

Achieving a (copy)right to repair for the EU's green economy

Anthony D. Rosborough¹, Leanne Wiseman¹ and Taina Pihlajarinne

1. Introduction

Manufacturers of various products and devices are increasingly incorporating computer programs in their design. Seemingly every object in today's world—from home appliances to insulin pumps to agricultural machinery—relies on embedded system design and software integration. This crucial role played by

including curtailing access to repair information and by prohibiting circumvention of technological protection measures in software-enabled devices.

- In surveying proposed IP Right to Repair reforms in Australia and Canada, the article calls upon EU legislators to consider more strongly the role of IP laws in preventing repair. Moving beyond the enactment of new exceptions and limitations, the article proposes that EU legislators conceptualize the Right to Repair as a positive user's right. Considering the social, economic and ecological benefits of increased access to repair, the authors contend that this requires exempting the application of exclusive rights where they impede repair activities, obligating rightsholders to provide access to repair information and software and stronger assurances to users and independent repairers through *ex ante* exceptions.

The authors

- Anthony Rosborough is a doctoral researcher in Law at the European University Institute in Florence, Italy. Leanne Wiseman is an Australian Research Council Future Fellow and Professor in Law at Griffith University, Brisbane Australia and is Associate Director of Australian Centre for Intellectual Property in Agriculture (ACIPA). Taina Pihlajarinne is a Professor of Copyright Law (Docent of Commercial Law) at the University of Helsinki.

Abstract

- The Right to Repair is a global movement in favour of rebalancing the relationship between manufacturers and end users of products and devices. As part of the European Union (EU) Green Deal and the Circular Economy Action Plan, EU legislators have made the Right to Repair a key policy aim. To date, however, the EU's Right to Repair policy focus has been predominantly consumer law-oriented.
- This article sheds light on another key dimension of the Right to Repair—IP (and principally copyright law). It canvasses the ways in which copyright can inhibit repair activities,

computerization in modern manufacturing is evidenced by a global semiconductor shortage,¹ resulting in supply chain constraints and looming global macroeconomic woes. While these technological advances have often provided efficiency gains and ease of use for end users, they have also granted manufacturers unprecedented control over *how* and *by whom* those products and devices are used, maintained and repaired. Although the public interest may support repairing and maintaining such

1 J P Morgan 'Supply Chain Issues and Autos: When Will the Chip Shortage End?' (*J.P.Morgan*, 11 August 2022). Available at www.jpmorgan.com/insights/research/supply-chain-chip-shortage (accessed 12 December 2022).

devices,² the profit incentive of manufacturers often operates in a different direction. The increasing sophistication of today's devices and products has also made access to diagnostic and maintenance information even more essential for repair, creating further incentive for manufacturers to keep a tight grip on it. Even where onboard software and technical restrictions permit independent repair and maintenance, the inability to access repair and diagnostic information means that many products and devices are abandoned prematurely, leading to a burgeoning pile of electronic waste—the fastest growing solid waste stream globally.³

In this article, we contend that the key barriers to extending product lifespan through repair are the exclusive rights afforded by IP and particularly copyright. While product design regulations and waste disposal regulations are important *remedies* to the problem, we contend that the *source* of many impediments to repairability is in fact restrictions enabled by IP laws. For this reason, our overarching claim is that IP (and copyright in particular) ought to play a stronger role in the policy reform efforts towards the Right to Repair in the European Union (EU). Two aspects of copyright law form the focus of our analysis: (i) the subsistence of exclusive rights in repair manuals and related documentation and (ii) software technological protection measures (TPMs) or 'digital locks'.

We begin with a brief overview of the Right to Repair movement, its normative ideals and its connection to copyright law. We then conduct a brief analysis of the EU's current policy reform efforts towards the Right to Repair, including current measures under the EcoDesign Directive⁴ and proposals for future legislation. While these efforts show a strong emphasis on enhancing manufacturers' responsibility and empowering consumers, our call for a greater emphasis on the role that a copyright regulatory response can play is supported by a comparative analysis of Right to Repair policy reforms underway in Australia and Canada. In contrast to the EU's consumer- and market-oriented approach, these jurisdictions evoke a copyright-focused approach to the Right to Repair. Finally, we put forward recommendations for

centring copyright as a key policy reform area in the efforts towards a European Right to Repair. The aim of this paper is to examine the role that EU copyright laws play in creating barriers to repairability and in how it can be reshaped, or opened, to empower independent repairers and provide wider access to repair and service information.

In calling for a '(copy)right to repair' in the EU, we acknowledge that there remains significant debate concerning the nature of EU copyright exceptions and, particularly, whether they can be characterized as full-fledged user rights.⁵ It is far beyond the scope of this analysis to wade into this larger debate. Rather, our focus is much more pointed. Our view is that the EU's Right to Repair ambitions in pursuit of a circular economy can only be meaningfully achieved if copyright reform (including the expansive interpretation of existing exceptions) becomes part of the EU's legislative agenda.

2. The Right to Repair movement

An active global Right to Repair movement is currently the impetus for legislative and policy reform initiatives around the world. This movement has been motivated by several end goals. For one, repair increases consumer choice, reduces costs and encourages market competition for independent repair services. Second, repair aligns with sustainability goals in extending product lifespan and reducing premature obsolescence and abandonment of various products and devices.⁶ Finally, repair strengthens communities by encouraging knowledge sharing and new discoveries and facilitating innovative processes. In terms of legal and policy outcomes, the Right to Repair movement seeks to rebalance the relationship between manufacturers and end users of the products. It calls upon manufacturers to make parts, tools, information and software more readily available to independent repairers and everyday people, well beyond the exclusivity of 'authorized technicians'.

When transposed as specific legal and policy reforms, the outcomes sought by the Right to Repair movement require revision to consumer laws, competition rules, IP and environmental laws.⁷ Many countries and jurisdictions around the world have started to take steps in one

2 Joint Research Centre 'Repairability Scores: Helping Consumers Choose More Sustainable Products' (*EU Science Hub*, 26 July 2022). Available at https://joint-research-centre.ec.europa.eu/jrc-news/helping-consumers-choose-more-sustainable-products-2022-07-26_en#:~:text=According%20to%20a%20special%20Eurobarometer,for%20at%20least%205%20years (accessed 12 December 2022).

3 Michael Eisenstein 'Short-Circuiting the Electronic-Waste Crisis' (*Nature*, 16 November 2022). Available at www.nature.com/articles/d41586-022-03647-y (accessed 12 December 2022).

4 Council Directive 2009/125/EC of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products [2009] OJ L285/10 (EcoDesign Directive).

5 See Maurizio Borghi 'Exceptions as Users' Rights?' in Eleonora Rosati (ed) *The Routledge Handbook of EU Copyright Law* (Routledge, New York 2021) 263–280.

6 European Parliamentary Research Service, *Right to Repair* (PE 698.869, January 2022).

7 See, for example, Aaron Perzanowski *The Right to Repair: Reclaiming the Things We Own* (Cambridge University Press, Cambridge 2021) 110–118; and Leah Chan Grinvald and Ofer Tur-Sinai 'Intellectual Property Law and the Right to Repair' (2019) 88 *Fordham Law Review* 63–128. Available

or more of these directions, with a range of rationales and priorities. Of these three policy areas, countries around the world have shown the least progress in adjusting competition policy to be more favourable to repair. One potential reason for this is that special status is often given to IP rights when measuring abuses of dominance and unfair market practices.⁸ Although the essential facilities doctrine may suggest an avenue forward for more robust competition regulation, its application to secondary markets is not always clear cut.⁹

At the same time, public awareness of repair restrictions has enticed some manufacturers to make their own commitments to greater repairability. For example, electronics giant Apple created its own Self Service Repair Program¹⁰ in 2021, and others have followed suit.¹¹ Although these industry commitments show some reason for optimism, Right to Repair advocates around the world remain steadfast in their efforts to ensure that repairability is not merely the subject of manufacturers' charity¹² but also backed by legislative and regulatory guarantees.

At first glance, copyright law may seem like an unusual focus for Right to Repair reforms. Focused on cultural, literary and artistic works, copyright policy reforms are ordinarily situated within the context of broadcast, print and creative media and related entertainment industries. And the lengthy process leading to the EU's Digital Single Market Directive's enactment would confirm this understanding of EU copyright law's priorities. But upon closer interrogation, copyright touches upon repair in several important ways.¹³ For one, repair manuals, instructions

and guides are often protected by copyright. Although these works often comprised largely unprotectable facts, processes and data, their compilation, arrangement and accompanying photographs are often sufficiently original to attract exclusive rights in their entirety.¹⁴ Repair manuals and information are rarely produced as commercial works in and of themselves, yet copyright's exclusive rights can provide manufacturers with the legal means to curtail their distribution, availability and communication online.

The second way in which copyright touches upon repair is through its protection for software, which is embedded into smart devices and products. This software is often accompanied by TPMs, which control access and modification to onboard software, firmware and settings. Computer software is protected as a literary work under copyright,¹⁵ and therefore the technical restrictions deployed by manufacturers in preventing access to software receives an additional layer of protection through TPM anti-circumvention laws. Legal protection for these techniques were originally envisioned as copy control technologies used to protect music and other creative works dating back to the 1990s,¹⁶ but they apply equally to software in onboard computers in a whole host of different devices and products. Many repairs of computerized devices require authorization controlled by onboard software, including activating replacement parts,¹⁷ resetting devices to factory settings and accessing diagnostic information. These activities can be made extraordinarily difficult (if not impossible) by manufacturers who incorporate TPMs into restrictive product and device design.

3. The EU approach to Right to Repair reforms

The Right to Repair in the EU has adopted a distinctly consumer-oriented approach to policy reform, rooted in circular economy and sustainability goals, with a view

at <https://ir.lawnet.fordham.edu/flr/vol88/iss1/3> (accessed 12 November 2022).

8 Anthony D Rosborough 'Unscrewing the Future: The Right to Repair and the Circumvention of Software TPMs in the EU' (2020) 11 *JIPITEC* 26–48. Available at www.jipitec.eu/issues/jipitec-11-1-2020/5083 (accessed 16 December 2022), 85–94.

9 See, for example, (T-201/04) *Microsoft Corp v Commission of the European Communities* EU: T:2007:289; [2007] ECR II-3601 (CFI).

10 Apple Inc 'Self Service Repair' (*Apple.com*, 2022). Available at <https://support.apple.com/self-service-repair> (accessed 14 December 2022).

11 Garling Wu 'Looking to Do a DIY Repair? These 5 Tech Companies Offer Self-Repair Programs' (*MUO*, 28 April 2022). Available at <https://www.makeuseof.com/diy-repair-tech-companies-offer-self-repair-programs/> (accessed 14 December 2022); Emma Roth 'John Deere Commits to Letting Farmers Repair Their Own Tractors (Kind of)', (*The Verge*, 10 January 2023). Available at www.theverge.com/2023/1/9/23546323/john-deere-right-to-repair-tractors-agreement (accessed 12 December 2023).

12 Anthony D Rosborough 'Apple's Pledge to Let Consumers Repair Their Own Gadgets Doesn't Go Far Enough' (*Corporate Knights*, 21 December 2021). Available at <https://www.corporateknights.com/waste/apples-pledge-to-let-consumers-repair-their-own-gadgets-doesnt-go-far-enough/> (accessed 15 December 2022).

13 Although not covered in this article, copyright may also impede repair practices where devices or products are 'applied arts' or otherwise sufficiently original in their design to attract exclusive rights. In these scenarios, copyright's exhaustion doctrine can play an important gatekeeper role in the lawfulness of repair activities.

14 See, for example, Anthony D Rosborough 'Zen and the Art of Repair Manuals: Enabling a Participatory Right to Repair through an Autonomous Concept of EU Copyright Law' (2022) 13 *JIPITEC* 113–131. Available at www.jipitec.eu/issues/jipitec-13-2-2022/5539 (accessed 16 December 2022).

15 Agreement on Trade-Related Aspects of Intellectual Property Rights (15 April 1994), Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 UNTS 299, 33 ILM 1197 (1994), Art 10.

16 See, for example, Ian Brown 'The Evolution of Anti-Circumvention Law' (2006) 20 *International Review of Law, Computers and Technology* 239. Available at www.tandfonline.com/doi/abs/10.1080/13600860600852119 (accessed 14 December 2022).

17 Chloé Mikolajczak 'Part Pairing: A Major Threat to Independent Repair' (*Right To Repair*, 6 August 2021). Available at <https://repair.eu/news/part-pairing-a-major-threat-to-independent-repair/> (accessed 15 December 2022).

to lessen the ecological toll of premature product obsolescence.¹⁸ Although the European Parliament has been supportive of improving access to repair for many years, the first major policy development came as part of the 2019 Implementing Regulations under the EcoDesign Directive.¹⁹ These regulations mandate manufacturers of certain products to provide access to parts, tools and information for a certain period after their manufacture and sale within the EU.²⁰ The EcoDesign regulations, however, omit any mention of IP rights or TPMs. Instead, they leave manufacturers with considerable discretion as to the cost, access and availability of parts, tools and information and restrict the beneficiaries of these resources to 'commercial repairers'.²¹

The 2019 EcoDesign Repairability Requirements coincided with the European Green Deal, a set of policy priorities set by the European Commission with the ultimate goal of making the EU climate neutral by the year 2050.²² The Circular Economy Action Plan ('CEAP') is a key pillar of the European Green Deal, which conceptualizes the Right to Repair as primarily a suite of consumer rights in relation to warranties, product guarantees and repairability information displayed at the time of sale.²³ Save for a passing reference to allowing for updates of obsolete software and the need for IP rights that 'enable the green transition through innovation and digitalisation',²⁴ the CEAP largely ignores the role of IP rights in creating direct obstacles to repairability.

As part of the 2021 State of the EU, the Commission announced that the European Green Deal is the impetus for a forthcoming comprehensive legislative proposal on the Right to Repair, targeted for release during the third quarter of 2022. To date, the Commission has not followed through on this commitment. This delay appears to be the result of resistance from the EU's Regulatory Scrutiny Board, an untransparent and independent

body within the European Commission that has a reputation of being guided by lobbying pressure from private industry.²⁵ And in any event, the Commission's call for evidence makes clear that the pending Right to Repair proposal will be situated as an amendment to the Sale of Goods Directive.²⁶ This means that forthcoming Right to Repair reforms will be centred around product manufacturing standards and imposing extended obligations on manufacturers to repair faulty products. This is a far cry from providing individuals and independent repairers with the legal means to lawfully access parts, tools and information necessary for repair. Beyond targeted reforms to industrial design protections allowing production of replacement parts,²⁷ it seems unlikely that IP or copyright amendments will form part of the EU's larger Right to Repair legislative proposals.

4. Inspiration from abroad: the Australian and Canadian Approaches

As a global movement, the Right to Repair has found resonance around the world. Given distinct legal traditions, regulatory frameworks and political economy dynamics, these reforms have sought to open repair through distinct legal and policy reform channels. In the following, we canvass recent policy reform efforts in Australia and Canada, which together evidence a Right to Repair approach that has recognized the role and importance of copyright reform. We believe that Australia and Canada are useful comparator jurisdictions to the EU due to their lack of US-style fair use or open norm system of copyright exceptions.^{28, 29} Like EU

18 One exception to this general approach is the exception to EU design protection for repair purposes at Council Regulation (EC) 6/2002 of 12 December 2001 on Community designs [2002] OJ L3/1, Art 20(2)(b)–(c).

19 EcoDesign Directive (n 4).

20 European Parliamentary Research Service (n 6).

21 Chloé Mikolajczak 'New Ecodesign Regulations: 5 Reasons Europe still Doesn't Have the Right to Repair' (*Right to Repair*, 1 March 2021). Available at <https://repair.eu/news/new-ecodesign-regulations-5-reasons-europe-still-doesnt-have-the-right-to-repair/> (accessed 17 March 2023).

22 European Commission, 'A European Green Deal: Striving to be the First Climate-Neutral Continent' (*European Commission*, 2022). Available at https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en (accessed 13 December 2022).

23 See, for example, Commission 'Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - A New Circular Economy Action Plan for a Cleaner and More Competitive Europe' COM (2020) 98 Final (Circular Economy Action Plan).

24 See, for example, *ibid* at 3.1 and 6.3.

25 Cristina Ganapini 'The EU Circular Economy Package Part II – Still Not Delivering on Right to Repair' (*Right To Repair*, 1 December 2022). Available at <https://repair.eu/news/the-eu-circular-economy-package-part-ii-still-not-delivering-on-right-to-repair/> (accessed 15 December 2022).

26 Council Directive 2019/771 of 20 May 2019 on certain aspects concerning contracts for the sale of goods, amending Regulation (EU) 2017/2394 and Directive 2009/22/EC, and repealing Directive 1999/44/EC [2019] OJ L136/28 (Sale of Goods Directive).

27 European Commission 'Intellectual Property: New Rules Will Make Industrial Designs Quicker, Cheaper and More Predictable' (*European Commission*, 29 November 2022). Available at https://ec.europa.eu/commission/presscorner/detail/en/IP_22_7216 (accessed 16 December 2022).

28 However, some scholars in Canada contend that the country's fair dealing framework has begun to resemble more of a fair use framework in practice. See, for example, Michael Geist 'Fairness Found: How Canada Quietly Shifted from Fair Dealing to Fair Use' in Michael Geist (ed), *The Copyright Pentology: How the Supreme Court of Canada Shook the Foundations of Canadian Copyright Law* (University of Ottawa Press, Ottawa 2013) 159. For a policy discussion on the merits of adopting a US-style fair use framework in Australia, see, for example, Australian Law Reform Commission *Copyright and the Digital Economy* (ALRC Report 122, 2013) ch 4.

29 See Grinvald and Tur-Sinai (n 7) 110–111.

copyright laws, Australia and Canada rely on exhaustive lists of enumerated exceptions within 'fair dealing' frameworks.³⁰ Like the EU, these jurisdictions also possess fairly rigid TPM anti-circumvention frameworks, influenced heavily by bilateral international trade agreements.³¹ Similar to the lawful grounds for TPM circumvention in the EU Information Society (InfoSoc)³² and Computer Programs Directives,³³ Australia and Canada do not have the leeway to issue case-by-case exemptions like those provided by the US Librarian of Congress under the Digital Millennium Copyright Act.³⁴

4.1 The Australian approach

The lack of repair and service information sharing by original equipment manufacturers and the competition concerns arising from the ever-increasing complexity in automotive technology have held the attention of the Australia's Consumer and Competition Commission (ACCC) for over a decade. An ACCC market study of the new car industry in 2017, focusing on the present and emerging consumer and competition issues, recommended a mandatory code requiring manufacturers to share with independent mechanics the information they need to fix modern cars.³⁵ Following on from this, in 2019, the Australian Government committed to Australia's first 'Right to Repair' Law, a mandatory data-sharing law to ensure independent repairers have access to all motor vehicle service and repair information at a fair

price.³⁶ The draft legislation, the Competition and Consumer Amendment (Motor Vehicle Service and Repair Information Sharing Scheme) Act 2020, was released for public consultation in 2020–2021, which followed broader regulatory attention and interest in the international Right to Repair movement by the Australian Government.³⁷

In October 2020, Australian Productivity Commission (APC), the Government's economic think tank, was tasked to conduct a broad ranging inquiry into barriers to repair in Australia.³⁸ While a number of key significant and unnecessary barriers to repair were found, several opportunities were seen to exist to give independent repairers greater access to repair supplies and increase competition for repair services, without compromising public safety or discouraging innovation. Among the Commission's deliberations was the recognition that IP laws,³⁹ in particular copyright law, posed one of the more significant and unnecessary barriers to repair that are being experienced in Australia.⁴⁰ One key recommendation was that the Australian Copyright Law regime warranted amendment to facilitate the accessing and sharing of repair information (such repair manuals and repair data hidden behind digital locks).⁴¹ A new 'use' exception was proposed, which would allow repair activities to be explicitly embedded in the copyright exception regime. It remains to be seen whether the Federal Government will implement this recommendation via a specific exception for the reproduction and sharing of information for the purpose of repair (a new fair dealing exception) or

30 See, for example, Copyright Act (RSC 1985, c C-42) s 29 (Canada), and Copyright Act 1968 (Cth), ss 40–43, 103A–C (Australia).

31 Madison Cartwright 'Preferential Trade Agreements and Power Asymmetries: The Case of Technological Protection Measures in Australia' (2018) 32 *The Pacific Review* 321–325. Available at <https://doi.org/10.1080/09512748.2018.1473471> (accessed 15 December 2022).

32 Council Directive 2001/29/EC of 22 May 2001 on the harmonization of certain aspects of copyright and related rights in the Information Society, 2001 OJ L167/10 (InfoSoc Directive).

33 Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs (Computer Programs Directive).

34 See, for example, Bill D Herman and Oscar H Gandy Jr 'Catch 1201: A Legislative History and Content Analysis of the DMCA Exemption Proceedings' (2006–2007) 24 *Cardozo Arts & Entertainment Law Journal* 121–190. Available at <https://heinonline.org/HOL/P?h=hein.journals/caelj24&i=130> (accessed 16 December 2022). In contrast, the United States' framework for TPM exceptions is guided by a period review and case-by-case exemption process led by the Librarian of Congress under the *Digital Millennium Copyright Act*. Like the EU, Australia and Canada require legislative amendment to their copyright laws to afford additional lawful grounds for circumvention, such as repair and interoperability.

35 Australian Competition and Consumer Commission (ACCC) 'New Car Retailing Industry: a Market Study by the ACCC' (ACCC, 14 December 2017) recommendation 4.1, 12. Available at www.accc.gov.au/about-us/publications/new-car-retailing-industry-market-study-final-report (accessed 13 November, 2022).

36 Australian Automotive Aftermarket Association (AAAA) 'New Mandatory Data Sharing Law to Transform Automotive Repair Industry' (AAAA, 29 October 2019). Available at www.aaaa.com.au/news/new-mandatory-data-sharing-law-to-transform-automotive-repair-industry (accessed 12 November 2022); see also, Leanne Wiseman et al 'The Mandatory Repair Scheme for Motor Vehicles 2019: Australia's First Response of the International Right to Repair Movement' (2020) 48 *Australian Business Law Review* 218. Available at <http://hdl.handle.net/10072/398350> (accessed 12 November 2022).

37 Shane Rattenbury 'Can We Fix It? Yes We Can! ACT Secures National Agreement on a "Right to Repair" It', 30 August 2019. Available at www.cmtedd.act.gov.au/open_government/inform/act_government_media_releases/rattenbury/2019/can-we-fix-it-yes-we-can-act-secures-national-agreement-on-a-right-to-repair (accessed 20 December 2022).

38 Michael Sukkar 'Productivity Commission Inquiry into Right to Repair' (*Treasury Press Release*, 29 October 2020). Available at <https://ministers.treasury.gov.au/ministers/michael-sukkar-2019/media-releases/productivity-commission-inquiry-right-repair> (accessed 12 November 2022).

39 Similarly in the USA, Copyright and its TPM regime were also recognized as creating barriers to accessing not only repair and service information but also the actual products themselves. See Grinvald and Tur-Sinai (n 7) 86–91.

40 Productivity Commission, *Right to Repair Inquiry Report* (Report No. 97, Australian Government, 2021) 17, 161. Available at www.pc.gov.au/inquiries/completed/repair/report (accessed 12 November 2023).

41 *ibid* 2, 34, finding 5.1.

a general copyright exception (a fair use exception).⁴² However, there appears to be strong policy support for the notion of broadening copyright defences to facilitate repair. To reinforce the importance of being able to reply upon a repair defence, the PC reiterated the need for Australian legislators to prevent the overriding or 'contracting out' of fair dealing defences (which is a tactic often employed through the use of repair restrictions in manufacturer's end use licence agreements).⁴³

The role that TPMs play in creating barriers to accessing repair information was also noted as significant concern by the APC. To better facilitate repairers' access to diagnostic information and embedded software, two amendments to Australia's TPM regime were recommended. First, the existing TPM circumvention exception for repair⁴⁴ should be amended to clarify its scope and application to remove uncertainty around when it is permissible to circumvent digital locks to access repair information and to permit circumvention in order to access information necessary to perform repairs to the product in which the TPM is installed. Second, to improve be permitted for the purpose of facilitating a permitted act of circumvention consistency in the regime, the distribution of TPM circumvention devices should be permitted.⁴⁵

While the much-anticipated reforms to Australia's copyright defences and TPM regime currently remain as recommendations before the Government, it is important to note that Australia's first Right to Repair law, the Competition and Consumer Amendment (Motor Vehicle Service and Repair Information Sharing Scheme) Act 2021, came into operation on 1 July 2021. Interestingly, this law, by mandating the sharing of service and repair information in the automotive aftermarket, prioritizes access to service and repair information (at reasonable cost) over the manufacturers' copyright in that information. Unlike the reliance on copyright defences to facilitate information sharing, this Scheme, with ACCC oversight, provides powers for the ACCC to impose financial penalties of up to \$10 million per offence under the Scheme.

42 *ibid* 2, 35, recommendation 5.2.

43 ACCC (n 35), recommendation 5.3. The prohibition on 'contracting out' of copyright defences is one that has had a long history of support from Australian copyright law reform bodies; see, for example, Australian Law Reform Commission 'Copyright and the Digital Economy' (Issues Paper 42, 2012). Available at www.alrc.gov.au/publication/copyright-and-the-digital-economy-ip-42/contracting-out/ (accessed 22 November 2022).

44 See Copyright Regulations 2017 (Cth), reg 40(2)(d).

45 Productivity Commission (n 40) 18–19, 35, recommendation 5.1.

4.2 The Canadian approach

Legislative efforts towards Canada's Right to Repair began in 2007, focusing on the automotive sector and mandating access to spare parts.⁴⁶ These early efforts demonstrated the primacy of IP laws and the need to curtail IP overreach before imposing positive obligations on manufacturers to share resources. After nearly a decade of stagnation, the Right to Repair became a priority for intellectual policy reform as part of the 2019 statutory review of the Copyright Act.⁴⁷ In a report, a parliamentary committee proposed that the Government of Canada 'examine...the relevance of technological protection measures within copyright law, notably to facilitate the maintenance, repair or adaptation of a lawfully-acquired device for non-infringing purposes.'⁴⁸

In 2021, policymakers in Canada responded to the parliamentary committee's 2019 proposal. In its annual consultation paper, Canada's Industry, Science and Economic Development ('ISED') surveyed the various impacts of TPMs on repair activities and proposed enacting new targeted exceptions to allow repair or enacting regulations excluding certain types of TPMs from protection.⁴⁹ Although the Government has not yet enacted TPM regulations, two private member's bills have been introduced in the Parliament seeking to enact new exceptions permitting circumvention, both for repair⁵⁰ and interoperability purposes.⁵¹ These two bills are consistent with the

46 For a more detailed overview of Canada's right to repair policy efforts, see Anthony D Rosborough 'Toward a Canadian Right to Repair: Opportunities and Challenges' (*Berkeley Technology Law Journal*, 2023). Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4236843 (forthcoming).

47 House of Commons, Standing Committee on Industry, Science and Technology, *Statutory Review of the Copyright Act: Report of the Standing Committee on Industry, Science and Technology* (House of Commons, June 2019-01, 16) 11. Available at <https://www.ourcommons.ca/Content/Committee/421/INDU/Reports/RP10537003/indurp16/indurp16-e.pdf> (accessed 15 December 2022).

48 This proposal came on the heels of the Federal Court's decision in *Nintendo v King* 2017 FC 246 where Nintendo was awarded over \$22 million in damages against a small business that installed TPM circumvention devices in Nintendo consoles. The significant damages award prompted policymakers and scholars to raise concerns of copyright overreach and the potential for non-infringing activities to be deemed unlawful.

49 Innovation, Science and Economic Development Canada 'A Consultation on a Modern Copyright Framework for Artificial Intelligence and the Internet of Things' (Canada.ca, 2021). Available at <https://www.ic.gc.ca/eic/site/693.nsf/eng/00316.html> 22, (accessed 13 December 2022).

50 House of Commons of Canada 'Bill C-244: An Act to Amend the Copyright Act (Diagnosis, Maintenance and Repair)' (*House of Commons of Canada, 44th Parliament, Session 1, 2021–2022; First Reading*, 8 February 2022). Available at www.parl.ca/DocumentViewer/en/44-1/bill/C-244/first-reading.

51 House of Commons of Canada 'Bill C-294: An Act to Amend the Copyright Act (Interoperability)' (*House of Commons of Canada, 44th Parliament, Session 1, 2021–2022; First Reading*, 17 June 2022). Available at www.parl.ca/DocumentViewer/en/44-1/bill/C-294/first-reading (accessed 14 December 2022).

ministerial mandate letter issued by the Prime Minister in 2021, which called upon the Minister of ISED to implement the Right to Repair by requiring manufacturers to supply repair manuals and spare parts and to amend the Copyright Act to ‘allow for the repair of digital devices and systems.’⁵²

IP and copyright law reform are certainly not the only arenas in which Canada has demonstrated momentum towards the Right to Repair. Consumer protection and waste disposal regulations are also being considered in various provinces across the country.⁵³ Nevertheless, Canada’s IP-focused approach to the Right to Repair builds on lessons learned in the automotive repair context from decades prior. By clarifying the scope of IP rights before enacting perspective regulations, the Canadian approach has merits for addressing the source of many repairability restrictions first and foremost.

5. Achieving a European (copy)right to repair

The EU copyright acquis is fragmented across 13 directives and 2 regulations and is incidentally regulated by several other EU policies.⁵⁴ Although EU copyright law has mostly followed a harmonizing agenda for internal market efficiency purposes, the purpose and objectives of EU copyright law can be ascertained by looking into multiple statements enshrined in the directives and regulations. Notably, the InfoSoc Directive includes a clear commitment to safeguarding a ‘fair balance of rights and interests between ... the different categories of rightsholders and users of protected subject-matter’.⁵⁵ This fair balance in relation to repairability is also informed by constitutional principles such as Article 11 of the Treaty on the Functioning of the European Union (“TFEU”), which requires that environmental

protection requirements are integrated in to the definition and implementation of EU policies and activities with a view to promoting sustainable development.⁵⁶ A similar guarantee is enshrined at Article 37 of the EU’s Charter of Fundamental Rights.⁵⁷ Taken together, there is ample legal and normative justification for ensuring that EU copyright law promotes repair activities and preserves basic user rights that further the public interest.

5.1 The InfoSoc Directive’s repair exception

To remedy the shortcomings of the EcoDesign Directive’s 2019 Implementing Regulations, EU copyright policy could provide non-profit and non-commercial repairers with the means to lawfully access repair and maintenance information. The InfoSoc Directive already includes a non-mandatory exception for ‘uses in connection with the repair or demonstration of equipment’. The substantive meaning of this repair exception has never been interpreted by the Court of Justice of the European Union (“CJEU”), and its implementation by Member States reveals significant inconsistencies and disharmonies in its transposition into national laws.⁵⁸ Our position is that the repair exception should be brought in conformity with the sustainable development mandate of Article 11 TFEU and receive broad and uniform interpretation as the facilitator of repair activities and access to information.⁵⁹ In applying unequivocally to uses ‘in connection with’ repair, the exception has the potential to be applied to a whole host of activities in relation to repair, which finds resistance from copyright laws.⁶⁰

5.2 Reconciling fragmented TPM policy

As evidenced by the IP-focused right to repair efforts underway in Australia and Canada, TPM policy plays a significant role in repairability in the case of software-enabled devices and products. TPM policy in the EU is complicated by the fact that it spans two distinct and inconsequential directives—the InfoSoc Directive⁶¹ and

52 Office of the Prime Minister of Canada ‘Minister of Innovation, Science and Industry Mandate Letter’ (16 December 2021). Available at <https://pm.gc.ca/en/mandate-letters/2021/12/16/minister-innovation-science-and-industry-mandate-letter> (accessed 16 December 2022).

53 Québec.ca ‘Bill 197 against Planned Obsolescence and the Right to Repair – M.N.A. Guy Ouellette Presents Innovative Bill to Control Planned Obsolescence and the Right to Compensation’ (*Québec.ca*, 10 April 2019). Available at www.quebec.ca/en/news/actualites/detail/bill-197-against-planned-obsolence-and-the-right-to-repair-mna-guy-ouellette-presents-innovative-bill-to-control-planned-obsolence-and-the-right-to-compensation (accessed 16 December 2022).

54 European Commission ‘The EU Copyright Legislation’ (*European Commission*, 25 July 2022). Available at <https://digital-strategy.ec.europa.eu/en/policies/copyright-legislation#:~:text=The%20overall%20goal%20in%20the,freely%20within%20the%20internal%20market> (accessed 16 December 2022).

55 Council Directive 2001/29/EC of 22 May 2001 on the harmonization of certain aspects of copyright and related rights in the Information Society, 2001 OJ L167/10 (InfoSoc Directive), recital 31.

56 Consolidated version of the TFEU, last amended by the Treaty of Lisbon [2008] OJ C326/47, Art 11.

57 European Union ‘Charter of Fundamental Rights of the European Union’ [2010] OJ C83/53, Art 37.

58 Rosborough (n 12) 124–125.

59 This view is shared by the authors in Caterina Sganga et al, ‘Copyright Flexibilities: Mapping and Comparative Assessment of EU and National Sources’ (*ReCreating Europe*, 16 January 2023) 577–579.

60 Anthony D Rosborough ‘The InfoSoc Directive and the Right to Repair: Exploring the Boundaries of a Lesser-Known Copyright Exception’ (*Kluwer Copyright Blog*, 14 December 2022). Available at <http://copyrightblog.kluweriplaw.com/2022/12/14/the-infosoc-directive-and-the-right-to-repair-exploring-the-boundaries-of-a-lesser-known-copyright-exception/> (accessed 15 December 2022).

61 InfoSoc Directive (n 32) Art 6.1–3.

the Computer Programs Directive.⁶² This obscures the lawfulness of repair activities requiring TPM circumvention for several reasons. First, it means that the grounds for lawful circumvention of TPMs are subject to distinct frameworks of exceptions depending on whether they protect computer programs or some other type of copyright work. The result is that a repairer must first determine the TPM's subject of protection before being able to determine which framework of exceptions applies. Second, the lawfulness of circumvention activities varies significantly between these two directives. Whereas the InfoSoc Directive prohibits the circumvention of TPMs *and* the circulation or sale of tools or devices used to circumvent, the Computer Programs Directive prohibits only circulation of circumvention devices.

The effect is to create a legal distinction between types of TPMs and the exceptions that apply to them, where there may not be any functional difference. Given the prevalence of complex works such as video games and interactive media, it is often the case that TPMs restrict access to computer programs in conjunction with other things. Overall, the usefulness of this distinction is in fast decline. More importantly, the ability to distribute or circulate the tools for circumvention is essential to the Right to Repair.⁶³ Under the existing TPM framework, repairers may lawfully circumvent TPMs only where they *solely* protect access to computer programs and *only* if they are carried out privately. This limits the beneficiaries of this exception to a narrow class of technically inclined users. The technical means to circumvent TPMs necessary for completing repairs is not within the reach of everyone, and nor need it be. To truly embrace repairability on a wider scale, repairers must be free to devise solutions for circumventing such TPMs and to share them widely, whether on a commercial basis or not.

Taken together, TPMs under EU copyright law need to be reconciled and re-evaluated. The proliferation of computerized devices and embedded system design renders distinct classes of TPMs a mostly abstract and semantic exercise. Modern TPM implementation makes clear that technological advance has enabled copyright law to reach into the realm of tangible device use and ownership. EU copyright law must therefore address the resulting negative externalities on repairability.

5.3 The Right to Repair as a positive user's right

Both the Australian and Canadian reforms evidence an attempt to rebalance copyright in favour of public access to the software and information embedded in products and devices through new and broader exceptions. We contend that a more substantive balancing of copyright towards a *positive* user right to repair is required. In practice, this means shifting from either limited or broad exceptions to curtailing overreach and narrowing the application of copyright altogether where it impedes repair.⁶⁴

In the case of TPMs, new exceptions are only applicable in measuring the lawfulness of circumvention activities *after* they have been carried out. This requires that repairers bear the information costs involved in determining the legality of circumvention in advance. This is a determination that many repairers may not feel as though they are in the best position to make. It may therefore dissuade many repairers from engaging in otherwise lawful activity in fear of legal action.

To resolve this, anti-circumvention laws must not only permit repair activities *ex post* but also exclude repair impeding TPMs from the scope of anti-circumvention law *ex ante*. Wider access to repair information could also be facilitated through an approach similar to Australia's mandatory data-sharing law that enables diagnostic and repair information disclosure in the Australian motor vehicle aftermarket.⁶⁵ In effect, this prioritizes wider information access (at reasonable cost) over the copyright in the manufacturers' diagnostic and repair data for motor vehicle repair. It exemplifies the important role of positive obligations, albeit through consumer law amendments, in promoting dissemination of repair information otherwise subject to copyright's exclusive rights.

Overall, the EU legislature must incorporate copyright law and policy into its reform efforts to enable the right to repair. We acknowledge that legislative competence at the EU level is often a roadblock to the purposive and sweeping reforms necessitated here. Nevertheless, ignoring copyright's role in impeding repair will not produce positive results. And although an expansive interpretation of the existing repair exception in the InfoSoc Directive shows some promise, this alone would not address repair-inhibiting TPMs and particularly those which protect computer programs. Taken together, the foregoing demonstrates that the right to repair does not adhere

62 Council Directive 91/250/EC of 14 May 1991 on the legal protection of computer programs OJ L122/42 (Computer Programs Directive), art 7.1(c).

63 Rosborough (n 8) 74–75.

64 See, for example, Pascale Chapdelaine, *Copyright User Rights: Contracts and the Erosion of Property* (OUP, Oxford 2017) 191–195.

65 Competition and Consumer Amendment (Motor Vehicle Service and Repair Information Sharing Scheme) Act 2021.

neatly to the boundaries of a purely consumer, competition or IP law issue. It requires concerted effort from the EU legislator on all three fronts. Repair is an activity that furthers the public interest in broader domains, including sustainability, knowledge production, market competition and consumer choice. It is important that the policy solutions (including those within copyright law) not only *permit* repair but also promote and encourage it.

6. Conclusion

On many fronts, the EU has set an example for the world in finding regulatory solutions to product manufacturing standards, tackling product obsolescence through EcoDesign requirements and regulation of batteries and

waste batteries.⁶⁶ While these achievements should not go unrecognized, the primary contribution of this article is our assertion that IP laws (and particularly copyright) should play a more central role in the EU's right to repair ambitions. While European policymakers can find guidance from jurisdictions elsewhere on this front, we propose an even more substantive approach to such reforms and particularly in conceiving IP amendments in favour of the right to repair as user rights with corresponding obligations on manufacturers and rightsholders. Insofar as copyright in software has some to dictate the use, management, repair and operation of tangible products and devices, this article contends that it must not only permit socially beneficial activities like repair but also encourage and incentivize them.

66 News European Parliament 'Batteries: Deal on New EU Rules for Design, Production and Waste Treatment' (Press Releases, 9 December 2022). Available at www.europarl.europa.eu/news/en/press-room/20221205IPR60614/batteries-deal-on-new-eu-rules-for-design-production-and-waste-treatment#:~:text=In%20December%202020%2C%20the%20Commission,of%20the%20battery%20life%20cycle (accessed 12 January 2023).