158] He observed that 'the US and overseas right to repair movement isn't particularly impressed by the court sanctioned bullying of a small business owner.'[159] Bode also noted that, in addition to such litigation, Apple was also lobbying against the introduction of the right to repair in various jurisdictions: 'While the company has made some caveat-laden concessions, the company continues to fiercely lobby against right to repair laws in 18 states around the United States, all

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153 Samuel Stolton, 'Apple wins in 'David v Goliath' right to repair battle in Norway', *Euractiv*, 4 June 2020, https://www.euractiv.com/section/digital/news/apple-wins-in-david-v-goliath-right-to-repair-battle/

154 Thomas Claburn, 'Repair store faces hefty legal bill after losing David and Goliath fight with Apple over replacement iPhone screens', *The Register*, 4 June 2020, https://www.theregister.com/2020/06/04/apple_repair_norway/

155 Ibid.

156 Ibid.

157 Ibid.

158 Karl Bode, 'Norway Supreme Court Signs Off On Apple's Harassment Of An Independent Repair Shop', *TechShop*, 5 June 2020, https://www.techdirt.com/articles/20200604/11170944646/norway-supreme-court-signs-off-apples-harassment-independent-repair-shop.shtml

159 Ibid.

of which require hardware vendors like Apple sell replacement parts and repair tools to the general public and independent repair companies.'[160]

There has been an academy commentary by Ole-Andreas Rognstad on the litigation between Apple and Huseby published in a collection on intellectual property and sustainable markets.[161] Rognstad has contended that there is a need to reshape intellectual property law to better support sustainable markets.

In its discussion paper, the Productivity Commission mentions Apple's use of trademark law protections to prevent the importation of spare parts.[162] The Commission notes: 'There have been two recent, relatively high profile overseas cases involving Apple preventing imports of aftermarket iPhone screens by independent repairers on the basis that the screens infringed Apple's exclusive trademark rights.'[163] The Commission observes:

> In these cases, replacement iPhone screens imported from China and Hong Kong by independent repairers were seized by Norwegian and United States customs authorities — in one case, Apple was earlier granted an injunction requiring customs to 'seek to disclose and keep from release all articles [regardless of importer] with trademarks or figure marks belonging to Apple Inc' (*Henrik Huseby* v *Apple Inc*, HR 2020 1142 A, case no. 19 141420SIV HRET, [5]) — on suspicion that they were counterfeits bearing unauthorised Apple trademarks that therefore infringed Apple's trademark rights (Koebler 2018b; Montello 2020, pp. 172–174; Van der Velden 2020). The parts in question were argued to be aftermarket parts comprised of a mix of original manufacturer, refurbished and aftermarket components, with some original internal componentry bearing microscopic Apple logos invisible to consumers.[164]

The Productivity Commission acknowledged that this was a significant precedent in respect of trade mark law and the right to repair.

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160 Ibid.

161 Ole-Andreas Rognstad, 'Revisiting the Concept of Trade Mark Piracy in light of Sustainable Development Goals: a Discussion of the Norwegian Apple Case' in Ole-Andreas Rognstad and Inger B. Ørstavik (ed.), *Intellectual Property and Sustainable Markets*, Cheltenham (UK) and Northampton (Mass.): Edward Elgar, 2021, 101-114, https://www.elgaronline.com/view/edcoll/9781789901344/9781789901344.00011.xml

162 Productivity Commission, *Right to Repair: Draft Report*, Melbourne: Productivity Commission, 11 June 2021, 160, https://www.pc.gov.au/inquiries/current/repair/draft

163 Ibid., 160.

164 Ibid., 160.

In addition to the Norwegian case, which has received global attention, there has also been a less well-known dispute over replacement parts and trade marks in South Africa. [165] The court noted: 'So far as the alleged trade mark infringement is concerned, before us BMW alleged infringement of only one of its registered trade marks – the letters BM.' [166] The court observed: 'It alleged that the trade mark is infringed by its appearance on two articles reflected in photographs attached to the founding affidavit.' [167] The court noted: 'There is no explanation in the papers of what those articles are but we were told they are labels attached to the packaging of one of the components.' [168] The court observed:

> A customer would not view the trade mark 'BM' in isolation of its surrounding features. In the first case it can hardly be said that the trade mark is used as a badge of origin when the label states it to have a different origin. Moreover, the numbering surrounding, and immediately following, the mark clearly reflects its use to identify of the component concerned, and the same is to be said of the lettering and number on the second tag. In my view the marks are clearly not used as trade marks and the claim for infringement correctly failed. [169]

Accordingly, the court dismissed the claim of trademark infringement.

According to Professor Leah Chan Grinvald and Associate Professor Ofer Tur-Sinai, there has been trademark litigation over advertising repair services.[170] In the case of *Toyota Motor Sales USA Inc* v. *Tabari*, the Ninth Circuit discussed the need for a third party broker who sold Lexus cars to use the mark 'Lexus' in its domain name and its website. [171] The Ninth Circuit discussed the nominative fair use of the marks:

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165 *Bayerische Motoren Werke Aktiengesellschaft v Grandmark International* (722/12) [2013] ZASCA 114 (18 September 2013)

166 *Bayerische Motoren Werke Aktiengesellschaft v Grandmark International* (722/12) [2013] ZASCA 114 (18 September 2013)

167 *Bayerische Motoren Werke Aktiengesellschaft v Grandmark International* (722/12) [2013] ZASCA 114 (18 September 2013)

168 *Bayerische Motoren Werke Aktiengesellschaft v Grandmark International* (722/12) [2013] ZASCA 114 (18 September 2013)

169 *Bayerische Motoren Werke Aktiengesellschaft v Grandmark International* (722/12) [2013] ZASCA 114 (18 September 2013)

170 Leah Chan Grinvald and Ofer Tur-Sinai, 'The Right to Repair: Perspectives from the United States' (2020) 31 *Australian Intellectual Property Journal* 98-110 at 109.

171 *Toyota Motor Sales USA Inc* v. *Tabari*, 610 F 3d 1171 (9th Cir, 2010).

> It is the wholesale prohibition of nominative use in domain names that would be unfair. It would be unfair to merchants seeking to communicate the nature of the service or product offered at their sites. And it would be unfair to consumers, who would be deprived of an increasingly important means of receiving such information. As noted, this would have serious First Amendment implications. The only winners would be companies like Toyota, which would acquire greater control over the markets for goods and services related to their trademarked brands, to the detriment of competition and consumers. The nominative fair use doctrine is designed to prevent this type of abuse of the rights granted by the *Lanham Act*.[172]

The Ninth Circuit stressed: 'The important principle to bear in mind on remand is that a trademark injunction should be tailored to prevent ongoing violations, not punish past conduct'.[173] The Ninth Circuit cautioned: 'Speakers do not lose the right to engage in permissible speech simply because they may have infringed a trademark in the past.' [174]

In United States policy debate in 2001, Federal Trade Commission Chair Lina Khan has emphasized that various forms of intellectual property have been used to create barriers to repair – not just copyright law, but forms of industrial property, such as patent law and trademark law: 'As both the FTC's work and public reporting have documented, companies routinely use a whole set of practices, including limiting the availability of parts and tools, using exclusionary designs and product decisions that make independent repairs less safe, and **making assertions of patent and trademark rights that are unlawfully over-broad**'.[175]

Considering the situation in Australia, the Productivity Commission observed: 'It is also unclear whether manufacturers could use trademark law protections to prevent the importation of spare parts into Australia, as has occurred in other countries.' [176] The Commission commented: 'In particular, the use of microscopic marks on non visible product components may not satisfy legislative criteria set out in the *Trade Marks Act* 1995 (Cth) as to 'use' of a mark that gives rise to exclusive trademark rights — the consumer is unable to use

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172 *Toyota Motor Sales USA Inc* v. *Tabari*, 610 F 3d 1171 (9th Cir, 2010).

173 *Toyota Motor Sales USA Inc* v. *Tabari*, 610 F 3d 1171 (9th Cir, 2010).

174 *Toyota Motor Sales USA Inc* v. *Tabari*, 610 F 3d 1171 (9th Cir, 2010).

175 Lina Khan, 'Remarks of Chair Lina M. Khan Regarding the Proposed Policy Statement on Right to Repair', Federal Trade Commission, 21 July 2021, https://www.ftc.gov/public-statements/2021/07/remarks-chair-lina-m-khan-regarding-proposed-policy-statement-right-repair

176 Productivity Commission, *Right to Repair: Draft Report*, Melbourne: Productivity Commission, 11 June 2021, 160, https://www.pc.gov.au/inquiries/current/repair/draft

the sign to distinguish the goods.' [177] In order to better clarify the position in Australia, the Productivity Commission should consider the development of a legislative defence under trade mark law in respect of repair (much like it has proposed a defence of fair use or a defence of fair dealing for repair under copyright law).

Recommendation 8
In light of the Norwegian trade mark dispute between Huseby and Apple, and South African trademark litigation over replacement parts, and United States disputes over Lexus advertising cars, there is a need to ensure that trade mark law respects the right to repair. In its draft report, the Productivity Commission suggests that such an action for trade mark infringement against an independent repairer would be much harder. It would be helpful to clarify this position under Australian trade mark law by providing for an express defence or exception or limitation in respect of repair.

[177] Ibid., 160-161.

5. Patent Law

There has been significant as to whether repairing a patented invention would constitute patent infringement.[178]

In Australia, there has been growing litigation and public policy debate over the right to repair. There have been increasingly conflicts between intellectual property owners and intellectual property users in respect of repairs.

The topic of the right to repair has arisen in a range of policy contexts. Andrew Leigh MP of the Australian Labor Party has complained of problems in respect of the right to repair in the field of motor vehicles.[179] The Treasury of the Federal Government has held an inquiry into the sharing of motor vehicle information for the purposes of repair.[180] The West Australian National Party has called for the recognition of the right to repair for farmers.[181] The Australian Competition and Consumer Commission (ACCC) is currently inquiring into the right to repair and agricultural machinery.[182] Moreover, the issue of the right to repair has also come up in discussions of product stewardship – with the *Product Stewardship Act* 2011 (Cth).[183] Shane Rattenbury – the ACT Minister for Justice, as well as Minister for Consumer Affairs – has

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178 The discussion of patent law and the right to repair comes from a forthcoming paper, Matthew Rimmer, 'The Right to Repair: Patent Law, and 3D Printing in Australia' (2021) *Script-ed* (forthcoming).

179 Andrew Leigh MP, 'Driving A Better Deal for Auto Dealers', Australia Automotive Dealer Associate Conference, Gold Coast Convention Centre, 4 September 2018, http://www.andrewleigh.com/driving_a_better_deal_for_auto_dealers

180 Treasury, *Mandatory Scheme for the Sharing of Motor Vehicle Service and Repair Information: Consultation Paper*, Canberra: Treasury, 2019, https://treasury.gov.au/consultation/c2019-t358022; Matthew Rimmer, 'The Right to Repair: Mandatory Scheme for the Sharing of Motor Vehicle Service and Repair Information', Canberra: Treasury, 2019, https://eprints.qut.edu.au/127446/; and Leanne Wiseman, Kanchana Kariyawasasm, and Lucas Davey, 'The Mandatory Repair Scheme for Motor Vehicles 2019: Australia's First Response to the International Right to Repair Movement?' (2020) 48 *Australian Business Law Review* 218-233.

181 Jennie Bremmer, 'Nationals call for Consumer Rights to Repair Electronics', *The West Australian*, 16 October 2018, https://thewest.com.au/business/agriculture/nationals-call-for-consumer-rights-to-repair-electronics-ng-b88991358z

182 Australian Competition and Consumer Commission, *Agricultural Machinery: After-Sales Markets*, *Discussion Paper* (Canberra: Australian Competition and Consumer Commission, 2020), https://consultation.accc.gov.au/agriculture/agricultural-machinery-discussion-paper/

183 The Australian Earth Laws Alliance, 'Challenging Consumption and Planned Obsolescence', https://www.earthlaws.org.au/our-programs/challenging-consumption/planned-ob/

called for the Productivity Commission to conduct an inquiry into the right to repair.[184] He has called upon the Federal Government – as well as the States and Territories – to work in a collaborative approach to provide for a common framework to recognise the right to repair.

The focus of this segment of the paper is squarely on Australian patent law and the right to repair. It calls for patent law reform in respect of the right to repair. The larger argument of the paper is that there needs to be a common approach to the right to repair across the various domains of intellectual property – rather than the current fragmentary treatment of the topic. It is problematic that, while repair may be protected under designs law, it is vulnerable to infringement actions under other domains of intellectual property law – such as copyright law, patent law, trade mark law, and trade secrets law. If there is not a uniform approach to the right to repair, there needs to be better harmonisation to the topic between the spheres of intellectual property law.

This paper argues that the need for a right to repair under intellectual property law is further accentuated by the advent of new technologies, such as 3D printing, digital fabrication, and additive manufacturing. This paper contends that there is a need for a holistic approach to patent law reform in light of 3D printing, digital fabrication, and additive manufacturing. At present, there is formal recognition of a right to repair in designs law. However, this defence is awkward and cumbersome and may well need to be updated and modernized in light of the development of new technologies. Moreover, given the cross-cutting nature of 3D printing, other regimes of intellectual property (besides designs law) also need to establish and recognise a right to repair. There is a need for a substantive right to repair under the various species of intellectual property – including patent law. There is a need to ensure that the patent law enables citizens, consumers, makers, and companies to repair their own products (as has been recognised in the Maker's Bill of Rights and the Repair Manifesto).[185] The Maker Movement has a strong ethos of fixing, and repairing broken inventions.[186]

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184 Shane Rattenbury, 'Can We Fix It? Yes We Can. ACT secures National Agreement on a "Right to Repair"', Greens, 30 August 2019, https://greens.org.au/act/news/can-we-fix-it-yes-we-can-act-secures-national-agreement-right-repair

185 Phillip Torone, 'Maker's Bill of Rights' (2006) *Make Magazine* https://makezine.com/2006/12/01/the-makers-bill-of-rights/, TechCrunch, 'The Self-Repair Manifesto', *TechCrunch*, 10 November 2010 https://techcrunch.com/2010/11/09/the-self-repair-manifesto/ and iFixit, 'Repair Manifesto', https://www.ifixit.com/Manifesto

186 On the Maker Movement, see Chris Anderson, *Makers: The New Industrial Revolution* (New York: Random House LLC, 2012); Mark Hatch, *The Maker Movement Manifesto: Rules for Innovation in the New*

The topic of the right to repair brings into relief in a range of interests and concerns in the patent regime, highlighting tensions between underlying philosophical objectives. In terms of its conception of 'economic well-being', the patent regime seems to take a very traditional vision of economic growth and progress. However, there is an increasing problem with planned obsolescence – in which companies encourage a throwaway culture.[187] There is a need for the patent regime to better reflect the need to develop a circular economy – in which there is sustainable production and consumption.[188]

In light of such concerns, there is a need to broaden our conception of the public interest objectives being promoted by Australia's patent regime. 'Economic well-being' does need to embrace consumer rights, competition policy, and social welfare. Moreover, there is a need to ensure that Australia's patent regime promotes sustainable development – particularly in terms of the reduction of waste, the development of responsible consumption and production, and the creation of a circular economy.

This part of the submission considers the patent law and right to repair in the context of 2D printing and 3D printing. The main geographical focus of the paper is Australia – although there are comparisons made to other key jurisdictions. Part I looks at patent infringement, patent exhaustion, and the operation of the implied licence. In particular, it examines the patent litigation over 2D printing and refills between Seiko Epson Corporation and Calidad Pty Ltd – which has progressed through the Federal Court of Australia, the Full Court of the Federal Court of Australia, and the High Court of Australia. This paper prefers the approach taken by the majority of the High Court of Australia – which focuses on patent exhaustion. Part II considers options for patent law reform in respect of the development of defence in respect of a right to repair; compulsory licensing; crown use or government use;

World of Crafters, Hackers, and Tinkerers (New York: McGraw-Hill Books, 2013); Dale Dougherty with Ariane Conrad, *Free to Make: How the Maker Movement is Changing our Schools, Our Jobs, and Minds* (Berkeley: North Atlantic Books, 2016); Neil Gershenfeld, Alan Gershenfeld and Joel Cutcher-Gershenfeld, *Designing Reality: How to Survive and Thrive in the Third Digital Revolution* (New York: Basic Books, 2017); and Mark Hatch, *The Maker Revolution: Building a Future on Creativity and Innovation in an Exponential World* (Hoboken (NJ): John Wiley & Sons, 2018).

187 David R. Boyd, *The Optimistic Environmentalist: Progressing Towards a Greener Future* (Toronto: ECW Press, 2015), 51-67.

188 Kyle Wiens, 'Intellectual Property is Putting Circular Economy in Jeopardy', *The Guardian*, 3 June 2014, https://www.theguardian.com/sustainable-business/intellectual-property-circular-economy-bmwapple?CMP=share_btn_tw

oversight through competition law; and the recognition of the right to repair under contract law. It calls upon the legal system to embody some of the ideals, which have been embedded in the Maker's Bill of Rights, and the iFixit Repair Manifesto.

I. Patent Infringement, Patent Exhaustion, and the Implied Licence

There has been academic and judicial discussion about whether repair and recycling could constitute direct patent infringement.[189] There has also been debate about whether repair and refill could amount to indirect patent infringement.[190] A distinction has sometimes been drawn between repairs and reconstruction in the discussion of patent infringement.

In the United States, a distinction is drawn between permissible repair of a patented article, and impermissible reconstruction of a patented article, which is patent infringement.[191] In the case of *Jazz Photo* v. *U.S.*, the Court of Appeals for the Federal Circuit considered the repair and reconstruction doctrine. [192] The court found in favour of Jazz Photo: 'While there is no bright-line test for determining whether a device has been permissibly repaired, it does not turn on minor details.' [193] The court held: 'We thus discern no error in the court's conclusion that those 'various minor operations' did not make a new single use camera and thus constituted permissible repair'.[194]

In the United Kingdom, in the case of *Schütz (U.K.) Limited v. Werit (UK) Limited, the Supreme Court considered the relationship between patent law and repairs.*[195] *The judge held that there was not patent infringement:* 'In the present case, given that… apart from replacing it, Delta does no additional work to the article beyond routine repairs, I am of the view that, in carrying out this work, Delta does not "make" the patented article'.[196] The judge noted 'that,

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189 Mineko Mohri, 'Repair and Recycle as Direct Patent Infringement?' in Christopher Heath and Anselm Kamperman Sanders (ed.), *Spares, Repairs and Intellectual Property Rights* (Alphen aan den Reijn: Kluwer Law International, 2009), 59-84.

190 Christopher Heath, 'Repair and Refill as Indirect Patent Infringement', in Christopher Heath and Anselm Kamperman Sanders (ed.), *Spares, Repairs and Intellectual Property Rights* (Alphen aan den Reijn: Kluwer Law International, 2009), 85-102.

191 *Aro Mfg. Co.* v. *Convertible Top Replacement Co*., 377 U.S. 476 (1964).

192 *Jazz Photo* v. *U.S*. (Fed. Cir. 2006, 05–1096).

193 *Jazz Photo* v. *U.S*. (Fed. Cir. 2006, 05–1096).

194 *Jazz Photo* v. *U.S*. (Fed. Cir. 2006, 05–1096).

195 *Schütz (U.K.) Limited v. Werit (UK) Limited* [2013] UKSC 16.

196 *Schütz (U.K.) Limited v. Werit (UK) Limited* [2013] UKSC 16.

while one's focus in a case such as this should not be deflected from the central question of whether the alleged infringer "makes" the patented article, it may sometimes be a useful cross-check to consider whether its activities involve repairing the original product.'[197] The judge observed that as, 'Delta does not "make" a new patented article, I am of the view that its cross-bottling activities involve repairing the original product.'[198]

In Australia, there has recently been a discussion of patent law and the right to repair in the context of ink refills for 2D computer printers. There has been an analysis of patent infringement in this context. There has also been discussion about the operation of an implied licence in respect of the right to repair. The question of repair has also raised larger considerations in respect of first sale and patent exhaustion.

A. Federal Court of Australia

In the 2017 case of *Seiko Epson Corporation* v. *Calidad Pty Ltd*, Burley J of the Federal Court of Australia noted: 'In the fiercely competitive world of computer printers and ink refills for those printers, the first applicant, Seiko Epson Corporation (Seiko) is a global player.'[199] Ninestar Image (Malaysia) SDN bought empty cartridges and refilled them with ink, and then sold them to Calidad Distributors Pty Ltd (CDP).

The judge held that 'the central dispute in these proceedings concerns the right of a patentee to control or limit what may be done with a patented product after it has been sold.'[200]There is a tension identified between property law and intellectual property law. The judge observed: 'This gives rise to consideration of the intersection of the general rights of property ownership in a chattel once sold, and the monopoly rights conferred on a patentee under the *Patents Act* 1990 (Cth).'[201] The judge explored the question: 'When a patentee sells a chattel that embodies an invention claimed in a patent, can the patentee restrain the subsequent use made of it by a purchaser or a successor in title to the purchaser?'[202]

Calidad submitted that a patentee's exclusive rights under s 13(1) of the *Patents Act* 1990 (Cth) do not include the right to prevent the owner repairing or refurbishing a patented

197 *Schütz (U.K.) Limited v. Werit (UK) Limited* [2013] UKSC 16.

198 *Schütz (U.K.) Limited v. Werit (UK) Limited* [2013] UKSC 16.

199 *Seiko Epson Corporation* v. *Calidad Pty Ltd* [2017] FCA 1403 (29 November 2017) [1].

200 *Seiko Epson Corporation* v. *Calidad Pty Ltd* [2017] FCA 1403 (29 November 2017) [2].

201 *Seiko Epson Corporation* v. *Calidad Pty Ltd* [2017] FCA 1403 (29 November 2017) [2].

202 *Seiko Epson Corporation* v. *Calidad Pty Ltd* [2017] FCA 1403 (29 November 2017) [2].

product, or have subsequent dealings in that repaired or refurbished product (including importation). The judge considered at length some of the United Kingdom authorities on patent law and the right to repair. In the end, Burley J held: 'Applying the principles set out in that case, I have found that Seiko's infringement claim succeeds for Calidad's past range of products, but not in respect of its current products.' [203]

The case also involved some secondary questions in respect of trade mark law and consumer law as well. The judge concluded that the impugned use was not use of the word Epson in a trade mark sense and that the cause of action is not made out. The judge also held that the action for misleading and deceptive conduct was not made out.

B. Full Federal Court

In the 2019 case of *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115, the Full Court of the Federal Court of Australia heard an appeal.[204]

(i) Greenwood J

Summarising the issue at stake, Greenwood J observed: 'These proceedings raise an important question concerning the extent to which a patentee… can prevent a person who has acquired title to a patented product… from, put simply for present purposes, manipulating or "repurposing" (as it is described) the patented product for subsequent sale.' [205]

Greenwood J also observed that the matter raised larger questions about the approach taken in Australia to patent exhaustion – especially as compared to United States Supreme Court authorities.[206]

The judge referred to a range of United States precedents.[207] The judge considered the relevance of a 1911 decision of the Privy Council and a 1908 decision of the High Court of

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203 *Seiko Epson Corporation* v. *Calidad Pty Ltd* [2017] FCA 1403 (29 November 2017) [4].

204 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115

205 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115

206 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115

207 *Impression Products Inc* v. *Lexmark International Inc*., 137 S. Ct. 1523 (2017); *United States* v. *Univis Lens Co*. US 241 (1942); *Quanta Computer, Inc.,* v. *LG Electronics, Inc.,* 553 US 617 (2008); *Kirtsaeng* v. *John Wiley & Sons Inc.,* 568 US 519 (2013); *Boston Store of Chicago* v. *American Graphophone Co.*, [1918] USSC 42; 246 US 8 (1918); *United States* v. *General Elec. Co.,* [1926] USSC 211; 272 US 476 (1926).

Australia.[208] The judge noted that 'the question of whether an exhaustion of rights doctrine is to form part of the patent law of Australia on behalf of the citizens of this country is a matter to be determined by the High Court of Australia.'[209] There is a reluctance here to engage in judicial creativity at the level of the Federal Court of Australia.

Greenwood J considered the nature and scope of an implied licence:

> The scope of the implied licence, however, does not include a right to 'make' the product being a right exclusively reserved to the patentee. The 'owner' of a product, where the invention defined by a claim or claims, is that product, does not enjoy, by reason of ownership, a right to make an infringing product.[210]

Greenwood J held: 'Calidad's entitlement to import the modified product so described above rises no higher than the limitations in the implied licence relating to Ninestar's conduct.' [211] Greenwood J observed: CDP has imported into Australia for sale, kept for sale, offered for sale and sold, a product which does not fall within the scope and content of the implied licence.' [212] Greenwood J concluded: 'Calidad has thus infringed Seiko's patents.' [213]

(ii) Jagot J

In a separate judgment, Jagot J dismissed the appeal by Calidad:

> The implied licence arising on Seiko's unrestricted sale of the printer cartridges did not extend to any of the modifications necessary to enable the cartridges to be re-used. The modifications did not amount to the repair of any cartridge. Rather, in each case, the totality of the modifications constituted the making of a new embodiment of the invention claimed in the patents. [214]

The judge emphasized that the modifications did not amount to the repair of the cartridge.

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208 *National Phonograph Company of Australia Limited* v. *Menck* [1911] UKPCHCA 1; and *National Phonograph Company of Australia Limited* v. *Menck* [1908] HCA 96.

209 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

210 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

211 *Calidad Pty Ltd* v *Seiko Epson Corporation* [2019] FCAFC 115.

212 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

213 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

214 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

As part of the judgment, Jagot J considers the past precedents in respect of patent law and repair. The judge noted: 'Seiko is also right that the repair cases are able to be understood as involving an assessment of the scope of the implied licence which arises on unrestricted sale of a patented article.' [215] Jagot J cites Buckley LJ's remarks in the 1977 case of *Solar Thompson Engineering Co Ltd* v. *Barton* on the doctrine of repair in the context of the implied licence:

> It has long been recognised that a purchaser of a patented article may carry out repairs to it without being held liable for infringement. On the other hand he cannot manufacture a new article which infringes the patent and claim that he has not infringed merely because in the manufacture he has used parts derived from a patented article sold by the patentee. [216]

The judge cites an array of United Kingdom authorities considering the difference between a repair and making a new article.[217] Buckley LJ insisted: 'The cardinal question must be whether what has been done can fairly be termed a repair, having regard to the nature of the patented article.' [218]

Jagot J also considered the approach of Aldous J in the 2001 case of *United Wire Ltd* v. *Screen Repair Services (Scotland) Ltd* that the "concept of a licence ... is not really applicable to the repair of a patented article".[219] On appeal, Lord Hoffman approved this approach. Lord Hoffman cited Lord Halsbury L.C.'s remarks in the 1907 case of *Sirdar Rubber Co. Ltd* v. *Wallington, Weston & Co*: "you may prolong the life of a licensed article but you must not make a new one under the cover of repair."'[220]

Jagot J held that 'Repair is one of the concepts (like modifying or adapting) which shares a boundary with "making" but does not trespass upon its territory.' [221] Jagot J argued that 'in an action for infringement by making, the notion of an implied licence to repair is

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215 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

216 *Solar Thompson Engineering Co Ltd* v. *Barton* [1977] RPC 537 at 554 – cited in *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

217 *Dunlop Pneumatic Tyre Co. Ltd.* v. *Neal* (1899) 16 R.P.C. 247; *Dunlop Pneumatic Tyre Co. Ltd.* v. *Holborn Tyre Co. Ltd*. (1901) 18 R.P.C. 222; *Sirdar Rubber Co. Ltd.* v. *Wallington Weston & Co.* (1907) 24 R.P.C. 539 at 543.

218 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

219 *United Wire Ltd* v. *Screen Repair Services (Scotland) Ltd* [2001] RPC 24.

220 *Sirdar Rubber Co. Ltd* v. *Wallington, Weston & Co.* (1907) 24 R.P.C. 539 at page 543.

221 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

superfluous and possibly even confusing.' [222] In the judge's view, [the discussion of repair] 'distracts attention from the question raised by section 60(1)(a), which is whether the defendant has made the patented product.' [223] Jagot J was concerned about linguistic confusion, noting that 'As a matter of ordinary language, the notions of making and repair may well overlap' but for 'the purposes of the statute, they are mutually exclusive'. [224] Jagot J held: 'The owner's right to repair is not an independent right conferred upon him by licence, express or implied.' [225] Jagot J maintained: 'It is residual right, forming part of the right to do whatever does not amount to making the product.' [226]

Jagot J also referred to *Solar Thomson Engineering Co. Ltd* v. *Barton*, where the Court of Appeal held that there was an implied licence to repair.[227] Jagot J noted: 'But the juridical nature of the right to repair was not in issue.' [228]

The judge also cited the views of the 2013 case of Full Court of the Supreme Court of the United Kingdom in *Schütz (UK) Ltd* v. *Werit (UK) Ltd*: 'The mere fact that an activity involves replacing a constituent part of an article does not mean that the activity involves "making" of a new article rather than constituting a repair of the original article'. [229]

The judge commented 'that a purchaser has no right to make a new embodiment of the invention.' [230] The judge observed:

> The implied licence arising on unrestricted sale could never extend so far. Nor could the doctrine of exhaustion of patent rights result in the loss of the right to prevent the making of new embodiments of the invention, whether or not the new embodiment involved starting from scratch or re-using and modifying parts of the patented product as sold. [231]

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222 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

223 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

224 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

225 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

226 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

227 *Solar Thomson Engineering Co. Ltd* v. *Barton* [1977] R.P.C. 537.

228 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

229 *Schütz (UK) Ltd* v. *Werit (UK) Ltd* [2013] UKSC 16; [2013] RPC 16 – cited in *Calidad Pty Ltd* v *Seiko Epson Corporation* [2019] FCAFC 115.

230 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

231 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

The judge concluded: 'I do not consider any aspect of the present case lies at the "borderline" between repair and making.'[232]

(iii) Yates J

Yates J commented that 'this appeal concerns the right of a patentee to control or limit what may be done with a patented product after it has been sold.' [233]

In terms of the analysis of the case, Yates J deals directly with the question of the right to repair:

> It is convenient to commence by addressing Calidad's submissions on the subject of repair and refurbishment. As I have remarked, Calidad's inclusion of a right of refurbishment appears to be an embellishment of the subject matter dealt with in the United Kingdom cases. So far as I can see, the United Kingdom cases speak only of a right of repair arising from an implied licence to repair or, more latterly, existing as a residual right falling outside the monopoly right to 'make' the patented article.[234]

The judge ruled: 'On no reasonable view can it be said that the modifications carried out by Ninestar to the original Epson cartridges constitute "repair"'.[235] The judge held: 'The commencement of Calidad's argument in this regard is that the cartridges acquired by Ninestar no longer worked.' [236] The judge maintained: 'The implication is that these cartridges were, somehow, "broken" and in need of repair so that they could continue to function as they were intended to function when first sold.' [237] The judge cautioned: 'To so view the cartridges would be a mischaracterisation of the facts of the case.' [238]

Yates J held: 'Ninestar's modifications were not carried out to repair the cartridges, but to re-purpose them.' [239] The judge explored whether there could be a 'right of refurbishment' – if not a 'right to repair' under Australian law:

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232 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

233 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

234 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

235 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

236 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

237 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

238 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

239 *Calidad Pty Ltd* v *Seiko Epson Corporation* [2019] FCAFC 115.

> Properly considered, Ninestar's modifications were not refurbishment, if 'refurbishment' is taken to be some form of remediation different to repair that is nevertheless required to rectify some defect or deficiency in the cartridges. The simple fact is that there was no defect or deficiency as such. By the time the original Epson cartridges reached Ninestar's hands, the purpose of their intended use had been achieved and their utility, as intended, was spent. Seiko programmed them to be that way.[240]

The judge commented that 'on the facts of the case, consideration of whether Australian patent law recognises a right of repair, or for that matter a right of refurbishment, can be—and should be—put to one side.' [241] Yates J commented: 'That question does not arise for consideration.'[242]

Yates J held that the remanufacture of the cartridge went beyond the implied license in the case: 'It is sufficient for me to say that, in my view, the modifications amounted to remanufacture of the discarded original Epson cartridges to produce reborn printer cartridges that could not be said to have been of Seiko's making'. [243] The collection of judgments show a cautious approach to the topic of the right to repair – recognising both the role of the High Court of Australia in interpreting the law, and the policy choices of the Australian Parliament in dealing with the topic.

The outcome of the decision may be somewhat dispiriting for consumers and citizens – as it would mean that they would have to pay more for secondary products for printers.

C. The High Court of Australia

In November 2019, the High Court of Australia agreed to hear an appeal in the matter of *Calidad Pty Ltd* v. *Seiko Epson Corporation*.[244] Writing about the case, FB Rice patent attorneys Paul Whenman and Sarah Glasson hoped: 'Importantly, we think it is an opportunity for the High Court [of Australia] to recognise the importance of waste reduction and product design that permits product reuse.' [245] They observed: 'The Seiko Epson cartridges, prior to the

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240 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

241 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

242 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

243 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2019] FCAFC 115.

244 *Calidad Pty Ltd & Ors* v. *Seiko Epson Corporation & Anor* Case S329/2019 https://www.hcourt.gov.au/cases/case_s329-2019

245 Paul Whenham and Sarah Glasson, 'What dead parrots can tell us about printer cartridges', *Lexology*, 20 May 2020, https://www.lexology.com/library/detail.aspx?g=0362ccfb-198a-4eed-a57d-3f10d1425724 and

Ninestar modifications, were not designed for reuse.'[246] Wheham and Glasson comment: 'In fact, nowhere in patent 2009233643 is there anything to suggest how the cartridges could be reused.'[247] They observed:

> Society is objectively moving towards products that are capable of repair and/or reuse. If innovators are content to obtain patents for products without any thought of repair and/or reuse, then the patent monopoly must be similarly limited in scope. It is simply untenable to believe otherwise.[248]

Wheham and Glasson comment: 'At this time, the High Court has a pivotal role to play in ensuring the patent system is in harmony with this societal objective.'[249]

(i) Written Argument

In February 2020, the High Court of Australia received written submissions from the parties. In its appellants' submissions, Calidad commented: 'Stated generally, the issue presented by this appeal is whether, and if so, the extent to which, a patentee can control or limit what may be done with a patented product after it has been sold by or with the licence of the patentee.'[250] Calidad commented:

> The first question is whether a doctrine of exhaustion of patent rights on first sale should be recognised. A second and related question is what that doctrine encompasses, if it is to be recognised. For the reasons outlined below, Calidad respectfully submits that the decision of the Privy Council in *Menck* should not be followed, and that the decision of this Court in *NPCAL* should be preferred. Seiko's patent rights in this case were exhausted by its sale of the original Epson cartridges. [251]

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https://s3.amazonaws.com/documents.lexology.com/7ca8d2cf-7caf-4c40-a1ff-46f350271cd5.pdf?AWSAccessKeyId=AKIAVYILUYJ754JTDY6T&Expires=1603865956&Signature=9g%2BBmYCXU1UCV7sUx9zf6tkX1gk%3D

246 Ibid.

247 Ibid.

248 Ibid.

249 Ibid.

250 Appellants' Submission in *Calidad Pty Ltd & Ors* v. *Seiko Epson Corporation & Anor* Case S329/2019 https://cdn.hcourt.gov.au/assets/cases/08-Sydney/s329-2019/Calidad-SeikoEpson_App.pdf

251 Ibid.

Calidad stressed: 'The resolution of those questions is important, because the adoption of an implied licence and analysis of its terms were central to the reasoning below.' [252]

Calidad prefers the approach of the Supreme Court of the United States in the case of *Impression Products* v. *Lexmark*[253] in 2017: 'As submitted, this strikes an appropriate balance between the monopoly rights of a patentee, and principles of personal property and competition.'[254] Calidad cited the illustration of the Supreme Court of the United States in respect of a repair shop for cars – which stressed 'so long as those bringing in the cars own them, the shop is free to repair and resell those vehicles.'[255]

The respondents questioned the approach of Calidad to the issue of the right to repair.[256] The respondents emphasized: 'The cartridges were not broken or in need of repair; they had functioned in the manner intended upon sale and purchase and, on that basis, had been "discarded" by the initial purchaser.'[257] The respondents maintained that Calidad had just repurposed the inventions.

(ii) Oral Argument

The progress of the case was be affected by the coronavirus COVID-19 outbreak in 2020. In the end, the High Court of Australia held a hearing on the 12th August 2020.[258] A number of judges – including Kiefel CJ, Edelman J, and Gageler J – were particularly active, with their questions for counsel. There was much discussion of comparative approaches to patent exhaustion, implied licenses, and parallel importation. There was some heated discussion of patent law and repair. For the respondents, AJ Bannon explained to the court the nature of a 'repair':

252 Ibid.

253 *Impression Products, Inc* v. *Lexmark International Inc* 137 S Ct 1523 (2017).

254 Appellants' Submission in *Calidad Pty Ltd & Ors* v. *Seiko Epson Corporation & Anor* Case S329/2019 https://cdn.hcourt.gov.au/assets/cases/08-Sydney/s329-2019/Calidad-SeikoEpson_App.pdf

255 Ibid.

256 Respondents' Submission in *Calidad Pty Ltd & Ors* v. *Seiko Epson Corporation & Anor* Case S329/2019 https://cdn.hcourt.gov.au/assets/cases/08-Sydney/s329-2019/Calidad-SeikoEpson_Res.pdf

257 Ibid., 4.

258 *Calidad Pty Ltd & Ors* v. *Seiko Epson Corporation & Anor* [2020] HCATrans 107 (12 August 2020).

> If I may attempt to answer your Honour Justice Edelman's question again, the difference in repair is you are restoring it back to the condition it was in, in circumstances where it is spent or been damaged. What has happened here on any view is the creation of a new embodiment with two holes resealed by tape which can be reused for both outlet and inlet purposes. That is the difference. [259]

For the appellants, David Shavin QC commented: 'In relation to the making, in our respectful submission, our friends are ignoring all of the jurisprudence to which we went yesterday, which showed that "repair" has a very wide connotation and, as Lord Hoffmann said, it includes modification improvement.'[260] The parties have made some supplementary submissions.

The High Court of Australia handed down its decision in November 2020 – which was a surprisingly quick turnaround from the oral proceedings.[261] The final outcome was final balanced. The majority of the High Court of Australia – Kiefel CJ, Bell and Keane JJ - overturned the previous rulings by the Federal Court of Australia and the Full Court of the Federal Court Australia. There was an additional judgment by Gageler J which supported the majority judgment. There was a minority judgment – consisting of Nettle, Gordon, and Edelman JJ.

(iii). Majority Judgment of Kiefel CJ, Bell and Keane JJ

The majority judgment of Kiefel CJ, Bell and Keane JJ considered at length past precedents dealing with patent law and repair. [262]

On the facts of the case, the judges observed: 'When all of Ninestar's modifications to each of the categories of cartridges were completed what remained were the original Epson cartridges with some modifications which enabled their re-use.' [263] The judgement stressed: 'The modifications did not involve the replication of parts and features of the invention claimed'. [264] In their view, 'There was no true manufacture or construction of a cartridge which embodied the features of the patent claim.' [265] Kiefel, Bell, and Keane JJ concluded:

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259 *Calidad Pty Ltd & Ors* v. *Seiko Epson Corporation & Anor* [2020] HCATrans 107 (12 August 2020).

260 *Calidad Pty Ltd & Ors* v. *Seiko Epson Corporation & Anor* [2020] HCATrans 107 (12 August 2020).

261 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41.

262 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41.

263 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [69].

264 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [69].

265 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [69].

> The modifications to the original Epson cartridges were consistent with the exercise of the rights of an owner to alter an article to improve its usefulness and enable its re-use. Both English[266] and United States authority accept the prolonging of the life of a product to be within an owner's rights of use of a patented product. Regardless of whether it is said to be something done which is closer to "repair" than "making", it clearly does not involve a manufacture or making.[267]

The majority judgment then considered whether the patent exhaustion doctrine or implied license theory would be the best explanation of this position.

Kiefel CJ, Bell and Keane JJ preferred to rely upon the patent exhaustion doctrine:

> The exhaustion doctrine has the virtues of logic, simplicity and coherence with legal principle. It is comprehensible and consistent with the fundamental principle of the common law respecting chattels and an owner's rights respecting their use. At the same time, it does not prevent a patentee from imposing restrictions and conditions as to the use of a patented product after its sale but simply requires that they be obtained by negotiation in the usual way and enforced according to the law of contract or in equity. [268]

The judges concluded: 'The matters which inform the adoption of a policy of the law as to the scope of the patent rights to sell and use a product, as they affect a patentee and owner of a chattel, point strongly to an acceptance of the exhaustion doctrine and away from the implied licence doctrine.'[269]

The judges were less keen on the reliance on the implied licence doctrine, noting: 'Continued adherence to the implied licence doctrine is an unjustifiable gloss on the statutory language that confers monopoly rights on a patentee.' [270] The judges warned: 'The decisions of the courts below show the danger of distraction from the language of the statute that is encouraged by that doctrine.' [271] The judges chided the judges in the lower courts: 'In this case the implied licence doctrine was utilised as a juridical peg on which to hang not the patentee's

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266 *United Wire Ltd v Screen Repair Services (Scotland) Ltd* [2001] RPC 24 at 458-459 [70] per Lord Hoffmann, quoting *Sirdar Rubber Co Ltd v Wallington, Weston & Co* (1907) 24 RPC 539 at 543.

267 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [70].

268 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [76].

269 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [84].

270 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [110].

271 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [110].

permission to use the patented product, but rather unexpressed restrictions on the purchaser's rights in that regard to which the purchaser had not consented.' [272]

The decision of the majority of the High Court of Australia is to be welcomed – especially given its focus on the larger economic and social objectives to be achieved by the patent exhaustion doctrine. The ruling also provides a helpful critique of the approach of the Federal Court of Australia and the Full Court of the Federal Court of Australia – which perhaps unduly privileged the interests of the patent holders.

(iv). The Additional Judgment of Gageler J

While agreeing with the majority judgment, Gageler J made some additional comments about the virtue of the patent exhaustion doctrine:

> The exhaustion of rights doctrine has a lineage that is decades longer than the lineage of the implied licence doctrine. It has been shown by repeated application in the United States to be workable and coherent. It sets clear statutory boundaries. It respects longstanding common law principle. It does not need to enlist equity in some way to prop it up. It strikes an appropriate balance between the interests of patentees and the owners of patented products. In so doing, it fits comfortably with the statutory object of the *Patents Act 1990* as well as with the statutory language.[273]

The judge observed: 'Exhaustion of the right of the patentee to prevent others from using and selling patented goods upon exercise of the patentee's right to sell will have the consequence that a patentee who seeks to restrict downstream use or resale or other disposal of patented goods will be confined to seeking to impose those restrictions by contract or other enforceable arrangement.' [274]

(v). The Minority Judgment of Nettle, Gordon, and Edelman JJ

The minority judgment of Nettle, Gordon, and Edelman JJ would have allowed the appeal in part.[275]

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272 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [110].

273 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [134].

274 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [135].

275 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41.

The minority judgment declined to adopt the patent exhaustion theory:

> To now adopt the exhaustion theory diminishes the rights granted under the Australian *Patents Act 1990*. Under the exhaustion theory, a patentee cannot seek to control or limit, as a matter of patent law, what can be done by a purchaser of a patented product on notice of a condition of restraint; the patentee is left with only whatever rights and remedies are available in contract, and no rights and remedies under patent law. For our part, there is no principled reason for such a change. [276]

The minority judges were of the view that the patent exhaustion theory had its origins in United States patent law, and did not have a clear foundation in Australian patent law. The minority judges insisted: 'It is for Parliament, not the courts, to make such a fundamental change to patent rights.' [277]

The minority judges considered the precedents in respect of patent law and repair. The judges observed:

> The central issue is whether an alleged infringer has "made" a patented article as defined by the integers of the claim. In each case, that is a question of fact and degree to be decided according to the nature of the article as so defined . In making that decision, it assists to ask whether what the alleged infringer has done is to repair the article as opposed to making a new article . It needs also to be borne in mind that 'repair' may entail considerable disassembly, the removal and replacement of significant constituent parts, and reassembly on a mass production basis, without amounting to 'making' a new article. [278]

Focusing upon patent infringement and 'making', the judges held that 'the work performed on Category 1, 2, 3 and 4 and Category A cartridges – as later described – did not amount to making the patented invention but the work performed on Category 5, 6 and 7 and Category B cartridges did.' [279]

The minority judgment is somewhat more quietist in its approach to the topic of patent law – showing a reluctance to recognise the patent exhaustion doctrine without guidance from Parliament. Nonetheless, the judges are very much concerned with the treatment of repairs in patent infringement proceedings.

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276 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [146].

277 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [203].

278 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [263].

279 *Calidad Pty Ltd* v. *Seiko Epson Corporation* [2020] HCA 41 [143].

(vi) Context

The ruling builds upon a previous precedent in some respects. The High Court of Australia – albeit with a differently constituted bench – has expressed concern about the impact of intellectual property upon competition in the marketplace in a copyright case involving mod-chipping the Sony PlayStation.[280] In that matter, Kirby J noted: 'The right of the individual to enjoy lawfully acquired private property (a CD ROM game or a PlayStation console purchased in another region of the world or possibly to make a backup copy of the CD ROM) would ordinarily be a right inherent in Australian law upon the acquisition of such a chattel.'[281] The High Court of Australia was concerned in this case that the over-protection of intellectual property rights (through copyright law and technological protections) would have negative outcomes in terms of consumer rights and competition policy. The new decision in the patent matter over printer cartridges builds upon the earlier precedent in important ways in its promotion of consumer rights, competition policy, and sustainable development.

II. Patent Defences and Exceptions

In its investigation of Australia's intellectual property arrangements, the Productivity Commission highlighted the need for patent law reform:

> While the patent system has a role to play in promoting socially valuable and additional innovations — especially in highly codified technologies that involve large sunk costs such as machinery and pharmaceuticals — it is clear that the system is poorly targeted and in many cases provides excessively strong patent rights.
>
> In an environment where the patent system is not effectively targeting innovations that provide net benefits to the community, overly-strong patent rights compound the costs associated with false positives. Longer rights increase the scope for unused patents to be opportunistically revived to capture infringing firms, which imposes costs without a resulting increase in innovation.

280 *Stevens* v. *Kabushiki Kaisha Sony Computer Entertainment* [2005] HCA 58.

281 *Stevens* v. *Kabushiki Kaisha Sony Computer Entertainment* [2005] HCA 58 at [216].

> As a large net importer of patented technology, overcompensation in the strength of rights is particularly costly for Australia. And as a relatively small consumer market for technology, stronger rights in Australia do little to promote innovation by global firms.[282]

The Productivity Commission focused in particular upon patent objectives, patent thresholds, and patent flexibilities, such as compulsory licensing and crown use. However, in spite of its concern with overprotection under patent law, there was not a clear discussion of the right to repair. There was a mention in passing of the spare parts defence in relation to designs law.

After much public policy activity, the Productivity Commission has been given a new reference by the Australian Government to investigate the right to repair in late October 2020.[283] It is argued that more could be done, above and beyond the High Court of Australia ruling in the *Calidad* matter. This paper contends that there is scope to build upon the Productivity Commission's initial policy recommendations, and put forward reforms, which would help embed the right to repair in Australian patent law. In particular, there could be the establishment of a new defence or exception in respect of the right to repair under patent law. There could be the constructive use of compulsory licensing, crown use, and competition law to ensure that monopolies do not form in the aftermarkets. There could also be reform of contract law to ensure that the right to repair cannot be contracted out of. Such reforms would build upon the positive outcome of the High Court of Australia decision in respect of the *Calidad* case.

A. A Defence for the Right to Repair

Section 72 of the *Designs Act* 2003 (Cth) lays down some elaborate, convoluted rules in respect of certain repairs not infringing registered designs**.** The nature and scope of this defence was recently explored by the Federal Court of Australia in the 2019 case of *GM Global Technology Operations LLC* v. *S.S.S. Auto Parts Pty Ltd*.[284] It would appear from the outcome of the case that the spare parts exemption – the right of repair defence – has a substantive impact in

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[282] Productivity Commission, *Intellectual Property Arrangements – Final Report*, Melbourne: Productivity Commission, 2016, 214, https://www.pc.gov.au/inquiries/completed/intellectual-property/report

[283] Productivity Commission, *Right to Repair*, Melbourne: Productivity Commission, 2020, https://www.pc.gov.au/inquiries/current/repair

[284] Section 72 of the *Designs Act* 2003 (Cth); and *GM Global Technology Operations LLC* v. *S.S.S. Auto Parts Pty Ltd* [2019] FCA 97.

providing protection for repairs from the threat of action for designs infringement. There has been some scholarly discussion about the operation of the defence of right to repair in respect of the Australian designs law regime.[285]

Arguably, a defence for the right to repair could be crafted in respect of Australian patent law. There has been recent experience in codifying patent exceptions – with the introduction of a defence of experimental use in Australian patent law.[286] A similar approach could be taken to the topic of the right to repair. Ideally, a general defence for the right to repair would be crafted – with a range of factors to be taken into account by the courts.

As Lucas Osborn has noted, 'Across the IP spectrum, individual access and empowerment in the areas of design and manufacturing create tensions for laws constructed on assumptions about the legal sophistication and monetary resources of the regulated'. [287]

B. Compulsory Licensing

The Productivity Commission also recommended that there was a need to modernise and reform Australia's compulsory licensing powers under the patent act.[288]

The *Intellectual Property Laws Amendment (Productivity Commission Response Part 2 and Other Measures) Act* 2020 (Cth) Schedule 4 implements recommendations made in the 2013 Productivity Commission Report regarding compulsory licensing. The Act changes the test applied by the courts when determining whether a compulsory license should be granted. The amendments remove the current 'reasonable requirement of the public' test and replace it

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285 Mitchell Adams, 'The "Third Industrial Revolution" 3D Printing Technology and Australian Designs Law", (2015) 24 (1) *Journal of Law, Information, and Science* 56-84; and Tyrone Berger, '"Substantial Similarity' under Australian Design Law: Application to 3D Printing' in Dinusha Mendis, Mark Lemley, and Matthew Rimmer (ed.), *3D Printing and Beyond: Intellectual Property and Regulation*, Cheltenham and Northampton (MA): Edward Elgar Publishing, 2019, 294-307.

286 Matthew Rimmer, 'The Freedom to Tinker: Patent Law and Experimental Use' (2005) 15 (2) *Expert Opinion on Therapeutic Patents* 167-200; *Intellectual Property Laws Amendment (Raising the Bar) Act* 2012 (Cth); and Senator Kim Carr, 'Second Reading Speech on *the Intellectual Property Laws (Raising the Bar) Bill* 2011 (Cth)', Hansard, Australian Senate, Australian Parliament, 22 June 2011, p. 3485.

287 Lucas Osborn, *3D Printing and Intellectual Property*, Cambridge: Cambridge University Press, 2019, 229.

288 Productivity Commission, *Intellectual Property Arrangements – Final Report*, Melbourne: Productivity Commission, 2016, https://www.pc.gov.au/inquiries/completed/intellectual-property/report

with a 'public interest' test. These amendments improve the balance between the rights of the patent owner and the interests of the broader public.

Compulsory licensing could conceivably be deployed in Australia – where patent holders refused to allow for independent repairs in respect of patented inventions.

C. Crown Use

The Productivity Commission recommended that there was a need to reform Australia's crown use powers under the patent regime.[289]

The *Intellectual Property Laws Amendment (Productivity Commission Response Part 2 and Other Measures) Act* 2020 (Cth) also provided for the reform of the crown use provisions in respect of both patent law and designs law. The explanatory memorandum noted that 'Crown use is a rarely used safeguard', which 'allows the government to step in when action is necessary to deal with an emergency, or other public interest issues, and access patented inventions and designs.'[290] The explanatory memorandum notes: 'This Act introduces measures to improve transparency and accountability of Crown use'.[291] Under the new regime, 'The amendments modify the Acts to clarify the circumstances in which Crown use can be invoked, introduce a process of Ministerial oversight, and provide better guidance to the courts on the remuneration standard that should be used in determining the level of compensation to be paid to the rights holder.'[292]

Crown use or government use could be used in Australia to provide access to patented inventions if there were issues about patent thickets or patent trolls in the marketplace.

D. Competition Oversight

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289 Productivity Commission, *Intellectual Property Arrangements – Final Report* Melbourne: Productivity Commission, 2016, https://www.pc.gov.au/inquiries/completed/intellectual-property/report

290 Explanatory Memorandum for the *Intellectual Property Laws Amendment (Productivity Commission Response Part 2 and Other Measures) Bill* 2019 (Cth), https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22legislation%2Fems%2Fs1216_ems_f72c231a-ab5a-4563-8aaa-f78983def254%22

291 Ibid.

292 Ibid.

The Harper Review and the Productivity Commission recommended the repeal of s 51 (3) of the *Competition and Consumer Act* 2010 (Cth) – because of the view that it was unduly confining the ability of the Australian Competition and Commission to provide oversight of the competition impacts of intellectual property.[293]

The repeal of s 51 (3) of the *Competition and Consumer Act* 2010 (Cth) in 2019 will mean that the ACCC will have greater oversight in respect of the intersection between intellectual property and competition policy. The ACCC has previously conducted inquiries into various after-markets. The regulator has investigated motor vehicles and spare parts,[294] as well as agricultural machinery.[295] Arguably, the ACCC needs to play a more active role in policing competition in after-markets in Australia – subject to intellectual property rights. The ACCC has become increasingly active in regulating the digital economy – so there is hope that such a priority will lead to a focus on the right to repair.[296]

In the United States, there have been concerns about the laissez-faire approach taken to competition regulation by the Department of Justice and the Federal Trade Commission.[297] There has been alarm that monopoly power in key markets has been uncontrolled and

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[293] Ian Harper, Peter Anderson, Sue McCluskey and Michael O'Bryan, *Competition Policy Review: Final Report*, Canberra: the Australian Government, March 2015, http://competitionpolicyreview.gov.au/files/2015/03/Competition-policy-review-report_online.pdf and Productivity Commission, *Intellectual Property Arrangements – Final Report* Melbourne: Productivity Commission, 2016, https://www.pc.gov.au/inquiries/completed/intellectual-property/report

[294] Australian Competition and Consumer Commission, *New Car Retailing Industry Market Study*, Canberra: Australian Competition and Consumer Commission, 2017, https://www.accc.gov.au/focus-areas/market-studies/new-car-retailing-industry-market-study See also Australian Competition and Consumer Commission, *Motor Vehicle Sales and Repairs - An Industry Guide to the Australian Consumer Law*, Canberra: Australian Competition and Consumer Commission, 2018, https://www.accc.gov.au/publications/motor-vehicle-sales-repairs-an-industry-guide-to-the-australian-consumer-law

[295] Australian Competition and Consumer Commission, *Agricultural Machinery: After-Sales Markets*, *Discussion Paper*, Canberra: Australian Competition and Consumer Commission, 2020, https://consultation.accc.gov.au/agriculture/agricultural-machinery-discussion-paper/

[296] Ben Butler, '"The Most Hated Regulator in Australia": Rod Sims Warns Business He's Still Watching', *The Guardian*, 4 October 2020, https://www.theguardian.com/australia-news/2020/oct/04/the-most-hated-regulator-in-australia-rod-sims-warns-business-hes-still-watching

[297] David Dayen, *Monopolized: Life in the Age of Corporate Power*, New York and London: The New Press, 2020, 282-283.

unrestrained.[298] As Zephyr Teachout has argued, there is a need for a stronger enforcement of competition law and policy to break up monopolies – including in respect of after-markets.[299] In 2021, President Joe Biden has responded to such concerns, issuing support for the right to repair in executive orders in respect of competition policy.[300]

E. Contract Law

Furthermore, there could also be reform of contract law to help reinforce such recognition of the right to repair under patent law. There should be protection to ensure that intellectual property owners cannot seek to contract out of, or undermine, the right to repair through the use of private contracts.

Conclusion

This submission has contended that there is a need to expand and widen the objectives of Australia's patent system to better reflect some of the principles and concerns in play on the topic of the right to repair. It has offered an analysis of the dispute in the case of *Calidad Pty Ltd* v. *Seiko Epson Corporation*. While critical of the approach taken by the Federal Court of Australia and the Full Court of Australia, this paper is relieved by the position of the majority of the High Court of Australia in respect of the patent exhaustion theory. It was also pleasing to see that even the minority of the High Court of Australia were concerned about the status of repairs in patent infringement proceedings. This paper has argued that there is a need for further patent law reform to provide recognition of a right to repair. It is debated as to whether this is best dealt with through the interpretation of patent infringement (drawing a distinction between repair and reconstruction); the development of a stand alone defence for the right to repair (like the spare parts defence in designs law); or the utilisation of devices, such as compulsory

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298 Michelle Meagher, 'Monopoly Power is Running Wild. We Need Tough Competition Laws To Rein It In', *The Guardian*, 28 September 2020, https://www.theguardian.com/commentisfree/2020/sep/28/monopoly-power-competition-policy-lawyer-city

299 Zephyr Teachout, *Break 'Em Up: Recovering Our Freedom From Big Ag, Big Tech, and Big Money* New York: Macmillan Publishers, 2020.

300 The White House, 'Fact Sheet: Executive Order on Promoting Competition in the American Economy', Press Release, 9 July 2021, https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/09/fact-sheet-executive-order-on-promoting-competition-in-the-american-economy/

licensing and crown use, which are designed to promote competition policy and the wider public interest. This paper has maintained that there is an urgent need to reform patent law – particularly in light of recent developments in respect of 3D printing, additive manufacturing, and digital fabrication. Patent law needs to be well-adapted for what has been described as the fourth industrial revolution. Indeed, the regime should seek to provide legal recognition for some of the ideals enunciated in the Maker's Bill of Rights, and the iFixit Repair Manifesto.[301]

As highlighted by the work of Dan Burk and Mark Lemley, patent law espouses a theory of technology neutrality, but in practice it is often contextual in its operation in particular technological fields.[302] That is certainly evident in the debate over patent law and the right to repair. In the area of automobiles, there has been a longstanding debate over the right to repair.[303] In the field of agriculture, there has been an increasing concern about the right to repair in respect of tractors and other agricultural machinery. United States farmers have been pushing for a right to repair.[304] David Doyen observed: 'An entire network of underground hacking and a "right to repair" movement have emerged to fight the tractor monopoly'.[305] Indeed, Senator Elizabeth Warren vowed to legislate for a right to repair for farm machinery, during her Presidential campaign.[306] The ACCC has been inquiring into the topic of the right to repair in agricultural markets.[307] In the domain of information technology and electronics,

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301 Phillip Torone, 'Maker's Bill of Rights' (2006) *Make Magazine* https://makezine.com/2006/12/01/the-makers-bill-of-rights/, TechCrunch, 'The Self-Repair Manifesto', *TechCrunch*, 10 November 2010 https://techcrunch.com/2010/11/09/the-self-repair-manifesto/ and iFixit, 'Repair Manifesto', https://www.ifixit.com/Manifesto

302 Dan Burk and Mark Lemley, *The Patent Crisis and How the Courts Can Solve It*, Chicago: The University of Chicago Press, 2009.

303 Treasury, *Mandatory Scheme for the Sharing of Motor Vehicle Service and Repair Information: Consultation Paper*, Canberra: Treasury, 2019, https://treasury.gov.au/consultation/c2019-t358022

304 Adam Minter, 'U.S. Farmers Are Being Bled by the Tractor Monopoly', *Bloomberg Opinion*, 23 April 2019, https://www.bloomberg.com/opinion/articles/2019-04-23/u-s-farmers-need-a-better-way-to-fix-their-tractors; and Adam Betz, 'Farm Bureau Members ratchet up "Right-to-Repair" Pressure', *Star Tribune*, 4 February 2020, https://www.startribune.com/farm-bureau-members-ratchet-up-right-to-repair-pressure/567459262/

305 David Dayen, *Monopolized: Life in the Age of Corporate Power*, New York and London: The New Press, 2020, 55.

306 Elizabeth Warren, 'Leveling the Playing Field for America's Family Farmers', *Medium*, 27 March 2019, https://medium.com/@teamwarren/leveling-the-playing-field-for-americas-family-farmers-823d1994f067

307 Australian Competition and Consumer Commission, *Agricultural Machinery: After-Sales Markets*, *Discussion Paper*, Canberra: Australian Competition and Consumer Commission, 2020, https://consultation.accc.gov.au/agriculture/agricultural-machinery-discussion-paper/; Jemima Burt, '"Right To

there has been debate over the right to repair – particularly with Apple's products. With the coronavirus COVID-19 outbreak, there has been a focus on the repair of essential medical equipment – such as ventilators.[308] Professor Jorge Contreras from the University of Utah has argued: 'In order to permit needed repairs and parts replacements for critical health-related equipment, courts should take a liberal view of the repair doctrine'.[309] Oregon Senator Ron Wyden and representative Yvette Clarke introduced the *Critical Medical Infrastructure Right-to-Repair Act* 2020 (US) in order to address a number of these problems in the public health emergency.[310] There has also been conflict over copyright access to manuals for the purpose of repair during the COVID-19 public health crisis.[311] In the area of 3D printing and additive manufacturing, there has been a special interest in the use of technologies for the purposes of the repair of inventions – otherwise protected by intellectual property.

Repair" Regulation Necessary, Say Small Businesses and Environmentalists', *ABC Capricornia*, 3 March 2019, https://www.abc.net.au/news/2019-03-03/does-australia-need-a-right-to-repair/10864852; Annie Guest, 'Right to Repair: Farmers Demand the Right to Repair their Own Machinery', ABC, Landline, 16 May 2020, https://abc.net.au/landline/right-to-repair:-farmers-demand-the-right-to/12256266; and Kit Mochan, '"Right to Repair" Taken up by the ACCC in Farmers' Fight to Fix their Own Tractors', *ABC News*, 19 April 2020, https://www.abc.net.au/news/2020-04-19/right-to-repair-tractors-taken-up-by-the-accc/12156196

308 Cory Doctorow, 'Right to Repair in Times of Pandemic', Electronic Frontier Foundation, 19 March 2020, https://eff.org/deeplinks/2020/03/right-repair-times-pandemic; Kathleen Bourke, 'COVID-19 Highlights Why IP Shouldn't Limit the Right to Repair', Public Knowledge, 22 May 2020, https://publicknowledge.org/blog/covid-19-highlights-why-ip-shouldnt-limit-the-right-to-repair/ and Kyle Wiens, 'The Right to Repair Will Help Us Endure Outbreaks', *Wired*, 5 March 2020, https://wired.com/story/opinion-the-right-to-repair-will-help-us-endure-outbreaks/ See also: Taylor Soper, 'Medical Device Repair Startup Summit Imaging fires back at Philips over Device "Hacking" Claims', *GeekWire*, 20 June 2020 https://www.geekwire.com/2020/seattle-area-medical-device-startup-summit-imaging-fires-back-at-philips-in-lawsuit/

309 Jorge Contreras, 'Patents and Coronavirus – The Right to Repair', *InfoJustice*, 3 April 2020, http://infojustice.org/archives/42222

310 *Critical Medical Infrastructure Right-to-Repair Act* 2020 (S. 4473, H.R. 7956), https://www.congress.gov/bill/116th-congress/house-bill/7956/all-info

311 Kit Walsh, 'Medical Device Repair Again Threatened With Copyright Claims', Electronic Frontier Foundation, 11 June 2020, https://eff.org/deeplinks/2020/06/medical-device-repair-again-threatened-copyright-claims and Kevin Truong, 'A Medical Device Maker Threatens iFixit Over Ventilator Repair Project', *Vice*, 16 June 2020, https://www.vice.com/en_us/article/akze8j/a-medical-device-maker-threatens-ifixit-over-ventilator-repair-project

It is important to remember, though, that the right to repair is not purely a technocratic matter of doctrinal matters in respect of intellectual property law.[312] In addition to intellectual property law, a number of other legal disciplines and regulatory fields have been implicated by the right to repair. There has been a debate over the impact of contract law on the right to repair – particularly around the topic of whether one cannot contract out of the right to repair.[313] Under Australian consumer law, the ACCC has provided advice about repairs, and spare parts, and has taken action against companies in respect of the right to repair.[314] The right to repair raises larger questions about market monopolies,[315] and the need for law reform of competition law and policy.[316] There needs to be better oversight of anti-competitive abuses of intellectual property in Australia.[317] The right to repair also raises issues about the relationship between intellectual property and sustainable development. There is a particular United Nations Sustainable Development Goal focused on responsible consumption and production. There is a need to ensure that intellectual property laws promote a circular economy. Moreover, environmental law has a role to play in the right to repair – particularly as it concerns the treatment of recycling and e-waste. As the ACT Minister for Justice and Consumer Affairs

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312 Christopher Heath and Anselm Kamperman Sanders (ed.), *Spares, Repairs and Intellectual Property Rights*, Alphen aan den Reijn: Kluwer Law International, 2009.

313 Estelle Derclaye, 'Repair and Recycle Between IP Rights, End User License Agreements, and Encryption', in Christopher Heath and Anselm Kamperman Sanders (ed.), *Spares, Repairs and Intellectual Property Rights*, Alphen aan den Reijn: Kluwer Law International, 2009, 21-56.

314 Australian Competition and Consumer Commission, *Repairs and Spare Parts*, https://www.accc.gov.au/business/treating-customers-fairly/repairs-spare-parts and Australian Competition and Consumer Commission, 'iPhone and iPad misrepresentations cost Apple Inc $9 million in penalties', Press Release, 19 June 2018, https://www.accc.gov.au/media-release/iphone-and-ipad-misrepresentations-cost-apple-inc-9-million-in-penalties

315 Federal Trade Commission, *Fixing the Nix*: *A Workshop on Repair Restrictions*, Washington DC: Federal Trade Commission, 16 July 2019, https://www.ftc.gov/news-events/events-calendar/nixing-fix-workshop-repair-restrictions; and Open Markets Institute, *Fixing America: Breaking Manufacturers' Aftermarket Monopoly and Restoring Consumers' Right to Repair*, White Paper, 13 April 2020, https://openmarketsinstitute.org/publications/fixing-america-breaking-manufacturers-aftermarket-monopoly-restoring-consumers-right-repair

316 Valentine Korah, 'Antitrust Considerations: Refusal to License Intellectual Property in the U.S. and EC', in Christopher Heath and Anselm Kamperman Sanders (ed.), *Spares, Repairs and Intellectual Property Rights*, Alphen aan den Reijn: Kluwer Law International, 2009, 183-206.

317 Jill McKeough, 'Is Intellectual Property Different, or Are All Unhappy Monopolists Similar?' (2003) 26 (1) *UNSW Law Journal* 289-295.

Shane Rattenbury has made clear, the right to repair is also bound up with climate action – in terms of reducing the carbon footprint of our production and consumption.[318] The topic of the right to repair requires intellectual property policy-makers, scholars, and lawyers to think about the linkages, intersections and connections of the discipline of intellectual property, with other fields of regulation – including consumer law, competition policy, sustainable development, environmental law, and climate law.

While this paper has presented an Australian story about the right to repair (one of many to be told), it is clear that there is a larger international debate over the right to repair. There has been a groundswell of support for the right to repair in the European Union;[319] the Nordic nations; the United Kingdom;[320] the United States;[321] and Canada.[322] There has been an increasing interest in the right to repair amongst developing countries – as part of making use of intellectual property flexibilities to better take into account the United Nations Sustainable Development Goals.[323] There should be international action on the topic of intellectual property and the right to repair in relevant fora such as the World Intellectual Property Organization, the World Trade Organization, and the United Nations Development Programme.

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318 Shane Rattenbury, 'Can We Fix It? Yes We Can. ACT secures National Agreement on a "Right to Repair"', Greens, 30 August 2019 https://greens.org.au/act/news/can-we-fix-it-yes-we-can-act-secures-national-agreement-right-repair

319 Igor Bonifac, 'EU Plans to Introduce Sweeping "Right to Repair" Legislation for Electronics', *Engadget*, 11 March 2020, https://engadget.com/2020/03/11/eu-right-to-repair-phones-tablets-computers/; and Chloe Mikolajczak, 'The Circular Economy Blueprint paves the way for a Right to Repair in Europe', Right To Repair Europe, 11 March 2020, https://repair.eu/news/circular-economy-action-plan/

320 The *Manchester Declaration* 2018 https://manchesterdeclaration.org/

321 Leah Chan Grinvald and Ofer Tur-Sinai, 'Intellectual Property Law and the Right to Repair' (2019) 88 *Fordham Law Review* 63-128.

322 CBC News, 'Canada Gets Closer to a Right to Repair Law', *CBC News*, 1 March 2019, https://www.cbc.ca/news/technology/what-on-earth-newsletter-right-to-repair-styrofoam-1.5037697

323 Dean Baker, Arjun Jayadev, and Joseph Stiglitz. *Innovation, Intellectual Property, and Development: A Better Set of Approaches for the 21st Century*, AccessIBSA, 2017; Margaret Chon, Pedro Roffe and Ahmed Abdel-Latif (ed.) *The Cambridge Handbook of Public-Private Partnerships, Intellectual Property Governance, and Sustainable Development*, Cambridge: Cambridge University Press, 2018; and Sara Bannerman, 'The World Intellectual Property Organization and the Sustainable Development Agenda' (2020) 122 *Futures* 102586.

Recommendation 9
While the High Court of Australia has recently ruled on patent exhaustion, it would be helpful to clarify that the provision of repairs does not amount to patent infringement. Australian patent law recognises a defence of experimental use. However, it is not clear that the defence extends to repairs. A specific patent defence for repairs would provide reassurance about the legitimacy of conducting repairs. The compulsory licensing regime remains unwieldy at the moment – but in exceptional circumstances could be used to provide access to inventions for the purposes of repair on competition grounds.

6. Trade Secrets and the Right to Repair

Australia provides for civil remedies in respect of trade secrets, as well as criminal offences in respect of violation of trade secrets by foreign principals. However, the nature and scope of defences for trade secrets remains unclear. There has been debate as to whether there is a general interest defence (as espoused by Kirby J) or a narrow defence related to exposing wrongdoing and iniquity (as recommended by Gummow J). In this context, there is currently a lack of clarity as to whether using trade secrets for the purposes of repair would be allowable.

There has been significant litigation over trade secrets in the vehicle industry in the United States. Of late, Waymo's self-driving car project won a settlement over allegations that Uber had poached one of its employees and taken significant confidential information with him.[324] The FBI has taken action in respect of employees at Apple sharing trade secrets with others.[325] There has been trade secrets action taken over economic espionage in respect of taking photographs of tires of earthmoving vehicles.[326]

[324] Dara Khosrowshahi, 'Uber and Waymo Reach Settlement', Uber, 9 February 2018, https://www.uber.com/newsroom/uber-waymo-settlement/

[325] Lauren Feiner, 'A Second Apple Self-Driving Car Engineer is Accused of Stealing Trade Secrets', *CNBC*, 30 January 2019, https://www.cnbc.com/2019/01/30/apple-autonomous-vehicle-engineer-accused-of-stealing-trade-secrets.html

[326] *United States* v. *Howley* 707 F.3d 575 (6th Cir. 2013), https://www.leagle.com/decision/infco20130204105

In the United States, manufacturers have argued on occasion that right to repair legislation will impinge upon their trade secrets.[327] Electronic Products Manufacturers have argued that right to repair 'legislation mandates the disclosure of protected proprietary information.'[328] They contend: 'Manufacturers make significant investments in the development of products and services, and the protection of intellectual property is a legitimate and important aspect of sustaining the health of the vibrant and innovative technology industry.'[329] The group fears that right of repair 'legislation puts at risk the intellectual property that manufacturers have developed.'[330] The group makes broad claims about trade secrets and confidential information: 'Given the scope of products covered and what must be provided under the legislation – including diagnostics, tools, parts, and updates to software – it is highly likely some of that information would be proprietary'.[331] They have argued that there will be a breach of trade secrets: 'Providing unauthorized repair facilities and individuals with access to proprietary information without the contractual safeguards currently in place between OEMs and authorized service providers places OEMs, suppliers, distributor and repair networks at risk.'[332] Some have argued that such trade secrets claims are not well-founded.[333]

In their study of intellectual property law and the right to repair, Professor Leah Grinvald and Ofer Tur-Sinai have noted the intersection of trade secrets and the right to repair.[334] The scholars seek to reconcile the potential for conflict:

> Unfortunately, repair shops that do not have information supplied to them due to the manufacturers' assertion of a trade secret exemption may not have the means to initiate litigation challenging this assertion. The straightforward way to resolve this would be to adopt the model legislation language

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327 'Subject Electronic Products Manufacturers Opposition to HB 2279', 8 January 2018, https://api.ctia.org/docs/default-source/legislative-activity/coalition-letter-in-opposition-to-washington-hb-2279---digital-right-to-repair.pdf

328 Ibid.

329 Ibid.

330 Ibid.

331 Ibid.

332 Ibid.

333 Michael Hiltzik, 'How Apple And Other Manufacturers Attack Your Right to Repair Their Products', *Los Angeles Times,* 16 November 2018, https://www.latimes.com/business/hiltzik/la-fi-hiltzik-right-repair-20181116-story.html

334 Leah Chan Grinvald and Ofer Tur-Sinai, 'Intellectual Property Law and the Right to Repair' (2019) 88 *Fordham Law Review* 63-128.

> regarding trade secrets or to delete the exemption for trade secrets altogether, as was proposed in California. If the language regarding trade secrets needs to remain as-is in order for states to pass the law, states could prevent the abuse of this loophole by imposing civil liabilities on manufacturers who knowingly violate the law. Thus, states might impose liability for manufacturers who falsely assert that certain information is protected as a trade secret.[335]

This paper highlights the need to properly consider the interaction of trade secrets law with the right to repair (especially often depends upon the sharing of repair information).

With the rapid growth of trade secrets law, Professor Peter Menell from Berkeley Law School has made the case that there needs to be a better articulated set of defences, exceptions, and limitations in respect of trade secrets law.[336] Menell laments:

> The core principles underlying trade secret protection—promoting commercial morality and technological progress—trace back two centuries to the Industrial Revolution and continue to serve economic growth today. Yet the uncritical breadth of trade secret protection and routine use of blanket NDAs has not kept pace with the greater protections for civil rights, workplace safety, public health, and environmental protection, as well as the expanded role of the government in the economy—from military procurement to public infrastructure, health, and safety, and regulation of financial markets.[337]

Menell maintains that there is accordingly a need to codify defences, exceptions, and limitations in respect of trade secrets law – much like judges and law-makers have done in respect of copyright law and patent law.

Professor Sharon Sandeen and Elizabeth Rowe have contended that there is a need for a proper law reform process in respect of the development of the law of confidential information and trade secrets (especially given the hectic, rushed nature of its evolution of late).[338] Sandeen and her collaborator Mylly have emphasized that there should be a proper

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335 Ibid., 123.

336 Peter Menell, 'Tailoring a Public Policy Exception to Trade Secret Protection' (2017) 105 *California Law Review* 1-63.

337 Ibid., 62-63.

338 Sharon Sandeen and Elizabeth Rowe (ed.), *Trade Secrets and Undisclosed Information*, Cheltenham and Northampton (MA): Edward Elgar Publishing, 2014; and Elizabeth Rowe and Sharon Sandeen, *Trade Secrecy and International Transactions: Law and Practice*, Cheltenham and Northampton (MA): Edward Elgar Publishing, 2015.

consideration of defences, limitations, and exceptions for trade secrets.[339] Sandeen and Mylly conclude that 'one should bear in mind that the starting point should not be to value trade secrets over freedom of expression, but to value the human right to information over information lock-down.'[340] In their view, 'The flourishing of individuals, society, and democracy depend upon it.'[341]

The open access community has maintained that repair manuals and other repair data and information should be shared openly – rather than restricted under confidential information and trade secrets.

Recommendation 10
Australia provides for civil remedies in respect of trade secrets, as well as criminal offences in respect of violation of trade secrets by foreign principals. However, the nature and scope of defences for trade secrets remains unclear. There has been debate as to whether there is a general interest defence (as espoused by Kirby J) or a narrow defence related to exposing wrongdoing and iniquity (as recommended by Gummow J). In this context, there is currently a lack of clarity as to whether using trade secrets for the purposes of repair would be allowable. The Productivity Commission should consider making recommendations regarding defences in respect of trade secrets relating to repair.

7. Databases and Repair Information

There has been a push for the sharing of repair information in the motor vehicle industry. In an earlier submission, the author considered the proposed mandatory scheme for the sharing of motor vehicle service and repair information.[342] The submission was quite critical of the narrow proposal put forward by Treasury, arguing that such a scheme would be insufficient to address the multi-dimensional problems in respect of the right to repair.

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339 Sharon Sandeen and Ulla Maija Mylly, 'Trade Secrets and the Right to Information: A Comparative Analysis of E.U. and U.S. Approaches to Freedom of Expression and Whistleblowing', (2020) 21 (2) *North Carolina Journal of Law & Technology* 1-62.

340 Ibid., 62.

341 Ibid., 62.

342 Matthew Rimmer, 'The Right to Repair: Mandatory Scheme for the Sharing of Motor Vehicle Service and Repair Information', Canberra: Treasury, 2019, https://eprints.qut.edu.au/127446/

Treasury's proposed code of conduct in respect of repair information was far too narrow because it was limited to parts of the motor vehicle industry:

> The Code would apply to new passenger and light goods vehicles, as defined in the Vehicle Standard (Australian Design Rule - Definitions and Vehicle Categories) 2005. This definition captures passenger cars and off-road passenger vehicles (such as four wheel drive vehicles), as well as vehicles designed for transport of goods with a gross vehicle mass of up to 3.5 tonnes. It would cover most vehicles manufactured primarily for use on public roads including four wheel drive passenger vehicles, vans and utility vehicles… This approach would not initially include two or three-wheeled vehicles; farm, construction or heavy vehicles; motorhomes or buses.

Even for the motor vehicle industry, this scope seems far too limited. Given all the conflict over the right of repair in respect of agricultural vehicles (particularly John Deere's tractors), it is surprising that topic is not dealt with.[343] Issues over the right of repair have been raised across a wide range of fields of industry and business – not just parts of the motor vehicle industry. As such, Treasury's proposed code of conduct in respect of repair information seems only a shadow solution to the problems that it has identified. As iFixit comments, 'the proposal is too limited'.[344]

Treasury also proposed the establishment of a Service and Repair Information Sharing Advisory Committee. The membership of the Committee, though, is entirely made up of representatives of different parts of the motor vehicle industry:

> The Government is considering membership of the Committee would consist of a Chair (representing the responsible Minister) and representatives from at least the signatories to the current Heads of Agreement, which are the:
> a. Australian Automobile Association (AAA) representing motoring clubs;
> b. Australian Automotive Aftermarket Association (AAAA) representing the automotive aftermarket industry;
> c. Australian Automotive Dealer Association (AADA) representing new car dealers;
> d. Federal Chamber of Automotive Industries (FCAI) representing manufacturers; and

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343 Kyle Wiens, 'We Can't Let John Deere Destroy the Very Idea of Ownership'. *Wired Magazine*, 21 April 2015 http://www.wired.com/2015/04/dmca-ownership-john-deere/ and Kyle Wiens, 'John Deere Responds to Copyright Mess It Made'. *IFixit News*, 13 May 2015. http://ifixit.org/blog/7192/john-deere-mess/

344 Craig Lloyd, 'Australia's Right to Repair Proposal is a Good Start But Its not Enough', *iFixit*, 5 March 2019, https://ifixit.org/blog/13993/australias-right-to-repair-proposal-is-a-good-start-but-its-not-enough/

> e. Motor Trades Association of Australia (MTAA) representing the automotive retail, service and repair sector.

There is no representative on this Committee, which would represent the larger public interest in respect of consumer rights and competition policy.

Treasury has proposed 'the design of a mandatory scheme for access to motor vehicle service and repair information'. The intention is that 'This scheme would provide a level playing field in the sector and allow consumers to have their vehicles safely repaired by the repairer of their choice.' Treasury argues: 'The purpose of this consultation is to gauge the suitability of possible elements of a mandatory scheme for the sharing of motor vehicle service and repair information and the establishment of a Service and Repair Information Sharing Advisory Committee'. Treasury maintains: 'Subject to the outcome of consultation on these elements, the Government intends to implement a scheme in 2019.'

Unfortunately, Treasury were not particularly responsive to feedback in the consultation process about the nature of their scheme, and its limited, narrow scope.

In 2021, the Federal Government introduced the *Competition and Consumer Amendment (Motor Vehicle Service and Repair Information Sharing Scheme) Bill* 2021 (Cth). Assistant Treasurer and Minister Michael Sukkar discussed the significance of the legislation in his second reading speech.[345] He observed:

> The government has been working closely with industry to develop technical aspects of the scheme's design, and we've consulted extensively throughout the duration of the development of the scheme to ensure that it is effective, fair and safe. Ongoing industry cooperation will be crucial to the scheme's success. Therefore, a statutory adviser will be established and will have a key role in the day-to-day operation of the scheme. Importantly, the adviser will play a key role in assisting with the mediation of disputes and reporting to the government on the operation of the scheme. The government intends for

[345] Hon. Michael Sukkar, 'Second Reading Speech on the *Competition and Consumer Amendment (Motor Vehicle Service and Repair Information Sharing Scheme) Bill* 2021', Hansard, House of Representatives, Parliament of Australia, 24 March 2021, 7, https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22chamber%2Fhansardr%2Fd64bba7e-9b55-427c-aef1-2c98b347651d%2F0014%22

> the adviser position to be conferred on a joint-industry led organisation that will have the technical expertise, experience and relationships within the automotive industry to support the scheme.[346]

Sukkar commented: 'This bill includes significant reforms to the service and repair industry that have been made possible only through a strong partnership with industry, and I want to take this opportunity to thank the five signatories to the existing voluntary agreement for the work and engagement they have undertaken to date and thank them in advance for the work that will be done to ensure this scheme's success.'[347] This regime was passed in 2021.

Australian Labor Party Representative, the Hon. Andrew Leigh has agitated for reform in respect of access to repair information in the motor vehicle industry. He was pleased by the passage of the regulatory scheme.[348] Leigh discussed the significance of the scheme, particularly for regional and rural Australia:

> This is an issue across Australia, but it's an issue particularly in regional and remote Australia. When I visited Island Auto Repairs in Bongaree on Bribie Island, I learned about the many residents of Bribie Island who are older and don't feel comfortable driving their cars off the island. They're comfortable on the island—the traffic's a little slower and people go a little easier—but they don't go over the bridge to the mainland. The trouble is that there are no authorised dealers on Bribie Island. If you've got a car whose manufacturer won't share data with Island Auto Repairs, you face an invidious choice: either you don't get your car fixed or you take a dangerous drive that you don't want to do. So, for Island Auto Repairs, it's critical that they get the data they need to fix modern cars.
>
> It's a huge issue in regional Australia. Many regional areas don't have authorised dealers and, therefore, people are forced to drive tens or hundreds of kilometres to get to an authorised dealer. It's also an issue of affordability. Many Australians like to get their car fixed at a mycar, a JAX, an Ultra Tune, a Bridgestone or a Pedders—or, indeed, at a non-chain independent mechanic, such as Island Auto Repairs in Bongaree. Those independent mechanics tend to be cheaper—one study said that they were, on average, 25 per cent cheaper—and they have the right to be able to compete for business along with authorised dealers. But they can't do it if they don't get the data they need.[349]

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346 Ibid.

347 Ibid.

348 Hon. Andrew Leigh, 'Your Car Your Choice Finally Enacted', House of Representatives, Australian Parliament House, Canberra, 13 May 2021, https://www.andrewleigh.com/your_car_your_choice_finaly_finally_enacted

349 Ibid.

Leigh lamented that the scheme had not been passed in a more expeditious fashion: 'It is a shame that it has taken so many years to come to this point, but Labor support—nay, we champion—this reform. We will be pleased to see it implemented as soon as possible.'[350]

MP Matthew Thistlethwaite also his support for the bill in Parliament: 'We have been campaigning to support those local vehicle repairers to ensure that we are not only protecting jobs in that industry, protecting those small businesses and providing them with a fair playing field, but also promoting apprenticeships because most of the apprenticeships in the automotive industry will go to people at a local level through their local car repairer.'[351]

Unfortunately, the legislators were not particularly responsive to criticism about the narrow operation of the scheme, and its failure to deal with the larger problem of the right to feedback, which affects a wide range of industries (not just the motor vehicle industry). As it stands, the information sharing scheme is only a shadow solution in respect of the larger problems of repair.

Recommendation 11
Treasury has established a motor vehicle service and repair information sharing scheme. However, it is problematic that this information sharing scheme has been industry-specific. There was also a failure to consider how that scheme would interact with other disciplines of law – like intellectual property. There is a need for a more general system regarding the sharing of repair information for all technologies and industries. It would be desirable to go beyond the model of self-regulatory codes of conduct, and establish binding standards in respect of sharing repair information.

350 Ibid.

351 Hon. Matthew Thistlethwaite, 'Second Reading Speech on the *Competition and Consumer Amendment (Motor Vehicle Service and Repair Information Sharing Scheme) Bill* 2021', Hansard, House of Representatives, Parliament of Australia, 13 May 2021, 39, https://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22chamber%2Fhansardr%2F9174ef36-5bd6-4333-8000-d719ad0b062d%2F0085%22

8. Consumer Law and the Right to Repair

Australian consumer law provides some protection in respect of repairs.[352] The ACCC has brought a number of consumer actions in respect of repairs. In 2017, the ACCC lost a case against LG over customer repairs in the Federal Court of Australia. In 2018, the ACCC partially won an appeal against an earlier judgment dismissing the ACCC's case against LG Electronics Australia Pty Ltd.[353] The Full Court found that LG made two representations to consumers that were false, but dismissed the ACCC's appeal in respect of other LG statements made to consumers. ACCC Commissioner Sarah Court commented: 'When consumers buy products, they come with a consumer guarantee under the Australian Consumer Law that they will be of acceptable quality'.[354] She observed: 'Manufacturer's warranties exist in addition to the consumer guarantee rights.'[355] Court stressed: 'Consumers will often still be entitled under the consumer guarantee to a repair, refund or replacement when the manufacturer's warranty does not apply or has come to an end.'[356]

In 2018, the ACCC took action against Apple Inc. over repairs.[357] The Federal Court ordered Apple Inc to pay $9 million in penalties for making false or misleading representations to customers with faulty iPhones and iPads about their rights under the Australian Consumer Law (ACL). Apple admitted it had represented to at least 275 Australian customers affected by error 53 that they were no longer eligible for a remedy if their device had been repaired by a third party. ACCC Commissioner Sarah Court commented:

> If a product is faulty, customers are legally entitled to a repair or a replacement under the Australian Consumer Law, and sometimes even a refund. Apple's representations led customers to believe they'd be denied a remedy for their faulty device because they used a third party repairer. The Court declared the mere fact that an iPhone or iPad had been repaired by someone other than Apple did not, and could

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352 ACCC, 'Repairs and Spare Parts', https://www.accc.gov.au/consumers/consumer-rights-guarantees/repair-replace-refund

353 *ACCC v LG Electronics Australia Pty Ltd* [2018] FCAFC 96.

354 ACCC, 'Full Court finds LG made misleading representations', 27 June 2018, https://www.accc.gov.au/media-release/full-court-finds-lg-made-misleading-representations

355 Ibid.

356 Ibid.

357 ACCC, 'iPhone and iPad misrepresentations cost Apple Inc $9 million in penalties', 19 June 2018, https://www.accc.gov.au/media-release/iphone-and-ipad-misrepresentations-cost-apple-inc-9-million-in-penalties

> not, result in the consumer guarantees ceasing to apply, or the consumer's right to a remedy being extinguished.[358]

Court commented: 'Global companies must ensure their returns policies are compliant with the Australian Consumer Law, or they will face ACCC action.'[359] She observed: 'If people buy an iPhone or iPad from Apple and it suffers a major failure, they are entitled to a refund'.[360] Court concluded: 'If customers would prefer a replacement, they are entitled to a new device as opposed to refurbished, if one is available.'[361]

CHOICE Australia has made a detailed submission to the Productivity Commission on the right to repair and consumer law.[362] In her evidence to the Productivity Commission, Erin Turner said: 'We're seeing that warranties generally can discourage large groups of consumers from getting a remedy under the consumer law'.[363] She noted that the consumer organisation had surveyed 6,571 of its members and supporters in April and May in 2021 about getting remedies on TVs, washing machines, microwaves and lawn mowers. Turner commented that only 24% of people with washing machine issues tried to get a remedy, 15% for TVs, 19% for microwaves and 18% for lawnmowers. She commented: 'Often these products could be just outside the warranty period, a few weeks, months, or years, and with a product like a washing machine, something that might be five years old, something that we'd still still see as well within that consumer guarantees period for a large piece of equipment you want in your home'.[364] Turner observed: 'So what worried me is that this research is telling us is that warranty periods could have a dampening effect on consumers seeking remedy.'[365]

The Consumer Action Law Centre has argued that 'the Productivity Commission should recommend improvements to people's access to dispute resolution services, including

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358 Ibid.

359 Ibid.

360 Ibid.

361 Ibid.

362 CHOICE Australia, 'Submission to the Productivity Commission Issues Paper on the Right to Repair', Submission 126 to the Issues Paper, February 2021, https://www.pc.gov.au/__data/assets/pdf_file/0013/273010/sub126-repair.pdf

363 Josh Gnosis, 'Australian Warranties To "Discourage" Repairs or Replacements Under Consumer Law', *The Guardian*, 20 July 2021, https://www.theguardian.com/law/2021/jul/20/australian-warranties-acting-to-discourage-repairs-or-replacements-under-consumer-law

364 Ibid.

365 Ibid.

when a person's right relates to a choice between a repair, refund or replacement.'[366] The Centre maintains: 'The responsibility for repair and ethical disposal can be shifted to the supplier or manufacturer of a faulty product, once a person receives the remedy to which they are entitled.'[367] The Consumer Action Law Centre elaborate:

> In short, in relation to faulty products, the burden of a right to repair should not fall on the shoulders of consumers, who have already outlaid the cost for the good. Instead, repairs could be incentivised or required of companies once they have complied with their requirements under the consumer guarantees—whether it is undertaking a repair, or providing a refund or a replacement to their customer. Furthermore, it seems likely that a consumer will choose a repair over a refund or a replacement, if access to a repair is speedy, convenient and not costly.[368]

The Consumer Action Law Centre contends that 'it is imperative that any recommendations from the Productivity Commission into a right to repair improve access to justice for people who purchase faulty products, including lemons, which are largely immune to repair, rather than decreasing access to justice through additional barriers.'[369]

The draft report by the Productivity Commission provides a detailed discussion of Australian consumer law, and its application to repair. This submission agrees with the Productivity Commission that there is scope for further improvements – particularly given the imbalance of bargaining power between consumers, SMEs, and independent repairers on the one hand, and technology developers on the other hand. This submission supports the finding 3.1 of the Productivity Commission that 'there is scope to enhance consumers' ability to exercise their rights when their product breaks or is faulty — by providing guidance on the expected length of product durability and better processes for resolving claims.' This submission also supports the recommendations of the Productivity Commission in respect of guidance on reasonable durability of products (draft recommendation 3.1); powers for regulators to enforce guarantees (draft recommendation 3.2); and enabling a super complaints process (draft recommendation 3.3). The Productivity Commission has also asked for information as to whether consumers have reasonable access to repair facilities, spare parts,

366 Consumer Action Law Centre, 'Right to Repair Inquiry', 15 February 2021 https://consumeraction.org.au/wp-content/uploads/2021/02/210215-CALC-sub-Right-to-repair-FINAL.pdf

367 Ibid.

368 Ibid.

369 Ibid.

and software updates (information request 3.1). There is a need to ensure that businesses are required to hold physical spare parts and operate repair facilities for fixed periods of time. It is also important to ensure that software updates are provided by manufacturers for a reasonable period of time after the product has been purchased.

Recommendation 12
This submission supports the finding 3.1 of the Productivity Commission that 'there is scope to enhance consumers' ability to exercise their rights when their product breaks or is faulty — by providing guidance on the expected length of product durability and better processes for resolving claims.' This submission also supports the recommendations of the Productivity Commission in respect of guidance on reasonable durability of products (draft recommendation 3.1); powers for regulators to enforce guarantees (draft recommendation 3.2); and enabling a super complaints process (draft recommendation 3.3). The Productivity Commission has also asked for information as to whether consumers have reasonable access to repair facilities, spare parts, and software updates (information request 3.1). There is a need to ensure that businesses are required to hold physical spare parts and operate repair facilities for fixed periods of time. It is also important to ensure that software updates are provided by manufacturers for a reasonable period of time after the product has been purchased.

Recommendation 13
This submission notes the finding of the Productivity Commission that there have been misleading terms in warranties for mobile phones, gaming consoles, washing machines, and high-end watches regarding independent repairs. This submission supports the recommendation of the Productivity Commission (draft recommendation 4.2) that 'the Australian Government should amend r. 90 of the Competition and Consumer Regulations 2010, to require manufacturer warranties ('warranties against defect') on goods to include text (located in a prominent position in the warranty) stating that entitlements to consumer guarantees under the Australian Consumer Law do not require consumers to use authorised repair services or spare parts.' This submission supports the suggestion of the Productivity Commission that Australia should adopt provisions similar to the Magnuson-Moss Warranty Act in the United States, which prohibit manufacturer warranties from containing terms that require consumers to use authorised repair services or parts to keep their warranty coverage.

9. Competition Law and Policy and the Right to Repair

In its draft report, the Productivity Commission has also considered the role of competition in repair markets. In particular, it focused on agricultural machinery; mobile phones and tablets; motor vehicles; and other product markets.[370] The Productivity Commission considered the operation of competition rules on anti-competitive agreements, misuse of market power, and exclusive dealing.[371] The Productivity Commission considered the philosophy and approach of the Australian Competition and Consumer Commission to enforcement of competition law and policy.[372] The Productivity Commission also highlighted the complexities of pursuing legal action for breaches of the competition regime. The Productivity Commission also stressed the importance of comparative approaches to competition law and policy in the field of the right to repair.

In evidence to the hearings held by the Productivity Commission, there was concern expressed about a lack of competition in a number of markets. The IT service provider Interactive expressed concern that enterprises are being forced to enter into direct maintenance services contracts with technology manufacturers to be able to access firmware updates.[373] iFixit was alarmed by the market domination by technology developers, such as Apple, Samsung, and Microsoft.[374] There has been worry about the position of independent repairers in the motor vehicle industry.[375] The Watch and Clockmakers of Australia Inc. was worried that independent repairers were being squeezed out of the marketplace by various

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370 Productivity Commission, *Right to Repair: Draft Report*, Melbourne: Productivity Commission, 11 June 2021, 129, https://www.pc.gov.au/inquiries/current/repair/draft

371 Ibid., 138.

372 Ibid., 142-145.

373 Aimee Chanthadavong, 'IT service provider Interactive hits out at tech companies for monopolistic firmware tactics', *ZDNet*, 21 July 2021, https://zd.net/2TpuRM9

374 Aimee Chanthadavong, 'iFixit CEO Names and Shames Tech Giants for Right to Repair Obstruction', *ZDNet*, 19 July 2021, https://zd.net/3kyA3Z9

375 Peter McCutcheon, 'Mechanics Say They'll Go Bust If Car Makers Don't Share Computer Codes', *ABC 7:30 Report*, 21 November 2018, https://www.abc.net.au/news/2018-11-21/mechanics-want-car-makers-to-share-computer-codes/10506186

monopolies.[376] The National Farmers Federation was worried about the domination of farming markets by technology developers and big agriculture companies.[377]

Rod Sims, the head of the Australian Competition and Consumer Commission, has expressed his concerns about tackling market power.[378] He commented:

> We benefit greatly from a market economy. Companies, with their objective of maximum profit, can deliver significant benefits to society. But we must keep asking whether our market economy is too much favouring the producers at the expense of consumers. Alternatively put, we must do all we can to align the interests of business and society through sound laws.

Sims contended: 'It would be a major step forward for our economy, for consumers and for small business if we could address the gaps in our competition and consumer laws that I have discussed today: Make Unfair Contract Terms illegal, introduce an Unfairness Provision, regulate the prices and services of monopoly infrastructure and introduce well-targeted regulation to deal with the more damaging market power issues.'[379] He observed: 'Our need for a strong post-COVID recovery invites this, particularly given the concern that significant disruption often allows the strong to get stronger, to the detriment of our economy and society.'[380]

Rod Sims was particularly concerned about digital platforms, noting: 'The main digital platforms have accumulated huge wealth from innovation, and later steps to cement their market power.'[381] He noted: 'While we have all benefitted greatly from their innovation, we

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376 Watchmakers and Clockmakers of Australia Inc., 'Right to Repair: Productivity Commission', Submission 83 to the Issues Paper, 1 February 2021, https://www.pc.gov.au/__data/assets/pdf_file/0006/272562/sub083-repair.pdf

377 The National Farmers Foundation, 'Re: Submission to the Productivity Commission "Right to Repair" Inquiry', Submission 55 to the Issues Paper, 1 February 2021, https://www.pc.gov.au/__data/assets/pdf_file/0004/272335/sub055-repair.pdf

378 Rod Sims, 'Tackling Market Power in the COVID-19 Era', National Press Club, 21 October 2020, https://www.accc.gov.au/speech/tackling-market-power-in-the-covid-19-era

379 Ibid.

380 Ibid.

381 Ibid.

must now ensure the innovation of others is not stifled.'[382] Sims commented: 'We may well need more regulation of digital platforms.'[383]

United States competition experts have been concerned about the rise of monopolies in various sectors. Massachusetts Senator and Presidential candidate Elizabeth Warren supported a national right to repair law for farm equipment.[384] She contended: 'Farmers should be able to repair their own equipment or choose between multiple repair shops.'[385] Likewise, Vermont Senator and Presidential Candidate Bernie Sanders also supported a right to repair for farmers.[386] In her book, *Break 'Em Up*, Professor Zephyr Teachout highlights the concentration of economic and political power in agricultural markets.[387] She highlights the issue of the right to repair: 'Even on his own tractor, a farmer has no freedom: John Deere contracts require that tractors be serviced by affiliates of the company.'[388] She hopes: 'With a grassroots, anti-monopoly movement: 'Farmers can reclaim the right to fix their own tractors'.[389]

In his book *Goliath*, Matt Stoller discusses the monopoly power of automobile companies, and the high cost of repairs.[390]

Another United States Presidential candidate Amy Klobuchar has been concerned about monopoly power in the digital age.[391] 'Antitrust hipster' Associate Professor Angela Daly has argued that there is a need to take into account a wide range of economic and political power

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382 Ibid.

383 Ibid.

384 Makena Kelly, 'Elizabeth Warren Comes Out in Support of a National Right-to-Repair Law for Farm Equipment', *The Verge*, 27 March 2019, https://www.theverge.com/2019/3/27/18284011/elizabeth-warren-apple-right-to-repair-john-deere-law-presidential-campaign-iowa

385 Ibid.

386 Matthew Gault, 'Bernie Sanders Calls for a National Right-to-Repair Law for Farmers', *Vice*, 5 June 2019, https://www.vice.com/en/article/8xzqmp/bernie-sanders-calls-for-a-national-right-to-repair-law-for-farmers

387 Zephyr Teachout, *Break 'Em Up: Recovering Our Freedom From Big Ag, Big Tech, and Big Money* New York: Macmillan Publishers, 2020.

388 Ibid., 26.

389 Ibid., 7.

390 Matt Stoller, *Goliath: The 100-Year War Between Monopoly Power and Democracy*, New York: Simon & Schuster, 2020.

391 Amy Klobuchar, *Antitrust: Taking on Monopoly Power from the Gilded Age to the Digital Age*, New York: Knopf, 2021.

of information technology monopolies.[392] In his presentation to the Productivity Commission, Kyle Wiens of iFixit expressed his concern about the market power of information technology companies, such as Apple, Samsung, and Microsoft.[393]

In his work, *Monopolized*, David Dayen explores a number of key sectors affected by monopolies – including banking, airlines, telecommunications, pharmacies, and medical supplies.[394] Sally Hubbard has also been exploring the impact of monopolies on key United States industries.[395]

In the United States, the Federal Trade Commission has been identifying competition issues in respect of repair. The May 2021 report, *Fixing the Nix: An FTC Report to Congress on Repair Restrictions*, focuses in particular upon competition problems with repair restrictions.[396] The report discusses a variety of different forms of restrictions – including Physical restrictions; Unavailability of parts, repair manuals, and diagnostic software and tools; Designs that make independent repairs less safe; Telematics (i.e., information on the operation and status of a vehicle that is collected by a system contained in the vehicle and wirelessly relayed to a central location, often the manufacturer or dealer of the vehicle); Application of patent rights and enforcement of trademarks; Disparagement of non-OEM parts and independent repair; Software locks, Digital Rights Management and Technical Protection Measures; and End User License Agreements

The report identified a number of competition problems and issues in respect of repair:

> Several scenarios described in this report involve business decisions made by the manufacturer that may restrict repair options by consumers or ISOs and make it difficult or impossible for ISOs to compete in aftermarkets. Tying exists when the sale of one product (the tying product) is conditioned on the purchase of a second product (the tied product) from the same firm. Tying is illegal where the effect is to impair competition and harm consumers in the market for either the tying product or the

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392 Angela Daly, 'Beyond 'Hipster Antitrust': A Critical Perspective on the European Commission's Google Decision', (2017) 1(3) *European Competition and Regulation Law Review* 188

393 Aimee Chanthadavong, 'iFixit CEO Names and Shames Tech Giants for Right to Repair Obstruction', *ZDNet*, 19 July 2021, https://zd.net/3kyA3Z9

394 David Dayen, *Monopolized: Life in the Age of Corporate Power*, New Press, 2020.

395 Sally Hubbard, *Monopolies Suck: 7 Ways Big Corporations Rule Your Life and How To Take Back Control*, New York: Simon & Schuster, 2020.

396 Federal Trade Commission, *Nixing the Fix: An FTC Report to Congress on Repair Restrictions*, Washington DC: Federal Trade Commission, May 2021, https://www.ftc.gov/reports/nixing-fix-ftc-report-congress-repair-restrictions

> tied product. For example, an illegal tying claim might allege that a manufacturer unlawfully tied the availability of parts to the purchase of its repair service. Other scenarios describe different types of conduct that may harm competition when adopted by a firm with market power.[397]

The report added: 'Other tactics described by commenters involve allegations of potentially exclusionary conduct, such as making products difficult or impossible to disassemble, in order to maintain market position and exclude aftermarket competitors, or the anti-competitive assertion of patent rights and enforcement of trademarks by manufacturers to restrict repairs not authorized by OEMs.'[398]

Anti-monopoly advocate Lina Khan has been appointed to the Federal Trade Commission by the Biden Administration.[399] As iFixit noted, 'With [Lina Khan's] appointment, Right to Repair gains perhaps its highest-profile advocate, and people get a committed advocate to their right to fix the things they own, regardless of what the biggest companies would prefer.'[400] In July 2021, Lina Khan and the Federal Trade Commission have prioritised taking enforcement action in respect of repair restrictions.[401]

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397 Ibid., 9.

398 Ibid., 9.

399 See for instance her classic works – Zephyr Teachout and Lina Khan, 'Market Structure and Political Law: A Taxonomy of Power', (2014) 9 *Duke Journal of Constitutional Law and Public Policy* 37-74; Lina Khan, 'Amazon's Antitrust Paradox' (2017) 126 *Yale Law Journal* 710-805; Lina Khan and Sandeep Vaheesan, 'Market Power and Inequality: The Antitrust Counter-revolution and its Discontents' (2017) 11 *Harvard Law & Policy Review* 235-294; Lina Khan, 'The New Brandeis Movement: America's Antimonopoly Debate' (2018) 9 (3) *Journal of European Competition Law & Practice* 131-132; Lina Khan, 'Sources of Tech Platform Power' (2018) 2 *Georgetown Law & Technology Review* 325-331; Lina Khan, 'The Separation of Platforms and Commerce' (2019) 119 (4) *Columbia Law Review* 973-1098; and Lina Khan and David Pozen, 'A Skeptical View of Information Fiduciaries' (2019) 133 *Harvard Law Review* 497-541.

400 Kerry Sheehan, 'Lina Khan is the New FTC Chair, and That's Great for Repair', *iFixit*, 15 June 2021, https://www.ifixit.com/News/50783/lina-khan-is-the-new-ftc-chair-and-thats-great-for-repair?utm_content=buffere0abf&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

401 Federal Trade Commission, 'FTC to Ramp Up Law Enforcement Against Illegal Repair Restrictions', Press Release, 21 July 2021, https://www.ftc.gov/news-events/press-releases/2021/07/ftc-ramp-law-enforcement-against-illegal-repair-restrictions

401 Federal Trade Commission, 'Policy Statement of the Federal Trade Commission on Repair Restrictions Imposed by Manufacturers and Sellers', 21 July 2021, https://www.ftc.gov/system/files/documents/public_statements/1592330/p194400repairrestrictionspolicystatement.pdf and Lina Khan, 'Remarks of Chair Lina M. Khan Regarding the Proposed Policy Statement on Right to

Arguably, Rod Sims and the Australian Competition and Consumer Commission should show a similar enthusiasm for enforcement action in respect of repair restrictions, as has been shown by Lina Khan and the Federal Trade Commission, with encouragement from President Joe Biden.

Recommendation 14
There is scope for the Australian Competition and Consumer Commission to deploy competition law to address repair issues. As Draft Finding 4.3 notes, 'there are existing remedies available under Part IV of the *Competition and Consumer* Act 2010 to address anti-competitive behaviours in repair markets, such as provisions to prevent the misuse of market power, exclusive dealing or anti-competitive agreements.' The Productivity Commission has highlighted in Draft Finding 4.2 that limits to repair supplies could be leading to consumer harm in some repair markets – including agricultural machinery, and mobile phones and tablets. A positive obligation to provide access to repair supplies could be a useful means of mandating access to repair supplies – including repair information, spare parts, and diagnostic tools.

10. Product Stewardship and e-Waste

Chapter 6 of the draft report of the Productivity Commission considers the topic of product design and obsolescence. Chapter 7 of the Productivity Commission focuses upon the management of e-waste.

Environmentalist George Monbiot has been concerned about the production of e-waste:

> The world's production of e-waste is rising by 4% a year. It is driven by another outlandish norm: planned obsolescence. Our appliances are designed to break down, they are deliberately engineered not to be repaired.[402]

Repair', Federal Trade Commission, 21 July 2021, https://www.ftc.gov/public-statements/2021/07/remarks-chair-lina-m-khan-regarding-proposed-policy-statement-right-repair

[402] George Monbiot, 'People Want a Greener, Happier World Now. But Our Politicians Have Other Ideas', *The Guardian*, 22 July 2020, https://www.theguardian.com/commentisfree/2020/jul/21/greener-happier-world-politicians-boris-johnson-consumerism-planet?CMP=share_btn_tw

Monbiot has contended that there is a need to shift to a model of sustainable production and consumption in a circular economy.

AELA has been concerned about the problem of planned obsolescence – 'an economic strategy to keep people buying the same product again, and again, in a saturated market.'[403] AELA recommends:

> Mandatory existing environmental design standards to be applied to all relevant products made, imported and sold in Australia. These standards would require Australian companies to manufacture, import or sell products that are designed to be durable and exist for their optimal lifetime, and that can easily be upgraded, repaired and recycled where technically possible.[404]

AELA recommends amending the objects of the *Product Stewardship Act* 2011 (Cth) so that a core objective of the Act is to reduce energy and water use and reduce emissions. In its view, 'The *Product Stewardship Act* 2011 (Cth) should state that in considering the environmental impacts of products, decision makers will draw on contemporary scientific knowledge, and use an evidenced based approach.'[405] AELA argues: 'Environmental impacts of products must include an assessment of the life cycle of the product, and its contribution to the cumulative impacts of pollution and resource use.'[406]

The World's Biggest Garage Sale – based in Morningside, South Brisbane – submitted: 'A 'Right to Repair' should not be considered in isolation, but rather in tandem with extended producer responsibility and novel materials.'[407] The organisation called for extended producer responsibility: 'If nobody can make money with end of service life products and nature cannot digest them (because they're synthetic), then they go back to the manufacturer, who made the profit in the beginning and has the knowledge of how they were built and how to process them at end of life; it cannot be up to municipalities to pay for problems created by profit-making industrial producers.'[408] The submission suggested: 'Manufacturers or distributors should be

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403 AELA, 'Challenging Consumption and Planned Obsolescence', https://www.earthlaws.org.au/our-programs/challenging-consumption/planned-ob/

404 Ibid.

405 Ibid.

406 Ibid.

407 The World's Biggest Garage Sale, 'Submission for the Right to Repair Inquiry', Submission 45 to the Issues Paper, Productivity Commission, 30 January 2021, https://pc.gov.au/__data/assets/pdf_file/0019/272323/sub045-repair.pdf

408 Ibid.

encouraged to work with local organisations embedded in the community so that when an item no longer works or is not wanted, then it can be repaired and reused, repurposed or recycled locally, making it more accessible for consumers; however the manufacturer must pay for this service as part of their extended producer responsibility.'[409] The organisation contends that 'to truly move into a circular economy, we want to prevent future legacy waste (synthetic materials that cannot easily be recycled or reabsorbed into the environment), so we need to explore circular chemistry, circular metallurgy and circular component disciplines.'[410] The submission noted: 'Long-term this could be factored into any "repair index", "durability index" and "recyclability index".'[411] The submission argued: 'As we move from a linear to a circular economy, repair must be considered integral in any policies and frameworks moving forward'.[412] The submission maintained: 'Environmental considerations can no longer be ignored at the very critical phase of designing products, where options for repair should be examined.'[413]

John Gertsakis and Shaun Scallan of the e-Waste Watch Institute have argued to the Productivity Commission that there is a need for a stronger package of policy measures to support product stewardship, the reduction of e-waste, and the adoption of circular economy.[414] Their submission contends: 'The Right to Repair must facilitate and enable easy and if possible (and safe) DIY repair, this will lower the cost of repair dramatically.'[415] Their submission maintains: 'Good design should be restorative and regenerative'.[416] Their submission argues: 'The concept of 'less harm' is inadequate in 2021 given the environmental challenges being faced locally, nationally and globally.'[417] The authors call for stronger recognition of the concept of a circular economy: 'Key principles of the circular economy explicitly talk about designing-out waste from the outset; and prolonging the life of products through repair,

409 Ibid.

410 Ibid.

411 Ibid.

412 Ibid.

413 Ibid.

414 Shaun Scallan and John Gertsakis, e-Waste Watch Institute, 'A Submission to the Australian Government Productivity Commission on Right to Repair', Submission 125 to the Issues Paper, Productivity Commission, 2021, https://www.pc.gov.au/__data/assets/pdf_file/0020/273008/sub125-repair.pdf

415 Ibid.

416 Ibid.

417 Ibid.

refurbishment, remanufacturing and reuse.'[418] The authors maintain: 'Waste avoidance and reduction by extending product life and prolonging the life of products, components and materials, is also considered to be an important contribution toward achieving a circular economy by diverting end-of-life products from landfill and maximising their functionality, value and environmental benefit.'[419] The submission comments: 'Design for durability, repair and reuse can be seen as the 'first responders' when considering solutions and preventative measures that can avoid and reduce waste'.[420]

As part of the ARC Future Fellowship on intellectual property and climate change (2011-2015), the author conducted research and fieldwork in respect on green trade marks, eco-labelling, and greenwashing. There has been a wide range of labelling schemes established in respect of energy labelling, eco-labelling, and carbon labelling. There is a need to develop reliable, credible and trustworthy labelling systems. Notably, the Nordic Swan Ecolabel is a sophisticated scheme, which deals with life cycle development.[421] The Nordic Swan Ecolabel undergoes development of criteria for new areas. The regime is also supported by public procurement. The Nordic Swan Ecolabel is designed to promote a circular economy.

In the area of private labelling, there has also been a problem with greenwashing – with some companies making misleading and deceptive representations. [422] There is a need to ensure that regulators take action against companies, which make misleading and deceptive claims in respect of environmental matters.

Professor Jay Sanderson and Teddy Henriksen have suggested that trade marks and labelling schemes could play a useful role in terms of certifying the quality of repairs.[423] Sanderson and Henriksen commented: 'While a repairable mark and license is not the panacea of repairability, it can help distinguish repairable goods and signal to consumers, manufacturers and governments the efforts implemented to ensure goods are as repairable as they can be.'[424]

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418 Ibid.

419 Ibid.

420 Ibid.

421 Nordic Swan Ecolabel, https://www.nordic-ecolabel.org/

422 Matthew Rimmer, 'Greenwashing: Trademark Law, Consumer Rights, and Internet Domain Names', QUT Climate Business Symposium, 5 September 2017, https://www.youtube.com/watch?v=H64ZjpCby8o

423 Jay Sanderson and Teddy Henriksen, 'Certified Repairable: Using Trade Marks to Distinguish, Signal and Encourage Repair' (2020) 31 *Australian Intellectual Property Journal* 161-172.

424 Ibid., 171-172.

Sanderson and Henriksen argue that 'once a repairable trade mark and associated standards are established the real work begins; building trust in the mark, and its standards and processes.'[425]

In its submission to the Productivity Commission, Clare Hobby and Andreas Nobell considered the right to repair and sustainability certification.[426] Hobby and Nobell contend: 'As the organization behind global sustainability certification for IT, TCO Certified, the right to repair is fundamental to longer product use, which in turn supports the shift to a regenerative, circular economy and the prevention of e-waste.'[427] Hobby and Nobell commented that there was a lack of consideration of the need for a circular economy by many technology developers:

> From both industry and users, there is a lack of circular mindset around electronics. This means there isn't enough planning for either circular design or extend product life. Many products are today designed with only the initial user in mind. One example, phone headsets often incorporate soldered batteries, which are difficult to replace. This does not have to be the case, as there are manufacturers adopting easy replaceability solutions for batteries without the need to desolder. Printers are another category where the product is used much less than the potential lifetime. Over 20% of printers are used less than 3% of their usable life before being switched to a new product, as part of the contract or lease terms.[428]

The submission also noted the problem of false product claims: 'There is a continuing problem of untrue claims that certain products are unsafe to open up and repair.'[429] Hobby and Nobell suggested that there was a need for the regulator to take further action in respect of greenwashing.

The Australian Academy of Technology and Engineering has provided support for the recognition of the right to repair.[430] The Academy noted:

> ATSE's recent landmark report on technology readiness in Australia's waste management and resource recovery sector recommended a legislated consumer right to repair products in Australia, starting with

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425 Ibid., 172.

426 Clare Hobby and Andreas Hobell, 'Submission to Inquiry – Right to Repair in Australia', TCO Development, March 2021, https://www.pc.gov.au/__data/assets/pdf_file/0007/273895/sub137-repair.pdf

427 Ibid.

428 Ibid.

429 Ibid.

430 Australian Academy of Technology and Engineering, 'Submission to the Productivity Commission inquiry into a Right to Repair', 1 February 2021, https://www.atse.org.au/wp-content/uploads/2021/01/SUB-2021-02-01-Inquiry-into-the-Right-to-Repair-within-Australia-FINAL.pdf

> electronics (recommendation 1.1(c)). In Towards a Waste Free Future, ATSE found that consumers are increasingly demanding repair services, particularly for electronics, and that unfixable devices contribute to the mounting problem of e-waste.[431]

The Academy discussed the need for standard-setting and labelling systems in respect of repair: 'Creating standards and certification systems for reused, repaired and remanufactured goods to build consumer confidence and promote sustainable design.'[432]

As of the 1st January 2021, France is the first country in the European Union to have implemented a repairability index on 5 categories of electronic devices. There has been much public policy interest in France's new 'repairability index'.[433] Maddie Stone reflects upon the development:

> In a world first move, France began requiring makers of certain electronic devices, including smartphones and laptops, to tell consumers how repairable their products are. Manufacturers selling these devices in France must give their products a score, or "repairability index," based on a range of criteria including how easy it is to take the product apart and the availability of spare parts and technical documents. While France won't be enforcing use of the index with fines until next year, some companies have already begun releasing scores for their products.[434]

Stone notes: 'The repairability index represents part of France's effort to combat planned obsolescence, the intentional creation of products with a finite lifespan that need to be replaced frequently, and transition to a more circular economy where waste is minimized.'[435] Stone observes that the policy initiative has global implications: 'Repair advocates say that the index will serve as a litmus test for other nations weighing similar regulations, help consumers make better choices, and hopefully incentivize companies to manufacture more repairable devices.'[436]

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431 Ibid.

432 Ibid.

433 Right to Repair, 'The French Repair Index: Challenges and Opportunities', 3 February 2021, https://repair.eu/news/the-french-repair-index-challenges-and-opportunities/

434 Maddie Stone, 'Why France's new 'repairability index' is a big deal', *Grist*, 8 February 2021, https://grist.org/climate/why-frances-new-repairability-index-is-a-big-deal/

435 Ibid.

436 Ibid.

In the European Union, there has been an interest in the adoption of labelling schemes. The Greens/EFA in the European Parliament have been campaigning for the adoption of a repair score as part of a sustainability labelling scheme.[437] The Greens/ EFA commented:

> More and more, manufacturers are designing tech devices so that they are almost impossible to repair. We're left with very few options other than to buy something new. This is especially challenging to consumers who might not be able to afford a new device. It's also unfair to independent repairers that would otherwise be able to repair your device. Last but not least, it damages our planet, because we are spending resources on new devices instead of fixing the ones we already own.[438]

The Greens/ EFA noted: 'We want to reduce e-waste and enable consumers to make informed choices about whether or not their electronics can be repaired.'[439] The Greens/ EFA commented: 'The repair score will tell consumers how easy a product is to repair before they make the choice to buy it.'[440] They observed: 'The repair score would grade products based on: accessible product design; the tools needed to perform the repair; the availability of spare parts; and the prices of spare parts.'[441] The Greens/ EFA suggested: 'That is why we need a repair score: an easy to understand score that shows how easy it is to repair your device.' The Greens EFA argued: 'As part of the green transition legislative packages this year, we need the Commission to propose a mandatory EU-wide repair score by December 2021.'[442] The Greens EFA envisaged: 'By 2030, upcoming EU legislation should provide for the EU repair score to become a sustainability index by adding greater traceability and information on materials'.[443] The Greens EFA noted: 'This repair score should also take into account the environmental footprint and how circular a product is (whether it will last, and whether it can be repaired, reused or recycled).'[444]

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437 Greens/ EFA, 'Support a Repair Score in Europe', https://act.greens-efa.eu/repairscore?source=gg_twitter_20210719

438 Ibid.

439 Ibid.

440 Ibid.

441 Ibid.

442 Ibid.

443 Ibid.

444 Ibid.

There has also been much interest in Switzerland about the adoption of a 'repairability index'.[445] There has been interesting empirical research on the role of independent repairers working in the field of mobile phones in Switzerland.[446] Nova and Bloch commented:

> In considering how repair and maintenance facilities contribute to innovation, our portraits show how repairers have handled technological change (and the increasing complexity of smartphones), responding by diversifying their services and, increasingly, supporting users in reconfiguring and customising their digital technologies. This combination provides an alternative to dominant models of innovation, which foreground the role of technological R&D in generating intellectual property that then can be applied in new products and services. Although our informants' activities share certain characteristics with forms of bottom-up innovation (von Hippel, 1988), we saw little evidence of repairers or stores making efforts to commercialise products based on the results of their activities. At the same time, the three modes of innovation we encountered diverge from descriptions of inverted or frugal innovation (Radjou & Prabhu, 2015), as found in the developing economies of the Global South. Instead, we characterise these stores and repairers' innovative practices as a form of "silent innovation."[447]

Nova and Bloch observed: 'In this, repair shops are one example of the kind of organisations that emerge where the networks facilitating processes of "globalisation from below" intersect with formal, regularised commercial activity.'[448]

Recommendation 15
The submission would argue that additional policies to prevent premature product obsolescence would have net benefits to the community (cf the Productivity Commission's Draft Finding 6.1). This submission notes that a product labelling scheme could address information gaps in respect of product repairability, durability, and environmental impact (Information Request 6.1). There are various precedents in respect of energy labelling, eco-labelling, and carbon labelling. The submission supports the adoption of a French-style 'repairability index' in Australia. The submission would argue that e-waste is a significant

445 'Swiss consumers want repair label on electronic appliances', Swissinfo.ch, https://swissinfo.ch/eng/business/swiss-consumers-want-repair-label-on-electronic-appliances/46111198#.YPZ4KnN4Mfg.twitter

446 Nicolas Nova and Anais Bloch, *Dr. Smart-Phone: An Ethnography of Mobile Phone Repair Shops*, IDP Publishing, 2020, https://hal.archives-ouvertes.fr/hal-03106034 and https://hal.archives-ouvertes.fr/hal-03106034/document

447 Ibid.

448 Ibid.

problem in Australia, and there is a need to shift towards the adoption of sustainable production and consumption as part of a circular economy. The submission supports the recommendation 7.1 of the Productivity Commission that the Australian Government should amend the National Television and Computer Recycling Scheme (NTCRS) to allow e-waste products that have been repaired or reused by co regulatory bodies to be counted towards annual scheme targets.

Recommendation 16
Australia should reform the *Product Stewardship Act* 2011 (Cth) in order to promote the right to repair, reduce e-waste, and support a circular economy and the Sustainable Development Goals.

11. Comparative Law – The United States of America

In the United States, there has been a dynamic series of debates over the right to repair at a state and a Federal level. A wide variety of individual states have considered right to repair proposals. At a Federal level, the Federal Trade Commission has undertaken empirical research on the topic of the right to repair. There have been a number of proposals for a right to repair circulated in the United States Congress – including in respect of the public health coronavirus epidemic. The Biden Administration has shown a great deal of enthusiasm for the right to repair, promulgating the concept in new executive orders designed to promote competition in the United States.

A. States

Historically, there has been a push for the right to repair in respect of motor vehicles. Since then, there have been various state initiatives in the United States to recognise a right to repair – but these have been opposed by various technology developers. Reviewing such developments, Professor Leah Chan Grinvald and Associate Professor Ofer Tur-Sinai have commented: 'As part of its lobbying of State legislatures to enact a consumer right to repair law, the Repair Association has drafted a model Act, which has been the basis for the 20 States

that have introduced such laws into their respective legislatures.'[449] They noted: 'There are four main provisions to the model Act: (1) mandating disclosure of information that will allow repairs; (2) mandating the availability of parts and tools to facilitate repairs; (3) mandating disclosure of information to allow security protections to be reset; and (4) forbidding the contracting around such provisions in terms between authorised repair providers and the original equipment manufacturers.'[450] The model act limits the operation of such provisions to 'digital electronic equipment.'

i. Massachusetts

Digital rights activist Cory Doctorow has observed: 'Massachusetts has long been a leader in the Right to Repair movement, thanks to a combination of principled lawmakers and a motivated citizenry that refuses to back down when well-heeled lobbyists subvert the legislative process.'[451]

In 2012, Massachusetts was the first United States state to enact right to repair legislation. This legislation provided for independent repair in Massachusetts, and led to a national agreement in respect of better access to repair information.

In their article, 'The Tethered Economy', Chris Jay Hoofnagle, Aniket Kesari, and Aaron Perzanowski discuss the importance of the right to repair in the digital economy.[452] They reflected:

> Because the ability to repair is being eroded for consumers of tethered products, policymakers must consider how to recalibrate the bundle of rights enjoyed by digital consumers. Although many consumers would find it daunting to repair their own device, a statutory right to repair would facilitate markets for third-party repair services. Such markets, in turn, would drive down prices for new and

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449 Leah Chan Grinvald and Ofer Tur-Sinai, 'The Right to Repair: Perspectives from the United States' (2020) 31 *Australian Intellectual Property Journal* 98-110 at 102.

450 Ibid., 102.

451 Cory Doctorow, 'Bay Staters Continue to Lead in Right to Repair, and EFF is There to Help', Electronic Frontier Foundation, 13 January 2020, https://www.eff.org/deeplinks/2020/01/bay-staters-continue-lead-right-repair-and-eff-there-help

452 Chris Jay Hoofnagle, Aniket Kesari, and Aaron Perzanowski, 'The Tethered Economy' (2019) 87 (4) *The George Washington Law* Review 783-874.

> refurbished goods, improve device longevity, and mitigate the environmental impact of the digital economy.[453]

Hoofnagle and co highlight the importance of Massachusetts as a policy leader in respect of the right to repair. They also observe: 'Although 18 states have introduced right to repair bills, aggressive lobbying by Apple and other device makers have stalled these efforts.'[454]

In 2020, there has been debate over House Bill 4122, which is designed to close some of the loopholes, which existed in 2012 laws.

Cory Doctorow has made a submission with the Electronic Frontier Foundation to further expand the right to repair in the state of Massachusetts.[455] He explained that automotive manufacturers had undermined the 2012 legislative regime:

> The manufacturers accomplished this subversion by designing their informatics systems to transmit diagnostics using proprietary wireless interfaces -- which will be present in 90% of cars by 2022 -- that neither consumers nor independent mechanics can readily intercept and decode. Passing HB4122 will amend the Right to Repair regime and ensure that drivers will be able to make their own choices about which mechanics they trust to fix their cars best and at the best price, subjecting auto manufacturers' own repair divisions to much-needed market discipline, forcing them to win their customers' repair business rather than corralling those drivers into manufacturer-approved service depots.

Doctorow maintained that such practices have served to undermine a right to repair. He commented that 'history has shown that vehicle computers depending on secrecy for security are, in fact, frequently vulnerable to hacking.'[456] Doctorow said: 'Information security is absolutely reliant upon independent security researchers probing systems and disclosing what they discover.'[457] He commented 'The manufacturers' desire to monopolize bad news about design defects in their own products is especially dire because it rides on the tails of a strategy of monopolizing service and parts for those products.'[458] Doctorow concludes that the automotive industry 'remains in dire need of competitive discipline, as is evidenced by a

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453 Ibid., 864-5.

454 Ibid., 865.

455 Cory Doctorow, 'Re: HB4122 (Automotive Right to Repair Bill)', Electronic Frontier Foundation, 13 January 2020, https://www.eff.org/files/2020/01/13/eff_hb4122_0.pdf

456 Ibid.

457 Ibid.

458 Ibid.

commercial strategy dominated by reducing public choice, surveilling their own customers and selling their data, and extracting monopoly rents from luckless drivers who are locked into their proprietary ecosystems.'[459]

Almost immediately, the car industry asked to delay the law.[460] The automobile industry has launched litigation against the Massachusetts right to repair legislation.[461] The name of the litigation is *Alliance for Automotive Innovation* v. Maura Healey, *Attorney General of the Commonwealth of Massachusetts* (2020) No. 1:20-cv-12090-DPW.[462] In its complaint, the Alliance for Automotive Innovation made the following arguments:

> Massachusetts's Data Law violates federal law. It is preempted under the Supremacy Clause of the U.S. Constitution because it conflicts with federal law and policy regarding a host of consumer safety and intellectual property protections. It also takes auto manufacturers' private property without providing just compensation in violation of the Fifth Amendment as incorporated by the Due Process Clause of the Fourteenth Amendment.[463]

The group argued: 'Far from protecting consumers, the law puts consumer safety at risk by allowing third parties to access, and modify, that data on auto manufacturers' systems without the manufacturers' authorization.'[464]

The Massachusetts Attorney-General Maura Healey has defended the right to repair, and sought to dismiss the action.[465] In a memorandum of law, the Attorney General observed:

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459 Ibid.

460 Hayley Tsukayama and Cory Doctorow, 'Asleep at the Wheel: Why Didn't Carmakers Prepare for Massachusetts' Right to Repair Law?', *Electronic Frontier Foundation*, 12 November 2020, https://www.eff.org/deeplinks/2020/11/asleep-wheel-why-didnt-carmakers-prepare-massachusetts-right-repair-law

461 Joe Chesto, 'Auto Manufacturers Sue To Block State's New Right-to-Repair Law, After Voters Approved It', *Boston Globe*, 21 November 2020, https://www.bostonglobe.com/2020/11/21/business/auto-manufacturers-sue-block-states-new-right-to-repair-law-after-voters-approved-it/

462 *Alliance for Automotive Innovation* v. Maura Healey, *Attorney General of the Commonwealth of Massachusetts* (2020) No. 1:20-cv-12090-DPW

463 Complaint in *Alliance for Automotive Innovation* v. Maura Healey, *Attorney General of the Commonwealth of Massachusetts* (2020) No. 1:20-cv-12090-DPW

464 Ibid.

465 John Huetter, 'Mass. "Right to Repair" Advocates Confident They'll Overcome Federal OEM Lawsuit', *Repairer Driven News*, 28 December 2020, https://www.repairerdrivennews.com/2020/12/28/mass-right-to-repair-advocates-confident-about-federal-lawsuit/

> The Alliance asserts six claims for implied conflict preemption, but none is viable as a matter of law. Its primary claim, under the Motor Vehicle Safety Act, relies on non-binding agency guidance, which is insufficient to preempt state law. Neither it nor any of the Alliance's other preemption claims establishes an actual conflict between state and federal law, much less satisfies the heavy burden required for facial, pre-enforcement challenges established by the Supreme Court and First Circuit. The Alliance's Takings Clause claim, similarly requires dismissal under Rule 12(b)(6) because the relief it seeks is unavailable as a matter of law (and any claim the Alliance or its members may have to other relief is barred by the Eleventh Amendment from adjudication in this court).[466]

The Attorney-General cautioned: 'This lawsuit is an attempt by the Alliance for Automotive Innovation (the "Alliance"), a trade association for the automotive industry, to undo an initiative petition recently approved by the Massachusetts voters, based in large part on the same cybersecurity policy arguments that the voters rejected at the ballot box.'

In response, the Electronic Frontier Foundation has filed an amicus brief with a range of other organisations, defending the right to repair in Massachusetts.[467] The coalition brief is 24 pages long.[468] In its summary, the brief maintains:

> Plaintiff's breathless invocation of various federal vehicle regulations notwithstanding, the Right to Repair Act of 2020 simply vindicates and extends longstanding consumer protection policies that are historically the province of the states. Massachusetts has stepped into the breach to protect its residents' interests in preserving their vehicles, limiting aftermarket monopolies, enhancing consumer choice and quality of service, growing small businesses, encouraging grassroots innovation, and protecting the environment. And it has done so in a way that complements, rather than conflicts, with federal laws, to the benefit of car owners, repair shops, and the public interest.[469]

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466 Memorandum of Law in support of defendant Attorney General Maura Healey's Motion to Dismiss in *Alliance for Automotive Innovation* v. *Maura Healey, Attorney General of the Commonwealth of Massachusetts* (2020) No. 1:20-cv-12090-DPW

467 Hayley Tsukayama, 'EFF Files Amicus Brief Defending the Right to Repair in Massachusetts', Electronic Frontier Foundation, 9 June 2021, https://www.eff.org/deeplinks/2021/06/eff-files-amicus-brief-defending-right-repair-massachusetts

468 Brief of iFixit, the Repair Association, U.S. PIRG Education Fund Inc., Securepairs.org, the Electronic Frontier Foundation, and Professor Jonathan Askin as Amici Curiae in Support of Defendant in *Alliance for Automotive Innovation* v. Maura Healey, *Attorney General of the Commonwealth of Massachusetts* (2021) No. 1:20-cv-12090-DPW https://www.eff.org/document/eff-amicus-brief-re-automotive-innovation-alliance-v-healey

469 Ibid.

First, the brief observes that the 'Plaintiff incorrectly asserts that the Right to Repair Act is fundamentally incompatible with its regulatory obligations related to cybersecurity and product safety.'[470] Second, the brief comments that the 'Plaintiff's pre-emption claim also depends on a flawed cybersecurity theory.'[471] Third, the brief comments that 'The exceptional importance of the Right to Repair Act to the protection of consumer expectations and interests, particularly against powerful dominant firms that seek to monopolize repair markets, likewise demands close scrutiny of plaintiff's claims'.[472] In conclusion, the brief commented: 'At bottom, plaintiff's preemption argument amounts to a claim that any sufficiently complex regulatory system is a free pass to monopolize the market for repair services and deny consumers full enjoyment of the things that they own.'[473] The brief observed: 'This Court should not impute from the general existence of federal regulation, as a matter of law, a prohibition on legislative enhancements to the right to repair.'[474]

ii. California

In California. Susan Talamantes Eggman, a Democrat from Stockton, has introduced a right of repair bill, saying: 'The Right to Repair Act will provide consumers with the freedom to have their electronic products and appliances fixed by a repair shop or service provider of their choice, a practice that was taken for granted a generation ago but is now becoming increasingly rare in a world of planned obsolescence.'[475] Mark Murray, executive director of Californians Against Waste, supported the bill: 'People shouldn't be forced to "upgrade" to the newest model every time a replaceable part on their smartphone or home appliance breaks.'[476] Kit Walsh, the Senior Staff Attorney with the Electronic Frontier Foundation, commented: 'This bill is critical to protect independent repair shops and a competitive market for repair, which

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470 Ibid.

471 Ibid.

472 Ibid.

473 Ibid.

474 Ibid.

475 Jason Koebler, 'The Right to Repair Battle Has Come to Silicon Valley', *Motherboard*, 8 March 2018, https://motherboard.vice.com/en_us/article/8xdp94/right-to-repair-california-bill

476 Ibid.

means better service and lower prices.'[477] Maureen Mahoney, a Policy Analyst for Consumers Union, thanked Assembly member Eggman for 'her efforts to ensure consumers have the choice to fix their own electronic devices or have them fixed by an independent repair servicer.'[478] Apple, Microsoft, John Deere, and AT&T and trade associations have lobbied against the introduction of right of repair legislation in the United States.

iii. New York

In June 2021, the New York Senate passed a landmark right to repair bill on a 51 to 12 vote.[479] Senate Bill S4014 enacts the Digital Fair Repair Act.[480] This legislation will require original equipment manufacturers (OEM) to make diagnostic and repair information for digital electronic parts and equipment available to independent repair providers and consumers if such parts and repair information are also available to OEM authorized repair providers.

iv. Hawaii

The State of Hawaii has been considering a right to repair bill – HB1884 and SB2496.[481] The House of Representatives received a range of testimony.[482]

There was opposition from American Machinery – an agriculture and construction dealership, seemingly focused on John Deere equipment.[483] Likewise Hawaii dealers of construction and farm equipment – CNH Industrial, Case IH and New Holland – opposed the

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477 Ibid.

478 Ibid.

479 Nathan Proctor, 'Right to Repair Shows No Signs of Slowing Down', US PIRG, 18 June 2021, https://uspirg.org/blogs/blog/usp/right-repair-shows-no-signs-slowing-down#.YM2HydfYxt0.twitter

480 Senate Bill S4104 https://www.nysenate.gov/legislation/bills/2021/S4104

481 *Relating to the Model State Right-to-Repair Law 2020* (Hawaii) HB1884 and SB2496 https://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=HB&billnumber=1884&year=2020 and https://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=SB&billnumber=2496&year=2020

482 Testimony to the Hawaii State House https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

483 American Machinery, 'Testimony in opposition to HB 1884', Hawaii State House, 30 January 2020, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

right to repair legislation.[484] HawthorneCat – a Caterpillar Inc. dealer in construction, agricultural, mining and power generation applications – argued that the legislation was focused on mass-produced consumer electronics, and was unsuitable for capital goods.[485]

The Entertainment Software Association was an opponent to the state right to repair law.[486] The Association maintained that the right to repair would encourage a flood of intellectual property infringement: 'ESA believes that "right to repair" legislation – or any actions that weaken copyrighted protections – open the floodgates of mass infringement and threatens the economic input that the video game industry provides to our nation.'[487]

The Cellular Telecommunications Industry Association (CTIA) was an opponent to the right to repair bill: 'This legislation would harm the marketplace by weakening the relationship that manufacturers have with authorized repair facilities and provides no protection or quality assurance for consumers.' [488]

The Consumer Technology Association opposed the legislation, maintaining that it was unnecessary: 'Making sure devices are kept out of the trash is an important priority for manufacturers, so repair and reuse are important elements of manufacturers' networks.' [489]

An alliance of original equipment manufacturers objected to the bill – arguing the right to repair would undermine consumer safety and consumer security.[490] They also maintained that HB1884 would imagine upon their intellectual property because it mandated the disclosure

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484 CNH Industrial, 'Hawaii HB1884: Relating to the Model State Right to Repair Law', Hawaii State House, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

485 Hawthorne Cat, 'Comment on HB 1884', 29 January 2020, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

486 Entertainment Software Association, 'RE: Testimony in Opposition to HB 1884, Relating to the Model State Right-to-Repair Law', Hawaii State House, 28 January 2020, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

487 Ibid.

488 Cellular Telecommunications Industry Association (CTIA), 'Opposition to Hawaii House Bill 1884 - Before the House Committee on Consumer Protection & Commerce', Hawaii State House, 29 January 2020, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

489 Consumer Technology Association, 'Re: CTA Comments on HB 1884 – Oppose', Hawaii State House, 29 January 2020, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

490 Electronic Manufacturers Opposition, 'Re: Electronics Manufacturers Opposition to House Bill 1884', Hawaii State House, 29 January 2020, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

of protected proprietary information: 'Providing unauthorized repair facilities and individuals with access to proprietary information without the contractual safeguards currently in place between OEMs and authorized service providers places OEMs, suppliers, distributors and repair networks at risk.'[491] In their view, the legislation would undermine copyright, technological protection measures, and confidential information held by the original equipment manufacturers.

Elon Musk's Tesla opposed HB 1884 on safety grounds.[492] The company maintained:

> Tesla's mission is to accelerate the world's transition to sustainable energy through the deployment of electric vehicles and sustainable energy products, like storage and solar energy systems. Based on the definitions in this bill, Tesla's current understanding is that while Tesla vehicles would be exempt from the bill's requirements, our energy products, which appear to meet the definition of "digital electronic equipment" would be subject to this measure's provisions.[493]

The company argued: 'Given the nature of the products Tesla manufactures and installs, all of which involve high voltage systems that interact with the utility distribution or transmission system, Tesla is very concerned that this bill will create significant safety issues if untrained customers and third parties are allowed, and, pursuant this bill, effectively encouraged, to provide repair services.'[494] In the alternative, the company argued: 'At a minimum, we ask that an exemption be provided to high voltage equipment generally given the significant safety issues involved.'[495]

The Medical Imaging & Technology Alliance opposed the right to repair bill, complaining that it was overly broad in its reach: 'This legislation would affect a wide range of sophisticated, medically essential equipment under the classification and oversight of the FDA, including but not limited to magnetic resonance imaging, ultrasound, computed

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491 Ibid.

492 Tesla, 'Testimony Regarding HB 1994', Hawaii State House, 30 January 2020, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

493 Ibid.

494 Ibid.

495 Ibid.

tomography, x-ray, and PET systems.'[496] The Alliance requested a clear exemption for medical devices.

The Advanced Medical Technology Association (AdvaMed) also opposed the bill, objecting that right to repair legislation could 'jeopardize patient safety and quality of care.'[497] The Association called for the addition of a rider, which would exclude medical devices: 'Nothing in this section applies to manufacturers or distributors of a medical device as defined in the federal food, drug, and cosmetic act (21 U.S.C. Sec. 301 et seq.) or a digital electronic product or software found in a medical setting including diagnostic, monitoring, or control equipment or any product or service that they offer.'[498]

By contrast, Sodexo – which managed and provided maintenance services for medical equipment – supported the bill: 'For us to continue providing our valuable services to healthcare providers, it is essential that we have access to the necessary information and materials (i.e., manuals, diagnostic software, tools and parts), which some manufacturers decline to provide'.[499] The company contended: 'In order to ensure safe and cost-effective care for patients, we urge you to support and pass the Right to Repair legislation inclusive of medical equipment in your state.'[500]

Nathan Proctor – the National Right to Repair Campaign Director for US PIRG, expressed its support for the right to repair legislation: 'We believe this legislation is a common-sense step to cut consumer costs and decrease waste.'[501] Proctor claimed: 'Manufacturers are using their power in the marketplace to make things harder to repair, and as a resultwe generate way too much waste.'[502] He observed: 'Electronic waste is the fastest

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496 Medical Imaging & Technology Alliance, 'Re: Opposition to H.B. 1884', Hawaii State House, 30 January 2021, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

497 Advanced Medical Technology Association, 'Submission on HB 1884', Hawaii State House, 29 January 2019, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

498 Ibid.

499 Sodexo, 'Subject: Right to Repair/ Fair Repair Legislation', Hawaii State House, 20 January 2019, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

500 Ibid.

501 Nathan Proctor, 'Memorandum of Support for Right to Repair/ Fair Repair Legislation HB 1884', Hawaii State House, 29 January 2020, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

502 Ibid.

growing waste stream on the planet and our ability to process waste is not keeping up'.[503] Proctor maintained: "Right to Repair" laws are an important tool to slow the creation of waste by bringing more competition to the repair marketplace and allowing consumers to keep their stuff in use and out of the trash.'[504]

AscdiNatd – a trade association for buyers, sellers of IT and telecom equipment – argued: 'When repair is readily available, technology equipment carries long-term value and can remain in use for decades, long beyond the last date of support from any manufacturer.'[505] The Association argued: 'Without independent repair, costly investments in technology lose all value the moment the manufacturer stops providing support.'[506]

Jim Crum of Geeks for Good supported the bill 'because it is critical to businesses like mine and consumers in rural and remote places like Hawaii, especially the Hamakua Coast on the Big island.'[507] He maintained: 'We need to be empowered to repair items that we own that are essential to our way of life.'[508] Jim Crum of Geeks for Good commented:

> I have often had trouble getting quality tech support, documentation, and specialized parts from hardware manufacturers over the years. Recently, I have seen a real move toward a model of manufacturers pushing replacement rather than repair, with some keeping a very tight reign on special tools or parts that are only available from the manufacturer directly at what seems to me to be an inflated price. As a result, it's getting harder and harder for me to fix machines and empower my customers to repair theirs because of what the manufacturers have started to do -- block access to parts, tools, certain updates, and sometimes needed diagnostics and schematics.[509]

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503 Ibid.

504 Ibid.

505 Joseph Marion, 'Memorandum of Support for Right to Repair / Fair Repair Legislation', AscdiNatd, 4 January 2020, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

506 Ibid.

507 James Crum, Geeks for Good and Tinyville Farm, 'Testimony on the Right to Repair to the Committee on Consumer Protection and Commerce', Hawaii State House, 29 January 2020, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

508 Ibid.

509 Ibid.

Jim Crum of Geeks for Good concluded: 'Passing this bill would help my company and others like it in Hawaii, help businesses and consumers cut costs and do their own repairs if they are so inclined, and help us keep equipment from becoming electronic waste.'[510]

Michael Nale – a repairer with Android Hawaii and Phonlab – also supported the bill: 'Without Right to Repair, my business could be crippled, and consumers would be exposed to unfair prices and poor service.'[511]

The Repair Association and a number of independent repairers also made submissions.[512] The Repair Association contended:

> The impact on consumers, business, agriculture, education, industry, medicine and the environment is profound. Without choice of repair other than from the manufacturer, including the option of self-repair, every individual and every organization are being forced to discard products and buy new on terms and conditions they no longer control. The result is that our homes, schools and businesses are filled with electronics we can't fix—and our repair options are dwindling. Meanwhile, we have a shrinking number of technicians who can keep our electronics going. This bill will help turn this tide.[513]

The Repair Association maintained: 'Competition drives fair pricing, creates incentives for excellence in service and availability, and stimulates innovations throughout the marketplace.' In its view, 'There aren't any markets made better by monopolies, including the market for repair.'[514]

Hayley Tsukayama of the Electronic Frontier Foundation contended: 'Establishing a right to repair in Hawaii would make it easier for people to fix their broken devices or take them to a trusted, local repair shop, rather than having to throw them away and buy new

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510 Ibid.

511 Michael Nale, 'Submission on the Right to Repair HB 1884', Hawaii State House, 29 January 2020, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

512 Repair.org, 'Memorandum of Support for Right to Repair / Fair Repair Legislation', Hawaii State House, 4 January 2020, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

513 Ibid

514 Ibid.

ones.'[515] In her view 'That's good for Hawaii's environmental concerns, Hawaii's businesses, and for all Hawaiians'.[516]

The committees on CPC recommended that the measure be passed, with amendments. The vote was 8-0 with 3 excused.[517]

Summary

Considering such state-based initiatives in 2020, Professor Leah Chan Grinvald and Associate Professor Ofer Tur-Sinai have commented upon this movement:

> The right to repair movement in the United States is to be applauded for its tenacity and success to date. By focusing on the consumer aspects of repair, the movement has been able to tap into the latent "purchaser-citizen" sentiment that American consumers have been schooled to feel and amass broad support for its call to action.[518]

Grinvald and Tur-Sinai have cautioned 'that even if such legislation were to pass, effective implementation and enforcement of such right would run into intellectual property-based obstacles.'[519] They commented: 'Such obstacles need to be dealt with in order for a comprehensive and effective right to repair to be realised.'[520]

Professor Aaron Perzanowski has conducted empirical research on American consumer perceptions of the right to repair.[521] He concludes from his survey that 'the data presented here demonstrate that consumers expect and value the right to repair the products they buy'.[522] He

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515 Hayley Tsukayama of the Electronic Frontier Foundation, 'Re: National Support for Right to Repair Legislation', Hawaii State House, 21 November 2019, https://www.capitol.hawaii.gov/Session2020/Testimony/HB1884_TESTIMONY_CPC_01-30-20_.PDF

516 Ibid.

517 Kevin O'Reilly, 'Hawaii Committee Votes Unanimously to Advance Right to Repair', USPIRG, 31 January 2020, https://uspirg.org/blogs/blog/usp/hawaii-committee-votes-unanimously-advance-right-repair

518 Leah Chan Grinvald and Ofer Tur-Sinai, 'The Right to Repair: Perspectives from the United States' (2020) 31 *Australian Intellectual Property Journal* 98-110.

519 Ibid., 110.

520 Ibid., 110.

521 Aaron Perzanowski, 'Consumer Perceptions of the Right to Repair' (2021) 96 (2) *Indiana Law Journal* 361-394.

522 Ibid., 394.

contends that there is a disjuncture between consumer expectations and legal practices and policies: 'But the practices and policies adopted by device makers—from product design and pricing to contract terms and assertions of intellectual property rights—interfere with those expectations.' [523] Aaron Perzanowski contends: 'The right to repair bills pending in states around the country would help ensure the availability of parts, tools, and information crucial to a functioning independent repair market.' [524] In his view, 'establishing a robust right to repair will require lawmakers, courts, and regulators to confront the full range of repair restrictions and to adopt more aggressive, multifaceted policy interventions to fully protect the interests of consumers.' [525]

B. Federal Debate

I. Federal Trade Commission Inquiry

The Federal Trade Commission has hosted a workshop on the right to repair. There were a range of submissions made to this inquiry.

Microsoft made a submission to the FTC discussion on the right to repair.[526] Microsoft contends that there is no need for a right to repair as the market itself can deal with such matters:

> Microsoft has compelling economic incentives to make sure that its customers remain satisfied with the aesthetics, functionality, safety, and security of our devices and that any repairs are completed promptly, effectively, and safely. A competitive and innovative market in which device design choices are driven by consumer demand and preferences and market competition and innovation will provide consumers with the most choice and empower them to use their purchasing power to select the devices that possess the features that they value most highly.[527]

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523 Ibid., 394.

524 Ibid., 394.

525 Ibid., 394.

526 Duane Pozza, 'Comment submitted by Microsoft Corporation on the Right to Repair', Federal Trade Commission, 31 May 2019, https://www.regulations.gov/document?D=FTC-2019-0013-0012

527 Ibid.

The company contends: 'Microsoft strives to design repairable and sustainable devices, but consumers also demand features that drive design choices which may have the effect of impacting or impeding repairability.'[528]

GE Appliances maintained that appliance manufacturers have legitimate product safety concerns for establishing authorised service networks:

> Today's home appliances offer consumers a variety of increasingly innovative products, including smart features. Service of today's appliances requires more than minimal technical competence to ensure technician's safety as well as the appliance's continued safe operation.[529]

The company maintains: 'GEA is committed to ensuring cost effective and comprehensive service coverage for home appliances through our network of Factory Service technicians and authorized independent servicers.'[530]

The Telecommunications Industry Association[531] contends that manufacturers have safety and economic interests for establishing repair networks:

> Manufacturers have legitimate interests in establishing requirements for product repair and facilitating a robust repair network. Paramount among these is ensuring customer safety. Devices connected to the Internet of Things offer consumers a broad range of benefits, but part of the nature of connected devices is a potential risk to a consumer's privacy. Through repair networks and authorized affiliates, manufacturers help protect consumer privacy and data security by limiting the ability of employees to access customer data and by contractually prohibiting the use of customer data for any purpose outside of product repair. By limiting the access and use of customer data, established repair networks help ensure that customer privacy remains uninfringed.[532]

The Association contends that manufacturers also have a business interest in the protection of their intellectual property: 'Manufacturers make significant investments in the development of

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528 Ibid.

529 Michael Del Negro, 'Comment Submitted by GE Appliances (a Haier company) on the Right to Repair', Federal Trade Commission, 17 September 2019, https://www.regulations.gov/document?D=FTC-2019-0013-0081

530 Ibid.

531 Colin Andrews, 'Comment Submitted by Telecommunications Industry Association on the Right to Repair', Federal Trade Commission, 16 September 2019, https://www.regulations.gov/document?D=FTC-2019-0013-0072

532 Ibid.

software, products and services, and any requirement for manufacturers to provide this information to non- affiliated independent repair shops increases the likelihood of trade secrets becoming public knowledge.'[533]

The Consumer Technology Association have been opponents of the right to repair.[534] The Association contends: 'The goal of each CTA member is to satisfy the consumer; initially by building high quality, reliable products, and then by ensuring that products are, when necessary, repaired or replaced in a technically proficient, safe, and secure manner'.[535] The Association maintains: 'CTA members have and will continue to make investments in their repair networks in order to better achieve that goal, to the benefit of American consumers and the broader economy.'[536]

The Open Markets Institute argued that the right to repair would help protect and restore open, competitive aftermarkets.[537]The Institute was concerned about the growth of monopolies in the space of aftermarkets:

> Manufacturers of many products have used restraints of trade and monopolistic practices to dominate aftermarkets. Indeed, this manufacturer domination of aftermarkets appears to be the rule, not the exception. Manufacturers in practically every market use numerous tactics to monopolize aftermarket parts and repair services for their products. From cellphones to combines and vehicles to video game consoles, consumers' ability to repair their goods is restricted, at times destabilizing the very notion of ownership. Monopolization of repair markets chokes off opportunities for small businesses, drives up the costs for repairs, increases wait times, and results in the underserving of many communities. Manufacturer control of aftermarkets can discourage or prevent repair altogether, pushing consumers to buy new products and send more goods to landfills.[538]

The Open Markets Institute argued that the FTC should use its considerable competition powers to address the problems in aftermarkets: 'FTC has significant power to address this

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533 Ibid.

534 Walter Alcorn, 'Comment Submitted by Consumer Technology Association on the Right to Repair', Federal Trade Commission, 17 September 2019, https://www.regulations.gov/document?D=FTC-2019-0013-0078

535 Ibid.

536 Ibid.

537 Sandeep Vaheesan, 'Comment submitted by the Open Markets Institute on Restoring an Open Marketplace for Product Repairs', Federal Trade Commission, 16 September 2021, https://www.regulations.gov/document?D=FTC-2019-0013-0084

538 Ibid.

problem using its antitrust authorities and should put this power to use.'[539] The Open Markets Institute contended: 'By attacking manufacturer practices that limit competition in the aftermarkets for parts and service, the FTC, together with other policymakers at the federal and state level, can play an important role in restoring the public's right to repair.'[540]

Military personnel Lucas Kunce and Elle Ekman contended that the right to repair also affected military contracting and maintenance.[541] They commented that the military were affected by issues related to the right to repair as well:

> The right to repair issue and its constituent problems affect all consumers of goods and services in this country, including the federal government and the military. Because of the "reinvention of government" in the 90s, the rising of acceptance of commercial practices, consolidation of industry both at large and in the defense sector, and diminished marketplace presence and influence, the federal government and military find themselves in the same weak negotiating position as individual Americans regarding warranties and the right to repair.[542]

They observed that there were issues for the military in dealing with trouble-shooting digital technologies: 'New equipment increasingly incorporates electronics, and diagnostic software and data needed to trouble shoot is either not available for procurement or not procured because of the up-front procurement cost.'[543] They commented: 'The costs saved up-front are then absorbed during the equipment's life-cycle and are manifested in increased Marine man-hours spent trouble-shooting and repairing equipment because Marines do not possess all of the tools and diagnostic equipment that would help them do maintenance more efficiently.'[544]

Moreover, they observed that there were also issues in terms of 3D printing technology:

> Marines possess capabilities to fabricate, machine, and manufacture repair parts using a variety of tools (e.g., water-jets, CNC mills). While creating parts can save money and time, these parts either need to be reverse engineered or made according to manufacturer specifications. Often, those specifications are cost-prohibitive or Marines are not allowed to create the part due to manufacturer restrictions. As the

539 Ibid.

540 Ibid.

541 Major Lucas Kunce and Captain Elle Ekman, 'Comment submitted by two Active Duty Marine Officers on the Right to Repair', Federal Trade Commission, 16 September 2019, https://www.regulations.gov/document?D=FTC-2019-0013-0074

542 Ibid.

543 Ibid.

544 Ibid.

> Marine Corps continues to expand its capabilities in additive manufacturing (i.e., 3D printing capabilities18), part manufacturing will continue to face vendor-induced obstacles. These obstacles will prevent Marines from repairing equipment if a part is unavailable due to supply chain issues in austere environments.[545]

The military personnel conclude: 'Overall, Marines are less capable of repairing equipment in extreme circumstances because they are not allowed to repair the equipment during regular operations and do not have the tooling, diagnostic equipment or diagrams, or hands-on experience.'[546]

Crash Course contended that the automobile industry would be challenged by new technological trends.[547]

In May 2021, the Federal Trade Commission published *Fixing the Nix: An FTC Report to Congress on Repair Restrictions*.[548] The report noted:

> Congressional interest in the competition and consumer protection aspects of repair restrictions is timely. Many consumer products have become harder to fix and maintain. Repairs today often require specialized tools, difficult-to-obtain parts, and access to proprietary diagnostic software. Consumers whose products break then have limited choices.[549]

The report observed that 'the burden of repair restrictions may fall more heavily on communities of color and lower-income communities.'[550] The reported commented: 'Many Black-owned small businesses are in the repair and maintenance industries, and difficulties facing small businesses can disproportionately affect small businesses owned by people of color.'[551]

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545 Ibid.

546 Ibid.

547 Crash Course, 'Comment on the Right to Repair', Federal Trade Commission, 6 December 2019, https://www.regulations.gov/document?D=FTC-2019-0013-0092

548 Federal Trade Commission, *Nixing the Fix: An FTC Report to Congress on Repair Restrictions*, Washington DC: Federal Trade Commission, May 2021, https://www.ftc.gov/reports/nixing-fix-ftc-report-congress-repair-restrictions

549 Ibid., 3.

550 Ibid., 3.

551 Ibid., 3.

The Federal Trade Commission observed: 'The pandemic has exacerbated the effects of repair restrictions on consumers.'[552] In particular, the Federal Trade Commission stressed: 'The pandemic also has revealed a drastic shortage in the availability of new laptops for students.'[553]

The Federal Trade Commission concluded: 'Based on a review of comments submitted and materials presented during the Workshop, there is scant evidence to support manufacturers' justifications for repair restrictions.'[554] The Federal Trade Commission commented: 'Moreover, the specific changes that repair advocates seek to address manufacturer repair restrictions (e.g., access to information, manuals, spare parts, and tools) are well supported by comments submitted for the record and testimony provided at the Workshop'. [555] The Federal Trade Commission commented: 'While the car manufacturing industry has taken important steps to expand consumer choice, other industries that impose restrictions on repairs have not followed suit.' [556] The Federal Trade Commission has promised agency action: 'The Commission will consider reinvigorated regulatory and law enforcement options, as well as consumer education.'[557] Moreover, the Federal Trade Commission commented that it was willing to work with state and federal legislators to boost the right to repair.

II. *Critical Medical Infrastructure Right-to-Repair Act* 2020 (US)

In 2020, there was discussion in the United States about the need to address the right to repair in light of the public health emergency in respect of the coronavirus.

Digital rights activist Cory Doctorow has contemplated the right to repair in the times of the COVID-19 pandemic.[558] He considered the local 3D printing of replacement parts for ventilators in a hospital in Brescia, Italy, and the ensuing controversy over intellectual property and the right to repair. Doctorow considers the response of the Maker Movement to the COVID-19 crisis:

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552 Ibid., 4.

553 Ibid., 4.

554 Ibid., 6.

555 Ibid., 6.

556 Ibid., 6.

557 Ibid., 6.

558 Cory Doctorow, 'Right to Repair in Times of Pandemic', Electronic Frontier Foundation, 19 March 2020, https://eff.org/deeplinks/2020/03/right-repair-times-pandemic

> The global supply-chain shutdown has revealed the fragility of long distance, complex manufacturing systems that are organized around central hubs that represent points of critical failure. The surge in open source hardware designs and parts for medical equipment during the emergency represents a distributed, urgently needed decentralization of our world's critical manufacturing capacity. Even as these distributed efforts reduce the hazards of failing health systems, they have the potential to create their own hazards. The best way to ensure that emergency repairs and modifications are safe is for original manufacturers to cooperate with community technicians. Indeed, that's the only way—we can't simply leave our hospitals undersupplied or sitting on broken hardware until the emergency has passed.[559]

Doctorow emphasized: 'The right person to decide whether a field repair should be attempted, and whether the repair is solid enough to rely upon are medical professionals, not the shareholders of med-tech companies or the lawyers who write their terms of service and patent applications.'[560] He contended: 'We are all like farmers now—isolated, with machinery that we can't afford to let sit idle until a distant company can help us repair it.'[561] Doctorow maintained: 'Today, we need those companies to step up by providing repair instructions, specifications, and technical aid to the global volunteer corps of makers and fixers who have given themselves over to helping us all weather this calamity.'[562]

A number of civil society groups – including US PIRG, Repair.Org and iFixit – supported a petition for a right to repair. The petition read: 'U.S. hospitals do not have enough ventilators to meet the spike in cases of respiratory failure that the novel coronavirus is projected to create.'[563] The petition emphasized that 'it will become critical to remove barriers to repairing ventilators' and 'we may need to repair older reserve ventilators so they can be put into service.'[564] The petition demanded: 'I urge you to immediately release service information - manuals, access to error logs and diagnostic information or other repair resources - for hospital ventilators to help our hospitals combat the coronavirus'.[565]

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559 Ibid.

560 Ibid.

561 Ibid.

562 Ibid.

563 Mark Morgenstein and Nathan Proctor, '43,000 Call on Ventilator Manufacturers to Release Repair Information', MoPIRG. 3 April 2020, https://mopirg.org/news/usp/43000-call-ventilator-manufacturers-release-repair-information

564 Ibid.

565 Ibid.

Nathan Proctor, Right to Repair campaign director with U.S. PIRG, said: 'Right now, ventilator repair and maintenance issues are life and death issues.'[566] He contended: 'Manufacturers of ventilators should immediately release service manuals, service keys, schematics and service keys. Lives are at stake. This is no time to be proprietary.'[567] Proctor commented: 'From removing barriers to repair to ramping up production, there are steps we must take now to maximize ventilator supply and save lives.'[568] Kevin O'Reilly of PIRG added: 'There is no reason we should tolerate manufacturers putting their own proprietary concerns over patient safety - especially during the pandemic.'[569] He called for Congressional recognition of the right to repair: 'Passing this bill is an easy, common-sense way for the Senate to help hospitals in their time of need, and a terrific first step towards a permanent solution.'[570]

Gay Gordon-Byrne of Repair.org commented: 'We've been fighting for our right to repair medical technology since our founding seven years ago'. [571] The executive director argued: The coronavirus pandemic has proven that manufacturer restrictions on access to repair information and technicians is a recipe for disaster.'[572]

Kyle Wiens, iFixit.com CEO, commented: 'A single hospital might have ventilators made by four different manufacturers and it can be a headache trying to find the right information, so iFixit is trying to help make that easier'.[573] He observed: 'We want to make sure that a technician doesn't have to hunt for these manuals -- every second counts right now.'[574]

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566 Mark Morgenstein and Nathan Proctor, '43,000 Call on Ventilator Manufacturers to Release Repair Information', MoPIRG. 3 April 2020, https://mopirg.org/news/usp/43000-call-ventilator-manufacturers-release-repair-information

567 Ibid.

568 Ibid.

569 Ron Wyden, 'Wyden and Clarke Introduce Bill to Eliminate Barriers to Fixing Critical Medical Equipment During the Pandemic', Press Release, 6 August 2020, https://www.wyden.senate.gov/news/press-releases/wyden-and-clarke-introduce-bill-to-eliminate-barriers-to-fixing-critical-medical-equipment-during-the-pandemic-

570 Ibid.

571 Mark Morgenstein and Nathan Proctor, '43,000 Call on Ventilator Manufacturers to Release Repair Information', MoPIRG. 3 April 2020, https://mopirg.org/news/usp/43000-call-ventilator-manufacturers-release-repair-information

572 Ibid.

573 Ibid.

574 Ibid.

Kathleen Burke of Public Knowledge was concerned about the relationship between intellectual property and the right to repair during the COVID-19 crisis:

> During the peak of the COVID-19 crisis in Italy, hospitals struggled to find official replacement valves for their ventilators, and eventually partnered with a 3D printing company to make unofficial replacement valves. California needed to refurbish out-of-service ventilators; after failing to get quick results from official repair providers, California ultimately turned towards the tech entrepreneurs in its own backyard to find a solution Even though the state-of-emergency has made such measures necessary, it still has not stopped IP protectionists from clamoring that such measures are wrong and illegal. If even hospitals and states during a state-of-emergency face outcry over side-stepping IP barriers to repairing goods that they own, then we have obviously created a system that is broken.[575]

Burke maintained: 'As we rethink how our world is shaped in light of COVID-19, making sure consumers have a meaningful right to repair is one issue space that can help ensure our world is more sustainable.'[576] John Bergmayer, Legal Director at Public Knowledge, supported the call for legislative action: 'Especially during the pandemic, it's important that medical services aren't interrupted by expensive, slow, and unnecessary service requirements.'[577]

There has been concerns that intellectual property owners have been hampering repairs in respect of critical medical infrastructure and equipment during the COVID-19 pandemic.[578]

Democrats – Oregon Senator Ron Wyden and New York Representative Yvette D. Clark - have introduced right to repair legislation in the Senate and the House that would make it easier for hospitals to fix medical equipment during the COVID-19 pandemic.[579]

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575 Kathleen Burke, 'COVID-19 Highlights Why IP Shouldn't Limit the Right to Repair', Public Knowledge, 22 May 2020, https://www.publicknowledge.org/blog/covid-19-highlights-why-ip-shouldnt-limit-the-right-to-repair/

576 Ibid.

577 Shiva Stella, 'Public Knowledge Applauds Bill Protecting the Public's Right To Repair During Health Crisis', Press Release, 6 August 2020, https://www.publicknowledge.org/press-release/public-knowledge-applauds-bill-protecting-the-publics-right-to-repair-during-health-crisis/

578 Matthew Gault and Jason Koebler, 'Congress Will Consider National Right-to-Repair Legislation for Medical Equipment', *Vice*, 6 August 2020, https://www.vice.com/en/article/akzyy5/congress-will-consider-national-right-to-repair-legislation-for-medical-equipment

579 Ron Wyden, 'Wyden and Clarke Introduce Bill to Eliminate Barriers to Fixing Critical Medical Equipment During the Pandemic', Press Release, 6 August 2020, https://www.wyden.senate.gov/news/press-releases/wyden-and-clarke-introduce-bill-to-eliminate-barriers-to-fixing-critical-medical-equipment-during-the-pandemic-

Oregon Senator Ron Wyden maintained: 'There is no excuse for leaving hospitals and patients stranded without necessary equipment during the most widespread pandemic to hit the U.S. in 100 years.'[580] He commented: 'It is just common sense to say that qualified technicians should be allowed to make emergency repairs or do preventative maintenance, and not have their hands tied by overly restrictive contracts and copyright laws, until this crisis is over.'[581]

New York Representative Yvette D. Clarke observed: 'As America grapples with this lethal pandemic, we are also experiencing unprecedented shortages of medical equipment.'[582] She contended: 'This narrowly-tailored, common-sense, and time-limited bill will ensure critical medical items like ventilators do not go to waste due to maintenance restrictions that have no nexus to safety.'[583] Clarke contended: 'During this health crisis, we must do everything in our power to expand access to life-saving devices.'[584]

The United States Congress has been considering the *Critical Medical Infrastructure Right-to-Repair Act* 2020 (US).[585]

The legislation is a bill 'To amend title 17, United States Code, to address circumvention of copyright protection systems with respect to the maintenance or repair of critical medical infrastructure, and for other purposes.' Section 1 provides that the short title of the Act is the *Critical Medical Infrastructure Right-to-Repair Act* of 2020. Section 2 provides definitions in respect of the bill – including in respect of the terms 'commerce', 'covered emergency', 'covered service provider', 'critical medical infrastructure', and 'repair' and 'service material' as well as 'critical media infrastructure contract', 'service provider', and 'trade secret'. Section 3 provides for a new clause in the Copyright Act – section 123, which would provide for a 'Limitation on exclusive rights: incidental copies of service materials made during maintenance or repair of critical medical infrastructure'. Section 3 also provides for an amendment to section 1201 of the *Copyright Law* to allow for the permissible circumvention of a technological protection measure 'to repair or maintain critical medical infrastructure with

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580 Ibid.

581 Ibid.

582 Ibid.

583 Ibid.

584 Ibid.

585 *Critical Medical Infrastructure Right-to-Repair Act* of 2020 (US) H.R. 7956 introduced 08/07/2020 https://www.congress.gov/bill/116th-congress/house-bill/7956; and *Critical Medical Infrastructure Right-to-Repair Act* of 2020 (US) S. 4473 introduced 08/06/2020 https://www.congress.gov/bill/116th-congress/senate-bill/4473

respect to that covered healthcare provider' as 'part of preparation for, or a response to, the covered emergency.'

Section 4 of the legislation amends Section 271 of the design patents regime. In the new legislative provision, 'It shall not be an act of infringement with respect to a patent for design obtained under section 171 for a covered healthcare provider to fabricate a part on a non-commercial basis, and as needed, for the repair or maintenance of critical medical infrastructure with respect to that covered healthcare provider, if the repair or maintenance is part of a response to the covered emergency.'

Section 5 deals with contracts. The new provision seeks to prevent the contracting out of the right to repair: 'Notwithstanding any other provision of law or regulation, a provision of a critical medical infrastructure contract is null and void if that provision of the critical medical infrastructure contract prohibits or restricts the ability of a covered healthcare provider that is a party to the contract to, in response to the covered emergency, repair or maintain critical medical infrastructure with respect to the covered healthcare provider.'

Section 6 focuses on manufacturer requirements.

Section 7 calls for further study of the topic. The legislation requires that: 'The Chairman of the Federal Trade Commission, in consultation with the Register of Copyrights and the Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office, shall conduct a study regarding the impact and effectiveness of this Act, and the amendments made by this Act, with respect to innovation and anticompetitive practices in the market for critical medical infrastructure, including enforcement with respect to those practices.'

The House bill has been referred to the House of Representatives Committee on the Judiciary, and in addition to the Committee on Energy and Commerce. The Senate Bill has been referred to the Senate Committee on the Judiciary.

Oregon Senator Ron Wyden wrote an op-ed with the President of the American College of Clinical Engineering, Ilir Kullolli, on the need for the United States Congress to support the bill.[586] They highlighted: 'As the crisis continues, concerns about the maintenance of critical medical equipment, including X-ray machines, dialysis machines, and ventilators, are

[586] Ron Wyden and Ilir Kullolli, 'Hospitals Need to Be Able to Repair Their Own Medical Equipment', *Future Tense*, *Slate*, 12 October, 2020 https://slate.com/technology/2020/10/critical-medical-infrastructure-right-to-repair-act-ventilators.html

growing.'[587] Wyden and Kullolli discuss some of the barriers and obstacles to repair of medical equipment during the coronavirus public health emergency. They despaired: 'Too many hospitals face long waits for authorized technicians to repair life-saving machines.'[588] They lamented: 'A recent study shows that an overwhelming majority of repair technicians have been blocked from making critical repairs as a result of manufacturer restrictions.'[589] Wyden and Kullolli commented:

> This commonsense legislation would allow trained repair technicians to more easily access the information and tools they need to fix and maintain critical medical infrastructure during the COVID-19 crisis. The legislation has been endorsed by rural doctors and health care providers, as well as repair technicians across the country—from the Colorado Association of Biomedical Equipment Technicians, to Maine General Medical Center.[590]

Wyden and Kulloli denied that the legislative regime would adversely affect safety standards: 'The Food and Drug Administration, the Centers for Medicare and Medicaid Studies, and other federal agencies would continue to enforce those rules.'[591]

Wyden and Kullolli also supported a more general right of repair: 'While this bill is focused on addressing the pandemic-induced emergency facing medical infrastructure, Americans should always have the right to repair the vehicles, tools, and devices they own'.[592] They hoped that there would be a right to repair in the field of agriculture: 'If a farmer's tractor breaks down, they should have the right to go to any qualified mechanic, instead of being locked-in to paying higher prices at dealerships.'[593] They also noted: 'Americans should be able to buy generic-brand replacement printer cartridges or go to independent phone repair technicians.'[594] Wyden and Kullolli commented: 'Our hope that this legislation serves as the first step toward establishing a new balance that strikes down unnecessary obstacles to home

587 Ibid.

588 Ibid.

589 Ibid.

590 Ibid.

591 Ibid.

592 Ibid.

593 Ibid.

594 Ibid.

repair—everything from tractors to electronics—while continuing to allow manufacturers to innovate and thrive.'[595]

Rural health care and public interest advocates supported the bill. [596] Alan Morgan, CEO of the National Rural Health Association said: 'As COVID-19 surges across rural America, rural providers must have the rapid ability to maintain effective and operational equipment.'[597] He commented: 'This common-sense approach will enable rural providers caring for COVID patients to keep lifesaving equipment operating during this pandemic.' [598]

Color Of Change Vice President Arisha Michelle Hatch commented: 'Since the onset of the COVID-19 pandemic in the United States, Color Of Change has pushed ventilator manufacturers to dial-back their dangerous, counterproductive repair restrictions, which have put an unnecessary strain on our medical providers' ability to tackle the virus'.[599] She observed that there were larger considerations of health justice at stake: 'For Black people especially, Senator Wyden and Representative Clarke's bill would be a necessary protection against medical rationing in a system that has consistently neglected and harmed our communities'.[600]

The *Critical Medical Infrastructure Right-to-Repair Act* 2020 (US) has been supported by a spectrum of health care, engineering and civil society groups – including the American College of Clinical Engineering (ACCE); Association of Medical Service Providers (AMSP); National Rural Health Association (NRHA); National Association of Rural Health Clinics (NARHC); International Association of Medical Equipment Remarketers and Servicers (IAMERS); Alliance for Quality Medical Device Servicing (AQMDS); ISS Solutions Healthcare Technology Management; U.S. Public Interest Research Group (U.S. PIRG); The Repair Association; the Electronic Frontier Foundation (EFF); Color of Change; Public Knowledge R Street Institute; Re:Create; Lincoln Network; Niskanen Center; Colorado Association of Biomedical Equipment Technicians (CABET); MaineGeneral Medical Center;

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595 Ibid.

596 Ron Wyden, 'Wyden and Clarke Introduce Bill to Eliminate Barriers to Fixing Critical Medical Equipment During the Pandemic', Press Release, 6 August 2020, https://www.wyden.senate.gov/news/press-releases/wyden-and-clarke-introduce-bill-to-eliminate-barriers-to-fixing-critical-medical-equipment-during-the-pandemic-

597 Ibid.

598 Ibid.

599 Ibid.

600 Ibid.

Pennsylvania Public Interest Research Group (PennPIRG); and Center for Democracy & Technology (CDT).

R Street supported the bill.[601] According to R Street Distinguished Senior Fellow Mike Godwin: 'This carefully crafted bill allows technical personnel to lawfully repair medical infrastructure and equipment during the COVID-19 pandemic, while also ensuring patent holders control commercial use of their intellectual property per their statutorily defined rights.'[602]

The Niskanen Center supported the proposed legislation.[603] Daniel Takash, regulatory policy fellow at the Niskanen Center was concerned that copyright law and technological protection measures were putting in place unnecessary barriers:

> Under current copyright law, it is illegal to circumvent any technological protection measure (TPM) designed to restrict access to a copyright work–i.e. a piece of computer software. Due to the prevalence of TPMs in virtually every device we use today, these measures impose significant costs on both consumers and firms that use relevant equipment. The consequences of these policies go from excessive to dire if we're talking about medical equipment like ventilators.[604]

He added, 'But even if the restrictions on circumvention were removed, manuals, diagnostic software, and other essential service materials are also protected by copyright.'[605] Takash was also concerned about the impact of patent law upon the right to repair: 'Broken parts in need of replacement may also be under patent protection–another legal roadblock for those seeking to fix what they own or have leased. It is shocking how little control hospitals have over what they supposedly own.'[606]

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601 Canyon Brimhall, 'R Street Applauds Introduction of the Critical Medical Infrastructure Right-to-Repair Act', *R Street*, 6 August 2020, https://rstreet.org/2020/08/06/r-street-applauds-introduction-of-the-critical-medical-infrastructure-right-to-repair-act/

602 Ibid.

603 Niskanen Center, 'Niskanen Center Proud to Endorse Critical Medical Infrastructure Right-to-Repair Act of 2020', Press Release, 12 August 2020, https://niskanencenter.org/niskanen-center-proud-to-endorse-critical-medical-infrastructure-right-to-repair-act-of-2020/

604 Ibid.

605 Ibid.

606 Ibid.

In addition to law reform, Professor Jorge Contreras of the University of Utah has called on courts to take a liberal view of the legitimacy of repair in any patent disputes during the pandemic:

> In order to permit needed repairs and parts replacements for critical health-related equipment, courts should take a liberal view of the repair doctrine. In particular, reconstruction of patented devices should be permitted to address pressing public health needs, so long as the reconstruction is made by an authorized owner of the original patented article. This would stop short of eliminating patent holders' rights to enforce their rights against all infringers, but would at least eliminate the threat of infringement during the crisis. Moreover, the immunity from suit afforded by the repair right should be extended not only to the owners of patented equipment, but to their suppliers, parts vendors and maintenance organizations. This step is important as many hospitals, emergency responders and relief organizations may themselves lack the 3D printing equipment and skills necessary to fabricate required parts and devices. These small modifications to existing doctrine could go a long way toward addressing current public health needs.[607]

Contreras has maintained that there is scope for expanding exceptions to patent infringement for research and repair in response to the pandemic.[608]

III. Federal Right to Repair Bill

In 2021, Representative Joseph Morelle has put forward a right to repair bill to the United States Congress.[609] He discussed his desire to provide stronger recognition of the right to repair:

> For too long, large corporations have hindered the progress of small business owners and everyday Americans by preventing them from the right to repair their own equipment. It's long past time to level the playing field, which is why I'm so proud to introduce the Fair Repair Act and put the power back in the hands of consumers. This common-sense legislation will help make technology repairs more

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607 Jorge Contreras, 'Patents and the Coronavirus – The Right to Repair', *InfoJustice*, 3 April 2020, http://infojustice.org/archives/42222

608 Jorge Contreras, 'Research and Repair: Expanding Exceptions to Patent Infringement in Response to a Pandemic' (2020) 7 (1) *Journal of Law and the Biosciences*, Isaa014, https://academic.oup.com/jlb/article/7/1/lsaa014/5828395?login=true

609 Rep. Joseph Morelle, 'Congressman Joe Morelle Introduces the Fair Repair Act: Legislation Would Finally Give Small Businesses and Consumers the Right to Repair their own products like cell phones and computers', Press Release, 17 June 2021, https://morelle.house.gov/media/press-releases/congressman-joe-morelle-introduces-fair-repair-act

> accessible and affordable for items from cell phones to laptops to farm equipment, finally giving individuals the autonomy they deserve.

His press release also noted: 'COVID-19 further magnified the need for consumers and small businesses to be self-reliant and have the ability to repair their own equipment when large retailers have to shutter.'[610]

In terms of the legislative framework, the Fair Repair Act will require Original Equipment Manufacturers to make diagnostic and repair information, parts, and tools available to third-party repairers and owners in a timely manner and on fair and reasonable terms. This bill allows for the Federal Trade Commission to penalize those who violate these provisions through civil penalties including payment of damages, reformation of contracts, and refund of money or property. It also empowers the FTC to promulgate any rules or regulations necessary to carry out these enforcement duties. The Fair Repair Act authorizes state attorneys general to play an enforcement role as well.

The legislative bill was supported by a number of advocacy organisations. Maureen Mahoney, Senior Policy Analyst, Consumer Reports, commented: 'We're pleased that Congressman Morelle is taking the lead on legislation to ensure that consumers can fix their own electronic products, or have them repaired by the servicer of their choice.'[611] Kit Walsh, Senior Staff Attorney and Assistant Director, Electronic Frontier Foundation, commented: 'This important bill will help Americans keep our technology in good repair and will help small repair businesses compete on fair terms with device manufacturers.'[612] Kerry Sheehan, U.S. Policy Lead at iFixit, said: 'We applaud Representative Joe Morelle for taking the fight for Right to Repair to Congress and for standing up for consumers, farmers, and independent repair shops nationwide.'[613]

From an agricultural perspective, David Fisher said that the 'New York Farm Bureau thanks Rep. Morelle for his support on this legislation.'[614] Considering environmental concerns, John Bergmayer, Legal Director at Public Knowledge commented: 'Ensuring that people can repair devices and use independent repair shops doesn't just save them money; it

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610 Ibid.

611 Ibid.

612 Ibid.

613 Ibid.

614 Ibid.

has significant environmental benefits as well, reducing e-waste and carbon use.'[615] Nathan Proctor, U.S. PIRG Senior Campaign Director, Right to Repair, said: 'No matter how many lobbyists Apple, Microsoft or John Deere and the rest of the manufacturers throw at us, Right to Repair keeps pushing ahead, thanks to champions like Rep. Joe Morelle.'[616] Gay Gordon-Byrne, Executive Director of Repair.org, said that there was an international movement towards a recognition of the right to repair: 'We've seen progress in the E.U. and Australia, and now Congress is taking it up'.[617]

The legislative bill received significant media attention.[618] Representative Joseph Morelle has been further heartened by the Biden White House issuing executive orders in respect of competition policy and the right to repair.

IV. President Joe Biden's Executive Orders

In July 2021, President Joe Biden issued an executive order on promoting competition in the American economy.[619] The executive order established a whole-of-government effort to promote competition in the American economy. There were 72 initiatives designed to address pressing competition problems across the United States economy. One of the initiatives was to

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615 Ibid.

616 Ibid.

617 Ibid.

618 Matthew Gault, 'National Right-to-Repair Bill Filed in Congress', *Vice*, 18 June 2021, https://www.vice.com/en/article/v7e37d/national-right-to-repair-bill-filed-in-congress; Matthew Hughes, 'New York Congressman Puts Forward Federal Right-to-Repair Bill', *The Register*, 18 June 2021, https://www.theregister.com/2021/06/18/first_federal_right_to_repair_bill/ ; Michael Kan, 'Congressman Introduces Federal "Right to Repair" Bill', *PC*, 18 June 2021, https://au.pcmag.com/computers-electronics/87749/congressman-introduces-federal-right-to-repair-bill; Mike Peterson, 'National Right to Repair Legislation Introduced in the House', *Apple Insider*, 17 June 2021, https://appleinsider.com/articles/21/06/17/national-right-to-repair-legislation-introduced-in-the-house; and Alyse Stanley, 'Congressman Introduces National Right-to-Repair Bill', *Gizmodo*, 17 June 2021, https://gizmodo.com/congressman-introduces-national-right-to-repair-bill-1847126450?utm_medium=sharefromsite&utm_source=gizmodo_twitter

619 The White House, 'Fact Sheet: Executive Order on Promoting Competition in the American Economy', Press Release, 9 July 2021, https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/09/fact-sheet-executive-order-on-promoting-competition-in-the-american-economy/

'make it easier and cheaper to repair items you own by limiting manufacturers from barring self-repairs or third-party repairs of their products.'[620]

President Joe Biden was particularly concerned about competition problems in the field of agriculture. The executive order noted:

> Corporate consolidation even affects farmers' ability to repair their own equipment or to use independent repair shops. Powerful equipment manufacturers—such as tractor manufacturers—use proprietary repair tools, software, and diagnostics to prevent third-parties from performing repairs. For example, when certain tractors detect a failure, they cease to operate until a dealer unlocks them. That forcers farmers to pay dealer rates for repairs that they could have made themselves, or that an independent repair shop could have done more cheaply.[621]

The executive order 'encourages the FTC to limit powerful equipment manufacturers from restricting people's ability to use independent repair shops or do DIY repairs—such as when tractor companies block farmers from repairing their own tractors.'[622]

President Joe Biden was also concerned about the right to repair in the context of information and communications technologies. The White House was worried about 'Cell phone manufacturers and others blocking out independent repair shops.'[623] The White House warned: 'Tech and other companies impose restrictions on self and third-party repairs, making repairs more costly and time-consuming, such as by restricting the distribution of parts, diagnostics, and repair tools.'[624] In the executive order, the President 'encourages the FTC to issue rules against anti-competitive restrictions on using independent repair shops or doing DIY repairs of your own devices and equipment.'[625]

Apple Co-Founder Steve Wozniak has expressed his support for the right to repair campaign.[626] He reflected: 'We wouldn't have had an Apple had I not grown up in a very open technology world.'[627] He noted: 'I wasn't restricted from anything that kept me from building

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620 Ibid.

621 Ibid.

622 Ibid.

623 Ibid.

624 Ibid.

625 Ibid.

626 BBC News, 'Apple Founder Steve Wozniak Backs Right-to-Repair Movement', *BBC News*, 9 July 2021, https://www.bbc.com/news/technology-57763037

627 Ibid.

that computer and showing the world that the future of personal computers is going to be a keyboard and a TV.'[628] Wozniak said he relied upon repair: 'That all came from being able to repair things, and modify them, and tap into them yourself.'[629] He recalled: 'You could repair a lot of things at low cost - but it's even more precious to know that you did it yourself.'[630] Wozniak said that a strength of Apple was that it was originally an open platform. In light of such heritage, Wozniak questioned why Apple has been engaged in disputes with independent repairers: 'So why stop them? Why stop the self-repair community?'[631] Wozniak lamented: 'Companies inhibit [the right to repair] because it gives the companies power, control, over everything.'[632] He maintained: 'It's time to start doing the right things.'[633] Wozniak concluded: 'It's time to recognise the right to repair more fully.'[634] This call of support by Wozniak for the right to repair has received significant media attention – especially given Apple's litigation and public policy lobbying against the right to repair.[635] Wozniak made the final point: 'Is it your computer [as the customer]? or is it some company's computer?'[636] Wozniak said. 'Think about that. It's time to start doing the right thing.'[637]

The Brookings Institute has urged the Biden Administration to go even further in its law reform initiatives in respect of the right to repair.[638] Seddon and West noted: 'A potential

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628 Ibid.

629 Ibid.

630 Ibid.

631 Ibid.

632 Ibid.

633 Ibid.

634 Ibid.

635 Michelle Toh, 'Apple co-founder Steve Wozniak: 'It's time to recognize the right to repair', *CNN*, 9 July 2021, https://edition.cnn.com/2021/07/09/tech/apple-steve-wozniak-right-to-repair-intl-hnk/index.html; Aimee Chanthadavong, 'Apple co-founder Steve Wozniak voices support for right to repair', *ZDNet*, 9 July 2021, https://www.zdnet.com/article/apple-co-founder-steve-wozniak-voices-support-for-right-to-repair/; and Derek Wise, 'Apple co-founder Steve Wozniak stands up for right-to-repair, argues company built on open source', *9to5Mac*, 7 July 2021, https://9to5mac.com/2021/07/07/apple-co-founder-steve-wozniak-stands-up-for-right-to-repair-argues-company-built-on-open-source/

636 Luke Dormehl, 'Apple co-founder Steve Wozniak says it's 'time to recognize' right to repair', *Cult of Mac*, 8 July 2021, https://www.cultofmac.com/747077/apple-co-founder-steve-wozniak-says-its-time-to-recognize-right-to-repair/

637 Ibid.

638 James Seddon and Darrell West, 'President Biden's Right to Repair Order Needs Strengthening to Aid Consumers', *Brookings Institute,* 14 July 2021, https://brook.gs/3ejaZBx

patchwork of state laws, memorandums of understanding, and limited FTC rulemaking are insufficient to address an issue that impacts essentially all consumers and products sold in the United States'.[639] Seddon and West observed that the executive orders should be reinforced by Congressional legislative action: 'We hope that the renewed focus on the right to repair from the White House and the FTC also will spark serious action from Congress.'[640]

V. Federal Trade Commission's Enforcement Priority

On the 21st July 2021, the Federal Trade Commission voted 5-0 to prioritize enforcement action in respect of repair restrictions.[641]

The Federal Trade Commission issued a policy statement on repair restrictions imposed by manufacturers and sellers.[642] The Federal Trade Commission noted: 'While unlawful repair restrictions have generally not been an enforcement priority for the Commission for a number of years, the Commission has determined that it will devote more enforcement resources to combat these practices.'[643] The Federal Trade Commission observed: 'Accordingly, the Commission will now prioritize investigations into unlawful repair restrictions under relevant statutes such as the Magnuson-Moss Warranty Act and Section 5 of the Federal Trade Commission Act.'[644]

The Federal Trade Commission made four key recommendations. First, 'the Commission urges the public to submit complaints and provide other information to aid in greater enforcement of the *Magnuson-Moss Warranty Act* and its implementing regulations.' The Commission said that it would 'consider filing suit against violators of the *Magnuson-Moss Warranty Act* to seek appropriate injunctive relief.'[645] Moreover, 'the Commission will

639 Ibid.

640 Ibid.

641 Federal Trade Commission, 'FTC to Ramp Up Law Enforcement Against Illegal Repair Restrictions', Press Release, 21 July 2021, https://www.ftc.gov/news-events/press-releases/2021/07/ftc-ramp-law-enforcement-against-illegal-repair-restrictions

642 Federal Trade Commission, 'Policy Statement of the Federal Trade Commission on Repair Restrictions Imposed by Manufacturers and Sellers', 21 July 2021, https://www.ftc.gov/system/files/documents/public_statements/1592330/p194400repairrestrictionspolicystatement.pdf

643 Ibid.

644 Ibid.

645 Ibid.

also closely monitor private litigation to determine whether the Commission may wish to investigate a pattern of unfair or deceptive acts or practices or file an amicus brief.'[646]

Second, 'the Commission will scrutinize repair restrictions for violations of the antitrust laws.' [647] The Commission cautioned that 'certain repair restrictions may constitute tying arrangements or monopolistic practices—such as refusals to deal, exclusive dealing, or exclusionary design—that violate the *Sherman Act*.'[648] The Commission warned that 'Violations of the *Sherman Act* also violate the prohibition on unfair methods of competition codified in Section 5 of the *Federal Trade Commission Act*.'[649]

Third, 'the Commission will assess whether repair restrictions constitute unfair acts or practices, which are also prohibited by Section 5 of the *Federal Trade Commission Act*.'[650] Furthermore, 'the Commission will analyze any material claims made to purchasers and users to ascertain whether there are any prohibited deceptive acts or practices, in violation of Section 5 of the *Federal Trade Commission Act*.'[651]

Finally, the 'Commission will bring an interdisciplinary approach to this issue, using resources and expertise from throughout the agency to combat unlawful repair restrictions'.[652] The policy statement also emphasized: 'The FTC will also closely coordinate with state law enforcement and policymakers to ensure compliance and to update existing law and regulation to advance the goal of open repair markets.'[653]

Chair of the Federal Trade Commission Lina Khan made a statement about the policy on repair restrictions.[654] She said: 'While efforts by dominant firms to restrict repair markets are not new, changes in technology and more prevalent use of software has created fresh opportunities for companies to limit independent repair.'[655] She observed: 'These types of

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646 Ibid.

647 Ibid.

648 Ibid.

649 Ibid.

650 Ibid.

651 Ibid.

652 Ibid.

653 Ibid.

654 Lina Khan, 'Remarks of Chair Lina M. Khan Regarding the Proposed Policy Statement on Right to Repair', Federal Trade Commission, 21 July 2021, https://www.ftc.gov/public-statements/2021/07/remarks-chair-lina-m-khan-regarding-proposed-policy-statement-right-repair

655 Makena Kelly, 'FTC Pledges to Fight Unlawful Right to Repair Restrictions', *The Verge,* 21 July 2021, https://www.theverge.com/2021/7/21/22587331/right-to-repair-apple-iphone-ftc-lina-khan-open-meeting

restrictions can significantly raise costs for consumers, stifle innovation, close off business opportunities for independent repair shops, create unnecessary electronic waste, delay timely repairs, and undermine resiliency.'[656] Khan observed: 'The FTC has a range of tools that it can use to root out unlawful repair restrictions'.[657] She emphasized: 'Today's policy statement would commit us to move forward with new vigor.'[658] Khan called on consumers and businesses to file complaints if they believed businesses were unlawfully imposing repair restrictions.

Democratic Commissioner Rohit Chopra made a number of remarks on the policy on repair restrictions.[659] He observed: 'The adoption of today's policy statement makes clear that the Commission will investigate unlawful repair restrictions, using the *Magnuson-Moss Warranty Act* and other consumer protection laws, as well as antitrust law to promote fair and open repair markets.'[660] Chopra added: 'This isn't just about saving money.'[661] He observed: 'When laws go unenforced, we weaken our country by making us less resilient and less able to meet our basic needs.'[662]

Chopra observed that repair issues came to the fore during the coronavirus pandemic. He observed that a laptop shortage during the pandemic was exacerbated because of restrictions on where schools could get computers fixed. Chopra also highlighted issues on the repair of medical infrastructure during the pandemic: '[W]e heard about hospitals worried that they would be unable to fix a ventilator because a manufacturer was seeking to deny access to repair

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656 Ibid.

657 Lisa Parker and Tom Jones, 'What 'Right-to-Repair' Means For Consumers and Their Technology, Appliances and Vehicles', *NBC*, 21 July 2021, https://www.nbcchicago.com/consumer/what-right-to-repair-means-for-consumers-and-their-technology-appliances-and-vehicles/2561019/

658 Ibid.

659 Rohit Chopra, 'Prepared Remarks of Commissioner Rohit Chopra Regarding a Motion to Adopt a Policy Statement on Repair Restrictions Imposed by Manufacturers and Sellers', Federal Trade Commission, 21 July 2021, https://www.ftc.gov/public-statements/2021/07/commissioner-chopra-remarks-regarding-repair-restrictions

660 Ibid.

661 Graison Dangor, 'FTC Goes After Companies That Prevent Outside Repair Of Tech, Other Products', *Fortune*, 21 July 2021, https://www.forbes.com/sites/graisondangor/2021/07/21/genius-barred-ftc-goes-after-companies-that-prevent-outside-repair-of-tech-other-products/?sh=415f63ed1a40

662 Ibid.

it.'[663] Chopra acknowledged: 'The right-to-repair movement also showed us how these problems can be matters of life or death'.[664]

Chopra emphasized that the FTC could assist Federal and State law-makers in crafting law reform on the right to repair: '[T]he commission should also devote resources to assisting policy makers, including at the state and local level, as they craft Right to Repair laws.'[665]

FTC Commissioner and former Acting Chair Rebecca Kelly Slaughter commented: 'Today's policy statement is a significant and important step in making clear that the FTC is dedicated to eliminating anti-competitive and anti-consumer restrictions and empowering all consumers with choice and access to repair their products and extend the life of expensive but indispensable equipment.'[666]

FTC Commissioners Christine S. Wilson and Noah Joshua Phillips emphasized the need for a renewed focus on consumer repair choice. Phillips commented: 'I absolutely agree that there are many unwarranted restrictions that make it excessively difficult and expensive for consumers to attain repairs'.[667]

Professor Tim Wu has been seconded from Columbia Law School to work as a special assistant to the President for technology and competition policy within the National Economic Council.[668] He commented: 'When you buy an expensive product, whether it's a half-a-million-dollar tractor or a thousand-dollar phone, you are in a very real sense under the power of the

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663 Ibid.

664 Lisa Parker and Tom Jones, 'What 'Right-to-Repair' Means For Consumers and Their Technology, Appliances and Vehicles', *NBC*, 21 July 2021, https://www.nbcchicago.com/consumer/what-right-to-repair-means-for-consumers-and-their-technology-appliances-and-vehicles/2561019/

665 Kerry Sheehan, 'FTC Unanimously Approves Policy of Fighting Repair Restrictions', *iFixit*, 21 July 2021, https://www.ifixit.com/News/51520/ftc-unanimously-approves-policy-of-fighting-repair-restrictions?utm_content=buffer61fc7&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

666 Ibid.

667 Ibid.

668 Professor Tim Wu has particular expertise in the regulation of monopolies in mass media, telecommunications, broadband, and social media – see Tim Wu, *The Master Switch: The Rise and Fall of Information Empires*, New York: Alfred A. Knopf, 2010; Tim Wu, 'Net Neutrality and the Idea of America', *The New Yorker*, 16 May 2014, https://www.newyorker.com/tech/annals-of-technology/net-neutrality-and-the-idea-of-america; Tim Wu, *The Attention Merchants: The Epic Scramble to Get Inside Our Heads*, New York: Alfred A. Knopf, 2016; Tim Wu, *The Curse of Bigness: Antitrust in the New Gilded Age*, New York: Columbia Global Reports, 2018; and Tim Wu, 'How Google and Amazon Got Away With Not Being Regulated', *Wired*, 13 November 2018, https://www.wired.com/story/book-excerpt-curse-of-bigness/

manufacturer.' [669] He observed: 'And when they have repair specifications that are unreasonable, there's not a lot you can do.'[670] Wu reflected that the Right to Repair has become a 'visceral example' of the imbalance in bargaining power between workers, consumers, small businesses, and large technology developers.[671]

The vote by the Federal Trade Commission has been hailed by consumer rights organisations and repair advocates.[672] iFixit's US policy lead Kerry Sheehan commented: 'The FTC's progress addressing repair restrictions shows how much momentum Right to Repair has achieved, and how powerful our community can be when we work together.'[673] She commented: 'The FTC can play a significant role in making sure that when you buy a product, you own it, and you have the right to fix it by enforcing the law against manufacturers, and by creating new rules prohibiting repair restrictions that stifle competition and harm technology owners and small businesses.'[674] Sheehan observed: 'The best way to shape those rules is by listening to people in the repair community—DIY fixers and repair professionals alike.'[675]

iFixit's leader Kyle Wiens elaborated upon the development:

> The FTC sets the tone for the nation's commerce. For too long, manufacturers have been bullying consumers and driving local repair shops out of business. This landmark new policy changes that. There's a new sheriff in town.[676]

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669 Lauren Goode, 'The FTC Votes Unanimously to Enforce Right to Repair', *Wired*, 21 July 2021, https://www.wired.com/story/ftc-votes-to-enforce-right-to-repair/

670 Ibid.

671 Ibid.

672 Ryan Tracey, 'The Federal Trade Commission Takes Step to Make it Easier for Consumers to Fix their Products from Cellphones to Tractors', *Wall Street Journal*, 21 July 2021, https://wsj.com/articles/broken-iphone-stalled-tractor-ftc-wants-to-make-it-easier-to-fix-them-11626899876?reflink=desktopwebshare_twitter

673 Makena Kelly, 'FTC Pledges to Fight Unlawful Right to Repair Restrictions', *The Verge,* 21 July 2021, https://www.theverge.com/2021/7/21/22587331/right-to-repair-apple-iphone-ftc-lina-khan-open-meeting

674 Kerry Sheehan, 'FTC Unanimously Approves Policy of Fighting Repair Restrictions', *iFixit*, 21 July 2021, https://www.ifixit.com/News/51520/ftc-unanimously-approves-policy-of-fighting-repair-restrictions?utm_content=buffer61fc7&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

675 Ibid.

676 Ibid.

Lauren Goode has recounted a number of other reactions to the policy announcement by the Federal Trade Commission.[677] During the public comments section of the Federal Trade Commission hearing, Paul Roberts, the founder of Securepairs.org, observed: 'I urge the FTC to use its rulemaking authority to reinforce basic consumer and private property rights, and to update it for the digital age, as manufacturers seek to turn hundreds of millions of owners of technology into tenants of their own property.'[678] He emphasized that 'a digital Right to Repair is a vital tool that will extend the life of electronic devices.'[679]

It is notable that there has been opposition to the right to repair enforcement action from industry groups, such as the Outdoor Power Equipment Institute, TechNet (a trade group that has represented companies like Microsoft and Apple), and the Consumer Technology Association.

In light of such rapid and sweeping developments in the United States, Australia's Productivity Commission should be confident about introducing a bold and extensive package of measures to support a right to repair in Australia. It is important that Australian consumers and businesses will enjoy a right to repair in Australia, which is equivalent in stature to that available in the United States.

Recommendation 17
The Productivity Commission should be encouraged to develop a bold package of proposals to support a right to repair in Australia – especially given the recent, rapid developments on the right to repair at a state and a federal level in the United States. The Australian Competition and Consumer Commission should prioritize enforcement action in respect of repair restrictions – like its counterpart the United States Federal Trade Commission.

12. Comparative Law - Canada

As a result of domestic copyright modernization and international trade agreements, Canada has introduced broad protection in respect of copyright law and technological protection

677 Lauren Goode, 'The FTC Votes Unanimously to Enforce Right to Repair', *Wired*, 21 July 2021, https://www.wired.com/story/ftc-votes-to-enforce-right-to-repair/

678 Ibid.

679 Ibid.

measures.[680] The Canadian courts have read and interpreted technological protection measures broadly in judicial proceedings.[681]

Nonetheless, Canada has been progressing towards a right of repair.[682] At a state level, Michael Coteau introduced a private member's bill amending Ontario's Consumer Protection Act that represents the first right to repair legislation ever proposed in Canada. The bill would force brands to: 'Provide consumers or electronics repair shops with replacement parts, software and tools for diagnosing, maintaining or repairing their products, for a fair price'; 'Provide electronic documents such as repair manuals for free'; and 'Reset any electronic security that may disable the device during diagnosis, maintenance or repair.[683]' Coteau has commented that the goal of the legislative bill is to 'reduce environmental waste, allow repairs to be made locally and encourage innovation.'[684]

At a Federal level, Bryan May has sponsored a bill *C-72 – An Act to Amend the Copyright Act (Diagnosis, Maintenance or Repair)*.[685] Introducing the bill, Bryan May discussed the significance of the legislative initiative:

> If members care about agriculture, the environment or consumer rights, they should care about passing Bill C-272. The bill has wide-ranging implications when it comes to solving some key problems for farmers in reducing landfill waste, particularly toxic e-waste, and in the innovation economy. I hope this legislation kicks off a conversation about the right to repair in Canada. This issue is non-partisan, and it spans citizens from all corners of urban and rural areas. The bill protects consumers. It has a

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680 See Matthew Rimmer, 'Back to the Future: The Digital Millennium Copyright Act and the Trans-Pacific Partnership' (2017) 6 (3) *Laws* http://www.mdpi.com/2075-471X/6/3/11; and Matthew Rimmer, *The Trans-Pacific Partnership: Intellectual Property and Trade in the Pacific Rim,* Cheltenham (UK) and Northampton (Mass.): Edward Elgar, December 2020, 132-134.

681 *Nintendo of America Inc.* v. *Jeramie Douglas King and Go Cyber Shopping* (2015) Ltd 2017 FC 246.

682 CBC News, 'Canada Gets Closer to a Right to Repair Law', *CBC News*, 1 March 2019, https://www.cbc.ca/news/technology/what-on-earth-newsletter-right-to-repair-styrofoam-1.5037697

683 Ibid.

684 Ibid.

685 *C-272, An Act to Amend the Copyright Act (diagnosis, maintenance or repair)* (Canada) https://www.parl.ca/LegisInfo/BillDetails.aspx?Language=E&billId=11112088 The Hon. Bryan May, Private Members Business, 15 April 2021 https://www.ourcommons.ca/DocumentViewer/en/43-2/house/sitting-81/hansard#11239176

> positive impact on our health and safety and the environment. It takes a common-sense approach and is highly targeted to a specific problem.[686]

His second reading speech was a passionate call for a right to repair.[687] Bryan May commented: 'I hope that this legislation kicks off a deeper conversation about the Right to Repair…the Copyright Act is being used and interpreted in areas far beyond its scope.'[688]

The bill sought to address the danger of copyright and technological protection measures being used to thwart repair. Bryan May commented:

> Bill C-272 would work to prevent these kinds of issues by carving out a specific and very limited allowance for consumers to circumvent a TPM, but only for the purpose of diagnosis, maintenance or repair. This bill is not a sweeping change to the Copyright Act, but a rather limited change designed to give a small amount of control back to the consumer. [689]

Bryan May noted: 'Any other circumvention would remain illegal under the Copyright Act.'[690] He stressed that 'Bill C-272 is not a rewriting of the act and does not allow TPMs to be circumvented under other circumstances.'[691] Bryan May stressed: 'We must, as consumers, have the ability to conduct basic repairs on the objects that we own'.[692] The legislator maintained: 'We must have the ability to replace a part without risking charges under the Copyright Act'.[693] The legislator warned: 'If we do not, we are dooming many more devices to the junkyard, to the detriment of our pocketbooks.'[694]

Bryan May emphasized that a right to repair was particularly important during the COVID-19 pandemic:

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686 The Hon. Bryan May, 'Copyright Act', Private Members Business, 15 April 2021 https://www.ourcommons.ca/DocumentViewer/en/43-2/house/sitting-81/hansard#11239176

687 The Hon. Bryan May, 'Second Reading – Private Members Bill C 272', 2 May 2021, https://t.co/tSmToAcEvK?amp=1

688 Ibid.

689 The Hon. Bryan May, 'Copyright Act', Private Members Business, Hansard, Parliament of Canada, 15 April 2021 https://www.ourcommons.ca/DocumentViewer/en/43-2/house/sitting-81/hansard#11239176

690 Ibid.

691 Ibid.

692 Ibid.

693 Ibid.

694 Ibid.

> The need to address these issues has been more important than ever during this pandemic, when repair professionals are often unable to visit homes or even farms. It is critical that Canadians have a legal ability to conduct the repairs they are able to on the spot. This need for repair is even more critical for people in rural or remote locations who likely do not have quick access to dealerships or manufacturers. Their cost for travel to repair facilities might already be in the hundreds of dollars and that is, of course, before the cost of the repairs.[695]

The proposal in this sense resonates with the push by United States Senator Ron Wyden to recognise the right to repair during the coronavirus pandemic.[696]

Jeremy Patzer (Cypress Gills – Grasslands, CPC) commented that the right to repair would be of assistance to rural Canada and farming communities:

> [This bill] has a very far-reaching impact into rural Canada and to our farming communities. It is important because our Copyright Act, as he also mentioned, is very outdated. It was written long ago, and it needs to be updated. It needs to be more flexible, and it needs to be able to respond more quickly to the needs of industry and, quite frankly, to the new reality we live in with everything being digitized. A lot of the things written in the Copyright Act go back prior to the time when everything was as digitized as it is here.[697]

Patzer acknowledged: 'Right to repair for a lot of people is a lot more than just a digital screen or an Xbox or an iPhone or things like that.'[698] He observed: 'The right to repair goes back prior to the digital age that we live in now.'[699]

Brian Masse (Windsor West, NDP) was supportive of the proposal for the right to repair.[700] He commented that the bill would help promote consumer rights and competition policy:

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695 Ibid.

696 *Critical Medical Infrastructure Right-to-Repair Act* 2020 (S. 4473, H.R. 7956), https://www.congress.gov/bill/116th-congress/house-bill/7956/all-info

697 The Hon. Jeremy Patzer, 'Copyright – Private Member's Business', Hansard, Parliament of Canada, 15 April 2021, https://www.ourcommons.ca/DocumentViewer/en/43-2/house/sitting-81/hansard#11239216

698 Ibid.

699 Ibid.

700 The Hon. Brian Masse, 'Copyright – Private Member's Business', Hansard, Parliament of Canada, 15 April 2021, https://www.ourcommons.ca/DocumentViewer/en/43-2/house/sitting-81/hansard#11239243

> This bill would help level the playing field. It would not interfere with intellectual property. It would not undermine the production and assembly of the first product to start with. It provides for what we have always had in our societies, which is secondary work on objects that are useful in our society. In the farming community, in the auto manufacturing community where I am, in the software industry or in the electronic device industry, we found multiple and continued uses of products. To have them denied just because of a monopolistic approach by a large corporation that is using basically a back door to prevent that type of an economy is not helpful.[701]

Masse said that the legislative bill also promoted public safety: 'It is also about public safety, because many devices continue to be used improperly or are tinkered with and not fixed correctly because of not having a good third-party that is actually responsible in getting the proper parts, services and information from the supplier.'[702] Masse also commented that the bill would also promote sustainable development and a circular economy: 'As well, environmentally, it would very much be an improvement, because we would extend the lifespan of things.'[703]

Sebastien Lemire (Abitibi—Témiscamingue, BQ) also discussed the importance of the bill:

> Bill C-272 seeks to amend the Copyright Act to allow a person to circumvent a technological protection measure in a computer program if the circumvention is solely for the purpose of diagnosis, maintenance or repair of a product in which the program is embedded. The member for Cambridge will be pleased to hear that the Bloc Québécois supports this bill. We believe that the amendments that we are debating today will prevent the act from being twisted for economic and industrial ends, especially when it is intended to protect artists. This is a worthwhile bill that confirms that we have the right to repair products that belong to us or to have them repaired. The people doing the repairs, whether they be mechanics or computer specialists, will no longer risk being sued for copyright infringement. This will open the door to healthy competition and the development of the SMEs that we are so proud of in Quebec.[704]

Lemire noted: 'The Bloc Québécois supports the changes proposed in Bill C-272, because they promote healthy competition and the development of our economic ecosystem in the regions

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701 Ibid.

702 Ibid.

703 Ibid.

704 The Hon. Seastien Lemire, 'Copyright – Private Member's Business', Hansard, Parliament of Canada, 15 April 2021, https://www.ourcommons.ca/DocumentViewer/en/43-2/house/sitting-81/hansard#11239225

and in major centres'.[705] Lemire stressed: 'For consumers, it also allows for freedom of choice and full ownership of the items they have purchased.'[706]

The Canadian Parliament voted unanimously upon second reading in favour of Bill C-272.[707] The bill has been referred to committee for further consideration.

At an academic level, Anthony Rosborough has articulated the case for a right to repair in Canada.[708] He has emphasized the need for a collective approach to obtain law reform:

> It's time for "right-to-repair" advocates in Canada to come together and put comprehensive solutions on the table. With many overlapping policy issues and a complex network of interests, Canadian repair advocates need to deliver a coherent message. Finding success will require effective lobbying at all levels of government for legislative changes that will allow both the right and ability to repair the things we own without contravening intellectual property and other laws.[709]

Rosborough commented: 'It is time that Canada's right-to-repair movement puts all of the pieces together and speaks with a unified voice.'[710]

Recommendation 18
The Productivity Commission should take note of proposal in the Parliament of Canada to recognise a right to repair under copyright law and technological protection measures, which has received broad support from the various quarters of political parties in the Canadian political system.

13. Comparative Law: United Kingdom

705 Ibid.

706 Ibid.

707 Repair.org, 'A Canadian Right to Repair bill sees 330-0 vote, as measure clears key hurdle', Repair.org 3 June 2021, https://www.repair.org/blog/2021/6/3/a-canadian-right-to-repair-bill-sees-330-0-vote-as-measure-clears-key-hurdle

708 Anthony Rosborough, 'Unscrewing the Future: The Right to Repair and the Circumvention of Software TPMs in the EU' (2020) 11 *Journal of Intellectual Property, Information Technology & E-Commerce Law* 26-48 https://www.jipitec.eu/issues/jipitec-11-1-2020/5083

709 Anthony Rosborough, 'Canada needs Right-to-Repair Legislation', *Policy Options – Politiques*, 14 May 2021, https://policyoptions.irpp.org/magazines/may-2021/canada-needs-right-to-repair-legislation/

710 Ibid.

In 2018, the UK community repair movement came together at Fixfest UK on 6 October 2018, and issued the Manchester Declaration.[711] The Manchester Declaration observed: 'By focusing on people and the planet, we hint at the future we want – a future where repair is a thriving sector of our economy; products are easy to repair and manufacturers provide spare parts for as long as possible.'[712] The Manchester Declaration observed: 'We are part of a growing movement pushing for our Right to Repair worldwide, alongside independent repair businesses and citizens frustrated with the early obsolescence of most of today's products.'[713] The Manchester Declaration maintained: 'We ask UK legislators and decision-makers at all levels, as well as product manufacturers and designers, to stand with us for our Right to Repair, by making repair more accessible and affordable, and ensuring that we adopt product standards making products better supported, well documented and easier to repair by design.'[714]

In spite of departing the European Union under Brexit, the United Kingdom has pressed ahead with new right to repair rules.[715] The United Kingdom has introduced a package of reforms through regulations.[716] Under the regulations, manufacturers will be under a legal obligation to make spare parts and maintenance information available to consumers in order to facilitate repairs. The regulations will set higher energy efficiency standards, and require certain electric products will have to meet higher minimum energy-efficiency requirements. There will also be new energy efficiency labels – which will use a new scale from A to G. Such developments echo what is happening in the European Union: 'The regulations will mirror EU proposals, which means that, in the short term, the UK will maintain a consistent regulatory regime with the EU.'[717]

Environmental expert Libby Peake, head of resource policy at Green Alliance, commented that the new regulations 'represent a small, first step towards giving people the

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711 The *Manchester Declaration* 2018, https://manchesterdeclaration.org/

712 Ibid.

713 Ibid.

714 Ibid.

715 Tom Espiner and Rebecca Wearn, 'Right to repair rules will extend lifespan of products, government says', *BBC News*, 1 July 2021, https://www.bbc.com/news/business-57665593

716 Osborne Clark, 'UK poised to require 'right to repair' information for consumers', *Lexology*, 15 April 2021, https://www.lexology.com/library/detail.aspx?g=8b139876-7f92-4695-918b-0e8262bf6621

717 Ibid.

long-lasting repairable products they want'. [718] In her expert opinion, the new rules did create a 'legal right to repair'.[719] Peake commented: 'The government hasn't given consumers any such right, as the spare parts and repairability criteria are only directed at professional repairers, not at the people who own products.'[720] She added: 'There is also no guarantee that spare parts and repair services will be affordable, so considerable barriers remain to making this the easiest, default option.'[721]

Recommendation 19
The Productivity Commission should take note of the developments in the United Kingdom in respect of the right to repair – which are intended to mirror the European Union.

14. Comparative Law: European Union

In the European Union, a group of European environment ministers have been mooting an EU Ecodesign Directive.[722] They have a series of proposals forcing manufacturers to make goods that last longer and are easier to mend.[723] The European proposals are limited to lighting, televisions and large home appliances. The European Environmental Bureau (EEB) has argued that the scope of the regime is too narrow: 'This restricts the access of independent repairers to spare parts and information - and that limits the scope and affordability of repair services.'[724] The EEB also wants other products like smart phones and printers included in the legislation. There has been opposition to the proposals from manufacturers, such as Apple.

University of Helsinki Professor Taina Pihlajarinne has discussed European steps to the right to repair and the development of a comprehensive approach to a sustainable lifespan of

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718 Tom Espiner and Rebecca Wearn, 'Right to repair rules will extend lifespan of products, government says', *BBC News*, 1 July 2021, https://www.bbc.com/news/business-57665593

719 Ibid.

720 Ibid.

721 Ibid.

722 European Parliament, 'Making consumer products more durable and easier to repair', 2017, http://www.europarl.europa.eu/news/en/press-room/20170629IPR78633/making-consumer-products-more-durable-and-easier-to-repair

723 Roger Harrabin, 'Climate Change: "Right to Repair" Gathers Force', *BBC News*, 9 January 2019, https://www.bbc.com/news/science-environment-46797396

724 Ibid.

products and materials.[725] She suggests that intellectual property should be informed by the developments in respect of the circular economy in the European Union. The Professor contends: 'If the transformation towards a balance between IPRs and the Circular Economy is to be comprehensive, enrichment of IPR doctrines by those centring around circular economic aims and concepts would be needed.'[726] Pihlajarinne argues: 'Full recognition of Circular Economy interests requires incorporation of Circular Economy concepts directly into IPR doctrines.' [727] In her view, '"Sustainable lifespan" has the potential to act as a key concept describing the fundamental aim of balancing IPRs and the Circular Economy: an incentive for innovative and creative work in society where products and materials are utilised within the parameters of a sustainable lifespan.' [728] Pihlajarinne observes that this concept should acquire an independent role in intellectual property doctrines: 'The creation and adoption of doctrines focused on assessing the sustainable lifespan of products or materials in the context of IP infringements would, for instance, serve this purpose.' [729]

Recommendation 20
The Productivity Commission should take into account developments on the right to repair in the European Union – particularly given their strong focus on promoting eco-design, green business, a circular economy, and the United Nations Sustainable Development Goals.

15. Comparative Law: South Africa

There has also been a significant discussion of the right to repair in South Africa. The Supreme Court of South Africa has considered the issue of intellectual property and the right to repair (in the context of designs law and trade mark law).[730]

In 2021, the Health Justice Initiative has called on the Government of South Africa to make amendments to the domestic copyright regime in response to the public health crisis of

[725] Taina Pihlajarinne, 'European Steps to the Right to Repair: Towards a Comprehensive Approach to a Sustainable Lifespan of Products and Materials?' (2020) 31 *Australian Intellectual Property Journal* 111-119.

[726] Ibid., 119.

[727] Ibid., 119.

[728] Ibid., 119.

[729] Ibid., 119.

[730] *Bayerische Motoren Werke Aktiengesellschaft* v. *Grandmark International* (722/12) [2013] ZASCA 114 (18 September 2013).

the coronavirus.[731] The Health Justice Initiative noted that the TRIPS Waiver proposed by South Africa and India to access all medical technologies was relevant because it related to all forms of intellectual property – including copyright law. The Health Justice Initiative commented: 'We are of the view that previous discussions about the *Copyright Amendment Bill* have not adequately acknowledged that 'copyright' is not only, or indeed primarily, an issue of the narrow or sectoral interests of book and music publishers only, but that it affects the health and well-being of all people in South Africa.'[732] The submission observed: 'In finalising the *Copyright Amendment Bill*, we believe that Parliament must take into account the wide-reaching negative effects of, at times, excessive copyright protection in the context of accessing life- saving health technologies.'[733]

The Health Justice Initiative noted that there was a need to recognise a right to repair under copyright law. The submission observed: 'During the initial phase of the COVID-19 pandemic many countries including South Africa experienced acute shortages of parts for medical ventilators that were needed to keep people alive, and still do.'[734] The Health Justice Initiative elaborated:

> Engineering experts who could ordinarily repair these machines cannot as they encounter both copyright and patent prohibitions or barriers. Making replacements of mechanical parts of ventilators via 3D printing or artisanal processes potentially infringes copyright protections since the parts are treated as three dimensional 'artistic' works. Modifying the machine or its parts may also constitute an infringement.[735]

The Health Justice Initiative recommended: 'The solution is a 'right to repair': the right of the owner/user of a machine to repair that machine to protect patients' health when the manufacturer either cannot or will not supply spare parts timeously or affordably.'[736]

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731 Health Justice Initiative Submission on the Copyright Amendment Bill [B13B-2017] to the Parliamentary Portfolio Committee on Trade and Industry https://healthjusticeinitiative.org.za/2021/07/09/health-justice-initiative-submission-on-copyright-amendment-bill-b13b-2017/

732 Ibid., 2.

733 Ibid., 2.

734 Ibid., 3.

735 Ibid., 3.

736 Ibid., 3.

The submission also called for the recognition of a right to research: 'South Africa needs to expand its academic and non-academic research capacity to respond to the COVID-19, and for other pandemics in the future too.'[737]

Referring to the TRIPS Waiver at the WTO, the Health Justice Initiative observed: 'While the waiver is being pursued, it is essential that South Africa also acts to reform its own domestically applicable legislation too, that inter alia deals with copyright and patents to address some of the IP barriers faced by countries such as ours, in responding both timely and meaningfully, to all pandemics, including COVID-19.'[738]

Recommendation 21
The Productivity Commission should take into account the push for a broader and stronger right to repair in South Africa – particularly in response to the coronavirus public health epidemic. The Productivity Commission should also consider how the prospect of a WTO TRIPS waiver would enable access to medical technologies (including for repair) during the public health emergency.

16. Comparative Law: New Zealand

The inquiry into the right to repair by Australia's Productivity Commission has also sparked interest in the topic across the ditch in New Zealand.

Paul Smith of Consumer.org.nz has highlighted a number of the right to repair issues in New Zealand.[739] Smith commented: 'Minister Parker's desire to review the Waste Minimisation Act is welcome, though governmental processes take forever so our own right to repair legislation is likely to be some way off.'[740] He observed: 'Along with new Right To Repair legislation, we think the 1993 *Consumer Guarantees Act* should be brought up to date'.[741] Smith suggested: 'The loophole in Section 42 allowing manufacturers to opt out of

737 Ibid., 4.

738 Ibid., 5.

739 Paul Smith, 'Why the Right to Repair is Big News and Why You Should Care - a New Zealand Perspective on the Right to Repair', *Consumer.org.nz*, 16 July 2021, https://consumer.org.nz/articles/right-to-repair-why-you-should-care

740 Ibid.

741 Ibid.

offering repairs needs to be removed.'[742] Smith also noted: 'Furthermore, the amendment should clearly state that the guarantees described in the act do not require the use of a manufacturers' authorised repairer or parts.'[743] Paul Smith has also highlighted that technology developers have deployed intellectual property litigation against independent repairers.[744]

Greg Fleming has explored the right to repair debate in New Zealand.[745] He lamented: 'Despite our clean and green profile New Zealand doesn't yet have a centralised e-waste recycling scheme although the Ministry for the Environment is looking into various product stewardship schemes and regulations.'[746] Fleming noted: 'Some retailers like Noel Leeming are taking the initiative and introducing their own.'[747] He observed: 'WasteMINZ, which works with industry partners, the Ministry for the Environment, other local and government agencies, believes part of the solution lies in an improved Waste Minimisation and Consumer Guarantees Act.'[748]

WasteMINZ has published a report on pathways for a right to repair in Aotearoa, New Zealand.[749] The report recommended amendments to the *Consumer Guarantees Act* – including 'the removal of section 42 so that retailers and manufacturers cannot avoid obligations to repair faulty items but the removal of this obligation for secondhand resellers of products'; 'The inclusion of a defined useful life for electrical products that that Consumer Guarantees Act covers, and also a period of time to which a consumer should expect an electrical product to remain "fault free"' and 'The removal of the (refundable) fee required by many retailers before an item is sent to the manufacturer to be assessed for repairs to remove a barrier to people seeking repairs for a faulty item.'[750] WasteMINZ also recommended amendments to the *Waste*

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742 Ibid.

743 Ibid.

744 Anuja Nadkarni, 'How Tech Firms are Infringing On consumers' "Right to repair"', *Newsroom*, 5 July 2021, https://www.newsroom.co.nz/fast-fashion-model-drives-e-waste

745 Greg Fleming, 'Why the Right-to-Repair Movement is a Big Headache for Big Tech', *Stuff*, 19 July 2021, https://www.stuff.co.nz/technology/thebit-nz/300360909/why-the-righttorepair-movement-is-a-big-headache-for-big-tech

746 Ibid.

747 Ibid.

748 Ibid.

749 WasteMINZ, 'Pathways for Right to Repair in Aotearoa New Zealand', September 2020, https://www.wasteminz.org.nz/wp-content/uploads/2020/09/Pathways-for-right-to-repair-in-Aotearoa-New-Zealand.pdf

750 Ibid.

Minimisation Act to support the right to repair. WasteMINZ stressed that a product stewardship scheme could include 'requirements that manufacturers make available diagnostic information, tools and parts to consumers and independent repairers'; 'economic levers to incentivise the repair and refurbishment of electronic goods over recycling'; and 'a mandatory labelling system that allows consumers to determine before purchase whether goods can be repaired easily and affordably (i.e. availability of spare parts; ease of repair (e.g., whether non-proprietary tools are needed to repair the product); and whether batteries can be replaced easily by the consumer)'.[751] The report also suggests that regulations could be passed to address landfilling of e-waste and the waste hierarchy. The report also highlighted how intellectual property rights impinged upon the right to repair.

New Zealand's Productivity Commission should conduct a wholesale review of the right to repair in New Zealand – much like Australia's Productivity Commission. Jacinda Ardern's New Zealand Government should consider a package of reforms to promote a right to repair in New Zealand.

Recommendation 22
Given that New Zealand has been lagging in this field, Jacinda Ardern's New Zealand Government should adopt a package of reforms to realise a right to repair in New Zealand.

17. Sustainable Development and the Right to Repair

Sustainable Development Goal No. 12 is focused on responsible production and consumption. The United Nations Development Programme has sought to help realise the sustainable development goals with the establishment of a network of Accelerator Labs.[752]

Kyle Wiens of iFixit and Dozuki has been concerned that intellectual property is putting circular economy in jeopardy.[753] He has commented:

> The trouble is, most manufacturers don't embrace the open markets, especially when it comes to reuse. Reusing and repurposing devices may require technicians to reverse engineer them, to hack them, and

751 Ibid.

752 UNDP Accelerator Labs, https://acceleratorlabs.undp.org/content/acceleratorlabs/en/home.html

753 Kyle Wiens, 'Intellectual Property is Putting Circular Economy in Jeopardy', *The Guardian*, 3 June 2014, https://www.theguardian.com/sustainable-business/intellectual-property-circular-economy-bmwapple?CMP=share_btn_tw

> to digitally unlock them. Repairing modern machinery requires access to diagnostic codes, circuit schematics, and replacement parts that manufacturers zealously protect. And refurbishing can require access to proprietary tools that manufacturers have been historically reticent to share.[754]

Wiens wonders: 'Imagine how much more manufacturers could accomplish if they worked with the open market, instead of against it.'[755] He contends: 'The market opportunity is immense in providing tools and services to the thousands of small businesses that specialise in reuse, refurbishment, repair, and recycling.'[756] In his view, 'An inclusive ecosystem is the best shot we have at closing the loop.'[757] Wiens reflects: 'Without them, we won't reach the economies of scale that the circular economy needs.'[758]

David R. Boyd – the United Nations Special Rapporteur on Human Rights and the Environment – has discussed the importance of law reform to promote a circular economy.[759] He suggests:

> Consumers need to think in new ways about the things they need and be open to leasing or renting instead of owning, enabling manufacturers to build new business models and be responsible for the durability, reuse, and recycling of their products. Governments need to enact stronger laws governing the disposal of waste, the manufacturing of disposable products, and the elimination of toxic substances. Businesses need to rethink their current approach and embrace the opportunities offered by the circular economy, cradle-to-cradle design, and biomimicry.[760]

Boyd maintains that the 'adoption of the circular economy could yield trillions of dollars in resource savings annually, along with enormous benefits for human and ecosystem health.'[761]

There has been discussion of how the intellectual property regime may be reformed to better support a circular economy.[762] In the context of 3D printing, there has been debate as to

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754 Ibid.

755 Ibid.

756 Ibid.

757 Ibid.

758 Ibid.

759 David R. Boyd, *The Optimistic Environmentalist: Progressing Towards a Greener Future*, Toronto: ECW Press, 2015, 51-67.

760 Ibid., 66.

761 Ibid., 67.

762 Dinusha Mendis, Mark Lemley, and Matthew Rimmer (ed.), *3D Printing and Beyond: Intellectual Property and Regulation*, Cheltenham (UK) and Northampton (Mass.): Edward Elgar, 2019.

whether the emerging technology will produce sustainable outcomes, or contribute to a junk economy. The advent of new technologies, such as 3D printing and additive manufacturing, will test the operation of existing laws related to the right to repair.[763]

In Australia, the ACT Attorney-General Shane Rattenbury has been an eloquent champion of how the recognition of a right to repair may better support sustainable development, the treatment of e-waste, and climate action.[764] In his submission to the Consumer Affairs Forum, Shane Rattenbury expressed particular concern about the unsustainable nature of production and consumption:

> A combination of rapid innovation in technology, cheap labour through enhanced globalisation, growing personal wealth, increases in consumerism and the spread of telecommunication networks has seen consumer goods proliferate and their life-span grow shorter. Accelerated product replacement has become increasingly detrimental both economically and environmentally. Electronics, white-goods and light machinery are classes of goods where low repair rates can signal consumer disempowerment, cause value leakage as a result of a linear economy, and result in toxic landfill. The concept of right to repair also covers whether an item can be repaired at all. Increasingly, consumers are offered goods, such as electrical/technology products, that in many instances will become obsolete after a certain period, either due to software or security upgrades, or interoperability issues with either operating systems or third-party services. .[765]

Rattenbury has been concerned about the cost of e-waste: 'Rapid technological innovation, low-quality manufacturing methods, and globalised markets lowering the costs of consumer goods have supported faster rates of product obsolescence.'[766] He contends: 'Stemming the creation of e-waste by extending product viability and life-span will more successfully address

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763 Mitchell Adams, 'The "Third Industrial Revolution" 3D Printing Technology and Australian Designs Law", (2015) 24 (1) *Journal of Law, Information, and Science* 56-84.

764 For a public discussion of these themes, see the author's public presentations - Matthew Rimmer, 'Shane Rattenbury, the Productivity Commission, and the Right to Repair: Intellectual Property and Sustainable Development', Remaking the Maker Movement, QUT, 3 February 2021, https://www.youtube.com/watch?v=DUGno_shkkA and Matthew Rimmer, 'Shane Rattenbury, the Productivity Commission, and the Right to Repair: Intellectual Property and Sustainable Development', BEST Conference, QUT, 11-12 February 2021.

765 The Hon. Shane Rattenbury, 'Submission on the Right to Repair', Consumer Affairs Forum, 2019, reproduced as a submission to the Productivity Commission https://www.pc.gov.au/__data/assets/pdf_file/0007/273382/sub133-repair.pdf

766 Ibid.

environmental and health detriments than measures such as recycling and up-cycling measures'. Rattenbury observes: 'Recycling does not effectively utilise all component parts of a consumer good, can expose workers to harmful substances, and often requires the additional consumption of natural resource consumption to process materials into reusable commodities'.

Rattenbury maintains: 'Product stewardship is a response to market failures that lead to environmental damage.'[767] He notes: 'Industry alone cannot correct these failures.' Rattenbury contends: 'Without the driver of regulated targets and outcomes there is often no incentive for product manufacturers to design products to be durable, re-usable or recyclable or to ensure they are collected for recycling at their end-of-life.'[768]

Rattenbury calls for the development of a circular economy: 'As the number of consumers increases and resources dwindle, a transition to a circular economy will be necessary to minimise both the resources consumed and the waste generated.'[769] He contends: 'A circular economy is centred on keeping products, components and materials circulating in use for as long as possible, through long-lasting design, repair, reuse, re-manufacturing and recycling.'[770] Rattenbury argues: 'A truly circular economy will rely, in part, upon product design for next life and new life, through reparability, modularity and disassembly.'[771]

Discussing the Productivity Commission report, Jeff Sparrow commented that the topic of the right to repair raised larger issues in respect of sustainable development and climate action.[772] He commented: 'If we want to reverse the ecological catastrophe engulfing our planet, we must refocus attention on what is produced and how.'[773] Sparrow reflected upon the public policy significance of the right to repair:

> By tinkering in their garages, the hobbyists who take apart electronic devices exert a skerrick of agency over the gadgets churned out by multinationals. And that's all to the good. In an increasingly fragile world, we need more — much more — control over production. We need conscious choices which resources we use and which we don't, instead of letting giant corporations do whatever makes them the

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767 Ibid.

768 Ibid.

769 Ibid.

770 Ibid,

771 Ibid.

772 Jeff Sparrow, 'Ending over Mending: Planned Obsolescence is Killing the Planet', *The Guardian*, 17 March 2021, https://theguardian.com/commentisfree/2021/mar/17/ending-over-mending-planned-obsolescence-is-killing-the-planet?CMP=share_btn_tw

773 Ibid.

> most money. Obviously, we are not going to end global warming just by repairing our iPhones. Yet if we can't even do that, what chance do we have?

Sparrow suggested that the right to repair should also lead us to consider the various pressing needs to repair the planet: 'In the era of catastrophic climate change, it's very clear where ending over mending leads.'[774]

From a Canadian perspective, Navneet Alang has also identified that the right to repair raises larger questions about environmental responsibility.[775] He observed: 'Right-to-repair legislation would force companies to make better decisions upstream in the design process so that the environmental cost of disposable devices could be dealt with, instead of moving us closer to an ideal of reuse and repurposing.'[776] He commented that 'a culture of wastefulness that strikes at the heart of the climate change issue: that how we have structured our economy and our societies is at odds with what we must do to avoid environmental cataclysm.'[777] Alang argued: 'Right to repair is one way we can start to make a shift toward a more responsible world.'[778] He noted: 'In part, it is about living up to the internet-era ideal of empowering individuals to use digital tools in varied, innovative ways.'[779] Alang suggested that the right to repair is 'also about what we will save in enabling a culture of fixing and tinkering — that in making a phone easier to fix, we will also be on the path to living up to our responsibilities to the earth and future generations, too.'[780]

It is notable that there has been an array of innovation strategies in respect of clean, sustainable technologies to encourage responsible consumption and production. In Australia, there has been the establishment of a growing networks of repair cafes (like the Bower Reuse and Repair Centres) and social enterprises (such as Logan's Substation 33). It is notable that a number of these organisations made submissions to the Productivity Commission. The Bower Reuse and Repair Centres have called on the Treasurer Josh Frydenberg to 'Introduce

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774 Ibid.

775 Navneet Alang, 'A Phone Call Canada Must Take: The Right to Repair our Digital Devices Jibes with Environmental Responsibility', *The Toronto Star*, 17 July 2021, https://www.thestar.com/business/opinion/2021/07/17/a-phone-call-canada-must-take-the-right-to-repair-our-digital-devices-jibes-with-environmental-responsibility.html

776 Ibid.

777 Ibid.

778 Ibid.

779 Ibid.

780 Ibid.

mandatory schemes for manufacturers of new products to provide spare parts and repair manuals for a mandated period of time, such as has been legislated in France and is being introduced across Europe and other jurisdictions'; 'Tax breaks for repairs of personal and household items, such as has been legislated in Sweden and other jurisdictions, as a financial incentive to repair and reuse, rather than throw away and buy new'; and 'Other best practice measures to boost the circular economy, lengthen product life, reduce landfill and protect the environment, such as including reusability and reparability standards in the Product Stewardship Act, as well as adding the 'right to repair' to the Productivity Commission's agenda for further examination and report back.'[781] There has even been the establishment of circular economy precincts, like those set up by the Worlds Biggest Garage Sale.[782]

Makerspaces, fab labs, and hackerspaces in Australia and overseas have also been focused upon repair, recycling, and upcycling. There have been an array of small businesses and independent repairers who have been engaged in repair.

Governments have also been increasingly focused upon the establishment of research institutions and networks to support a circular economy. UNSW's Professor Veena Sahjwalla is the founding Director of the Centre for Sustainable Materials Research & Technology at UNSW.[783] She has been focused on producing a new generation of green materials, products and resources derived from waste. Professor Sahjwalla has also been a leader of the ARC Industrial Transformation Hub for 'green manufacturing', which concluded its work in 2020.[784] The hub undertook research into the high temperature transformation of waste rich in plastic and metals, such as from used cars and electronic waste, as well as textiles.

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781 Bower Reuse and Repair Centres, 'Right to Repair Petition', https://bower.org.au/support-us/right-to-repair-petition/

782 Worlds Biggest Garage Sale, 'Submission for Right to Repair Inquiry', Submission 43 to Issues Paper, Productivity Commission, 30 January 2020, https://www.pc.gov.au/__data/assets/pdf_file/0019/272323/sub045-repair.pdf

783 UNSW Scientia Professor Veena Sahajwalla, https://research.unsw.edu.au/people/scientia-professor-veena-sahajwalla

784 ARC Green Manufacturing Research Hub, https://www.smart.unsw.edu.au/research-programs/arc-green-manufacturing-research-hub

The New South Wales Government and UNSW has established the NSW Circular Economy Innovation Network.[785] This organisation is now known as NSW Circular.[786] NSW Circular explains its mission thus:

> NSW Circular is a NSW government-funded body with environment, economic and social goals embedded into our work. Delivering for government organisations, and empowering industry and people is at the heart of what we do. We are created by the Office of NSW Chief Scientist & Engineer and hosted by UNSW Sydney. Our mission is to deliver a zero-carbon circular economy in NSW by: Providing transparent and open data to the market; Helping deliver new circular economy markets, infrastructure and services; Working collaboratively with businesses, government, researchers and individuals to remove barriers and scale the circular economy; and Empowering people to promote circular behaviours and change.[787]

This New South Wales network could be a useful model for other states and territories in Australia. The Federal Government could consider establishing research frameworks to encourage sustainable innovation – such as through a Centre of Excellence or a new Co-operative Research Centre.

The Australian Academy of Technology and Engineering has called on governments to provide for 'targeting manufacturing grant programs and tax incentives toward innovative design for waste avoidance or minimisation, including reparability.'[788]

At an international level, the UNDP administrator Achim Steiner has established a network of UNDP Accelerator Labs to help realise the United Nations Sustainable Development Goals. Steiner has explained the impetus for the initiative:

> Looking at many innovation initiatives worldwide, we realized that UNDP needs to draw on lessons learnt in the fields of innovation and entrepreneurship to deliver a more dynamic approach to accelerating the implementation of the Sustainable Development Goals. These Labs, will enhance our

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785 NSW Circular Economy Innovation Network, https://newsroom.unsw.edu.au/keywords/nsw-circular-economy-innovation-network

786 NSW Circular https://www.nswcircular.org/

787 Ibid.

788 Australian Academy of Technology and Engineering, 'Submission to the Productivity Commission inquiry into a Right to Repair', 1 February 2021, https://www.atse.org.au/wp-content/uploads/2021/01/SUB-2021-02-01-Inquiry-into-the-Right-to-Repair-within-Australia-FINAL.pdf

> capacity to provide more agile and solutions-focused support to countries as they build on local expertise and global best practices.[789]

The initiative was supported by the Federal Republic of Germany and the State of Qatar. Martin Jaeger, State Secretary for the German Ministry for Economic Cooperation and Development, envisaged: 'The Labs will tap into a wider range of solutions for global challenges such as migration, climate change and increasing inequalities.'[790]

Team leader Gina Lucarelli has explained the ambitions of the Accelerator Lab network:

> This is a response to what we see happening in the development environment. While development investments are making progress, the progress is not at a fast enough speed. These labs are teams of ethnographers, entrepreneurs, engineers, designers that we are bringing into UNDP to work with our experts on biodiversity and gender equality and poverty reduction. We are marrying a capability in social innovation with development expertise. We are hoping this creates new momentum to break through on some of the really difficult challenges, like growing inequality and climate change.[791]

Lucarelli argued: 'While development investments are making progress, the progress is not at a fast enough speed'.[792] She envisaged: 'These labs are teams of ethnographers, entrepreneurs, engineers, designers that we are bringing into UNDP to work with our experts on biodiversity and gender equality and poverty reduction.'[793] Lucarelli suggested: 'The labs are also applying the principles of agile management.'[794]

As of July 2021, the UNDP Network of Accelerator Labs consists of 91 locations, supporting 115 countries.[795] There are Accelerator Labs located in a number of regions – including Central America; the Caribbean; South America; Africa; the Middle East; Eastern

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789 UNDP, 'German Ministry for Economic Cooperation and Development supports bold new pathway to development through 60 UNDP Accelerator Labs', Press Release, 27 June 2019, https://www.undp.org/content/undp/en/home/news-centre/news/2019/undp-accelerator-labs.html

790 Ibid.

791 Amy Lieberman, 'Q&A: UNDP launches new Accelerator Lab network with a 'just do it' mentality', *Devex*, 22 July 2019, https://www.devex.com/news/q-a-undp-launches-new-accelerator-lab-network-with-a-just-do-it-mentality-95325

792 Ibid.

793 Ibid.

794 Ibid.

795 UNDP, 'Accelerator Labs', https://acceleratorlabs.undp.org/content/acceleratorlabs/en/home.html

Europe; Asia; and the Pacific. The UNDP Network of Accelerator Labs are staffed by a diverse array of team members:

> We are part of UNDP's global policy teams and country offices. Our 270 Lab team members bring bright, unusual talent into the development sector. 68 percent of us have experience in prototyping; 55 percent can work with citizen generated data; and 29 percent can perform tasks related to artificial intelligence and machine learning. Aligned with UNDP's vision of gender equality, more than 50 percent of our new innovation experts are women, driving our exploration and elevation of women-led solutions. 24 percent of the lab teams are repatriates — a source of pride for us that our Labs are attracting national talent back to developing countries.[796]

The UNDP hopes: 'The Accelerator Labs are designed to close the gap between the current practices of international development in an accelerated pace of change.'[797] The UNDP expect that the Accelerator Labs will 'model a new capability to make breakthroughs on the future of development: inequality, decarbonization, the 4th industrial revolution and new forms of governance.'[798] The UNDP has published case studies of the UNDP Accelerator Labs, documenting their strategies and outcomes.[799]

Thus far, the Australian Government has not made much progress in translating the sustainable development goals into new laws, regulations, policies, and practices.[800] As yet, Australia is not a funder, participant or a host in the UNDP Accelerator Labs. But conceivably,

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796 UNDP, 'Accelerator Labs: About Us', https://acceleratorlabs.undp.org/content/acceleratorlabs/en/home/about-us.html

797 Ibid.

798 Ibid.

799 Kathy Peach, Aleks Berditchevskaia, Geoff Mulgan, Gina Lucarelli, and Mirko Ebelshaeuser, *Collective Intelligence for Sustainable Development: Getting Smarter Together*, 13 May 2021, https://acceleratorlabs.undp.org/content/acceleratorlabs/en/home/library/Collective-Intelligence-Sustainable-Development-Getting-Smarter-Together.html; and Aleks Berditchevskaia, Kathy Peach, Gina Lucarelli, and Mirko Ebelshaeuser, *Collective Intelligence for Sustainable Development: 13 Stories from the UNDP Accelerator Labs*, 13 May 2021, https://acceleratorlabs.undp.org/content/acceleratorlabs/en/home/library/Collective-Intelligence-Sustainable-Development-13-Stories-UNDP-Accelerator-Labs.html

800 Matthew Rimmer, 'A Submission on Intellectual Property and the United Nations Sustainable Development Goals', Senate Standing Committee on Foreign Affairs, Defence, and Trade, Parliament of Australia, 2018, https://eprints.qut.edu.au/121459/; and , Senate Standing Committee on Foreign Affairs, Defence, and Trade, *United Nations Sustainable Development Goals*, Canberra: Parliament of Australia, 14 February 2019, https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Foreign_Affairs_Defence_and_Trade/SDGs/Report

Australia could play a significant and instrumental role as a funder, host, and a participant in the UNDP Accelerator Labs system.

There has also been a growing focus on the reform of intellectual property law, policy, and practice to promote the sustainable development goals.[801] There has been a WIPO Development Agenda – although that initiative has been quite technocratic in its operation.[802] Nobel Laureate Joseph Stiglitz and his collaborators have emphasized that current intellectual property institutions and treaties are not well aligned with the sustainable development goals.[803] Professor Margaret Chon and her collaborators have promoted the use of intellectual property partnerships to help realise the sustainable development goals.[804] Professor Sara Bannerman has called for a substantive reform agenda, which considers the full panoply of sustainable development goals.[805] The author of this submission has argued that regional trade agreements

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801 Christopher May, *The World Intellectual Property Organization: Resurgence and the Development Agenda*, Routledge: Abingdon and New York, 2007; Jeremy de Beer (ed.), *Implementing the World Intellectual Property Organization's Development Agenda*, Waterloo: WLU Press/ CIGI/ IDRC, 2009; Dean Baker, Arjun Jayadev, and Joseph Stiglitz. *Innovation, Intellectual Property, and Development: A Better Set of Approaches for the 21st Century*, AccessIBSA, 2017, http://ip-unit.org/wp-content/uploads/2017/07/IP-for-21st-Century-EN.pdf; Margaret Chon, Pedro Roffe and Ahmed Abdel-Latif (ed.) *The Cambridge Handbook of Public-Private Partnerships, Intellectual Property Governance, and Sustainable Development*, Cambridge: Cambridge University Press, 2018; Sara Bannerman, 'The World Intellectual Property Organization and the Sustainable Development Agenda' (2020) 122 *Futures* 102586, https://www.sciencedirect.com/science/article/pii/S0016328720300768; and Ole-Andreas Rognstad and Inger B. Ørstavik (ed.), *Intellectual Property and Sustainable Markets*, Cheltenham (UK) and Northampton (Mass.): Edward Elgar, 2021, https://www.elgaronline.com/view/edcoll/9781789901344/9781789901344.00006.xml

802 WIPO Development Agenda, https://www.wipo.int/ip-development/en/agenda/; Christopher May, *The World Intellectual Property Organization: Resurgence and the Development Agenda*, Routledge: Abingdon and New York, 2007; and Jeremy de Beer (ed.), *Implementing the World Intellectual Property Organization's Development Agenda*, Waterloo: WLU Press/ CIGI/ IDRC, 2009

803 Dean Baker, Arjun Jayadev, and Joseph Stiglitz. *Innovation, Intellectual Property, and Development: A Better Set of Approaches for the 21st Century*, AccessIBSA, 2017, http://ip-unit.org/wp-content/uploads/2017/07/IP-for-21st-Century-EN.pdf

804 Margaret Chon, Pedro Roffe and Ahmed Abdel-Latif (ed.) *The Cambridge Handbook of Public-Private Partnerships, Intellectual Property Governance, and Sustainable Development*, Cambridge: Cambridge University Press, 2018.

805 Sara Bannerman, 'The World Intellectual Property Organization and the Sustainable Development Agenda' (2020) 122 *Futures* 102586, https://www.sciencedirect.com/science/article/pii/S0016328720300768

need to be better informed by the sustainable development goals.[806] There has also been an increasing interest in the role played by intellectual property in fostering clean innovation, green businesses, and sustainable markets.[807]

There is a growing scholarship in respect of intellectual property, clean technologies, and climate change.[808]

Recommendation 23
Australian governments should support repair cafes and social enterprises, makerspaces and fab labs, research centres and innovation networks, which are focused on responsible production and consumption. NSW Circular could be a model for the Federal Government, and other states and territories in Australia. There is a need to recognise a right of repair in Australia in order to help implement Sustainable Development Goal No. 12, which is focused on responsible production and consumption. As a funder, host, and participant, Australia should support the UNDP Accelerator Labs Network programme.

18. The Right to Repair, 3D Printing, and Additive Manufacturing

The topic of the right to repair will no doubt be affected by new generations of technology – such as 3D printing, additive manufacturing, and 4D printing.

There has been some discussion as part of the Productivity Commission about the role of 3D printing in repair. At a speech at the National Repair Summit, Commissioner Paul Lindwall observed: 'The increasing use of 3D printing may provide a less costly way of

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806 See Matthew Rimmer, 'The Trans-Pacific Partnership and Sustainable Development: Access to Genetic Resources, Informed Consent, and Benefit-Sharing' in Charles Lawson and Kamalesh Adhikari (ed.), *Biodiversity, Genetic Resources and Intellectual Property: Developments in Access and Benefit Sharing,* Abingdon (Oxon) and New York: Routledge, 2018, 151-184; and Matthew Rimmer, *The Trans-Pacific Partnership: Intellectual Property and Trade in the Pacific Rim,* Cheltenham (UK) and Northampton (Mass.): Edward Elgar, December 2020, 525-550.

807 Ole-Andreas Rognstad and Inger B. Ørstavik (ed.), *Intellectual Property and Sustainable Markets*, Cheltenham (UK) and Northampton (Mass.): Edward Elgar, 2021, https://www.elgaronline.com/view/edcoll/9781789901344/9781789901344.00006.xml

808 Matthew Rimmer, *Intellectual Property and Climate Change: Inventing Clean Technologies*, Cheltenham (UK) and Northampton (Mass.): Edward Elgar, September 2011; and Matthew Rimmer (ed.), *Intellectual Property and Clean Energy*: *The Paris Agreement and Climate Justice*, Singapore: Springer, 2018.

providing spare parts in the future – just as we now see print on demand for rarely purchased books.'[809] At the Productivity Commission, Kyle Wiens acknowledged that while 3D printing could be a solution, it would not be a practical one for some tech-based products: '3D printing is a wonderful idea … we do have some 3D printed models on iFixit … unfortunately, in our analysis of parts, about 2% of all parts can be 3D printed with current technology … where 3D printing is more compelling and interesting is in whitegoods.'[810]

As part of the author's fieldwork for an ARC Discovery Project on intellectual property and 3D printing, he conducted a number of interviews with practitioners of 3D printing, and fieldwork visits to makerspaces, fab labs, and innovation labs. This empirical research was carried out over several years from 2017 to 2021 across a number of jurisdictions, including Australia, Canada, the United States, the United Kingdom, a range of members of the European Union, and Switzerland.

It was striking to hear and observe how 3D printing and additive manufacturing was being deployed for the purposes of repair in Australia. In Queensland, the author visited a small business based on the Sunshine Coast, which provided 3D printing services – including for repair (particularly when the original manufacturer had ceased making parts). In Logan, Substation 33 has used 3D printing in its social enterprise for the purposes of making, repair, and recycling.[811] As part of its work, Substation 33 has sought to engage in training programmes. In Brisbane, the State Library of Queensland have engaged in 3D printing of heritage items – such as the Tunley Braille Globe.[812] The Edge at the State Library of Queensland also conducts various workshops on repair for a wide range of communities. The Brisbane Tools Library has sought to share technologies (including for repair) in a commons.[813] In Victoria, Australia, Swinburne University of Technology, Tradiebot Industries and the AMA

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809 Commissioner Paul Lindwall, 'The Right to Repair Draft Report', Productivity Commission, Australian Repair Summit, Canberra, 9 July 2021, https://www.pc.gov.au/news-media/speeches/repair

810 Aimee Chanthadavong, 'iFixit CEO Names and Shames Tech Giants for Right to Repair Obstruction', *ZDNet*, 19 July 2021, https://zd.net/3kyA3Z9

811 Substation 33, https://substation33.com.au/

812 State Library of Queensland, 'Tunley Globe Digitisation Project', https://www.slq.qld.gov.au/discover/queensland-stories/tunley-globe-digitisation-project

813 Sabrina Chakori, 'Tool Libraries: Innovation Hubs for Economic Degrowth', Brisbane Tool Library Inc., QUT Remaking the Maker Movement Symposium, https://www.youtube.com/watch?v=hVM9GyG2_xQ

Group have been investigating the use of 3D printing for automotive repair.[814] In South Australia, Makerspace Adelaide hosts the Adelaide Repair Café, which is intended to reduce waste through repairing technology.[815] In the Australian Capital Territory, the Canberra Environment Centre hosts a repair café.[816] In its evidence to the Productivity Commission, the Australian Academy of Technology and Engineering highlighted the growth of 3D printing and additive manufacturing, and its present and future utilities in respect of repairs.

In North America, American automobile companies like Ford have been experimenting with 3D printing for prototyping and repair.[817] The author visited Fab Labs and makerspaces in the European Union – in Ireland, Austria, Portugal, the Netherlands, and Germany. It was noticeable that many of these community-based endeavours provided repair café services to their local communities. Such sites often displayed the Repair Manifesto featured on the front page of this submission. In the Netherlands, RDM Rotterdam has been using 3D printing and additive manufacturing in respect of maritime innovation and repair.[818] The neighbouring Rotterdam Makers District will no doubt further enhance and accelerate such applications of 3D printing. In the Czech Republic, 3D printing company Prusa Printers has taken an open source approach to the development of its 3D printers, enabling ease of repair, with open access manuals and handbooks.[819] Even in outer space, 3D printing plays an important role in terms of repair. The international space station has a 3D printer in case there is a need to manufacture items in space.[820] (Even in a galaxy, far, far, away, the right to repair is a significant issue in the fictional Star Wars Universe).[821]

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814 Anas Easop, 'Swinburne Robot Constructs Automotive Repair Using 3D Printing', *3D Printing Industry*, 11 March 2019, https://3dprintingindustry.com/news/swinburne-robot-constructs-automotive-repair-using-3d-printing-150831/

815 Makerspace Adelaide, 'Adelaide Repair Café', https://makerspaceadelaide.org/

816 Canberra Environment Centre, https://www.canberraenvironment.org/whats-on/repaircafe

817 Ford, 'Building in the Automotive Sandbox', https://corporate.ford.com/articles/products/building-in-the-automotive-sandbox.html

818 RDM Rotterdam, https://www.rdmrotterdam.nl/en/about-rdm-rotterdam/

819 Prusa Printers, https://blog.prusaprinters.org/prusa-i3_3543/

820 NASA, International Space Station: 3D Printer, https://www.nasa.gov/content/international-space-station-s-3-d-printer/

821 Adam Minter, 'In the "Star Wars" Economy, One Thing Doesn't Pay', *Bloomberg*, 22 December 2019, https://www.bloomberg.com/opinion/articles/2019-12-22/in-the-star-wars-economy-one-thing-doesn-t-pay

There has been concern about intellectual property holders engaging in profiteering – not only in 2D printing, but also in 3D printing.[822]

While the litigation in *Calidad* is very much focused on 2D printing, it may nonetheless have ramifications for 3D printing and additive manufacturing, and emerging fields such as 4D printing. [823] Furthermore, a proprietarian approach to patent law, as taken by the Federal Court of Australia and even the minority judges of the High Court of Australia, may also have an adverse impact upon communities – such as those in the Maker Movement – which support a culture of DIY repair, refurbishment of inventions, and open sharing. The majority position of the High Court of Australia in the *Calidad* litigation on patent exhaustion may be much more conducive to support a culture of repair and remaking in secondary markets.

The Maker Movement has advocated the open development, collaboration, and sharing of inventions. [824] Chris Anderson has observed that the Maker Movement is a 'broad description that encompasses a wide variety of activities, from traditional crafting to high-tech electronics'[825]. The Maker Movement has been a strong advocate of the recognition of a right to repair. The Maker's Bill of Rights has emphasized that 'ease of repair shall be a design ideal, not an afterthought'.[826] Likewise, iFixit's Repair Manifesto has stressed that 'repair is better

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822 Cory Doctorow, 'Ink-Stained Wretches: The Battle for the Soul of Digital Freedom Taking Place Inside Your Printer', Electronic Frontier Foundation, 5 November 2020, https://www.eff.org/deeplinks/2020/11/ink-stained-wretches-battle-soul-digital-freedom-taking-place-inside-your-printer

823 The discussion of patent law and the right to repair comes from a forthcoming paper, Matthew Rimmer, 'The Right to Repair: Patent Law, and 3D Printing in Australia' (2021) *Script-ed* (forthcoming).

824 On the Maker Movement, see Chris Anderson, *Makers: The New Industrial Revolution*, New York: Random House LLC, 2012; Mark Hatch, *The Maker Movement Manifesto: Rules for Innovation in the New World of Crafters, Hackers, and Tinkerers*, New York: McGraw-Hill Books, 2013; Dale Dougherty with Ariane Conrad, *Free to Make: How the Maker Movement is Changing our Schools, Our Jobs, and Minds*, Berkeley: North Atlantic Books, 2016; Neil Gershenfeld, Alan Gershenfeld and Joel Cutcher-Gershenfeld, *Designing Reality: How to Survive and Thrive in the Third Digital Revolution*, New York: Basic Books, 2017); and Mark Hatch, *The Maker Revolution: Building a Future on Creativity and Innovation in an Exponential World*, Hoboken (NJ): John Wiley & Sons, 2018.

825 Chris Anderson, *Makers: The New Industrial Revolution* (New York: Random House LLC, 2012), 20.

826 Phillip Torone, 'Maker's Bill of Rights', (2006) *Make Magazine* https://makezine.com/2006/12/01/the-makers-bill-of-rights/

than recycling', 'repair saves you money', 'repair teaches engineering', and 'repair saves the planet'.[827]

There has been increasing academic and scholarly interest in the topic of intellectual property and 3D printing.[828] There has also been significant interest in the public policy dimensions of the topic.[829] Some scholars, such as Mark Lemley, have argued that patent law, practice, and policy will be disrupted by 3D printing, additive manufacturing, and digital fabrication.[830] Others, such as Geertrui van Overwalle, have argued that patent law has a long accommodated emerging technologies, and will be able to assimilate 3D printing into its schema.[831]

In the context of the topic of repair, UNSW scholar Miles Park has written about how 3D printing and additive manufacturing have been deployed in respect of making replacement

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827 TechCrunch, 'The Self-Repair Manifesto', *TechCrunch*, 10 November 2010 https://techcrunch.com/2010/11/09/the-self-repair-manifesto/ and iFixit, 'Repair Manifesto', https://www.ifixit.com/Manifesto

828 John Hornick, *3D Printing will Rock the World*, North Charleston (South Carolina): Createspace, 2015; Angela Daly, *Socio-Legal Aspects of the 3D Printing Revolution*, London: Palgrave Macmillan, 2016; Dinusha Mendis, Mark Lemley, and Matthew Rimmer (ed.), *3D Printing and Beyond: Intellectual Property and Regulation*, Cheltenham (UK) and Northampton (Mass.): Edward Elgar, 2019; Lucas Osborn, *3D Printing and Intellectual Property*, Cambridge: Cambridge University Press, 2019; James Griffin, *The State of Creativity: The Future of 3D Printing, 4D Printing and Augmented Reality*, Cheltenham (UK) and Northampton (Mass.): Edward Elgar, 2019; and Hing Kai Chan, Hui Leng Choo, Onyeka Osuji and James Griffin (ed.), *Intellectual Property Rights And Emerging Technology: 3D Printing in China*, London and New York: Routledge, 2019.

829 Michael Weinberg, *It Will be Awesome if They Don't Screw it Up: 3D Printing, Intellectual Property, and the Fight Over the Next Great Disruptive Technology*, Washington DC: Public Knowledge Whitepaper, 2012, https://www.publicknowledge.org/files/docs/3DPrintingPaperPublicKnowledge.pdf; Michael Weinberg, *What's the Deal with Copyright and 3D Printing*?, Washington DC: Public Knowledge, January 2013, https://www.publicknowledge.org/news-blog/blogs/whats-the-deal-with-copyright-and-3d-printing; and Michael Weinberg, *3D Scanning: A World Without Copyright*, Shapeways, 2016, http://www.shapeways.com/wordpress/wp-content/uploads/2016/05/white-paper-3d-scanning-world-without-copyright.pdf

830 Mark Lemley, 'IP in a World without Scarcity' (2015) 90 (2) *New York University Law Review* 461-515.

831 Geertrui Van Overwalle and Reinout Leys, '3D Printing and Patent Law: A Disruptive Technology Disrupting Patent Law?' (2017) 48 (5) *International Review of Intellectual Property and Competition Law* 504-537.

parts.[832] He observes that 3D printing could transform how products are designed, manufactured, distributed, and sold:

> 3D printing replacement parts demonstrates an evolutionary step towards this transformation. It offers the opportunity to extend product lifespans by providing re-printable replacement parts when existing part inventories are exhausted, or no longer exist. The technology enables the repositioning of production both in terms of location (printing parts in places where they are required) and structure (by placing the tools of production in the hands of the consumer).[833]

Park predicts that '3D printing will continue to rapidly improve and will become increasingly prolific in mainstream consumer markets'.[834] He notes: 'The technology will become more affordable for individual ownership and will be easier to use.'[835] Park is hopeful that 'technical and regulatory obstacles will eventually be resolved that will contribute to the acceptance by manufacturing brands to provide 3D print information and parts, and consumer confidence to obtain 3D printed replacement parts.'[836]

Kelsey Wilbanks has considered how 3D printing will fare in the United States given past patent precedents on the right to repair.[837] Wilbanks observes that 'some patent holders will start to attribute lost revenues to the 3D printing revolution, and they will view 3Dprinting replacement parts as theft.'[838] Wilbanks comments: 'As a result, they will either try to tighten the restrictions on the products they sell, or they will initiate litigation against the consumers who are fixing products with multiple 3D printed replacement parts.'[839] Wilbanks reflects that 'current patent law holds that a consumer has a legal right to repair a patented combination, but not the right to reconstruct it.' [840] He laments, though, the lack of a bright-line rule about the difference between repair and reconstruction: 'The Supreme Court has declined to create an

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832 Miles Park, 'Printer to Repair: 3D Printing and Product Repair', in Jonathan Chapman (ed.) *Routledge Handbook of Sustainable Product Design*, Abingdon (Ox) and New York, 2017, 236-259.

833 Ibid., 237.

834 Ibid., 248.

835 Ibid., 248.

836 Ibid., 248.

837 Kelsey Wilbanks, 'The Challenges of 3D Printing to the Repair-Reconstruction Doctrine in Patent Law' (2013) 20 *George Mason Law Review* 1147-1181.

838 Ibid.

839 Ibid.

840 Ibid.

all-encompassing test to determine the difference between permissible repair and infringing reconstruction, and as a result lower courts have applied the law inconsistently and erratically'.[841] Wilbanks maintains that there is a need to remedy this uncertainty in the law: 'Consumers need and deserve a defined standard or set of standards to determine whether their actions are permissible repair or infringing reconstruction'.[842] The author submits that 'an "all or nothing" standard, a redefined burden-shifting analysis, or a multifactor approach would help lessen the ambiguities in the current repair-reconstruction legal doctrine.'[843] Wilbanks concludes: 'As 3D printing technology advances, the legal standards distinguishing item repair and reconstruction must do the same.'[844]

Tesh Dagne and Gosia Piasecka have considered the right to repair doctrine and the use of 3D printing technology under Canadian patent law.[845] They anticipated clashes between intellectual property holders, 3D printing companies, and consumers:

> There is an increasing trend to share the designs for these 3D printed creations online, as consumers progressively shift away from vertical economies towards horizontal market networks. This trend is commonly referred to as the sharing economy. It presents a wealth of opportunities but also bears challenges. As consumers want to have greater freedom and autonomy over the design and manufacture of goods, patent-holders will seek to minimize the unauthorized reconstruction of their inventions.[846]

The lawyers argued: 'Due to its innovative nature and connection to the sharing economy, 3D printing is bound to disrupt today's manufacturing markets'.[847] However, they maintained that the existing regimes of intellectual property were not well designed to deal with 3D printing and additive manufacturing. In their view, there was a need to introduce an all-encompassing right to repair, subject to a number of conditions: 'It is vital to balance the interests of patent-

841 Ibid.

842 Ibid.

843 Ibid.

844 Ibid.

845 Tesh Dagne and Gosia Piasecka, 'The Right to Repair Doctrine and the Use of 3D Printing Technology in Canadian Patent Law' (2016) 14 *Canadian Journal of Law and Technology* 263-287.

846 Ibid., 263.

847 Ibid., 286.

holders with innovative consumers, so 3D printing can thrive without eroding existing patent rights and investments by stakeholders'.[848]

In her study for the United Kingdom Intellectual Property Office, Dinusha Mendis and her colleagues wondered: 'What are the implications of consumers and independent repair companies being able to manufacture spare parts for domestic appliances on demand, using consumer 3D Printers?'[849] Her second report with Phil Reeves considers 3D printing and replacement parts amongst other things. Mendis and Reeves consider the automotive aftermarket for printing parts. [850] They contended that '[additive manufacturing] could be used to make component parts for the automotive industry directly from digital design files, rather than high cost fixed assets such as injection moulding, rotational moulding and die casting tooling'.[851] Mendis and Reeves were nonetheless sceptical of the speed of uptake of 3D printed replacement parts in the automotive industry: 'Given the speed of [additive manufacturing] technology development it is very unlikely for there to be significant revenue opportunities in this sector for at least the next 15-years.'[852] They suggested that there would be a longer-process of standard-setting, which would take place first.

Mendis and Reeves also look at the domestic appliances aftermarket using home-based 3D printing: 'Although the idea of printing spare parts at home for domestic appliances appears to hold much promise, and to a small extent is already taking place today, it is believed that it will be a substantial period of time before this becomes a widespread practice.'[853]

Looking at the European Union, Rosa Ballardini and her colleagues have also explored some of the legal and business challenges in respect of printing spare parts through 3D printing

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848 Ibid., 286.

849 Dinusha Mendis, Davide Secchi, and Phil Reeves, *A Legal and Empirical Study into the Intellectual Property Implications of 3D Printing* (Newport: United Kingdom Intellectual Property Office, March 2015), https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/421222/A_Legal_and_Empirical_Study_into_the_Intellectual_Property_Implications_of_3D_Printing_-_Exec_Summary_-_Web.pdf

850 Phil Reeves and Dinusha Mendis, *The Current Status and Impact of 3D Printing Within the Industrial Sector: An Analysis of Six Case Studies* (Newport: United Kingdom Intellectual Property Office, 2015), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/549046/Study-2.pdf

851 Ibid., 14.

852 Ibid., 21.

853 Ibid., 25.

and additive manufacturing.[854] As the work of the European Patent Office has shown, the patent landscape in respect of 3D printing has become very crowded.[855]

In their 2017 Springer brief on design protection of visible spare parts, Dana Beldiman and Constantin Blanke-Roeser considered the future of spare parts in an age of 3D printing.[856] They foresee that additive manufacturing will become much more widespread:

> 3D printing technology will undoubtedly find widespread application in the automotive industry, in particular the spare parts industry. Of course, mass production of spare parts is still several years away, estimated in the range of 10-15 years. Once established however, the technology will profoundly change the mode of industrial production, as well as the market structure and the relative positions of its players.[857]

The scholars debate what impact 3D printing will have on spare parts, and how intellectual property will respond to such matters. Beldiman and Blanke-Roeser concluded: 'It is more likely that OEM's will take advantage of the numerous smaller local players to enter co-operative arrangements that allow localized, on demand supply of spare parts.'[858]

In his survey of *3D Printing and Intellectual Property*, Lucas Osborn recognises that 'IP law will face many calls for change from a variety of constituencies' in the face of 3D printing and additive technologies.[859] He has urged that there be further debate about the field: 'Continuing the study and conversation will be immensely important to achieving a society in which 3D printing technology, innovation, and creativity can optimally flourish.'[860]

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854 Rosa Maria Ballardini, Inigo Flores Ituarte, and Eujin Pei, 'Printing Spare Parts through Additive Manufacturing: Legal and Digital Business Challenges' (2018) 29 (6) *Journal of Manufacturing Technology Management* 958-982.

855 European Patent Office, *Patents and Additive Manufacturing: Trends in 3D Printing Technologies*, (Munich: European Patent Office, 2020), http://documents.epo.org/projects/babylon/eponet.nsf/0/C2F0871212671851C125859F0040BCCA/$FILE/additive_manufacturing_study_en.pdf

856 Dana Beldiman and Constantin Blanke-Roeser, *An International Perspective on Design Protection of Visible Spare Parts*, Springer Briefs in Law, 2017.

857 Ibid., 115.

858 Ibid., 128.

859 Lucas Osborn, *3D Printing and Intellectual Property*, Cambridge: Cambridge University Press, 2019, 228.

860 Ibid., 229.

There has been a concern about intellectual property owners engaging in profiteering in the fields of 2D printing and 3D printing.[861] This literature review of scholarly work and public policy inquiries has shown that there has been a strong impetus to redesign intellectual property laws to better to take into account new technologies such as 3D printing and additive manufacturing, and the cultures of the Maker Movement and right-to-repair advocates.

In addition to intellectual property, there has also been product liability issues raised in respect of 3D printing. Nora Freeman Engstrom considered obstacles around product liability for 3D printing in the United States.[862] European scholar Angela Daly flagged product liability as a key issue for 3D printing at an early date.[863] From an Australian perspective, Jane Nielsen and Lynden Griffs have discussed allocating risk and liability for defective 3D printed products.[864]

America Makes and other leaders in the field of 3D printing have been seeking to engage in standards-setting in order to raise standards of quality and reliability.[865]

In its draft report, the Productivity Commission considers the future impact of new technologies such as 3D printing and additive manufacturing upon the right to repair:

> New technologies such as 3D printing (and other forms of 'additive manufacturing', whereby objects are created by adding layers of material, rather than by removing material (General Electric 2021)), may also increase the accessibility of spare parts, by enabling repairers to fabricate their own replacement parts and be less dependent on conventional manufacturers (Abbas, sub. 34, p. 13). In Australia, the use of 3D printing to create spare parts is unlikely to infringe manufacturers' IP rights if: the 3D printed spare part is not substantially similar in overall impression to the original part (or the 'spare parts defence' under the *Designs Act* applies), there has been no copying of the part's original

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861 Cory Doctorow, 'Ink-Stained Wretches: The Battle for the Soul of Digital Freedom Taking Place Inside Your Printer', Electronic Frontier Foundation, 5 November 2020, https://www.eff.org/deeplinks/2020/11/ink-stained-wretches-battle-soul-digital-freedom-taking-place-inside-your-printer

862 Nora Freeman Engstrom, '3D Printing and Product Liability: Identifying the Obstacles' (2013) 162 (35) *University of Pennsylvania Law Review* 35-41.

863 Angela Daly, *Socio-Legal Aspects of the 3D Printing Revolution*, London: Palgrave Macmillan, 2016, 66-70.

864 Jane Nielsen and Lynden Griffs, 'Allocating Risk and Liability for Defective 3D printed Products: Product Safety, Negligence, or Something New?', (2019) 42 (3) *Monash University Law Review* 712-739.

865 America Makes and ANSI Additive Manufacturing Standardization Collaborative (AMSC) https://www.ansi.org/standards-coordination/collaboratives-activities/additive-manufacturing-collaborative

(copyrighted) design schematics in the creation of the print (the part is reverse engineered), and no manufacturer trademarks are printed on to the part.[866]

However, the evidence would suggest that intellectual property litigation over 3D printing is growing, particularly as the technology field matures, and commercial value is realised.[867] Moreover, there will also be complex issues in respect of product liability and 3D printing. The process of standard-setting will be an important one to ensure the quality, reliability, and durability of 3D printing repairs.

Recommendation 24
3D printing and additive manufacturing are already playing a significant role in respect of repair across a number of sectors and technologies. There is a need to ensure that intellectual property law enables the use of such technologies for the purposes of repair. Product liability may have an impact in respect of defective repairs conducted with 3D printing (much like in other fields of technology). The development of standards will also be important to ensure the quality, reliability and durability of repairs undertaken with 3D printing.

[866] Productivity Commission, *Right to Repair: Draft Report*, Melbourne: Productivity Commission, 11 June 2021, 161, https://www.pc.gov.au/inquiries/current/repair/draft

[867] Matthew Rimmer, '3D Printing, the Maker Movement, Intellectual Property Litigation and Legal Reform', (2019) 5 *WIPO Magazine* 40-45 https://wipo.int/export/sites/www/wipo_magazine/en/pdf/2019/wipo_pub_121_2019_05.pdf

19. Public Health, the Coronavirus Pandemic, and the Right to Repair

In the draft report, the Productivity Commission discusses the impact of the coronavirus upon the public policy topic of the right to repair in passing.

For instance, the Productivity Commission notes in relation to motor vehicles: 'In the wake of the COVID 19 pandemic, prices for used cars have increased by over one third due to strong demand and production constraints for new cars (Gray 2021; Hope 2021), which may increase demand for motor vehicle repairs and maintenance.'[868] The Productivity Commission mentions: 'For example, there were reports that during the early stages of the COVID 19 crisis, constrained access to repair information and parts for ventilators obstructed some repairs, leaving some devices non functional during the peak of the crisis.'[869] The Productivity Commission also notes that the consumption of IT equipment and e-waste generation could be affected by coronavirus: 'Unexpected fluctuations in demand can also increase some types of e waste generation, such as the spike in consumption of IT equipment during the COVID 19 pandemic, as individuals set up home offices.'[870]

In composing its final report, it would be helpful and useful if the Productivity Commission could devote a chapter or at least a sub-chapter to the topic of public health and the right to repair (much like it has in respect of intellectual property, consumer rights, competition policy, product design, and e-waste). At a domestic level, the issue of repair of medical infrastructure and technology is becoming increasingly important in Australia.

At a comparative level, it is notable that there have been a number of law reform proposals to recognise a right to repair in respect of medical infrastructure. As discussed in this submission, there has been a United States Congressional bill targeted at the issue of intellectual property, the right to repair, and medical infrastructure. In his remarks on the 2021 the right to repair enforcement priority of the competitor regulator, Rohit Chopra of the Federal Trade Commission highlighted the need to consider the right to repair in the United States in the context of the pandemic:

> The pandemic exposed serious weaknesses in our nation's resilience and ability to recover from shocks. While we typically view improper repair restrictions through its effects on fair competition, consumers, and

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868 Productivity Commission, *Right to Repair: Draft Report*, Melbourne: Productivity Commission, 11 June 2021, 59, https://www.pc.gov.au/inquiries/current/repair/draft

869 Ibid., 123.

870 Ibid., 226.

> small businesses, the Right to Repair movement also showed us how these problems can be matters of life and death. During the FTC's review of this issue, we heard about hospitals worried that they would be unable to fix a ventilator because a manufacturer was seeking to deny access to repair it. Outages caused by repair restrictions like these can make the difference in times of emergencies.[871]

Likewise, in the South African debates over copyright law reform, there has been a proposal for a right to repair. At an international level, there has been a proposal for a TRIPS Waiver put forward by South Africa and India in relation to intellectual property associated with COVID-19 technologies. The Biden Administration has supported a TRIPS Waiver for vaccines. Conceivably, a broad-based TRIPS Waiver would apply to repairs made in respect of intellectual property related to medical infrastructure.

There has been much discussion of the necessity of law reform during the coronavirus emergency – including in respect of intellectual property and the right to repair.

Recommendation 25
The draft report by the Productivity Commission briefly discusses in passing some of the impacts of the coronavirus pandemic upon the topic of the right to repair. It would be helpful and useful if the Productivity Commission could devote a chapter or a sub-chapter to the topic of public health and the right to repair (much like it has in respect of intellectual property, consumer rights, competition policy, product design, and e-waste). There has been much discussion of the necessity of law reform during the coronavirus emergency – including in respect of intellectual property and the right to repair.

[871] Rohit Chopra, 'Prepared Remarks of Commissioner Rohit Chopra Regarding a Motion to Adopt a Policy Statement on Repair Restrictions Imposed by Manufacturers and Sellers', Federal Trade Commission, 21 July 2021, https://www.ftc.gov/public-statements/2021/07/commissioner-chopra-remarks-regarding-repair-restrictions

Biography

Dr Matthew Rimmer is a Professor in Intellectual Property and Innovation Law at the Faculty of Business and Law, at the Queensland University of Technology (QUT). He has published widely on copyright law and information technology, patent law and biotechnology, access to medicines, plain packaging of tobacco products, intellectual property and climate change, Indigenous Intellectual Property, and intellectual property and trade. He is undertaking research on intellectual property and 3D printing; the regulation of robotics and artificial intelligence; and intellectual property and public health (particularly looking at the coronavirus COVID-19). His work is archived at QUT ePrints, SSRN Abstracts, Bepress Selected Works, and Open Science Framework.

Over the past two decades, Rimmer has investigated intellectual property and access to medicines in a range of contexts. He has considered conflicts in relation to HIV/AIDS, malaria, tuberculosis, tropical diseases, non-communicable diseases such as cancer, the SARS virus, avian influenza, ebola, and the coronavirus COVID-19. Rimmer is a co-editor of a collection on access to medicines entitled *Incentives for Global Public Health: Patent Law and Access to Essential Medicines* (Cambridge University Press, 2010). The work considers the intersection between international law, public law, and intellectual property law, and highlights a number of new policy alternatives – such as medical innovation prizes, the Health Impact Fund, patent pools, open source drug discovery, and the philanthropic work of the (Red) Campaign, the Gates Foundation, and the Clinton Foundation. Rimmer is also a co-editor of *Intellectual Property and Emerging Technologies: The New Biology* (Edward Elgar, 2012). Rimmer has undertaken extensive research on intellectual property and access to essential medicines. He has written about the Race to Patent the SARS Virus (*Melbourne Journal of International Law*, 2004). Rimmer has analysed Canada's pioneering regime for the export of pharmaceutical drugs (*Public Health Ethics*, 2008). He has also evaluated the system for priority review vouchers (*WIPO Journal*, 2012). Rimmer has also considered the impact of the *Trans-Pacific Partnership* on access to essential medicines (*IP Journal*, 2017). Rimmer has been providing expert commentary on intellectual property, access to essential medicines, and the coronavirus COVID-19.

Rimmer has undertaken a range of research work and public policy engagement on the relationship between intellectual property, international trade, and globalisation. He has investigated the *TRIPS Agreement* 1994, and considered its implications for various global issues – such as technology transfer, food security, public health, and climate change. Rimmer

has undertaken extensive analysis of the *Australia-United States Free Trade Agreement* 2004 – particularly focusing upon its impact upon the duration of the copyright term, and the evergreening of pharmaceutical drugs. He has also considered other bilateral trade agreements – such as the *Chile-Australia Free Trade Agreement*, the *Korea-Australia Free Trade Agreement*, the *Japan-Australia Economic Partnership Agreement*, and the *China-Australia Free Trade Agreement*. Rimmer was a critic of the *Anti-Counterfeiting Trade Agreement* 2011. Rimmer has written extensively about the various iterations of the *Trans-Pacific Partnership*. He has been particularly interested in the relationship between intellectual property and investor-state dispute settlement. He has published a research monograph on *The Trans-Pacific Partnership: Intellectual Property and Trade in the Pacific Rim* (Edward Elgar, 2020). Rimmer has also been exploring other mega-regional trade agreements – such as the *Regional Comprehensive Economic Partnership*, the *United States-Mexico-Canada Agreement* 2020, and the *Trade in Services Agreement*.

Rimmer is a chief investigator of the NHMRC Centre of Research Excellence on Achieving the Tobacco Endgame (CREATE) (2020-2025). He is a co-director of the legal project of the research network. Rimmer is a researcher and commentator on the topic of intellectual property, public health, and tobacco control. He is the co-author of the influential article 'The Case for the Plain Packaging of Tobacco Products' (2008), which has been a high impact piece of research and public policy in Australia and the world. Rimmer has undertaken research on intellectual property and the plain packaging of tobacco products, and given evidence to an Australian parliamentary inquiry on the topic. He has edited a special issue of the *QUT Law Review* on the topic, *The Plain Packaging of Tobacco Products* (2017). Rimmer has considered the development and implementation of the *WHO Framework Convention on Tobacco Control* 2003. He has been an advocate of tobacco control measures – such as tobacco advertising bans, graphic health warnings, plain packaging of tobacco products, tobacco divestment, and tobacco endgame strategies.

Rimmer was a Chief Investigator on an ARC Discovery Project on 'Inventing The Future: Intellectual Property and 3D Printing' (2017-2021). This project aimed to provide guidance for industry and policy-makers about intellectual property, three-dimensional (3D) printing, and innovation policy. It will considered the evolution of 3D printing, and examined its implications for the creative industries, branding and marketing, manufacturing and robotics, clean technologies, health-care and the digital economy. The project examined how 3D printing disrupts copyright law, designs law, trade mark law, patent law and confidential information. The project provided practical advice about intellectual property management and

commercialisation, and boost Australia's capacity in advanced manufacturing and materials science. Along with Dinusha Mendis and Mark Lemley, Rimmer is the editor of the collection, *3D Printing and Beyond: Intellectual Property and Regulation* (Edward Elgar, 2019). He has been engaged in fieldwork on makerspaces, fab labs, tech shops, Maker Faires, hackerspaces, innovation centres, hubs and accelerators; and has been conducting interviews with members of the Maker Movement.

Rimmer has also a research interest in Indigenous intellectual property and traditional knowledge. He has written about the misappropriation of Indigenous art, the right of resale, Indigenous performers' rights, authenticity marks, biopiracy, and population genetics. Rimmer is the editor of the collection, *Indigenous Intellectual Property: A Handbook of Contemporary Research* (Edward Elgar, 2015). He has focused upon the adoption and the implementation of the *United Nations Declaration on the Rights of Indigenous Peoples* 2007. Rimmer has participated in inquiries into the right of resale, inauthentic art, and the design of the Aboriginal Flag.

Rimmer was an Australian Research Council Future Fellow, working on Intellectual Property and Climate Change from 2011 to 2015. He is the author of a monograph, *Intellectual Property and Climate Change: Inventing Clean Technologies* (Edward Elgar, September 2011). This book charts the patent landscapes and legal conflicts emerging in a range of fields of innovation – including renewable forms of energy, such as solar power, wind power, and geothermal energy; as well as biofuels, green chemistry, green vehicles, energy efficiency, and smart grids. As well as reviewing key international treaties, this book provides a detailed analysis of current trends in patent policy and administration in key nation states, and offers clear recommendations for law reform. It considers such options as technology transfer, compulsory licensing, public sector licensing, and patent pools; and analyses the development of Climate Innovation Centres, the Eco-Patent Commons, and environmental prizes, such as the L-Prize, the H-Prize, and the X-Prizes. Rimmer is the editor of the collection, *Intellectual Property and Clean Energy: The Paris Agreement and Climate Justice* (Springer, 2018). He is currently working on a manuscript, looking at green branding, trade mark law, and environmental activism. Rimmer is interested in the implementation of the *Paris Agreement* 2015 and the *United Nations Sustainable Development Goals* 2015.

Rimmer is the author of *Intellectual Property and Biotechnology: Biological Inventions* (Edward Elgar, 2008). This book documents and evaluates the dramatic expansion of intellectual property law to accommodate various forms of biotechnology from micro-organisms, plants, and animals to human genes and stem cells. It makes a unique theoretical

contribution to the controversial public debate over the commercialisation of biological inventions. Rimmer also edited the thematic issue of Law in Context, entitled *Patent Law and Biological Inventions* (Federation Press, 2006). Rimmer was also a chief investigator in an Australian Research Council Discovery Project, 'Gene Patents In Australia: Options For Reform' (2003-2005), an Australian Research Council Linkage Grant, 'The Protection of Botanical Inventions (2003), and an Australian Research Council Discovery Project, 'Promoting Plant Innovation in Australia' (2009-2011). Rimmer has participated in inquiries into plant breeders' rights, gene patents, and access to genetic resources.

Rimmer is the author of *Digital Copyright and the Consumer Revolution: Hands off my iPod* (Edward Elgar, 2007). With a focus on recent US copyright law, the book charts the consumer rebellion against the *Sonny Bono Copyright Term Extension Act* 1998 (US) and the *Digital Millennium Copyright Act* 1998 (US). Rimmer explores the significance of key judicial rulings and considers legal controversies over new technologies, such as the iPod, TiVo, Sony Playstation II, Google Book Search, and peer-to-peer networks. The book also highlights cultural developments, such as the emergence of digital sampling and mash-ups, the construction of the BBC Creative Archive, and the evolution of the Creative Commons. Rimmer has also participated in a number of policy debates over Film Directors' copyright, the *Australia-United States Free Trade Agreement* 2004, the *Copyright Amendment Act* 2006 (Cth), the *Anti-Counterfeiting Trade Agreement* 2011, and the *Trans-Pacific Partnership*. He has been an advocate for Fair IT Pricing in Australia.

Rimmer is a member of the QUT Centre for the Digital Economy – which is part of the QUT Centre for Future Enterprise; the QUT Digital Media Research Centre (QUT DMRC), the QUT Centre for Behavioural Economics, Society, and Technology (QUT BEST); the QUT Centre for Justice; the QUT Australian Centre for Health Law Research (QUT ACHLR); and the QUT Centre for Clean Energy Technologies and Processes. Rimmer is a chief investigator, and co-director of the legal program in the NHMRC Centre of Research Excellence on Achieving the Tobacco Endgame (CREATE) (2020-2025) – a transnational research network. Rimmer was previously the leader of the QUT Intellectual Property and Innovation Law Research Program from 2015-2020 (QUT IPIL).

Dr Matthew Rimmer holds a BA (Hons) and a University Medal in literature (1995), and a LLB (Hons) (1997) from the Australian National University. He received a PhD in law from the University of New South Wales for his dissertation on *The Pirate Bazaar: The Social Life of Copyright Law* (1998-2001). Dr Matthew Rimmer was a lecturer, senior lecturer, and an associate professor at the ANU College of Law, and a research fellow and an associate

director of the Australian Centre for Intellectual Property in Agriculture (ACIPA) (2001 to 2015). He was an Australian Research Council Future Fellow, working on Intellectual Property and Climate Change from 2011 to 2015. He was a member of the ANU Climate Change Institute.