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RIGHT TO REPAIR AND THE DOCTRINE OF EXHAUSTION IN THE EUROPEAN UNION: LIFTING REPAIR RESTRICTIONS BY MODIFYING THE INTELLECTUAL PROPERTY SYSTEM

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ABSTRACT

The conclusive purpose of this research is to obtain a comprehensive understanding of the emerging right to repair legislation, its main functions, and what this right will mean in terms of sustainability and intellectual property. The main goal will be to establish how the new legislation on repair will affect the doctrine of exhaustion and whether the forthcoming laws create a need for amendment in order to satisfy the needs of relevant stakeholders.

For the purpose of a logical and justified conclusion about the doctrine of exhaustion and its relationship with a right to repair, the conducted research will focus on three relevant questions. The research has been performed by using qualitative empirical research methods with the intention of producing a thesis that fulfils the required standards and aims, as well as gives a well-founded outcome on the topic.

In the following chapter of this thesis, all relevant aspects of the research topic will be presented. The introductory chapter will also outline the research questions. The first chapter focuses on European steps towards sustainability, gives background to the topic, and introduces the European measures in a global framework related to the United Nations Sustainable Development Goals. The second part focuses on the right to repair and examines its main applications. The third chapter examines the doctrine of exhaustion and assesses its relationship with the right to repair. The fourth chapter discusses the right to repair in the light of case studies from the EU and the US. The concluding chapter will present the main findings of this research.

Keywords: Right to Repair, Doctrine of Exhaustion, Intellectual Property, Sustainability

INTRODUCTION

The manufacturing and usage of electrical and electronic hardware generates waste, more specifically e-waste. E-waste consists of all the parts and ensembles of parts that have been determined as un-usable and, therefore, waste in the eyes of the owner. E-waste also includes electronic waste that cannot be reused or recycled; all objects with a circuitry or electrical components fall under the definition.[1] The usage of electronic equipment has been steadily rising in the 21st century. In the year 2016, 44.7 million metric tonnes of e-waste were generated globally. In 2021 the number increased to 52.2 tonnes.[2] The problem of rising e-waste generation has been recognised in the EU. Among other legal initiatives, the issue is tackled with the introduction of a Circular Economy (CE). Different causes of e-waste, such as insufficient design of electronic equipment, have been addressed in the European Commission CE plan.[3]

One significant theme of sustainability and the CE is the right to repair. A right to repair is a right that enables consumers and third-party repairers to engage in repair activities on products they possess ownership over. Consumers usually opt for new electronic devices instead of repairing their old equipment because repairs are often almost as expensive as buying a new equivalent product.[4] The price of repair is raised by different barriers to repair. These barriers can be divided into two categories, legal and non-legal barriers, which affect both consumers as well as the repair sector in buying, selling, and carrying out services related to repairs. One of the main legal barriers relates to the intellectual property rights of original equipment manufacturers (OEMs). OEMs hold multiple intellectual property rights (IP, IPR) on the products they manufacture. The barriers to repair can be further divided into consumer access to repair services, conduction of the repair service itself, and accessibility to spare parts, applicable manuals, and necessary tools.[5]

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[1] Baldé, C. P., Forti, V., Gray, V., Kuehr, R., & Stegmann, P. (2017). *The global e-waste monitor 2017: Quantities, flows and resources*. United Nations University, International Telecommunication Union, and International Solid Waste Association. 11

[2] *Ibid.* 4-5

[3] EU Commission (2015). 'Communication from the EU Commission, Closing the Loop - an EU Action Plan for the Circular Economy'. 2-3

[4] Svensson, S., Richter, J. L., Maitre-Ekern, E., Pihlajarinne, T., Maigret, A., & Dalhammar, C. (2018). The emerging 'Right to repair legislation in the EU and the US. *Proceedings from Going Green–Care Innovation*, 27-29. 1-3

[5] *Ibid.* 3-4

The social movement related to the right to repair started in the US. The main organisation behind the movement is the Digital Right to Repair Coalition, founded in 2013. The movement is also joined by consumers and private consumer-rights groups. In 2019 twenty states introduced relevant legislation, which gave consumers a right to repair their electronic equipment.[6] The social movement has also gained support in the EU, but the main driver in European development has been the goal of transitioning towards a CE model.[7] One of the themes in both the US and EU is to examine the relationship between intellectual property law (IPL) and consumer repair.

IPL is meant for the protection and stimulation of intellectual creations and innovation, such as artworks or industrially applicable inventions. Through the protection of IP, the creator of an idea or the expression of an idea can gain profit. However, in the context of the right to repair, the role of OEM IPRs has been examined. Because the right to repair is developing as a part of a CE, IPL should be reviewed in a more holistic way without the main emphasis being on private law and business. IPL should also be considered as a part of positive environmental efforts mentioned in art. 11 of the Treaty on the Functioning of the European Union (TFEU).[8]

On the first day of March 2021, a new set of regulations were introduced by the European Commission. These regulations directly touch the right to repair as OEMs of electric equipment are required to manufacture spare parts for their products.[9] The parts are required to be sufficient in professional-level repairs, and OEMs need to be able to provide these parts to third-party repairers for 7-10 years after the specific equipment model has been taken out of the market of the European Economic Area (EEA). However, the regulations are not exhaustive and do not apply to all objects with circuitry or electrical components. The list of applicable hardware contains four categories: refrigerators, dishwashers, displays, and washing machines.[10] A significant proportion of electronic products is not addressed in the regulation. For example, phones, laptops, and smart tables are left outside the scope. This situation is likely to change in the future as the EU is taking

[6] Grinvald, L. C., & Tur-Sinai, O. (2019). Intellectual property law and the right to repair. *Fordham L. Rev.*, *88*, 63. 71-72

[7] Pihlajarinne, T. (2020). European Steps to the Right to Repair: Towards a Comprehensive Approach to a Sustainable Lifespan of Products and Materials?. *University of Oslo Faculty of Law Research Paper*, (2020-32). 4

[8] Pihlajarinne, T., & Ballardini, R. M. (2020). Paving the way for the Environment: Channelling 'Strong' Sustainability into the European IP System. *European Intellectual Property Review*, *42*(4), 239-250. 2-3

[9] O´Neill, S. (2021). European Union Puts Teeth in Right to Repair. Engineering Journal, 7(9). 1197-1198

[10] Commission Regulation (EU) 2021/341

steps towards a more sustainable economy, and as a result, the position of consumer repair could improve.

The main focus of this research will be pointed towards understanding the right to repair and how it could possibly affect the European IP system. The emphasis within the IP system will be on the doctrine of exhaustion. The research will be executed through an examination of relevant European legislation and existing research. Other topics that will be discussed are the legislative efforts that are likely to happen in the future and a comparison conducted on the legal provisions of the US and EU relating to the right to repair.

Therefore, the aim of all selected research questions is to determine if the European IP system should be modified in order to achieve a more comprehensive framework that supports the effort towards a higher level of sustainability and the transition towards a CE. In order to reach a better understanding about the thesis, three specific research questions are listed below:

1. Is there a need to improve the consumer's prevalent right to repair in order to achieve a higher level of sustainability?
2. How the emerging right to repair legislation could affect the doctrine of exhaustion in the EU?
3. What are the distinguishing factors and similarities between the emerging European right to repair and the right to repair in the US?

1. EUROPEAN MEASURES TOWARDS SUSTAINABILITY

In 2015 the European Commission adopted its first action plan for the establishment of a CE.[11] This action plan mapped out the steps for transitioning from the prevalent linear economy design to a circular one. Before further examining the legal significance or the effects of the adopted plan and its role in the development of the right to repair, the two mentioned economy design models need to be defined.

One of the most dominant economic models in the modern world is a linear economy model. In a linear economy, the design is based on a three-level plan: "take-make-dispose".[12] The three parts can be broken down into a simple pattern. Firstly, extract raw materials from the earth. Then the extracted resources can be used to make goods and products with the intention that once they have served their purpose or broken down, the goods are discarded as waste and disposed of. This design generates monetary value from selling the manufactured products in large quantities. If humankind continues to implement the linear economy design, the world will be consuming three times more than the earth can handle by the year 2050.[13] To fight this consumption, the European Commission adopted a Circular Economy Action Plan (CEAP). This plan is meant to tackle the challenges of climate change and overconsumption by creating a climate-neutral European economy whilst still maintaining its competitiveness. The CE design presents solutions that have positive effects, which are based on sustainability. Themes such as the recycling of old products, maximising the value from the extracted raw materials and the elimination of waste generation through repair are presented as justifications for the European transition from a linear economy model.[14] The CEAP intends to tackle waste generation with repair by empowering consumers and third party repairs.

[11] Friant, M. C., Vermeulen, W. J., & Salomone, R. (2021). Analysing European Union circular economy policies: words versus actions. *Sustainable Production and Consumption*, *27*, 337

[12] Sørensen, P. B. (2018). From the linear economy to the circular economy: A basic model. *Finanz-Archiv: Zeitschrift für das Gesamte Finanzwesen*, *74*(1). 71-73

[13] European Commission (2020), A new Circular Economy Action Plan For a cleaner and more competitive Europe 2

[14] Svensson, S., Richter, J. L., Maitre-Ekern, E., Pihlajarinne, T., Maigret, A., & Dalhammar, C. (2018), *supra nota 4*, 1

This is done, for example, by creating an increased availability of repair services, spare parts and necessary schematics.[15]

At the moment, there are several barriers that restrict repairs. A portion of the barriers are related to the IPRs' of the OEMs. Consumers or even professional repair service providers do not possess the necessary practical nor legal knowledge, tools or awareness to make repairs as sufficient as they could be. Therefore, repairs are not seen as a viable option as it is more reasonable to buy new than repair the old.

1.1. Obstacles to repair

Obstacles to repair are a significant issue that needs to be addressed in order for the EU to move towards a CE. One substantial theme around the desired economy model is the reuse of products. This is not possible if repairs are hindered by legal obstacles. There are several factors that have an influence over consumers' decisions when choosing whether to repair old equipment or buy new. The obstacles can be divided into three categories: 1) fundamental legal and non-legal barriers that restrict accessible repair; 2) competitive factors; 3) consumer preferences. The emerging EU legislation on the right to repair mainly addresses the first obstacle.[16] The fundamental legal barriers restrict the possibility of repair. This affects a significant portion of the electric equipment market in Europe. Obstacles can be found in different stages of repair, from access to service to obtaining necessary parts.[17]

Practical examples of the obstacles to repair can be connected to OEM IPR in many different ways. From the perspective of industrial design, OEMs intentionally use non-reusable parts such as non-removable batteries and glue instead of removable parts and screws that could be reused. A circuitry part that is attached by using a glue-based compound is very hard to put back into the required place after it has been removed.[18] OEMs also rely on existing patent-related case law, which states that repair that amounts to modification of the patented equipment constitutes direct

[15] European Commission (2020), A new Circular Economy Action Plan For a cleaner and more competitive Europe. 5
[16] Svensson, S., Richter, J. L., Maitre-Ekern, E., Pihlajarinne, T., Maigret, A., & Dalhammar, C. (2018), *supra nota 4*, 4
[17] *Ibid.* 1
[18] *Ibid.* 4

infringement.[19] Additionally, there is some case law in the EU that supports the fact that OEMs' refusal to sell spare parts to non-authorized repairers is a national matter and needs to be dealt with accordingly.[20] This creates problems as the national law of Member States is not sufficiently harmonised in the field of IP protection related to the right to repair.[21]

Regarding tools and schematics needed for repair, copyright and patent law in the EU dictates that OEMs are not obligated to provide the mentioned resources to consumers or independent repair service providers. Copyright law regards the act of unauthorised spreading of copyrighted repair schematics as infringing. In the case of necessary tools for repair, the OEMs rely on patent law, which states that replicating patented tools constitutes direct infringement.[22]

These types of obstacles to repair are an issue that needs to be addressed. Major doctrines and international agreements need updated harmonisation in order to clear legal uncertainty related to the relationship between repairs and IPL. The EU has started to take steps towards a more comprehensive right to repair with legal initiatives, and it is possible that several new norms will be introduced to the field in the near future.

1.2. United Nations Sustainable Development Goals

One of the most important values of modern sustainability is the production and consumption of goods in a way that emphasises long-lasting and eco-friendly decisions. This type of sustainability is at the heart of the United Nations (UN) Sustainable Development Goals (SDGs). SDGs are a part of the 2030 Agenda for Sustainable Development, which was adopted by every UN Member State in 2015. Goal 12 of the SDGs focuses on ensuring sustainable consumption and production patterns. One theme within the goal is to reduce electronic waste, which is still on the rise.[23] In 2019 each person in the world generated approximately 7.3 kilograms of e-waste, but only 1.7 kilograms were recycled.[24] From the presented information, it can be stated that the 12th SDG shares some features with the European Circular Economy plan.

[19] German Supreme Court, X ZR 55/16, Trommeleinheit, 24.10.2017.
[20] Court decision, 23.10.2017, CEAHR v. Commission, T-712/14, ET:2017:748.
[21] Svensson, S., Richter, J. L., Maitre-Ekern, E., Pihlajarinne, T., Maigret, A., & Dalhammar, C. (2018), *supra nota 4*, 15
[22] *Ibid.* 4
[23] Baldé, C. P., Forti, V., Gray, V., Kuehr, R., Stegmann, P. (2017). *Supra nota 1,* 11
[24] United Nations (2021), The Sustainable Development Goals Report

IP has a vital role in making the SDGs a reality. The World Trade Organisation (WTO) and World Intellectual Property Organisation (WIPO) have expressed the importance of strong IPLs in the promotion of economic and sustainable development.[25]

A development Agenda for WIPO was established in 2007, and it was connected to the Millennium Development Goals (MDGs). The MDGs were the predecessors of the SDGs. WIPO's Development Agenda stated that "WIPO's norm-setting activities should be supportive of the development goals agreed within the United Nations system, including those contained in the Millennium Declaration".[26]

After the adoption of the SDGs, WIPO emphasised the role of goal number 9. Declaring that "Innovation is at the heart of WIPO's mission. SDG 9 is the most central to WIPO's mandate".[27] The role of innovation and industry can be linked to IP as one of its main applications is to encourage and protect innovation. However, IP can have negative effects on sustainability. For example, IPRs can be used to lock up innovation and prevent the transfer of technology. IPRs can and are being used to impede free access to parts as well as the ability to repair and reuse OEM's products.[28] The IP system is indirectly connected to many SDGs, but they may be counterproductive to the Sustainable Development Agenda.[29] In the next chapter, the right to repair itself is examined in more detail in order to establish what is needed in order to improve consumer repair and, through that, support sustainability in the EU.

[25] Bannerman, S. (2020). The World Intellectual Property Organisation and the sustainable development agenda. *Futures*, *122*, 102586. 4

[26] World Intellectual Property Organisation (2007). A development agenda for WIPO.

[27] World Intellectual Property Organisation (2019). Report on WIPO's Contribution to the Implementation of the Sustainable Development Goals and Its Associated Targets. 2

[28] District Court of Oslo 2018, Apple Inc. VS Henrik Huseby 17-151334TV1-OTIR/04

[29] Bannerman, S. (2020), *supra nota 26*, 5

2. THE RIGHT TO REPAIR

Throughout history, consumers have repaired products themselves. People who operate cars know or should know how to replace a blown-out tire, almost every single person has used duct tape to fix something, so why has repair become a topic of discussion over the recent years? The answer is the significant advancements made in the field of technology. In the present day, almost all electronically powered devices have a computer chip in them. This makes repairing a lot harder for consumers as there are numerous things, such as software, that need to be taken into account when repairing equipment. For example, farmers are not equipped with the required hardware or knowledge to check off an engine warning light from their tractors, or other machinery after a tire has blown out and it needs to be changed.[30] In other words, farmers can change the physical tire but cannot work with the onboard computer of the machine, which can render the whole product unusable. This is a prime example of why the repair movement has generated discussions and gained a lot of support in the US. Although the European steps towards a right to repair are different, the end goal is the same: give consumers the right to repair products themselves.

2.1. Background of the right to repair

The right to repair first generated discussion in the US in the form of a new consumer rights movement. The movement wanted to improve the right of consumers to repair products themselves without having to rely on OEMs. An organisation called the Repair Association was founded in 2013 and it is at the heart of the repair movement. The association is made up of consumer groups such as the American Farm Bureau Federation, which adopted a policy that would improve farmers' rights to fix their own farm equipment.[31]

A right to repair can mean different things. A briefing of the European Parliament concerning the future of the right to repair in the EU sets out a clear definition between the right to demand a

[30] Rogers, K. (2017). The 'Right to Repair' Movement Is Being Led by Farmers. Retrieved from https://perma.cc/MEV6-W4K5 , 2 March 2022.

[31] Grinvald, L. C., & Tur-Sinai, O. (2019), *supra nota 7*, 71

repair during the legal guarantee period or to repair a product after the legal guarantee period has expired. When consumers purchase goods within the borders of the EU, they have a right to demand that faulty products are repaired without any further costs to the consumer. EU law establishes that the time limit for this consumer right is two years from the transfer of ownership.[32] However, this right only applies to defects that occur for non-conformity reasons. Defects that result from consumer actions do not belong to the covered reasons. If a product breaks down after the legal guarantee period has expired, the consumer cannot demand repair from the seller or manufacturer. Consumers do not possess a right to repair the product even if they would be willing to pay for the repair.[33] This presents a problem for sustainability as consumers do not possess a right to repair the product if it infringes the IP holder's rights.

In a situation where a consumer good breaks down after the legal guarantee period set out in Directive 1999/44/EC has expired, the owner is left with a choice to either try to repair the old product with an OEM authorised repairer, which can charge a significantly higher fee for the provided services than a third-party service provider would or buy a new product to replace the old one. In 2020, an Eurobarometer survey was conducted on the attitudes of European citizens towards the environment with 27,498 conducted interviews. One theme of the survey was to clarify what European consumers prefer in a situation where they need to choose between repairing their old digital equipment or buying new to replace the old product. The results of the survey showed that 54% of the participants were in favour of making OEM products easier to repair if it did not affect the end price of the product, 25% were ready to pay more for better repairability, and 12% were against the possibility of improved repairability. This shows that the majority of consumers are in favour of repairing the old.[34] According to the Parliament briefing, one of the problems from a sustainability viewpoint of the consumers, was the cost of repair.[35]

[32] Directive 1999/44/EC, on certain aspects of the sale of consumer goods and associated guarantees, Council of the European Union, Article 5

[33] Šajn, N. (2022). European Parliament briefing on the right to repair. Retrieved from https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/698869/EPRS_BRI(2022)698869_EN.pdf , 15 February 2022

[34] European Commission, Brussels (2020). Attitudes towards the Impact of Digitalisation on Daily Lives, Eurobarometer 2228 / 503. 23

[35] Sajn, N. (2022), *supra nota* 33, 3

2.2. Right to repair in the EU

In January 2022, the European Parliament published a briefing which stated that "The European Commission has announced the establishment of a 'right to repair'".[36] The creation and development of a right to repair are based on the European transition from a linear economy to a circular one. The European right to repair is used as a tool to promote sustainability. The legal justifications for this promotion come from Article 11 of the TFEU.[37] Article 11 of the TFEU states that "environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development". This paragraph establishes that the EU should take environmental issues into account whilst creating new policies and legislation for the Union. These same fundamental values are addressed in Article 37 of the Charter of Fundamental Rights. Additionally, TFEU Article 3(3) establishes that the EU shall establish an internal market and work for the sustainable development of Europe. This development includes a high level for both protection and improvement of environmental quality.[38]

Directive 2009/125/EC, also known as the Ecodesign Directive, set out the first concrete requirements relating to the right to repair. The framework set out in the Ecodesign Directive established several measures that support consumer repairs. For example, in Annex 1. of the Directive, it is stated that the parameters and guidelines given in the Directive should be used to promote the usage of products after the lifetime is over. This can be done by improving reparability.[39] In 2019 rules on the availability of spare parts were implemented as a part of early 'right to repair' provisions, which address a number of appliances. Member states were required to meet these new conditions by 2021. The underlying idea was to promote the availability of spare parts by mandating that the OEMs need to provide spare parts for professional repairers for 7–10 years after the original product models have entered the Internal Market. OEMs were also required to share a small number of schematics and maintenance information with professional independent repair service providers.[40]

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[36] Šajn, N. (2022), *supra nota* 33, 2

[37] Pihlajarinne, T. (2020), *supra nota 8*, 4-6

[38] Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union (TFEU) [2016] Article 3(3)

[39] European Union. (2009). Directive 2009/125/EC on establishing a framework for the setting of ecodesign requirements for energy-related products, Annex 1. part 1(1.3)(i)

[40] Contreras, J. L. (2020). Research and repair: expanding exceptions to patent infringement in response to a pandemic. *Journal of Law and the Biosciences*. 6

Although the Ecodesign Directive is a big leap forward, it did not address some of the most significant issues with consumer repairs within the EU. The Directive only applies to household items like dishwashers, televisions, etc. Electronic equipment, which are more prone to be swapped for new ones by consumers, such as smartphones and laptops, were not addressed and are not included in the framework. This situation is likely to change as the Parliament briefing does address the issue in a more holistic way. With the added pressure on OEMs, new legal problems related to the exhaustion of IPRs arise.

With the improving status of the European right to repair, intellectual property protection referred to in Articles 36, and 118 of the TFEU needs to be re-examined and balanced with sustainability.[41] This should be reflected into legal frameworks and case law. At the moment, the European IP system mainly addresses the balance between competition and internal market issues but does not sufficiently touch on sustainability.[42]

2.2.1. Future plans of the von der Leyen Commission

The current European Commission (EC), also known as the von der Leyen Commission, has announced a set of legal initiatives which are meant to create a more favourable legal framework for repairs in the EU.[43] These programmes are done in a way that compliments the transition to a CE. It is important to further examine these initiatives because they show practical examples of what the right to repair can look like in the future.

A directly applicable set of initiatives tackling the right to repair is expected to introduce amendments to the Sale of Goods Directive (EU) 2019/771. An EC proposal for a directive has been presented, and it is planned to be adopted in the third quarter of 2022.[44] The mentioned amendments are likely to tackle 'repair over replacement, extending the minimum liability period for new or second-hand goods, restarting a new liability period after repair'.[45]

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[41] Pihlajarinne, T. (2020). Repairing and Re-Using From an Exclusive Rights Perspective – Towards Sustainable Lifespan as Part of a New Normal?, Helsinki Legal Studies Research Paper No. 61. 3

[42] Terryn, E. (2019). A Right to repair? Towards sustainable remedies in consumer law. *European review of private law*, *27*(4), p. 861

[43] Šajn, N. (2022), *supra nota* 33, 5

[44] European Commission (2022). Sustainable consumption of goods – promoting repair and reuse. Retrived from https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13150-Sustainable-consumption-of-goods-promoting-repair-and-reuse_en , 21 April 2022.

[45] Šajn, N. (2022), *supra nota* 33,. 5

The EC has also presented an initiative that would help consumers play their part in achieving a more sustainable economy by amending the Consumer Rights Directive 2011/83/EU. This could be done by providing consumers information on product 'reparability, availability of repair services, spare parts and repair manuals, and software updates and upgrades'. The Commission has released a proposal for Directive amending Directives 2005/29/EC and 2011/83/EU as regards empowering consumers for the green transition through better protection against unfair practices and better information.[46] The Commission has not confirmed a specific date for the adoption of the proposed Directive.

The Commission has also stated that it will revise the Ecodesign Directive and propose additional legislative measures with the aim of widening the scope of applicability from the narrow framework. The EC could require OEMs to become responsible for waste prevention. This could be done by adding a higher level of repairability to OEM products through guaranteed spare part availability and setting mandatory minimum sustainability requirements on public procurement of products.[47]

All the presented EC plans point towards the fact that consumer repairs will become more legally supported and comprehensive in the EU. It is likely that this direction of development will affect the European IP system, especially the exhaustion doctrine.

[46] European Commission (2020). Consumer policy – strengthening the role of consumers in the green transition. Retrieved from https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12467-Consumer-policy-strengthening-the-role-of-consumers-in-the-green-transition_en , 21 April 2022.
[47] Šajn, N. (2022), *supra nota* 33,. 5

3. THE DOCTRINE OF EXHAUSTION

One key question relating to the right to repair and IPRs of the manufacturers is how far should the holder of an IPR be able to restrict modification or alteration by a purchaser of a protected product? This issue is addressed in the exhaustion doctrine or the "first sale doctrine".[48] According to the doctrine, once the owner of an IP has sold an IP protected good on the market, the owner's right to control the use and sale of that good is exhausted. This limitation is based on the theory that after the sale of goods has been finalised, the IP holder has been rewarded for their efforts in the form of payment.

The exhaustion doctrine secures the consumer's right, as an owner of a good, to repair the item as long as the conducted repairs are not seen as too extensive. This principle creates a situation where the IPRs of manufacturers are being protected at the cost of sustainability. The limitations created to repair by the doctrine are usually interpreted narrowly by courts, which tend to follow the traditional line of sacrificing consumer rights to facilitate strong but unharmonised IP protection. As a consequence, the line between permissible repairs and acts constituting IP infringement is hazy. This hinders the consumer's willingness to opt for repair instead of buying new.[49]

Some scholars have proposed that today the concept of exhaustion operates in a way that was hard to see in the past. Therefore, it is possible that the establishment of updated limitations to the use of IPL would not necessarily undermine the central incentives for innovation, which are the main justifications for the usage of IP and its protection.[50] In the EU, the principle of exhaustion is being interpreted differently in different MS. The form of exhaustion varies through national case law and "statutory provisions".[51] On the international level, a state is able to adopt an international exhaustion model, which is governed by The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

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[48] Ghosh, S., & Calboli, I. (2018). *Exhausting intellectual property rights: a comparative law and policy analysis*. Cambridge University Press. 6-10

[49] Svensson, S., Richter, J. L., Maitre-Ekern, E., Pihlajarinne, T., Maigret, A., & Dalhammar, C. (2018), *supra nota 4*, 7

[50] Ghosh, S., & Calboli, I. (2018), *supra nota 48*, 42

[51] Pihlajarinne, T., & Ballardini, R. M. (2020), *supra nota 9*, 5

3.1. The TRIPS agreement

In 1994 members of the WTO established an agreement on matters relating to Trade-Related Aspects of Intellectual Property Rights. The TRIPS agreement establishes minimum standards for national government's protection and enforcement of the different forms of IPRs for the WTO member states.[52] The TRIPS agreement mentions exhaustion in Article 6 in a rather narrow manner: "For the purposes of dispute settlement under this Agreement, subject to the provisions of Articles 3 and 4, nothing in this Agreement shall be used to address the issue of the exhaustion of intellectual property rights."[53] Article 6 gives states the power to determine the scope for exhaustion themselves. Therefore, different states can be part of the TRIPS but still have varying governance on the matter. This leads to significant differences between national laws and rules concerning exhaustion.

3.2. Regional exhaustion

There are different geographical approaches that affect the applicability of exhaustion. The geographical approach refers to the practice which determines where an authorised sale will exhaust the patent holder's rights to the contracted goods. There are three different forms of exhaustion: international, regional and national exhaustion.

From the sustainability point of view, the most beneficial geographical exhaustion model is international exhaustion. This model enables non-infringing release and repair of products worldwide, with the rule that the repaired good has to be previously sold somewhere in the world first. OEM IPRs do not affect the act of repair as the rights have been exhausted globally.

The principle of national exhaustion works similarly to the international model, with the difference being that after the good has been sold, the act of repair is seen as non-infringing only within the borders of the state where the good was originally sold. This principle is applied in the US, among other states.

[52] Yu, P. K. (2009). The objectives and principles of the TRIPS agreement. *Hous. L. Rev.*, *46*. 980-982.

[53] TRIPS: Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organisation, Article 6

Most of the EU MS have adopted a regional exhaustion model. This means that goods can be released with the IP holder's consent in any state within the Union. Regional exhaustion is touched on in Articles 28 and 30 of the Treaty of Rome as well as Articles 11 and 13 of the EEA Agreement. The mentioned articles deal with the free movement of goods which also includes the IP rights connected to those goods.[54]

3.3. The relationship between exhaustion and repair

One legal concept relating to repair and IP is infringement. In order to achieve a more in-depth discussion, the mentioned term needs to be defined. Infringement is a breach of IP protection. Considering repairs, the most common way of infringing IP is when a third party uses protected assets without permission from the IP holder.[55] For example, a factory knowingly manufactures spare parts carrying trademark protected logos without permission from the trademark holder in order to gain more profits.

In the following chapters, the relationship between the exhaustion of IPRs and the notion of repairing will be examined. Patents, designs, copyright and trademark all have specific applications that can be used to restrict repairs. Business strategies created by IP holders often include plans for invoking IPRs, with the intention to restrict the reuse of products, which can have negative effects on their trade.[56] In order to define what the new legislation supporting repairs will require, the current causes of problems in the field of IP need to be identified. The chapters focus on the exhaustion of IPRs in relation to consumer repair by examining the current legislation governing patents, design, copyright and trademarks.

3.3.1. Patents: Repair or reconstruct

Under the doctrine of exhaustion, the contracted goods that are protected by IPR should be free from infringement liability after the consumer has compensated the IP holder and fulfilled their part of the contract of sale. However, even after the transfer of ownership, it is still possible for the consumer to commit IP infringement. The most concerning aspect that relates to repair is the

[54] Liu, B. P. W. (2014). Towards a Patent Exhaustion Regime for Sustainable Development. *Berkeley J. Int'l L.*, *32*, 330. 351

[55] Weaver J., (2018). Google IP infringements: no results found?, European Intellectual Property Review. 40(12), 760-761

[56] Pihlajarinne, T. (2020), *supra nota 41*, 1

question of permissible repair v. reconstruct, which can constitute infringement, also known as repairing versus 'making'.

A consumer or a legal entity who repairs electronic equipment professionally can alter the products within a narrow legal framework. Under the doctrine of permissible repair, IP protected goods can only be repaired, not 'made'. This means that the owner can repair the good but cannot construct a thing that has already been invented. The repair actions can therefore be divided into two categories; permissible repair and impermissible making. This creates a challenge as the line between repairing and making is vague. There is no comprehensive definition that would dictate a clear line between the two terms. Instead, the question of repair versus reconstruction is determined with a case by case approach.[57] Courts within the EU have openly disagreed on the matter of deciding how far making and modifying a good is legitimate. This is a good way to demonstrate that the concept of repair is still unclear within the Union. Additionally, none of the European patent regulations mentions or defines the action of "repair". The matter gets even more complicated if the patent-protected goods require refilling, such as toner for cartridges used in printers and copying machines. This might involve third parties as providers for substitute or replacement parts.[58]

If a patent-protected invention is made, used, offered to be sold or sold without permission, the owner of the patent in question can bring legal sanctions for direct infringement against the entity who has committed one or more of the mentioned actions.[59] This is known as direct infringement. The other form of infringement is known as indirect infringement or contributory infringement. For example, this type of infringement can be established by the patent holder if a large number of companies or consumers are committing infringement, and it would be extremely challenging to track down all relevant parties. In these kinds of cases, the patent holder may try to track down suppliers which the infringers are dependent on and bring forward indirect infringement claims.[60] In other words, the patent holder is able to claim indirect infringement against anyone who actively takes part in a direct infringement. Liability for indirect infringement can also be established from actions such as knowingly stimulating others to infringe a patent and knowing that those actions

[57] Liu, B. P. W. (2014), *supra nota 54*, 342

[58] German Supreme Court, X ZR 55/16, Trommeleinheit, 24.10.2017.

[59] Pihlajarinne, T., & Ballardini, R. M. (2020), *supra nota 9*, 11

[60] Holder, N. Schmidt, J. (2006). Indirect patent infringement - latest developments in Germany, European Intellectual Property Review 2006. 28(9). 480-483

would constitute infringement. In an infringement case, the plaintiff has the burden to prove that an infringement has been made.[61] This has been examined in European cases such as "*Trommeleinheit*" and "*Palettenbehälter II*", which relate to spare parts. Patent infringement is an important concept when the right to repair is considered, as the line between permissible repair and reconstruct constituting infringement is in a key role when the owner's right to repair a product is being determined.

3.3.2. Designs: Availability of spare parts

European design protection consists of measures against copying product shape and appearance. The design itself, nor its protection, puts emphasis on how the product functions, solely on the appearance. Industrial design means that the appearance of a product is intended for a specific purpose and is usually mass-produced.[62] Design is governed by Directive 98/71/EC on the legal protection of designs and Council regulation (EC) No 6/2002 on Community designs.

After a product has been released to the market by the patent holder, the basic form of exhaustion applies. However, modification of the original design is, in most instances, not allowed. This creates a situation where the IP holder can control repairs of a design protected product, which creates a problem as most repair efforts require modification in order to be sufficient.[63]

The prevalent design protection can cause problems with the right to repair as most OEM spare parts are protected. This hinders the availability of parts necessary to conduct successful and efficient repairs.[64] Article 110.1 of the Community designs Regulation acts as a repair clause: "Until such time as amendments to this Regulation enter into force on a proposal from the Commission on this subject, protection as a Community design shall not exist for a design which constitutes a component part of a complex product used within the meaning of Article 19(1) for the purpose of the repair of that complex product so as to restore its original appearance". This clause excludes spare parts from the protection of IPR if they are used to restore the original appearance of the product.

[61] Shah, T. Sheraton, H. (2017). Actavis v Eli Lilly: English Supreme Court shakes up approach to patent infringement by equivalents. European Intellectual Property Review. 39(12). 779-781
[62] European Union (2001), Council Regulation (EC) No 6/2002 on Community designs, Articles 3 & 4
[63] Pihlajarinne, T., & Ballardini, R. M. (2020), *supra nota 9*, 7
[64] Svensson, S., Richter, J. L., Maitre-Ekern, E., Pihlajarinne, T., Maigret, A., & Dalhammar, C. (2018), *supra nota 4*, 6

In 2004 a review of the framework set out by Article 14 of the Directive 98/71/EC was conducted, stating that a new set of legal rules should be adopted. These rules should make it possible for third parties to start supplying replacement parts for various products with the same design as the protected product. The review and its suggestion to renew the clause that would enable parties to provide spare parts required for repairs was withdrawn in 2014. This led to the lack of harmonisation with the repair clause.[65] The withdrawal had direct effects on repairs as the planned new legislation was never introduced. The prevalent laws concerning designs and spare parts will likely experience modifications when the emerging EC plans on repair and sustainability become a reality.

3.3.3. Copyright: Distribution of manuals and schematics

To successfully repair electronic equipment, the entity conducting the repair is required to know what they are doing. In order for consumers or third-party repairers to be sufficient with repairs, they require necessary manuals and schematics of the products they are repairing. Article 4 of Directive 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society governs the exhaustion of copyright protection and the distribution right for the IP holders.[66] The distribution right for software is regulated by Directive 2009/24/EC on the legal protection of computer programs. Article 4(2) of the 2009/24/EC Directive sets the framework for the exhaustion of the IP holder's right: "The first sale in the Community of a copy of a program by the right holder or with his consent shall exhaust the distribution right within the Community of that copy, with the exception of the right to control further rental of the program or a copy thereof".[67] Both Directives play a crucial role in setting the level of protection for copyrighted works as well as determining the rules for exhaustion.

The mentioned legal acts create a narrow approach to the interpreting of copyright-related exhaustion. The Court of Justice of the European Union gave a decision on case C-128/11 UsedSoft v Oracle International, which established that the IP holder's distribution right relating to a particular copy was exhausted if the holder had agreed that there was no fixed time period for

[65] Beldiman, D., & Blanke-Roeser, C. (2015). European design law: considerations relating to protection of spare parts for restoring a complex product's original appearance. *IIC-International Review of Intellectual Property and Competition Law*, *46*(8). 917

[66] Directive 2001/29/EC, The harmonisation of certain aspects of copyright and related rights in the information society, European Parliament, Council of the European Union, Article 4

[67] Directive 2009/24/EC, The legal protection of computer programs, European Parliament, Council of the European Union, Article 4(2)

the usage of that specific copy.[68] The principles related to copyright exhaustion set out in the legislation and case law create obstacles for repair, as the distribution of schematics and manuals is in the hands of the right holders, and exhaustion can only be applied to certain selected cases.[69] The IP holders of the manuals and product information are usually the entities who manufacture the products, and as already established in Chapter 1.1., it is not in their interest to commit acts that can cause harm to their trade, sharing vital information for making repairs possible can be seen as this kind of an act. The exhaustion of copyright limits the possibility of distributing necessary information for repair, such as schematics and manuals, to consumer and third-party repairs. Therefore, it can be seen as an obstacle to the promotion of the circular economy.

3.3.4. Trademarks: Restrictions to refurbished parts

In 2018, technology company and OEM Apple Inc. brought up a trademark violation claim against an owner of a third-party repair service company in Oslo District Court, Norway.[70] Norwegian case law is included in the scope of this research because, even though Norway is not a MS of the EU, it is a part of the EEA. Additionally, Norwegian IPLs are similar to EU IPLs. The defendant and owner of the repair company Henrik Huseby is an independent service provider and has no affiliation with the plaintiff. The claim was based on Mr Huseby's act of trying to acquire 63 refurbished Apple iPhone 6 and 6s model glass screens from China to complete the orders for his service company's customers. At the time of delivery, Apple had requested that the Norwegian customs seize the screens as counterfeits because they contained a small, trademark-protected Apple logo. The defendant claimed that the screens were not counterfeits but rather refurbished parts that were acquired legally. The District Court gave its decision in favour of the defendant on the basis that the Apple logos were internal and could not be seen through normal use. The Court added that Apple does manufacture new equivalent parts but does not provide them to independent repair shops like the defendant's establishment.[71]

The spare parts in question were identical to the new ones that Apple provides to its authorised service providers. Mr Huseby's company is reliant on the refurbished parts in order to conduct business, as it is the only way third-party repairers can access the equipment. The Court also noted

[68] UsedSoft v Oracle International (C-128/11) EU:C:2012:407
[69] Pihlajarinne, T., & Ballardini, R. M. (2020), *supra nota 9*, 8
[70] District Court of Oslo 2018, Apple Inc. VS Henrik Huseby 17-151334TV1-OTIR/04
[71] Montello, S. K. (2020). The right to repair and the corporate stranglehold over the consumer: profits over people. Tul. J. Tech. & Intell. Prop. 22. 172

that Apple did not claim that the parts were of low quality or that the defendant was trying to deceive his clients by claiming that the parts were new and original OEM parts.[72]
Apple appealed to the Norwegian Court of Appeals. The Appeal Court ruled in favour of Apple and based its judgement on the fact no matter how small, Apple logos were visible on the refurbished screens. Therefore, consumers could be misled to believe that the screens were OEM and not refurbishments. Huseby argued that his company never advertised the screens as being "OEM", so there were no misleading actions.[73]

The case was taken to the Norwegian Supreme Court in 2020, where the court upheld the decision of the Court of Appeals that the import of the refurbished screens, which contained the Apple logo, as a trademark infringement under Section 4 of Norway's Trademark Act.

On the EU level, the applicable framework for the exhaustion of trademarks can be found from Directive (EU) 2015/2436 on approximate the laws of the Member States relating to trademarks (TMD) and Regulation (EU) 2017/1001 on the European Union trade mark (TMR). Article 14(1)(c) of the TMD states: "An EU trademark shall not entitle the proprietor to prohibit a third party from using, in the course of trade: the EU trademark for the purpose of identifying or referring to goods or services as those of the proprietor of that trademark, in particular, where the use of that trade mark is necessary to indicate the intended purpose of a product or service, in particular as accessories or spare parts".[74]

Both the TMD Article 15(2) and TMR Article 15(2) touch on the limitation of the exhaustion of the trademark protection, stating that if the holder has legitimate reasons "to oppose further commercialisation of the goods", then the exhaustion principle is not applicable.[75] This clause and the separate Norwegian case law show that the position of consumers is not equal compared to the OEMs. Therefore, there is a need to improve the exhaustion of trademarks in order to reach a higher level of sustainability and CE. This can be done by creating a wider legal framework for exhaustion in the right to repair legislation.

[72] Ibid.
[73] Norwegian Court of Appeal (2019), LB-2018-62352
[74] Directive 2015/2436/EU, on approximate the laws of the Member States relating to trade marks, Council of the European Union, Article 14(1)(c)
[75] Regulation (EU) 2017/1001, on the European Union trade mark, Article 15(2)

3.4. How the right to repair could affect the exhaustion doctrine?

The products manufactured and sold by OEMs can be defined as primary products. These products are a part of the primary market. Term aftermarket can be used to define the supply of services (repair) and goods (spare parts) that are needed to enable a long lifetime for the primary products.[76] In relation to the right to repair, a distinctive line between primary market and secondary market can be drawn. The prevalent IP related exhaustion rules in the EU create problems with the secondary market for repairs. An independent repairer who provides his services on the secondary market might be liable to use a trademark owned by a third party in order to indicate the compatibility of the provided services and the primary product. For example, a repairer like Mr Huseby might need to use Apple's trademark in order to indicate that his company can provide aftermarket repair service to consumers who need help with their Apple products, an act that is allowed by the TMD.

The issue of needing to use a third-party IP has also been examined in CJEU case C-228/03, The Gillette Company, Gillette Group Finland Oy v LA- Laboratories Ltd Oy. In this case, Gillette Company claimed that the defendant LA- Laboratories Ltd had infringed the plaintiff's trademark by adding red stickers to its products that stated: 'All Parason FLEXOR® and all Gillette SENSOR® HANDLES are COMPATIBLE with this razor blade'. Gillette claimed that it had not given permission to LA- Laboratories and claimed that the defendant had committed infringement. Unlike in the Norwegian Apple Inc. v. Henrik Huseby case, the Finnish Supreme Court ruled in favour of the defendant, basing its judgement on the argument that the reference to Gillette's trademark was the only way to inform consumers about the intended purpose of LA's razor blades.[77] This question can be examined within the topic of access to spare parts, which is still left up to national rules. As presented, case law related to the access to spare parts differs in different national legislation, and the emerging right to repair legislation presented by the EC and European Parliament will likely affect this as the level of harmonisation is improved. At the moment, the EU legislation on repair has a problem as the secondary market of repair is completely reliant on exceptions and limitations to operate.[78] This situation is also likely to change as the new legislation on repair is introduced, and exclusive rights are examined from the sustainability and European CE viewpoint.

[76] OECD (2017), Competition Issues in Aftermarkets - Note from the European Union, p. 2
[77] CJEU (2006), The Gillette Company, Gillette Group Finland Oy v LA- Laboratories Ltd Oy, C-228/03
[78] Pihlajarinne, T. (2020), *supra nota 40*, 2

The emerging right to repair legislation has the potential to solve the problem of strong IP protection that creates incentives for OEMs but fails to promote sustainability and the circular economy model.[79] From the presented arguments, it can be established that a comprehensive balance between IP holder's rights and sustainability goals needs to be installed into the European IP system. In practice, this could be done by re-defining acts that constitute infringement based on the repair that tries to maximise the lifetime and usage of electronic equipment. Additionally, soft law remedies could be created. For example, WIPO could give guidelines that aim to establish a higher level of sustainability in regards to IPL, similar to the efforts done by WIPO with the UN SDG policies.

[79] *Ibid*. 5

4. CASE STUDY: THE RIGHT TO REPAIR IN THE EU AND THE US

In the following chapters, the paper presents a case study on the right to repair in the US and the EU. Topics such as similarities and differences between related legislation in both jurisdictions are examined by exploring relevant case law. Both jurisdictions are examined individually, and then the main findings are shortly listed in a concluding chapter. The research focuses on case law, but some other relevant legal aspects are included as well. The provided court practices will showcase practical examples of the relationship between IPL and consumer repair. The US was chosen for this study as it has been adopting the right to repair ahead of the EU and therefore, provides valuable examples of what could be expected when the European right to repair emerges.

4.1. Right to repair in the US

Due to the current advancements made in the field of technology, many consumer products include an electronic chip within them.[80] This phenomenon affects everyone, no matter the geological location or legal jurisdiction. Therefore, it is universally difficult for all people who would like to repair their products to do so independently, as the contribution offered by the OEMs is minimal. As advanced technological parts in consumer products have become more common, OEMs have been adopting strict control over the aftermarket of parts as well as repair services. This has been done by limiting access to spare parts by independent repairers and allowing access to only authorised service providers.[81] These actions unite the right to repair in the US and the EU. The issue with consumer product repair has been addressed in several different state legislations. In 2019, twenty states introduced bills that would provide consumers with the right to repair their electronic equipment. However, the legislation pushed forward in the US is not very similar when compared with the emerging European law on repair. This is because the US movement has a

[80] Grinvald, L. C., & Tur-Sinai, O. (2019), *supra nota 7*, 73

[81] Grinvald, L. C., & Tur-Sinai, O. (2021). The Right to Repair: Perspectives from the United States. Fordham Law Review. 98

different way of approaching the right. In the EU, the main driver towards a right repair has been the transition towards a CE. However, the US has not been adopting a similar economic model change. So where does the change derive its momentum from?

The aftermarket value of repairs in the US is a significant part of the OEM revenue. Repair profits in the field of agriculture can significantly exceed profits made from equipment sales.[82] OEMs base their actions of restricting the aftermarket on the argument that innovation will suffer as IPL is infringed if consumers autonomously work on and fix IP protected products. In the field of IPL, the restrictions are enforced through design and copyright legislation, among others.

The Digital Millennium Copyright Act (DMCA) prohibits consumer means that are used to "avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner"[83], which makes the software code in all computerised electronic equipment copyright protected. Therefore, consumers or third-party repairs cannot access or work on any computers that are within electronic equipment. This can be seen in a comment made by farming machinery manufacturer John Deere in a US Copyright Office report on a proposed exemption to Article 1201 of the DMCA in 2015 when the manufacturer stated that farmers who purchase John Deere tractors could not actually own the products as they cannot own the copyright-protected software that is needed for the machinery to work. John Deere claimed that farmers receive a licence for the life of the vehicle, which can be subjected to "contractual limitations".[84] A single tractor sold by John Deere costs hundreds of thousands of US dollars. Much like in the EU, OEMs also restrict repairs with copyright over schematics and manuals. US federal copyright law has the ability to impose serious monetary fines for copyright infringements like unauthorised distribution of manuals that are essential in repairs.[85] The concept of tinkering is important to the right to repair in the US. It means that the consumer should have a right to work on their rightfully purchased products. Tinkering has also been an important part of innovation in the history of the US.[86]

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[82] Hanley, D., Kelloway, C., & Vaheesan, S. (2020). Fixing America: Breaking manufacturers' aftermarket monopoly and restoring consumers' right to repair. 15

[83] United States, Committee on the Judiciary (1998), The Digital Millennium Copyright Act of 1998: Chapter 12, Section 1201 (a)(1)(A), (a)(3)(A)

[84] John Deere. (2015). Long Comment Regarding a Proposed Exemption Under 17 U.S.C. 1201. Retrieved from https:// www.copyright.gov/1201/2015/comments-032715/class%2021/John_Deere_Class21_1201_2014.pdf. , 28 March 2022.

[85] United States, Copyright Act (1976), Chapter 5, Article 504

[86] Hanley, D., Kelloway, C., & Vaheesan, S. (2020), *supra nota 82*, 4

One of the main organisations behind the US movement is the Digital Right to Repair Coalition. The Coalition has introduced a model legislation that offers policy solutions with the aim of improving the consumers' right to repair.[87] Among other aims, this model legislation targets IPL and proposes significant modifications to the governing legislation. Firstly, in the field of patents and copyright, the US courts have held that OEM and related companies cannot use their IPRs to dominate markets if the acts infringe US antitrust law.[88] The court's reasoning was later quoted in a major US case in 2001.[89] With this solidified case law, the restricting acts through the exploitation of patent and copyright law done by the OEMs can be seen as problematic. In the field of copyright, Section 1201 of the DMCA enables the Library of Congress to have the authority to create exceptions to the usage of copyrighted material. This provision was applied in a Library Congress ruling in 2015, where such exemption methods were created in order to access copyrighted works when they are used in the context of repairs.[90]

In the field of trademark, issues relating to products bearing a trademark protected logo have been surfacing. The claims are mainly related to consumer access to spare parts. The right to repair movement and proposed model legislation is also aimed to solve these kinds of problems. OEMs can use trademark legislation to restrict the access of products that are exported from overseas to the US and include trademark protected logos or features that have the equivalent meaning. These types of products are defined as grey market products.[91] An exception to the trademark legislation is required in order to introduce repair products to the market. Products that could fall under this exemption rule could, for example, be refurbished parts.[92] Enabling an improved supply of parts and manuals by creating an exemption to US IPL would increase consumers' ownership over their products and, at the same time, contribute to sustainability.

[87] Grinvald, L. C., & Tur-Sinai, O. (2019), *supra nota 7*, 77

[88] United States District Court, Kansas (1997), Independent Serv. Organ. Antitrust Lit., 964 F. Supp. 1479 (1997): CSU Holdings, Inc., et al. v. Xerox Corp.

[89] United States Court of Appeals, District of Columbia Circuit (2001): United States of America v. Microsoft Corporation 253 F.3d 34 p. 63

[90] Hanley, D., Kelloway, C., & Vaheesan, S. (2020), *supra nota 82*, 23

[91] United States. Supreme Court. (1988). K Mart Corp. v. Cartier, Inc., 486 U.S. 281. 486.

[92] Hanley, D., Kelloway, C., & Vaheesan, S. (2020), *supra nota 82*, 23-24

4.2. EU case law

The following chapters address European case law related to the right to repair and the exhaustion doctrine. Questions related to the limitations of repair and general IP protection as a restricting factor are examined. Case law is further researched to make analysed connections and distinctions between the right to repair in the EU and the US. Additionally, it is important to examine the prevalent EU court practice in order to get a better understanding of the legal aspects that could experience modification when the planned right to repair comes into force in the EU.

4.2.1. Trommeleinheit

EU case law relating to repair v. reconstruct is limited. However, there are some cases that shed light on this question. In 2017 the German Federal Court of Justice (FCJ) gave a decision in the case "Trommeleinheit". In the case, a Japanese company Canon K. K., which is an OEM of printers and respective toner cartridges, filed a lawsuit claiming patent infringement. The plaintiff competes with recycling companies refurbishing OEM toner cartridges. The claim was filed against two recycling companies who allegedly committed infringement to the plaintiff's European Patent 2 087 407. The patent-protected innovation is that the toner cartridge can be removed from the device that it is in, most commonly a copying machine, in a "direction perpendicular to the rotational axis, while replacement of the cartridge in devices known in the prior art required that the driving shaft be moved horizontally in the direction of the rotational axis."[93] The Regional Court of Dusseldorf found the defendants infringing the plaintiff's patent because the performed replacing of the toner cartridges constituted an impermissible reconstruction. Therefore, infringing the plaintiff's patent.

The FCJ amended the regional court's decision and dismissed the claim. The FCJ did not regard the replacement of mentioned cartridges as impermissible reconstruct, rather permissible repair. The FCJ used the prior decision of "Palettenbehälter II" as a base for deciding on the Trommeleinheit case.

[93] German Supreme Court, X ZR 55/16, Trommeleinheit, 24.10.2017.

4.2.2. Palettenbehälter II

The German Federal Court made a significant decision relating to the exhaustion of patent rights in the EU in the case "*Palettenbehälter II*" (Pallet Container II). In July 2012, the FCJ ruled on a case in which the plaintiff brought up patent infringement claims against two defendants, both operating in the refurbishing industry.

The plaintiff manufactures and sells pallet containers and holds an exclusive licence for European patent No 734 967 for the product in question. During the refurbishing process carried out by the Defendants; "the interiors of containers originally put on the market by the Plaintiff are removed and replaced by a similar inner container from the Defendants' production". The Plaintiff considered these actions as infringement.

The FCJ's decision on Palettenbehälter II is important because it tackles the question of direct infringement in repair cases. Before the case in question, the court had only determined the exhaustion of patent rights in indirect infringement cases. The difference between repairing and making is not clear, and the approach adopted by courts differs based on the facts of the case. Palettenbehälter II introduced a model test that can be applied to solve if an act constitutes infringement. This test is called the two-step case for distinguishing between repair and reconstruct. In the first step of the test, the components of the patent-protected product are examined. This examination is based on the question of whether it can be expected that different components of the product need to be replaced during its working life. If it is reasonable to expect that the components might be replaced, then the act of replacing does not conclude as infringement. In the second step of the test, the focus of examination is on the question of whether the technical effects of the product change when components are replaced. If the technical aspects of the product do not change, the act does not constitute infringement.[94]

Based on the described reasoning, the German Federal Court gave its verdict and held that the defendant was entitled to replace the inner container. Therefore, the defendant did not infringe the plaintiff's patent.[95] The two-step model for examining infringement introduced in this case is used by courts in the EU for examining infringement in matters related to the question of repair v.

[94] Pihlajarinne, T. (2020), *supra nota 41*, 7

[95] German Federal Court of Justice. (2013). Replacement of parts of a patented product-German decision Pallet container II (Palettenbehälter II). *Journal of Intellectual Property Law & Practice*, *8*(1), 84.

reconstruct. However, other ways of determining if an act is considered as 'repairing' or 'making' can be found.

4.2.3. Schütz v Werit

The question between repair and reconstruction has been addressed in the UK by a case of an OEM infringement claim; this case is Schütz Ltd v Werit UK Ltd. Final ruling on the matter was given in 2013 when the United Kingdom (UK) was still a MS of the EU. In the case, the plaintiff Schütz Ltd claimed that the defendant Werit UK Ltd commited secondary infringement to European patents 0 370 307 and 0 734 967, which protected a type of container that was used for transportation of different liquids. The product in question is also known as an intermediate bulk container (IBC). These types of containers have a protective cage on the outside and an inner bottle made of plastic, which can be removed.[96]

The claim was based on the fact that the defendant company manufactured spare inner bottles for IBCs and sold them in competition with the products manufactured by the plaintiff. However, at the time, the national patents laws of the UK did not clearly provide a framework that could be applied to the issue of repair v reconstruct. The Supreme Court stated in their judgement that the defendant did not infringe the plaintiff's patent. The verdict was based on criteria given by the Supreme Court. This criteria stated that activities related to repair did not constitute infringement if; "the defendant's activities could be regarded as routine repairs if the replaced component had no connection with the claimed inventive concept of the patent if the replaced components expected life is much shorter than the overall product and if the replaced component cannot be described as the main component of the article."[97] The framework criteria set out in the case by the Court has been regarded as a guideline in similar cases in the UK.[98] This criteria differs from the German court practice for distinguishing between 'repairing' and 'making'.

If the presented differences of criteria for repair v reconstruct are examined, a clear lack of harmonisation can be found. The basic principles related to consumer right to repair and the criteria for determining when the act of repair constitutes IPL infringing reconstruct are applied differently in different Member States. This could cause problems for the European patent system as

[96] Whitehead, B., Kempner, R. (2013). Manufacture or repair - the final word: Schutz v Werit, European Intellectual Property Review, 35(7). 422.
[97] The Supreme Court of the United Kingdom, [2013] UKSC 16, Schütz (UK) Limited v Werit (UK) Limited, 27.
[98] Whitehead, B., Kempner, R. (2013), *supra nota 96*, 423

consumers and IP holders could face different court outcomes in cases that are related to IP exhaustion and the right to repair. Even though most of the EU MS apply regional exhaustion in their national IPLs, the outcome of what constitutes infringement can vary depending on the court that is left to decide on the matter, not the exhaustion limitations themselves.

4.3. Discussion

As the US and the EU have started to express support for a higher level of sustainability through repairs, it is important to note that both parties have developed their own means for achieving the goal. The US has applied legislation based on the discussion about the value of aftermarket repair. In contrast, the European right is driven forward by the transition to a circular economy.[99]

In the EU, the existing court practice on repair is unharmonised, as Member States have been allowed to implement their own legislation and frameworks.[100] In the United States, the matter has been addressed by separate States, as a significant number of private sector members have experienced the effects of aftermarket capitalisation done by the OEMs. However, as the presented model legislation becomes more common in the US, it is possible that the jurisdiction will see an improvement in the future.[101] The EU will likely also make efforts towards a more harmonised legislation on repair in the future.[102]

The right to repair in the US differs from its European counterpart in the way that it seems to take advantage of exemptions and limitations of IPL to enable the notion of repair.[103] Whereas in the EU, the development has taken a more holistic approach with the introduction of directives, like the Ecodesign, and specific legislation plans for the future. The emerging European legislation will not likely just amend or create exemptions to already existing legislation but create new provisions that specifically address the issues around repair and IP.[104]

[99] Svensson, S., Richter, J. L., Maitre-Ekern, E., Pihlajarinne, T., Maigret, A., & Dalhammar, C. (2018), *supra nota 4*, 15
[100] Pihlajarinne, T. (2020), *supra nota 40, 13*
[101] Grinvald, L. C., & Tur-Sinai, O. (2019), *supra nota 7*, 127-128
[102] Šajn, N. (2022), *supra nota* 33, 1
[103] Hanley, D., Kelloway, C., & Vaheesan, S. (2020), *supra nota 82*, 24
[104] Pihlajarinne, T. (2020), *supra nota 40*, 13-14

CONCLUSION

The concluded research provides an overview of the current state of the right to repair and examines how the European IP system could be affected by the improved status of the mentioned right. As the research indicates, there are different issues relating to the right within the Union. These issues are connected to the exhaustion of IP protection. In order to facilitate a higher level of sustainability, the current state of IP exhaustion needs to be examined. In the future, the relationship between the right to repair and IPL could be further researched as the proposed EU laws are adopted and become applicable. At that time, the practical effects of the repair provisions could be explored by examining the possible developments to different MS's national legislations.

" Is there a need to improve the consumer's prevalent right to repair in order to achieve a higher level of sustainability?".

As advancements in the field of technology become more developed, a wider scale of consumer products start to include computer chips or require software, in order to fulfil their purpose. The possibility for consumers to conduct repairs to these products becomes more challenging. This creates more linear consumption. Therefore, the legal framework around repairs needs to be revised. As electronic equipment becomes more intertwined with IPL, through included software and other aspects, it is necessary to examine the role of the IPL system in the transition towards a CE.

As the EU is transitioning towards a more sustainable economy model, the value of repair grows. In order to achieve a working CE, the repairability of products needs to be improved. This cannot be done if consumers are not able to repair products themselves. Therefore, it is necessary to improve the consumers' right to repair. Exhaustion of IP is at the centre of this topic. At the moment, OEMs are using IP to restrict repairs by leveraging the protection provided by IPL. Therefore, as the EU is transitioning towards a CE, there is a need to improve the consumers' prevalent right to repair.

“ How the emerging right to repair legislation will affect the doctrine of exhaustion in the European Union?”.

Developments such as the Ecodesign Directive and plans of the European Commission and European Parliament indicate that the right to repair legislation will most likely become more comprehensive and take a more holistic approach in the future. This means that the consumer right will be more applicable and affect a larger number of industrially manufactured products.

The doctrine of exhaustion has a key role in the progress of the right to repair. As the examined European case law provides, there is a lack of harmonisation when it comes to the exhaustion of an IPR in the 21st century. The exhaustion doctrine could be modified so that the scope of infringement would not be applicable to acts that actually try to maximise the lifespan of an OEM product.

The current narrow interpretation of the exhaustion doctrine creates legal uncertainty within the Union. As relevant parties do not know what could be considered as infringement of IP, a lot of repair efforts are left undone. This could be addressed by amending the current exhaustion doctrine in a way that complements the current CE efforts.

“ What are the distinguishing factors and similarities between the emerging European right to repair and the right to repair in the US?”.

The European right to repair is driven forward by public legislative bodies of the EU. In the US, the right is actively pushed forward by a social movement including private organisations, companies and activists. The US has already seen the right to repair bill introduced in twenty states, and more are expected to follow. The US also has a long history and early case law that deals with the issue of using IPRs to restrict repairs in order to facilitate profits. In this sense, the US right is more developed at the moment, as the EU has only adopted a small amount of law relating to repairs.

Both jurisdictions value sustainability. In the EU, the transition towards a circular economy is a big step forward. Improving the right to repair is necessary in order to achieve this goal. In the US, sustainability aspects are examined through the circularity of products. An improved right to repair adds circularity as spare parts and schematics are more accessible for consumers. At the moment,

questions relating to exhaustion of IPRs in the EU are governed with exemptions and limitations to IPL provisions. This situation is likely to change as more repair supportive provisions are introduced. The movement of the US has created a model legislation which emphasises the role of exemptions and limitations. The European right to repair seems to take a more holistic approach with proposed new legislation that specifically addresses repairs. The role of limitations and exemptions is becoming outdated in the EU.

In the future, the relationship between the right to repair and IPL could be further researched when the proposed EU laws are adopted and become applicable. At that time, the practical effects of the repair provisions could be explored by examining the possible developments to different national legislations in the EU.

LIST OF REFERENCES

Scientific articles

1. Baldé, C. P., Forti, V., Gray, V., Kuehr, R., & Stegmann, P. (2017). *The global e-waste monitor 2017: Quantities, flows and resources*. United Nations University, International Telecommunication Union, and International Solid Waste Association. 11.

2. Bannerman, S. (2020). The World Intellectual Property Organisation and the sustainable development agenda. *Futures*, *122*, 102586. 4.

3. Beldiman, D., & Blanke-Roeser, C. (2015). European design law: considerations relating to protection of spare parts for restoring a complex product's original appearance. *IIC-International Review of Intellectual Property and Competition Law*, *46*(8). 917.

4. Contreras, J. L. (2020). Research and repair: expanding exceptions to patent infringement in response to a pandemic. *Journal of Law and the Biosciences*. 6.

5. Friant, M. C., Vermeulen, W. J., & Salomone, R. (2021). Analysing European Union circular economy policies: words versus actions. *Sustainable Production and Consumption*, *27*, 337.

6. German Federal Court of Justice. (2013). Replacement of parts of a patented product-German decision Pallet container II (Palettenbehälter II). *Journal of Intellectual Property Law & Practice*, *8*(1), 84.

7. Ghosh, S., & Calboli, I. (2018). Exhausting intellectual property rights: a comparative law and policy analysis. Cambridge University Press. 6-10.

8. Grinvald, L. C., & Tur-Sinai, O. (2019). Intellectual property law and the right to repair. *Fordham Law Review*, *88*, 63, 71-72.

9. Grinvald, L. C., & Tur-Sinai, O. (2021). The Right to Repair: Perspectives from the United States. Fordham Law Review. 98.

10. Hanley, D., Kelloway, C., & Vaheesan, S. (2020). Fixing America: Breaking manufacturers' aftermarket monopoly and restoring consumers' right to repair. 15.

11. Holder, N. Schmidt, J. (2006). Indirect patent infringement - latest developments in Germany, European Intellectual Property Review. 28(9). 480-483.

12. Liu, B. P. W. (2014). Towards a Patent Exhaustion Regime for Sustainable Development. Berkeley Journal of International Law, 32(2). 351.

13. Montello, S. K. (2020). The right to repair and the corporate stranglehold over the consumer: profits over people.*Tulane Journal of Technology and Intellectual Property,* (22). 172.

14. O´Neill, S. (2021). European Union Puts Teeth in Right to Repair. Engineering Journal, 7(9). 1197-1198.

15. Perzanowski, A., & Schultz, J. (2016). The end of ownership: Personal property in the digital economy. MIT Press. 135.

16. Pihlajarinne, T. (2020). European Steps to the Right to Repair: Towards a Comprehensive Approach to a Sustainable Lifespan of Products and Materials?. *University of Oslo Faculty of Law Research Paper*, 4.

17. Pihlajarinne, T., (2020). Repairing and Re-Using From an Exclusive Rights Perspective – Towards Sustainable Lifespan as Part of a New Normal?, Helsinki Legal Studies Research Paper No. 61. 3.

18. Pihlajarinne, T., & Ballardini, R. M. (2020). Paving the way for the Environment: Channelling 'Strong' Sustainability into the European IP System. *European Intellectual Property Review*, *42*(4), 239-250. 2-3.

19. Shah, T., & Sheraton, H. (2017). Actavis v Eli Lilly: English Supreme Court shakes up approach to patent infringement by equivalents. European Intellectual Property Review. 39(12). 779-781.

20. Sørensen, P. B. (2018). From the linear economy to the circular economy: A basic model. *Finanz-Archiv: Zeitschrift für das Gesamte Finanzwesen*, *74*(1). 71-73.

21. Svensson, S., Richter, J. L., Maitre-Ekern, E., Pihlajarinne, T., Maigret, A., & Dalhammar, C. (2018). The emerging 'Right to repair' legislation in the EU and the US. *Proceedings from Going Green–Care Innovation*, 1-3.

22. Terryn, E., (2019). A Right to repair? Towards sustainable remedies in consumer law. European review of private law. 27(4). 861.

23. Weaver J., (2018). Google IP infringements: no results found?, European Intellectual Property Review. 40(12), 760-761

24. Whitehead B., Kempner R. (2013). Manufacture or repair - the final word: Schutz v Werit, European Intellectual Property Review, 35(7). 422.

25. Yu, P. K. (2009). The objectives and principles of the TRIPS agreement. Houston Law Review, 46. 980-982.

EU and international legislation

26. Commission Regulation (EU) No 2021/341 of 23 February 2021 amending Regulations (EU) 2019/424, (EU) 2019/1781, (EU) 2019/2019, (EU) 2019/2020, (EU) 2019/2021, (EU) 2019/2022, (EU) 2019/2023 and (EU) 2019/2024 with regard to ecodesign requirements for servers and data storage products, electric motors and variable speed drives, refrigerating appliances, light sources and separate control gears, electronic displays, household dishwashers, household washing machines and household washer-dryers and refrigerating appliances with a direct sales function, OJ L 68, 26.2.2021, p. 108–148. 26.2.2021

27. Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union (TFEU) [2016], art. 3(3).

28. Council Regulation (EC) No 6/2002 of 12 December 2001 on Community designs, OJ L 3, 5.1.2002, p. 1–24 5.1.2002, art 3. & 4.

29. Directive (EU) 2015/2436 of the European Parliament and of the Council of 16 December 2015 to approximate the laws of the Member States relating to trade marks, OJ L 336, 23.12.2015, p. 1–26 23.12.2015, art 14, p 1.

30. Directive 1999/44/EC on certain aspects of the sale of consumer goods and associated guarantees, OJ L 171, 7.7.1999, p. 12–16 7.7.1999, art 5.

31. Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society, *OJ L 167, 22.6.2001, p. 10–19 22.6.2001, art. 4.*

32. Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products, OJ L 285, 31.10.2009, p. 10–35 31.10.2009.

33. Directive 2009/24/EC of the European Parliament and of the Council of 23 April 2009 on the legal protection of computer programs, OJ L 111, 5.5.2009, p. 16–22 5.5.2009, art 4, p 2.

34. European Union. (2009). Directive 2009/125/EC on establishing a framework for the setting of ecodesign requirements for energy-related products, Annex 1. part 1(1.3)(i).

35. Regulation (EU) 2017/1001 of the European Parliament and of the Council of 14 June 2017 on the European Union trade mark, OJ L 154, 16.6.2017, p. 1–99 16.6.2017, art 15, p 2.

36. World Trade Organisation (WTO) (1994). Agreement on Trade-Related Aspects of Intellectual Property Rights, art. 6.

Other countries' legislation

37. United States, Committee on the Judiciary (1998), The Digital Millennium Copyright Act of 1998: Chapter 12, Section 1201 (a)(1)(A), (a)(3)(A)

38. United States, Copyright Act (1976), Chapter 5, Article 504.

Court decisions

39. Court decision, 17.3.2005, C-228/03, ECLI:EU:C:2005:177.

40. Court decision, 23.10.2017, CEAHR v. Commission, T-712/14, EU:T:2017:748.

41. Court decision, 3 July 2012, C-128/11, ECLI:EU:C:2012:407

42. District Court of Kansas, (1997). Independent Serv. Organ. Antitrust Lit., 964 F. Supp. 1479 (1997): CSU Holdings, Inc., et al. v. Xerox Corp

43. German Federal Court of Justice, X ZR 55/16, Trommeleinheit, 24.10.2017.

44. Norwegian Court of Appeal, LB-2018-62352. 2019

45. Oslo District Court, 17-151334TV1-OTIR/04 Apple Inc. v. Henrik Huseby.

46. Supreme Court of the United States, 486 U.S. 281, K Mart Corp. v. Cartier, Inc.

47. United States. Court of Appeals. District of Columbia Circuit. (2001). United States of America v. Microsoft Corporation 253 F.3d 34. 63

Other sources

48. European Commission (2020). Consumer policy – strengthening the role of consumers in the green transition. Retrieved from https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12467-Consumer-policy-strengthening-the-role-of-consumers-in-the-green-transition_en , 18 April 2022

49. European Commission (2022). Sustainable consumption of goods – promoting repair and reuse. Retrived from https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13150-Sustainable-consumption-of-goods-promoting-repair-and-reuse_en ,15 April 2022

50. European Commission. (2015). Communication from the EU Commission, Closing the Loop - an EU Action Plan for the Circular Economy. Retrieved from: https://eur-lex.europa.eu/resource.html?uri=cellar:8a8ef5e8-99a0-11e5-b3b7-01aa75ed71a1.0012.02/DOC_1&format=PDF , 21 February 2022

51. European Commission. (2020). A new Circular Economy Action Plan For a cleaner and more competitive Europe. Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN , 20 February 2022

52. European Commission. (2020). Attitudes towards the Impact of Digitalisation on Daily Lives. Eurobarometer 2228/503. Retrieved from: https://europa.eu/eurobarometer/surveys/detail/2228 , 27 February 2022

53. John Deere. (2015). Long Comment Regarding a Proposed Exemption Under 17 U.S.C. 1201. Retrieved from: www.copyright.gov/1201/2015/comments-032715/class%2021/John_Deere_Class21_1201_2014.pdf , 28 March 2022

54. OECD (2017). Competition Issues in Aftermarkets - Note from the European Union. Retrieved from: https://one.oecd.org/document/DAF/COMP/WD(2017)3/en/pdf , 14 March 2022

55. Rogers, K. (2017). The 'Right to Repair' Movement Is Being Led by Farmers. Retrieved from https://perma.cc/MEV6-W4K5 , 7 March 2022

56. Šajn, N. (2022). European Parliament briefing on the right to repair. Retrieved from: https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/698869/EPRS_BRI(2022)698869_EN.pdf , 15 February 2022

57. United Nations. (2021). The Sustainable Development Goals Report. Retrieved from: https://unstats.un.org/sdgs/report/2021/goal-12/ , 24 February 2022

58. World Intellectual Property Organisation. (2007). A development agenda for WIPO. Retrieved from: https://www.wipo.int/sdgs/en/story.html , 2 March 2022

59. World Intellectual Property Organisation. (2019). Report on WIPO's Contribution to the Implementation of the Sustainable Development Goals and Its Associated Targets. Retrieved from: https://www.wipo.int/edocs/mdocs/mdocs/en/cdip_26/cdip_26_3.pdf , 2 March 2022

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