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REVISITING DIGITAL EXHAUSTION: ANALYSING THE DOCTRINE OF EXHAUSTION IN THE CONTEXT OF CONTEMPORARY DIGITAL TRADE

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CERTIFICATE

This is to certify that Mr MUHAMMED HASHIR N (Reg. No.LM0223008) has prepared and submitted the dissertation titled "Revisiting Digital Exhaustion: Analysing The Doctrine Of Exhaustion In The Context Of Contemporary Digital Trade" in partial fulfilment of the requirement for the award of the Degree of Master of Laws in International Trade Law, to the National University of Advanced Legal Studies, Kochi, under my guidance and supervision. It is also affirmed that the dissertation he submitted is original, bona fide, and genuine.

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DECLARATION

I, MUHAMMED HASHIR N (LM0223008), pursuing Master in International Trade Law, do hereby declare that the Dissertation titled ‘REVISITING DIGITAL EXHAUSTION: ANALYSING THE DOCTRINE OF EXHAUSTION IN THE CONTEXT OF CONTEMPORARY DIGITAL TRADE', submitted for the award of L.L.M Degree in the National University of Advanced Legal Studies, Kochi, during the academic year 2023-2024, is my original, bonafide and legitimate research work, carried out under the guidance and supervision of Mr. HARI S. NAYAR This work has not formed the basis for the award of any degree, diploma, or fellowship either in this university or other similar institutions of higher learning.

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35. UMG Recordings, Inc. v. Augusto, 628 F.3d 1175 (9th Cir. 2011)
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37. UsedSoft GmbH v. Oracle Int'l Corp., Case C-128/11, EU: C:2012:407.
38. Vernor v. Autodesk, Inc., 621 F.3d 1102 (9th Cir. 2010).

Abbreviations

No.	Abbreviations	Full Form
1.	Art.	Article
2.	Arts.	Articles
3.	ECJ	The European Court of Justice
4.	EEC	European Economic Community
5.	EU	European Union
6.	GI	Geographic Indications
7.	GVC	Global Value Chain
8.	ICESCR	International Covenant on Economic, Social and Cultural Rights
9.	InfoSoc	The Copyright and Information Society Directive 2001
10.	IPR	Intellectual property rights
11.	ReDigi	*Capitol Records, LLC v. ReDigi Inc.*,
12.	Tom Kabinet	*Nederlands Uitgeversverbond and Groep Algemene Uitgevers v Tom Kabinet Internet BV and Others*
13.	TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
14.	UDHR	The Universal Declaration of Human Rights
15.	UN	The United Nations Organization
16.	UsedSoft	Used Software Commerce Company
17.	USITC	USITC United States International Trade Commission
18.	US	The United States
19.	WCT	WIPO Copyright Treaty
20.	WIPO	World Intellectual Property Organization
21.	WPPT	The WIPO Performances and Phonograms Treaty
22.	WTO	The World Trade Organization

Chapter one

Introduction

1.1 Background

Scholars need to buy several textbooks during their academic careers. Can they sell it to someone else after using it? The answer will be a “yes”. The scholars can sell their books and receive remuneration from the sale. Can the publisher or author sue scholars on the grounds that the sale amounts to the infringement of the exclusive right of an intellectual property owner to distribute? The answer will be a “NO”, as the seller's right to distribute the respective textbook lapses at the commencement of the First sale. This principle is known as the Doctrine of Exhaustion or First Sale Doctrine. What about an eBook the scholar purchased from an Academic Website? Can he resell it? The answer will be a big “NO” in the current intellectual property regime because the application of the doctrine of exhaustion has not yet extended to the digital world due to the peculiar nature of digital products and the possible chances of intellectual property infringement.

Exhaustion doctrine, even though not recognised as a consumer right, is essential in protecting consumers' interests. The principle is effective in the dissemination of knowledge and ensuring public access to information. The rise in subscription and streaming models, especially after COVID-19, raises concerns about the concept of ownership and monopolising knowledge. Business models like the second-hand market for digital products have trans-border market potential but could not see the light due to copyright infringement allegations.

This dissertation argues that there is a need for doctrine of exhaustion in digital transactions of digital products, and the international intellectual property regime failed to address digital exhaustion to its full potential, which needs amendments. The TRIPS agreement did not directly address the doctrine; instead, it was left to the member state's discretion. WCT explicitly limits the exhaustion principle to tangible goods. The policymakers and Judiciary of various countries were more focused on technological deficiencies rather than on the objective of the doctrine. In an era where the trade of

digital products transcends borders, it is paramount to address limitations in current legal frameworks related to trade and intellectual property. The Dissertation will also argue for the need to revisit the policies and judgement in light of recent technological developments in NFT and smart contracts. These technologies could solve major technological deficiencies of digital trade arising while applying the Digital exhaustion doctrine.

1.2 Introduction

The goods and services that are traded through digital mediums are often subject to Intellectual Property (Hereinafter IP) protection. Even though they are a modern law, IP rights were conceived during the pre-digital era, and in the era of rapid digitisation, they cannot be transposed seamlessly to digital goods and services. While formulating most IP doctrines and regulations, the focus was on tangible objects that embody their IP-protected matters: goods bearing trademarks, patented products, copies of copyrighted work, and so on. With the fastest-growing connectivity provided by the internet and other technological advancements, traditional business models also adopted digitalisation. In this context, it is important to check the feasibility of different IP doctrines that emerged with analogue trade in a digital medium. This dissertation focuses on one principle favouring free trade in the second-hand market: exhaustion of intellectual property.

The principle of exhaustion provides that on the commencement of the first sale of a product having intellectual property, the seller cannot restrict the purchaser from reselling it on the grounds of IP protection. It is an internationally accepted legal doctrine, but international agreements such as TRIPS, WCT, and WPPT did not reach any consensus. Since no international standards exist, countries can formulate policies and form regional agreements.

The application of the exhaustion principle in digital trade has some complexities due to the nature of the digital product and the ease of copying. When a physical product is bought and resold, the material product itself is passed to another person. However, in the case of digital products, sellers can retain copies, which amounts to reproduction and IPR infringement. At the same time, IP protection without the exhaustive principle leads to a

monopoly. Other complexities include the renaming of the agreement as a license rather than a sale, the same quality of the second-hand product, etc.

Doctrine is applicable in the three major domains of intellectual property in different ways. From the available literature, the researcher identified that most of the contemporary issues in digital exhaustion are copyright-related. Therefore, research will focus more on the Copyright Exhaustion. Moreover, Most of the discussions and developments in doctrine are based on EU and US laws and literature. So, for the purpose of research, this dissertation focuses on EU and US case laws and statutes. The dissertation will also attempt to find how far doctrine could be applied to newly emerging blockchain technology and in the context of much-decentralised Web 3.0.

1.3 Literature Review

This literature review examines recent scholarship and legal analyses on the concept of digital exhaustion in international Intellectual Property law. Focusing on works by authors such as Peter Mezei, Caterina Sganga, Lothar Determann and Aaron Perzanowski, it explores the legal frameworks in the United States and Europe regarding the resale and ownership rights of digital goods like eBooks and software. The review also discusses the complexities, divergences, and policy implications surrounding digital exhaustion, highlighting debates between consumer advocates seeking expanded rights and copyright holders advocating for stronger protections. The review suggests the need for more research into digital exhaustion in light of advancing blockchain technology.

1. P. Sean Morris, Beyond Trade: *Global Digital Exhaustion in International Economic Regulation*, 36 Campbell L. Rev. 107 (2014).

This article examines the nature of digital exhaustion. Acknowledging the trans-border character of digital trade, the author suggests an international regime for digital exhaustion, which can be enforced through international dispute settlement mechanisms like the one in WTO.

2. M. Mimler, *Intellectual Property - A Friend or Foe of Digital Trade?*, 27 Int'l Trade L. & Reg. 129 (2021).

The author points out that the exhaustion theory originated in analogue copyright law, and applying it to digital goods raises concerns. Digital copies can be rapidly distributed worldwide, and they don't degrade like tangible carriers, posing piracy risks and impacting the original sales market.

3. Aaron Perzanowski & Jason Schultz, Digital Exhaustion, 58 UCLA L. REV. 889 (2011).

The authors of this article acknowledged that adhering to the outdated traditional first sale narrative would compromise the doctrine's benefit in the age of digital copyright. They emphasise the need to rejuvenate exhaustion to safeguard access, preservation, privacy, transactional clarity, user innovation, and platform competition.

4. Peter Mezei, Digital First Sale Doctrine Ante Portas: Exhaustion in the Online Environment, 6 J. INTELL. PROP. INFO. TECH. & ELEC. COM. L. 23 (2015).

The author emphasises that the judicial responses in the precedent related to digital exhaustion do not mark the end of the digital exhaustion debate. The paper advocates for the growing importance of digital exhaustion in society and business, proposing reasonable arguments for equally treating the resale of works in tangible and intangible formats.

5. Lothar Determann, Digital Exhaustion: New Law from the Old World, 33 BERKELEY TECH. L.J. 177 (2018).

The author highlights the complexity and divergence of copyright exhaustion rules in the United States and the European Union, noting the inconsistency in legal treatments between software and other digital works and the differing applicability of exhaustion based on transaction terms and reproduction rights. He discusses how complex contract terms often limit consumer rights, leading to confusion and a lack of understanding among consumers about their rights to resell digital goods.

6. Peter Mezei & Caterina Sganga, *The Need for a More Balanced Policy Approach for Digital Exhaustion – A Critical Review of the Tom Kabinet and ReDigi Judgments* (June 15, 2023), in Harmonising Intellectual Property Law for a Trans-Atlantic

Knowledge Economy (Peter Mezei, Hannibal Travis & Anett Pogácsás eds., forthcoming 2024)

In this article, the author opined that the exhaustion doctrine has never been properly theorised. The author then discusses how exhaustion remains a concept with diverse interpretations, often labelled as a limitation, exception, exclusion, exemption, restriction, implied license, doctrine, or principle. In addition, in his opinion, there's a lack of consensus in Europe regarding whether exhaustion grants users any "rights" or merely places limits on enforcing distribution rights against IP owners.

7. Chelsea Lim, The Digital First Sale Doctrine in a Blockchain World: NFTs and the Temporary Reproduction Exception, 91 Fordham L. Rev. 721 (2022).

One of the first scholarships which compared emerging Blockchain technology and the historical context of the doctrine of exhaustion. The author promotes legislative efforts to make the doctrine's application in the digital marketplace clear in light of NFTs' challenges to copyright owners' reproduction rights. She proposes amending the Copyright Act of 1976 to explicitly allow the first sale to apply to digital transfers under specific conditions.

8. Joshua Durham, The Growing Popularity of NFTs: How to Protect Your NFT Personal Property Rights, Wake Forest Journal of Business and Intellectual Property Law (2022).

This article offers the necessary technical understanding to support the existence of a digital first sale, marking a significant development since the advent of the internet. The Author argues that blockchain technology now makes it possible to apply a textualist interpretation of section 109 to digital media, thus enabling the "Exhaustion" doctrine for blockchain-based digital content. He asserts that only congressional action or a highly interpretative reading of § 109 could prevent the application of a "Digital Exhaustion."

9. Aaron Perzanowski & Jason Schultz, Legislating Digital Exhaustion, 29 Berkeley Tech. L.J. 1535 (2014).

They propose two legislative approaches to address digital exhaustion: a detailed rules-based framework and a flexible standards-based approach, with the latter giving courts significant leeway to balance consumer and rights-holder interests. The authors advocate for the standards-based approach as it better adapts to the complexities of digital transactions and preserves the exhaustion doctrine's benefits in the digital era.

1.4 Objectives

1. To determine the extent to which the exhaustion principle of intellectual property rights applies to digital trade, considering the unique characteristics of digital goods and services.
2. To analyse the legal, economic, and practical implications of adapting the exhaustion principle to digital trade.
3. To evaluate the need for an international framework for digital exhaustion to facilitate fair and consistent treatment of digital goods and services in international trade.

1.5 Research Problem

Digital trade has become increasingly prevalent in today's global economy. It exchanges digital goods and services across international borders. However, applying the exhaustion principle of intellectual property rights to this digital trade remains ambiguous and challenging. The research problem centres on the need to understand how the exhaustion principle, originally designed for physical goods, can be effectively adapted and applied to the complex realm of digital trade. This problem arises from the tension between protecting intellectual property rights, promoting innovation, and ensuring fair and efficient international trade in the digital age.

1.6 Research Question

1. Whether the exhaustion principle of intellectual property apply to digital trade?
2. Whether the exhaustion principle is essential in maintaining a fair balance among different stakeholders, both for the benefit of individuals and society as a whole, in digital trade?

3. Whether there should be different rules for the exhaustion of IPRs in the digital context depending on the nature of the digital goods or services involved?
4. Whether blockchain technology resolves challenges in Digital Exhaustion?
5. Whether there is a need for an international framework for digital exhaustion?

1.7 Hypothesis

There is a substantial need to establish an International Framework for Digital Exhaustion to harmonise and clarify the rules governing the international trade of digital goods and services.

1.8 Research Methodology

This research involves a Doctrinal approach. Data is gathered through literature reviews and document analysis of legal materials.

1.9 Chapterisation

Chapter One: Introduction

This chapter gives an Overview of the Dissertation. It will outline the research background, purpose and significance, research question, hypothesis, objectives, research methodology and the structure of the chapters.

Chapter Two: Intellectual Property and Exhaustion

This chapter will explore basic concepts like intellectual property and Exhaustion and their evolution, legal framework and relevance. It includes Definitions of key terms and concepts (e.g., intellectual property, exhaustion) Detailed explanation of intellectual property rights (IPR), Concept of exhaustion (first sale doctrine), Historical development and legal framework of exhaustion and its traditional applications and Different types of exhaustion (national, regional, international).

Chapter Three: Digital Trade and Digital Exhaustion

This chapter explores the emergence of digital trade and its significance in the global economy and focuses on how the exhaustion doctrine can be applied to digital goods and services. It delves into the concept of digital exhaustion, arguments in favour and against

it and precedents in the digital context, providing a comparative analysis of digital exhaustion in EU and US jurisdictions. The discussion will highlight the complexities and discrepancies in how these two legal systems handle digital exhaustion.

Chapter Four: Challenges in the Application of Digital Exhaustion

This chapter analyses the precedent of Digital exhaustion discussed in the previous chapter and enumerates the multiple challenges in extending the exhaustion doctrine to digital trade. It focuses on issues like the materiality and reproducibility of digital products. It examines how the intangible nature and easy duplication of digital goods complicate the application of traditional exhaustion principles. The chapter also discusses how businesses use licensing and deceptive agreements to evade exhaustion, highlighting key legal precedents and statutes that address these issues.

Chapter Five: Digital Exhaustion in an Era of Web 3.0

This chapter explores the application of digital exhaustion in the era of Web 3.0, which is characterised by decentralisation, blockchain technology, and smart contracts. It examines how these technologies can enhance the enforceability and transparency of digital exhaustion by providing immutable records of ownership and facilitating automated transfers of digital rights. The decentralised nature of Web 3.0 introduces new regulatory challenges, as traditional legal frameworks may struggle to adapt to technological advancement.

Chapter Six: Conclusions and Suggestions

This chapter summarises major findings on digital exhaustion and its impact on digital trade and provides conclusions derived from them. It emphasises the need for updated legal frameworks and harmonised international laws to address the challenges of digital goods.

Chapter Two

Intellectual Property and Exhaustion

2.1 Introduction

Intellectual property rights (“IPR”) are legally acknowledged intangible exclusive rights provided over the creations of a human intellect. These rights provide the original owner of particular ideas, inventions, and artistic expression with the exclusive right to restrain others from utilising or benefiting from these inventions without their consent. Copyright, Trademark, and Patent are the three major broad categories of intellectual property. The exclusive rights provided by IPR are an attempt to incentivise original ideas. Providing a right over original ideas was necessary to promote human creativity and inventions, protect consumer interest and promote economic growth. Intellectual property (“IP”) rights allow right holders to control the distribution of goods and services that embody their IP-protected matters.

While providing an exclusive right over creation or products, certain questions arise in our minds: How far will this right be embedded in a product during an economic sale? Does the IP right owner have a right over the sold products? The answer to similar doubts lies in the principle of exhaustion. The exclusive right to an invention may lead to a monopoly. Most of the ideas and inventions hold a significant role in meeting social needs. People will have the right to access knowledge, new technology and information, especially in the health and agriculture sectors. A monopoly in knowledge and sale may have an adverse effect on the public's right to access knowledge, free trade, and the buyer’s right to resale. The right to access knowledge should be balanced along with exclusive IP rights. There is a necessity to draw a line between overprotecting the rights of the creator and ensuring access to those creations for the overall welfare of society. The exhaustion of IP rights is an attempt to draw a line between the right to knowledge and the IP owners' exclusive rights. Exhaustion is a principle that impedes complete enforcement of IPR and provides an important tool for improving access to resources across boundaries.

The principle states that the exclusive right of the IP owner to control the sale of protected items lapses at the commencement of the first sale. It restricts IP owners from perpetually reselling their IP-based products and applies only when buyers legally purchase an IP-protected product.

2.2 Intellectual Property

Intellectual property is a legal recognition of creations of the mind; it grants exclusive rights to inventors and creators. It is a knowledge or creation of the mind that can be legally protected. The term "intellectual property" is a comprehensive expression.[1] It covers the whole field of creative activity, whether it is art, industry or literature. IP is invisible, intangible and incorporeal in nature. Intellectual property is an asset like other forms of tangible property because it can be sold, bought, assigned, licensed, mortgaged or transmitted by operation of law. Intellectual properties are purely legal constructs and do not have an independent existence. So, intellectual property refers to the various exclusive rights to intellectual capital; some forms of right can expire after a time limit, and others are perennial in nature. It is a system that seeks to balance the conflicting interests of private inventors and the public. Intellectual properties are emerging as the new wealth and power of nations and are described as a new global currency.[2] Further, it has become an area of international interest and controversy as the rate and cost of technological advancement have increased.

The primary rationale behind intellectual property rights is economic gain, wherein inventors disclose their inventions, and in exchange, they gain market exclusivity. The system allows IP owners to obtain exclusive rights and a limited monopoly on their work through a rigorous application process and examination. It requires that the invention or creation meets specific criteria like originality, novelty, inventiveness, and industrial applicability, depending on the type of IPR. The rights under the umbrella term,

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[1] Adesh Kumar, *Transborder reputation and trademark law in india*, *in* Contemporary Issues in International Law: Environment, International Trade, Information Technology and Legal Education 359 (2018).
https://doi.org/10.1007/978-981-10-6277-3_25 (last visited may 23, 2024).
[2] M.M.S Karki, Intellectual property rights: Basic concepts 85–86 (2009).

intellectual property, will apply to various types of subject matter to a differing extent.[3] Different types of IPRs protect different forms of intellectual property, such as copyrights for literary and artistic works, patents for scientific and technological innovations, and trademarks to distinguish products.[4]

2.3 Defining Intellectual Property

Intellectual property is typically defined as non-physical property resulting from original ideas and creative thinking. Black's Law Dictionary defines intellectual property as “a commercially valuable product of the human intellect, in a concrete or abstract form such as a copyrightable work, a protectable trademark, a patentable invention, or a trade secret.”[5] The term “intellectual property” refers to a loose cluster of legal doctrines regulating the uses of different ideas and insignia.[6] The term "intellectual property" was first used in October 1845 Massachusetts Circuit Court judgement in the case *Davoll et al. v. Brown*[7] in which Justice Charles I. Woodbury wrote that "only in this way we can protect intellectual property, the labours of the mind, productions and interest as much a man's own... as the wheat he cultivates, or the flocks he rears.[8] According to WIPO, Intellectual property refers to creations of the mind, such as inventions, literary and artistic works, designs, symbols, names and images used in commerce.[9] It is an intangible, created asset with legal protection against unauthorised use, distribution, or sale. Products, creative or literary works, innovations, logos, and other items that are made and have legal protection as intangible assets are all considered to be part of

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[3] Tanya Frances Aplin & Jennifer Davis, Intellectual property law : text, cases, and materials 1 (4 ed. 2022).
[4] F.M Abbott, T Cottier & F Gurry, International intellectual property in an integrated world economy 8 (2019).
[5] Garner, Brian A., ed., Black's Law Dictionary (11th ed. 2014).
[6] William W. Fisher, *Theories of Intellectual Property*, in *New Essays in the Legal and Political Theory of Property* 168, 1 (Stephen Munzer ed., 2001), available at https://dash.harvard.edu/handle/1/37373274 (last accessed on January 10, 2024).
[7] Davoll et al. v. Brown, 1 Woodb. & M. 53, 2 Robb Pat. Cas. 303, 3 West. L.J. 151, Merw. Pat. Inv. 414.
[8] Id.
[9] World Intellectual Property Organization, What is Intellectual Property?, WIPO, https://www.wipo.int/about-ip/en/ (last accessed on January 8, 2024).

intellectual property.[10] In the words of Bently and Sherman:[11] “Intellectual property law creates property rights in a wide and diverse range of things, from novels, computer programmes, paintings, films, television broadcasts and performances, dress designs, pharmaceuticals, and genetically modified animals and plants. The institutional property law also creates rights in various insignia that are applied to goods and services.”

The concept of intellectual property differs from that of the traditional notion of ‘Property’ due to its intangible character. In order to understand the expression "Intellectual Property", one has to appreciate the concept of property. According to Salmond[12], "all property is either corporeal or incorporeal". Corporeal property refers to property that exists in a physical or material form, such as land, buildings, and chattels. Incorporeal property refers to property that lacks physical substance or material form. It can be further classified in two[13]: (a) *Jura in re propria*, or property over immaterial things resulting from intellectual efforts, which includes patents, trademarks, copyrights, and designs; (b) *Jura in re aliena* or property in encumbrances, that allow one person to use or control material or immaterial property owned by another, such as easements, leases, and mortgages. Corporeal property is tangible in nature and can be seen through the eyes, whereas Incorporeal property is intangible and cannot be seen through the eyes. Thus, intellectual property is intangible and incorporeal.

There is another parallel classification of property as *tangible* and *intangible* property.[14] Tangible (visible or physical) property includes land (immovable), buildings (immovable), vehicles (movable), clothing (movable) and any other physical asset. On the other hand, intangible (invisible) property covers assets created by the mind and intellectual skill[15]. Literature, music, architectural work, new inventions, industrial

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[10] What is intellectual property (IP), BDC.ca, https://www.bdc.ca/en/articles-tools/entrepreneur-toolkit/templates-business-guides/glossary/intellectual-property (last visited january 10, 2024).
[11] Lionel Bently & Brad Sherman, Intellectual property law 1 (2001).
[12] John William & Patrick John Fitzgerald, Salmond on Jurisprudence 413 (12 ed. 1966).
[13] A.H. Campbell, *Some Footnotes to Salmond's Jurisprudence*, 7 CAMB. L.J. 206-223 (1940), http://www.jstor.org/stable/4503229.(last visited June 10, 2024).
[14] Stephen R. Munzer, A Theory of Property, 15 (Cambridge University Press 1990).
[15] A.R. Biswas, *Property in a Changing Society*, 15 J. INDIAN L. INST. 6 (1973).

designs, trademarks and watermarks are intangible property. This intangible kind of property is often called intellectual property.[16]

Many ownership rights are common to tangible property and intellectual property. Intellectual property is a 'property' in a legal sense. It is something that can be owned like any other property and can be assigned, mortgaged, and licensed. A concept must be modified into something that can be expressed in a legally defined manner for it to be regarded as intellectual property.[17] An idea alone does not constitute intellectual property.[18] The rights are not conferred to the abstract, intangible idea per se; instead, they are provided to the physical manifestations or expressions of those ideas.[19] IP rights protect the interests of the creator or owner of the original idea by granting them legal rights to produce and control the physical manifestation or expression of their novel ideas. These rights allow them to prevent others from utilising their intellectual property without their consent and provide them with avenues for seeking redress in cases of infringement.

2.4 History of Intellectual Property

The history of intellectual property protection spans millennia, with early references dating back to 500 B.C.E. in ancient Greece and Rome. Even though formal institutions did not exist there, instances of *culinary monopolies*[20] and *literary contests*[21] reflect early recognition of intellectual property rights. Over time, intellectual property systems evolved, culminating in landmark statutes like the Republic of Florence's recognition of

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[16] Duncan Spiers, Intellectual Property Law Essentials 1(Edinburgh University Press 2009).

[17] Amy B. Cohen, *Copyright Law and the Myth of Objectivity: The Idea-Expression Dichotomy and the Inevitability of Artistic Value Judgements*, 66 IND. L.J. 195 (1990). Available at: https://www.repository.law.indiana.edu/ilj/vol66/iss1/4/ (last visited June 10, 2024).

[18] Justin Hughes, *The Philosophy of Intellectual Property*, 77 GEO. L. J. 287 (1988). Available at: https://cyber.harvard.edu/IPCoop/88hugh.html (last visited June 10, 2024).

[19] Mark A. Lemley, *Property, Intellectual Property, and Free Riding,* 83 TEX L. REV. 1031 (2005). Available at: https://law.stanford.edu/wp-content/uploads/2015/06/MarkALemleyPropertyIntell.pdf (last visited June 10, 2024).

[20] In the Greek colony of Sybaris, chefs were given yearly monopolies to create specific dishes. See; Michael F Suarez, H R Woudhuysen & Oxford University Press, The book : a global history 183 (2013).

[21] It is claimed that Vitruvius (257–180 BCE) exposed intellectual property theft in an Alexandrian literary competition. As the competition's judge, Vitruvius exposed the forgers of poetry, who were subsequently put on trial, found guilty, and banished for plagiarising other people's words and phrases. See; Id

authors' rights in 1421[22] and the Venetian Republic's sophisticated patent system[23] in 1474. The foundation for contemporary copyright law was established in England by the Statute of Monopolies (1624) and the Statute of Anne (1710), which gave writers and inventors temporary exclusive rights for a specified period.[24] later, protection efforts for intellectual property were strengthened by international agreements like the TRIPS agreement and the Berne Convention.

Intellectual property is basically a Western concept rooted in Roman law property allocation principles. Historically, private ownership of knowledge was not a priority for Eastern oriental cultures. In ancient India, the Rig Veda, a Hindu philosophical text, emphasised the value of freedom of knowledge. Knowledge was considered a universal and free element, and it should not be limited or bounded. Human inventions were intended to benefit society as a whole.[25] The Chinese artists were praised for inspiring others to copy their work. Similarly, in ancient Java (Indonesia), community rights were prioritised over private rights.[26] IPRs were introduced by colonial rulers to Eastern countries, which resulted in the establishment of private IP legislation in countries that did not previously adhere to this ideology.

2.5 Domains of Intellectual Property

Intellectual property has been classified into (i) Industrial property and (ii) Literary property.[27] It is further categorised into several domains to protect different creative and innovative efforts. The primary domains of intellectual property include:

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[22] Frank D. Prager, *The Early Growth and Influence of Intellectual Property*, 34 J. PAT. OFF. SOC'y 121 (1952). Available at: http://www.compilerpress.ca/Library/Prager%20Early%20Growth%20&%20Influence%20of%20IP%20JPOS%201950.htm (last visited June 10, 2024)

[23] Giulio Mandich, *Venetian Patent*s (1450-1550), 30 J. PAT. OFF. SOC'y 166 (1948).

[24] Steven Wilf, ed., Intellectual Property Law and History 34 (Routledge 2017).

[25] Santanu Mukherjee, *The Journey of Indian Patent Law towards TRIPS Compliance*, 2 IIC Int'l Rev. Intell. Prop. & Compet. L. 126 (2004).

[26] Richard Gerster, *Patents and Development Lessons Learnt from the Economic History of Switzerland*, Intellectual Property Rights Series No. 4, at 2 (Third World Network 2001), available at http://www.gersterconsulting.ch/docs/TWN_Patents_and_Development.pdf.

[27] Neeraj Pandey & Khushdeep Dharni, Intellectual Property Rights 2 (PHI Learning Pvt. Ltd. 2014).

2.5.1 Copyrights

Copyright is an exclusive right given by law to creators of literary and artistic works.[28] It protects the original expression of ideas by guaranteeing certain minimum protection for authors' rights on their original works.[29] This protection can be extended to various creations, including books, music, paintings, films, and computer programs. A bundle of exclusive rights are conferred to the copyright holder for the reproduction, creation of derivative works, distribution of copies, publication, exhibition, and performance of the original works.[30] Notably, the copyright protects the expression, not thoughts or ideas. A copyright arises through the act of creation and does not require registration.[31] The exclusive rights are provided for a specified period.[32] The work enters into the public domain and becomes freely available for public use on the expiry of the stipulated period.[33] Copyright law sets out certain requirements for enjoying these privileges, including the fact that the work must be original, non-utilitarian in nature, and fixed in a tangible medium. The exclusive rights provided by copyrights are subject to limitations such as fair use and the first sale doctrine.[34] It enables the restricted utilisation of copyrighted material for criticism, teaching, and research, as well as for safeguarding the rights of subsequent purchasers of copyrighted works.

2.5.2 Patents

A patent is a government-granted exclusive right to an invention, which can be a product or a process that provides an entirely novel means of doing something or a new technical solution to a problem.[35] To qualify for a patent, the invention must meet certain criteria, such as being new, involving an inventive step, and being industrially applicable. Certain subject matter, like abstract ideas and laws of nature, are not patentable.[36] There are

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[28] Davis, *supra* note 3, at 1.
[29] Paul Goldstein & P B Hugenholtz, International copyright : principles, law, and practice 6 (4 ed. 2018).
[30] L. Ray Patterson, *Copyright and "the Exclusive Right" of Authors*, 1 J. INTELL. PROP. L. 8 (1993).
[31] Davis, *supra* note 3, at 1.
[32] Pat Deely, *Copyright: Limitation on Exclusive Right*s, Fair Use, 13 HOUS. L. REV. 1041 (1976).
[33] Id.
[34] Pat Deely, *Copyright: Limitation on Exclusive Rights, Fair Use*, 13 HOUS. L. REV. 1041 (1976).
[35] Frequently Asked Questions: Patents - patents - WIPO Liferay DXP, WIPO, https://www.wipo.int/web/patents/faq_patents (last visited Jun 23, 2024).
[36] Richard Stim, Patent, copyright & trademark : an intellectual property desk reference 148 (2022).

mainly three types of patents: design patents for ornamental designs, utility patents for functional inventions, and plant patents for new plant varieties.[37]

Patents incentivise inventions by offering inventors recognition and material rewards for their marketable value. These incentives inspire innovations and improve human life standards. A patent gives protection for the invention of the owner. During the patented period, the patent owner could decide who could not access and utilise the patented invention. In India, it is for 20 years. Upon expiration of the stipulated time, patent rights attached to the invention cease, allowing for subsequent independent creation. As part of receiving a patent right, all patent owners must publicly uncover information regarding their inventions, and these details enrich public technical knowledge. If overlapping patents exist, then Patents do not necessarily guarantee the ability to sell the invention. The patent's jurisdictional coverage character necessitates seeking protection on a country-by-country basis.[38]

2.5.3 Trademarks

A trademark is a word, symbol, or phrase legally registered and used to represent a company or product, used to distinguish a company from other companies in the market.[39] Trademarks protect brand names and symbols used by companies and help to identify their products, thus preventing consumers from confusion about the source of products and serving as a quality indicator. A well-known trademark will become a valuable business asset due to its association with reputable companies.[40] Origins of trademark are traceable back to ancient signs used for identification and distinction.[41] These signs, such as tribal marks[42], indicated belonging and carried unique meanings and functions within social contexts. Others could not adopt them without losing their

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[37] Lesson 1: Patent Concepts | UW-Madison Libraries, learn.library.wisc.edu, https://learn.library.wisc.edu/patents/lesson-1/.

[38] William R Cornish & Davi Llewelyn, Intellectual property : patents, copyright, trade marks and allied rights 7 (2003).

[39] Graeme B Dinwoodie & Mark D Janis, Research Handbook on Trademark Law Reform 250 (2021).

[40] Walter J. Halliday, *Protection of Trademarks and Trade Names*, 46 J. PAT. OFF. SOC'y 485 (1964).

[41] Daniel Stengel, *Intellectual Property in Philosophy*, 90 ARSP: Archiv für Rechts- und Sozialphilosophie / Archives for Philosophy of Law and Social Philosophy 21 (2004), http://www.jstor.org/stable/23681627 (last visited June 10, 2024).

[42] Brian Zark, *Use of Native American Tribal Names as Marks*, 3 AM. INDIAN L.J. 537 (2015). Available at: https://digitalcommons.law.seattleu.edu/ailj/vol3/iss2/7/ (last visited June 10, 2024).

significance, as they were essential in establishing relationships and identities within the community. These early signs laid the foundation for modern trademarks, which continue to serve the critical role of differentiating products and services. When a trademark is registered, it grants exclusive rights for its use as long as the mark remains in use and is actively protected.[43] Essentially, trademarks safeguard a company's reputation or goodwill.

2.5.4 Trade Secrets

Trade secrets protect confidential business information from improper acquisition without requiring disclosure and at a lower cost than patents, as long as the information is not generally known in the industry.[44] Trade secrets contain confidential business information, such as formulas, algorithms, or customer lists, that derive value from their secrecy and provide a competitive edge to their owners.[45] Unlike patents or trademarks, trade secrets are not registered with governmental agencies but are safeguarded through legal mechanisms like non-disclosure agreements.[46] To qualify as a trade secret, a piece of information must be actively protected from disclosure and offer a tangible economic advantage. This can include taking measures to limit access to the information within the company.

A vast range of topics are covered by trade secret law, which depends on private initiatives rather than government action to safeguard exclusivity.[47] However, there are essential requirements for trade secrets, including the need for secrecy and the competitive advantage they provide. Once a secret is no longer confidential or loses its competitive edge, it loses its trade secret status.[48] Despite having no inherent expiration, trade secrets necessitate constant protection, as their disclosure can lead to a loss of

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[43] Kerly, *O*n Trade Marks And Trade Names 6 (Sweet & Maxwell 1986).
[44] John C. Stedman, *Trade Secrets*, 23 OHIO ST. L.J. 4 (1962). Available at: https://core.ac.uk/download/pdf/159571812.pdf (last visited June 11, 2024).
[45] Id.
[46] Mark F Schultz & Douglas C Lippoldt, *Approaches to protection of undisclosed information (trade secrets): Background paper* (2014). Available at: https://doi.org/10.1787/5jz9z43w0jnw-en (last visited June 11, 2024).
[47] Adam Moore & Ken Himma, *Intellectual Property (Stanford Encyclopedia of Philosophy)*, STANFORD.EDU (2011). Available at: https://plato.stanford.edu/entries/intellectual-property/.(last visited June 11, 2024).
[48] S.K Sandeen & E.A Rowe, Trade secrets and undisclosed information (2014). DOI: https://doi.org/10.4337/9781784713324 (last visited June 11, 2024).

exclusivity. Owners of trade secrets have the right to pursue legal action against misappropriation, which may involve injunctions and monetary damages. Trade secret protection is violated when trade secrets are acquired, used, or disclosed without authorisation. This can have negative legal repercussions, including fines and injunctions.[49]

2.5.5 Geographical indications

Goods bearing a specific geographical origin and endowed with attributes, fame, or traits intrinsic to that location are designated as geographic indications ("GIs").[50] These indications can be valuable tools for producers to communicate their products' distinctiveness and quality to consumers while protecting them from imitation or misuse. GIs are often associated with agricultural products, foods, wines, spirits, handicrafts, and industrial products, where geographical origin significantly defines their unique characteristics or qualities. The protection of geographical indications typically involves legal frameworks that recognise and regulate their use, ensuring that only goods satisfying certain criteria related to their origin and production methods can bear the GI designation.[51] This helps preserve the reputation and integrity of products linked to particular regions while fostering local economies and cultural heritage.

2.5.6 Industrial designs

An industrial design constitutes the aesthetic or ornamental character of an article. A design can have two-dimensional elements like lines, colours, or patterns, or it can have three-dimensional elements like the surface or shape of an object.[52] An industrial design constitutes the aesthetic or ornamental characteristics of a product. Industrial design rights give legal protection to the visual design elements of industrial and commercial products, such as consumer goods, appliances, furniture, vehicles, and packaging. These rights aim to prevent unauthorised copying or imitation of the visual appearance of

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[49] Id.
[50] Dev Gangjee, Research handbook on intellectual property and geographical indications 100 (2016).
[51] Id.
[52] Eric Setliff, *Copyright and Industrial Design: An Alternative Design Alternative*, 30 COLUM. J.L. & ARTS 49 (2006).

products, thereby promoting innovation, creativity, and fair competition in the marketplace.

2.6 The Principle of Exhaustion

Several legal instruments have disrupted the exclusivity of rights provided to IP owners. It includes statutory and compulsory licenses, copyright duration, territoriality, limits on the alienability of economic rights, free use, and fair use/fair dealing. Some of the Intellectual property creations are excluded from protection per se. Exhaustion is one such legal limitation,[53] which impedes the complete enforcement of IP rights and provides an important tool for improving the right to access knowledge resources across boundaries. It affects the right to distribution, one of the exclusive rights that traditionally enables the transfer of original work or original product to the acquirer through sale, gift, or barter.[54]

The doctrine of Exhaustion refers to the instances where an inventor or creator loses some of the exclusive rights attached to a specific article containing protected intellectual property upon the authorised transfer of ownership of that article. The principle of exhaustion provides that the IP owner's exclusive right to control the sale of protected items lapses at the commencement of the first sale. It restricts IP owners from perpetually reselling their IP-based products and applies only when buyers legally purchase an IP-protected product. Thus, the principle of exhaustion avoids possible monopoly and enables the reselling of products without interference from IP owners. It serves as a public policy instrument, restraining the economic exploitation of intellectual property rights after the initial legal transfer of a physical object containing the intellectual property, unless specified otherwise by law.[55] The principle can have many variants depending on the type of work, type of right, type of intellectual property, and place where the work exists.[56] The exhaustion also extends to the right to repair, permitting the

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[53] P. Sean Morris, *Beyond Trade: Global Digital Exhaustion in International Economic Regulation,* 36 Campbell L. Rev. 107 (2013).
[54] Silke Von Lewinski, International copyright law and policy 450 (2008).
[55] David Gladwell, *The Exhaustion of Intellectual Property Rights*, 8(12) E.I.P.R. 366 (1986).
[56] Shubha Ghosh & Irene Calboli, Exhausting Intellectual Property Rights: A Comparative Law and Policy Analysis 6 (2018), DOI: https://doi.org/10.1017/9781316336243

repair of patented machines like automobiles or consumer electronics.[57] However, this right does not include reconstructing the technology or tampering with trademarks.[58]

Without the principle of exhaustion, right holders would have control over every distribution of any physical object that incorporates their copyrighted expression, potentially leading to anti-competitive outcomes.[59] To understand the concept better, imagine a situation[60] where exhaustion is absent, and whenever a car owner wanted to resell their used car, they would need to request a license from the car manufacturer. This would lead to an absurd situation of implying automatic compulsory licenses. The legal solution is to assume that when the owner purchased the car, the right to use the trademark for commercial operations was consumed.

2.6.1 Defining The Principle of Exhaustion

'Exhaustion' is a term widely used in relation to all IP rights but is not properly defined or harmonised under law. The term 'Exhaustion' is normally used by most countries, while the term 'first sale' is common in the United States. However, whether referred to as "exhaustion" or "first sale," the doctrine limits IP rights upon the transfer of ownership of a material object. The transfer will often involve a sale, but the transfer of ownership is not limited to transactions for consideration.

Specific criteria must be fulfilled for the automatic application of the exhaustion rule: (a) The right holder or another authorised individual must be involved. b) Lawful distribution and transfer of ownership must occur. c) The subject matter must be either the original or a copy of the protected content. d) The rightful owner, possessing

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[57] Simon Geiregat, Trading repaired and refurbished goods: how sustainable is EU exhaustion of trade marks?, 73 GRUR Int'l 289 (2024). Available at: https://lib.ugent.be/catalog/pug01:01HJB3VKN3499ACB7KW1NN718E (last visited June 11, 2024).

[58] Ghosh & Calboli, *supra* note 56, at 9.

[59] David T. Keeling, Intellectual Property Rights in EU Law, Volume I: Free Movement and Competition Law 75 (Oxford EC Law Library, Oxford Univ. Press 2003).

[60] Illustration is originally given by United States Appellate Federal Judge Posner in his judgement : "It is entirely different to claim that General Motors allows you to use the name Buick only if you purchase the associated car. This is a far-fetched characterization of the transaction, and legal precedents do not support a tie-in claim based on such a notion. To endorse this view would be to enforce a mandatory licensing of trademarks under the guise of antitrust law, which is a nonsensical idea." Jack Walters & Sons Corp. v. Morton Building, Inc., 737 F.2d 698, 704 (7th Cir. 1984).

ownership of the subject matter, may resell the copy without further consent or authorisation from the author.[61]

Three primary theories are often referred to identify the *raison d'être*[62] of the doctrine of exhaustion: The ownership theory, The tradability theory and the reward theory. The ownership theory asserts that exhaustion allows an owner of IP-embedded goods to transfer[63] them without restrictive negotiations with original IP holders. The tradability theory argues that IP rights as private monopolies hinder free trade, thus necessitating their limitation to ensure smooth market operations. The reward theory assumes that an IP right holder receives adequate remuneration for their creative contributions; providing the exclusive right in the subsequent sale would create an avenue for them to receive more than a 'fair', 'equitable', and 'adequate' remuneration. Therefore, the reward should be restricted to the first sale.

The exhaustion doctrine in intellectual property can be understood in two ways. The first perspective, known as implied license, which has a German tradition of property and contract law[64], suggests that exhaustion arises from implicit terms in the contract between the buyer and seller of a product containing intellectual property[65]. For instance, if a customer buys a patented composting bin, there is an implicit assumption that it will be used for its intended purpose—composting, and the patent owner cannot prevent this use once the sale is made. Similarly, if a buyer purchases a patented computer monitor, there is an implied license to repair it without needing the patent owner's permission.[66] This view holds that the intellectual property owner can withdraw a purchaser's rights through explicit contractual terms[67], such as geographic restrictions or resale limitations.

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[61] Peter Mezei, Copyright Exhaustion: Law and Policy in the United States and the European Union 8 (2018).

[62] 'A reason or justification for being or existence.' In French, raison d'etre literally means "reason for being.

[63]Simon Geiregat, Supplying and Reselling Digital Content 2 (2022).
DOI: https://doi.org/10.4337/9781802209426

[64] Josef Kohler, Handbuch Des Deutschen Patentrechts 452 (1900). The translation of the idea is provided in; Ruth L Okediji & Margo A Bagley, Patent Law in Global Perspective 419, 424 (2014).

[65] Ghosh & Calboli, *supra* note 56, at 8.

[66] Jazz Photo Corp. v. United States International Trade Commission, 264 F. 3d 1094 (Fed. Cir. 2001).

[67] Adam Mossoff, *Exclusion and Exclusive Use in Patent Law*, 22 Harv. J. L. & Tech. 321 (2009). Available at: https://jolt.law.harvard.edu/articles/pdf/v22/22HarvJLTech321.pdf (last visited June 10, 2024).

In contrast, the second perspective on the exhaustion doctrine focuses on the *principle of restraints on alienation.* This view, grounded in British legal tradition, focuses on the right to sell or transfer property, whether it is land, personal property, or intellectual property. It argues that restricting alienation limits the personal and economic freedom of an owner and interferes with markets. While some restrictions, like those on harmful substances, may be beneficial, the general favour towards alienability supports freedom and competition. This perspective defines the exhaustion doctrine as a way to balance the intellectual property rights of the owner with the public interests.

2.6.2 Evolution of the Doctrine of Exhaustion

The doctrine of Exhaustion dates back to the nineteenth century. Historically, the exhaustion doctrine acted as a common law[68] limitation on the rights of copyright and patent holders. when a product was legally and unrestrictedly sold by the rights holder, those rights were deemed "exhausted," preventing the rights holder from imposing further restrictions on the resale of the product.[69]for the first time In 1852 *Bloomer v. McQuewan*[70] case, the Supreme Court propounded the common law principle by stating that once a product "passes from the hands of the purchaser," it no longer remains within the "limits of the monopoly" granted by the patent.

The principle of exhaustion has evolved and developed differently across different IP systems and jurisdictions.[71] For instance, In the U.S., patent exhaustion is developed judicially, while copyright and trademark laws have explicit statutory provisions and jurisprudence defining exhaustion[72]. The European Union (“EU”) has a more consistent approach; while its law can regulate IP rights, it still faces challenges as it cannot affect the substance of those rights, and the prerogative is exercised on the national level. Therefore, the principle of exhaustion in the EU often relied on The European Court of

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[68] Wentong Zheng, Exhausting Patents, 63 UCLA L. REV. 122, 129 (2016). Available at: https://scholarship.law.ufl.edu/facultypub/748/ (last visited DEC 20, 2023).
[69] Seth Niemi, *Managing Digital Resale in the Era of International Exhaustion*, 30 IND. J. GLOBAL LEGAL Stud. 376 (2023) Available at: https://www.repository.law.indiana.edu/ijgls/vol30/iss1/14/ (last visited DEC 20, 2023).
[70] Bloomer v. McQuewan, 55 U.S. 539, 549 (1852).
[71] Jeremy de Beer & Robert Tomkowicz, *Exhaustion of Intellectual Property Rights in Canada*, 25 Can. Intell. Prop. Rev. 3 6(2009), available at https://ssrn.com/abstract=1636425. (last visited DEC 24, 2023).
[72] Id. at 9

Justice (“ECJ”) to protect the common market, primarily addressing distribution rights, which adds to the confusion.[73]

Internationally, the term "exhaustion" is commonly used in connection with all IP rights. Despite varying terminology, the core principle remains the same: IP rights are limited once the ownership of the material object is transferred. This transfer often involves a sale but is not restricted to it. It is essential to understand the ‘first sale’ doctrine of the US and the ‘Implied licence’ of the UK to understand the evolution of Exhaustion and variations in different jurisdictions.

2.6.3 First Sale Doctrine In the US

In U.S. copyright law, exhaustion is often referred to as the "first sale" doctrine. It provides that the IP owner exhausts their market control over the product through IP rights after the first unrestricted sale.[74] In other words, While the IP owner can benefit from the product by selling, restricting unauthorised manufacturing, or even destroying it, they cannot enforce the patent to prevent others from reselling or redistributing the sold product. The principle dictates that upon the initial disposal of the product into the market, an IP owner will receive adequate compensation in the form of royalties. Seeking royalties from subsequent sales could lead to additional profits through market segmentation and distorting the market. Thus, the ‘first sale principle’ inhibits someone from perpetually earning from patent rights attached to a product. From a consumer perspective, the first sale doctrine arises from the understanding that an ‘unrestricted sale’ is required for the ‘full enjoyment of a product’[75]. When we purchase a product, we anticipate [76]being free to use and resell it later on without the intervention of the original

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[73] Id. at 7

[74] Santanu Mukherjee, Patent Exhaustion and International Trade Regulation 22 (2023).

[75] JOHN R. THOMAS, CONG. RSCH. SERV., R44640, PATENTS AND PRESCRIPTION DRUG IMPORTATION 4 (2016) Available at: https://crsreports.congress.gov/product/pdf/R/R44640/5 (last visited Jan 22, 2024).

[76] In *Bobbs-Merrill Co. v. Straus, U.S. 339, 350-51 (1908)*. The Supreme Court invalidated an attempt by a book publisher to prohibit the resale of books for less than the original purchase price by providing a passage on the front page. The Court ruled that the publisher's right "to impose... a limitation [on the price] at which the book shall be sold by future purchasers with whom no contract exists" remained unaffected by copyright protection.

seller[77]. For instance, an original seller cannot lay down conditions like minimum resale price on the perpetual sale of the product.

In the US legal system, the first sale doctrine was drawn for the first time in *Bobbs-Merill Co. v. Straus*. Later, the Doctrine was codified under Section 109(a)[78] of the Copyright Act as a limitation to exclusive rights provided in Section 106. When US Congress incorporated exhaustion into the Copyright Act in 1909[79], the provision linked the doctrine to the "sale or conveyance" of a material object containing a copyrighted work. Consequently, court decisions[80] have used the term "first sale" when discussing exhaustion in copyright cases. It legalises the resale of books, patented products, or trademarked items without infringing on the original owner's rights.[81] Even though the practice of using the term 'first sale' persists, the U.S. Copyright Act requires "ownership" rather than a "sale" for the application of the exhaustion principle, which can be acquired through any form of disposition, including gratuitous or forced transfer.[82]

2.6.4 Implied License in the UK

The doctrine of implied license originated in the UK, later spread to various Commonwealth countries through colonisation and was adopted by other nations.[83] This doctrine holds that once a product containing intellectual property (IP) rights is legally sold or distributed, it is implied that the IP rights are licensed to the buyer for the life of the IP right, along with the transfer of the physical property. To retain control over the IP rights in a sold product, the holder must provide specific notice or have a contractual agreement explicitly restricting the license of the patented product. This principle was established in the English High Court case *Betts v. Willimott*[84] and further elaborated in

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[77] Sarah Reis, Towards a "Digital Transfer Doctrine"? The FirstSale Doctrine in the DigitalAge, 109 Nw. U.L. REV. 173, 180 (2015) Available at: https://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1193&context=nulr (last visited DEC 24, 2023).
[78] 17 U.S.C. §109 (2022)
[79] Copyright Act of 1976, 17 U.S.C. §§ 101-1332 (2022)
[80] See for e.g., U.S. Supreme Court's decisions in Adams v. Burke 84 U.S. 453 (1873) and Appolinaris v. Scherer. 27 F. 18 (1886)
[81] Ghosh & Calboli, *supra* note 56, at 7.
[82] 17 U.S.C. §§ 109 (a) and 109 (d) (2022).
[83] Mukherjee, *supra* note 74, at 24.
[84] *Betts v. Willimott,* (1871) 6 L.R. Ch. App. 239, 245.

National Phonograph Co. of Australia v. Menck[85], which allowed the patent holder to control further distribution only with express notification to the purchaser. Without such a contractual restriction, the sale of the physical product implies that the buyer automatically licenses the IP rights on the product. Contract law often precedes IP laws in jurisdictions practising the implied license doctrine. However, contractual restrictions based on the implied license may not be upheld if a statutory provision exists for specific exhaustion of rights. This was a practice in the UK before it adopted the EPO practices.

Each of the three primary forms of intellectual property protection grants rights holders the power to control the distribution of an article containing a protected right. Exhaustion limits this exclusive control.[86]

2.6.5 Exhaustion of Copyright

In copyright law, the owner is granted the exclusive right to publicly distribute physical objects containing copyrighted works, such as books, music CDs, movie DVDs, and works of visual art. Once the copyright owner sells such a physical object, the owner of that object can sell, lease, lend, or otherwise dispose of it without obtaining further permission from the copyright owner. However, the copyright owner retains all other exclusive rights concerning that article, including making copies, creating derivative works, performing it publicly, and, to some extent, displaying it publicly.[87]

2.5.6 Exhaustion of Patent

Under patent law, exhaustion allows the owner of an article containing a protected invention to be free from the patent owner's restriction over its sale and use. In other words, once a patent owner sells or places a patented product in the market, they lose the right to control its further use or sale.[88] The owner can resell the patented article, including by parallel importation[89], and use it as they wish without obtaining the patent

[85] *Nat'l Phonograph Co. of Austl. v. Menck*, [1911] 28 R.P.C. 229.
[86] John A. Rothchild, *Exhaustion of Intellectual Property Rights and the Principle of Territoriality in the United States*, in Research Handbook on Intellectual Property Exhaustion and Parallel Imports 226 (Irene Calboli & Edward Lee eds., 2016).
[87] Id., at 230
[88] Mukherjee, *supra* note 74, at 2.
[89] "Parallel importation" refers to goods produced and sold legally (genuine products), and subsequently exported.

owner's permission. Nonetheless, the patent holder retains the right to prevent others from making additional articles embodying the invention. The purpose of this principle is to prevent market control and the collection of multiple royalties from the same product. Once a patented product is sold, the patent holder has already received their financial reward, making it an economically viable commodity. The doctrine of exhaustion promotes the free movement of goods and applies only to original goods, not to counterfeits or products that violate exclusive rights. [90]

2.6.7 Exhaustion of Trademark

Trademark law differs in that it does not grant exclusive rights but rather the limited right to prevent uses of a mark that are likely to cause confusion. Once the trademark owner authorises the sale of an article bearing the mark, the owner's control over the resale of that article is exhausted.

2.7 Categories based on the territorial extent

Exhaustion is a market-based legal consequence, and therefore, it has been differentiated based on territorial dimensions of its impact, such as national exhaustion, regional exhaustion, and international exhaustion.[91]

2.7.1 National Exhaustion

The concept of national exhaustion of intellectual property rights provides that an intellectual property right is exhausted if a product covered by an IP right—such as a patent, trademark, or copyright—has been sold within a nation by the IP right owner or someone with their consent. As a result, the intellectual property owner is no longer able to legally sue anyone who buys, uses, or resells the product in the territorial boundary of the country. This doctrine is followed in around thirty nations.[92]

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[90] Mukherjee, *supra* note 74, at 2.
[91] Ghosh & Calboli, *supra* note 56, at 8.
[92] WIPO secretariat, E Standing Committee on the Law of Patents, (2022), Available at: https://www.wipo.int/edocs/mdocs/mdocs/en/scp_34/scp_34_3.pdf (last visited June 1, 2024).

2.7.2 Regional Exhaustion

Under regional exhaustion, once a product protected by an IPR is placed on the market within a specific region by the IPR owner or with their consent, the IPR owner cannot prevent the resale or further distribution of that product within the region.[93] This means that once IP-protected goods are put on the market in any part of that region, the rights of the IP owner are exhausted within the region, and the product can circulate freely among the member states. While national exhaustion limits the rights to the domestic market, regional exhaustion extends the boundary to a whole region, and international exhaustion applies globally.

2.7.3 International Exhaustion

In international exhaustion, the rights of the IP holder are considered exhausted globally after the first authorised sale, allowing for the free movement of goods across international borders. Once a product is released for sale anywhere in the world by the IP owner or their authorised representative, it can be freely circulated between countries as if it were a single market. The concept of international trademark exhaustion is recognised in India under the statutory provisions of the Indian Patents Act 1970. This recognition was demonstrated by the Indian judiciary in the case of Kapil Wadhwa and Ors. Vs. Samsung Electronics Co. Ltd[94]

2.8 Exhaustion under International Agreements

The doctrine of exhaustion is provided explicitly in four international multilateral agreements. They are the United Nations Set of Principles and Rules on Competition of 1980;[95] The Agreement on Trade-Related Aspects of Intellectual Property Rights

[93] K. Saggi, Regional Exhaustion of Intellectual Property, 10 Int'l J. Econ. Theory 125 (2014). Available at DOI : https://doi.org/10.1111/ijet.12031(last visited June 04, 2024).
[94] *Kapil Wadhwa & Ors. v. Samsung Elecs. Co. Ltd.*, 194 (2012) DLT 23.
[95] United Nations Set of Principles and Rules on Competition of 1980, § D(4)(e).

("TRIPS") of 1994;5[96]the WCT of 1996;[97] and the WPPT of 1996.[98]Among these multilateral agreements, TRIPS explicitly discusses exhaustion.

2.8.1 Exhaustion under TRIPs Agreement

The doctrine of exhaustion was one of the primary topics of discussion in the Uruguay negotiation round of the TRIPS Agreement.[99] It was left to the discretion of member states as the negotiation failed to reach a consensus. Article 6 of the TRIPS reserves discretion to Member States to adopt territorial rules of their choice - whether the exhaustion would be national or international.[100] The discretion of a member state to adopt the exhaustion regime cannot be challenged by other member states in the Dispute Resolution Mechanism. However, member states should ensure that they adhere to the principles of Most Favoured Nation[101] and National Treatment[102] while adopting a policy. Although the term 'exhaustion' was first introduced to the international legal regime in Article 6 of TRIPS, the agreement does not properly define it. Hence, to understand the true intent behind the term, one must refer to the negotiating history or the travaux préparatoires.[103]The WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT) contain provisions[104] inspired by Article 6 of TRIPS. These treaties offer two alternatives[105]: one, omitting the exclusive right to import[106], leaving room for domestic laws to adopt international exhaustion; second, the exclusive right containing the right to import, provided the only exception would be importation carried

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[96] Agreement on Trade-Related Aspects of Intellectual Property Rights,Article 6 Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, 1869 U.N.T.S. 299, 33 I.L.M. 1197 [hereinafter TRIPS].
[97] WIPO Copyright Treaty art. 6.2, Dec. 20, 1996.[hereinafter WCT]
[98] WIPO Performances and Phonograms Treaty arts. 8(2), 12(2), Dec. 20, 1996.[hereinafter WPPT]
[99] Santanu Mukherjee, *TRIPS Agreement: The Negotiating History of the TRIPS Agreement and Patent Exhaustion*, in *Patent Exhaustion and International Trade Regulation* 115 (Brill Nijhoff 2023).
[100] Art.6 of TRIPS
[101] Art. 4 of TRIPS
[102] Art. 3 of TRIPS
[103] M. BLAKENEY, Trade Related Aspects of Intellectual Property Rights: A Concise Guide to the TRIPS Agreement (London: Sweet and Maxwell, 1996)
[104] Art. 6(2) of the WCT and of arts. 8(2), 12(2) of the WPPT
[105] Basic Proposal for the Substantive Provisions of the Treaty on Certain Questions Concerning the Protection of Literary and Artistic Works, CRNR/DC/4, World Intellectual Property Organization, (August 30, 1996), 34-37. Available at: https://www.wipo.int/edocs/mdocs/diplconf/en/crnr_dc/crnr_dc_4.pdf (last visited June 04, 2024).
[106] Art. 8 of WPPT

out by an individual solely for personal and non-commercial use as part of their personal luggage.

2.9 Principle Of Exhaustion, Access to Knowledge and Public Domain

Fair use and access to knowledge are often counted as the purpose of exhaustion, especially in copyright law. The motivation behind copyright law, particularly in academic works, significantly differs from other intellectual property fields. Unlike other areas primarily driven by financial incentives, academic works are often created for reputation, dissemination, awareness, scientific development, and professional advancement.[107] Copyright law, therefore, plays a significant role in promoting knowledge and is directly linked to the overall well-being and advancement of society.

Several international treaties and declarations recognise the right to knowledge and access to resources as a human right. The Universal Declaration of Human Rights (UDHR) provides that education should be compulsory, free, and equally accessible to all.[108] This right travels beyond the traditional notion of knowledge to include the dissemination of knowledge and access to resources and technologies.[109] Similarly, the International Covenant on Economic, Social and Cultural Rights (“ICESCR”) affirms individuals' rights to "enjoy the benefits of scientific progress" while also protecting creators of scientific, literary, or artistic works.[110] These provisions provide that merely having abundant resources is insufficient; states must actively make them accessible and affordable. This reflects Amartya Sen's "capabilities approach," which assesses social

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[107] Peter Suber, Open Access 3-4 (MIT Press 2012). DOI: https://doi.org/10.7551/mitpress/9286.001.0001

[108] Universal Declaration of Human Rights, Article 26.1, G.A. Res. 217 (III) A, U.N. Doc. A/RES/217(III) (Dec. 10, 1948) [hereinafter UDHR].

[109] United Nations Educational, Scientific, and Cultural Organisation, Recommendation concerning Education for International Understanding, Co-operation and Peace and Education relating to Human Rights and Fundamental Freedoms(Nov.19,1974), Available at: https://www.ohchr.org/en/resources/educators/human-rights-education-training/3-recommendation-concerning- education-international-understanding-co-operation-and-peace-and. (last visited June 8, 2024).

[110] International Covenant on Economic, Social and Cultural Rightsart. 15, Dec. 16, 1966, 6 I.L.M. 360 (1967), 993 U.N.T.S 3. [hereinafter ICESCR].

arrangements based on the freedoms people have to utilise resources, not just their availability.[111]

Further, Article 7 of the TRIPS Agreement states that the IP regime should contribute to "technological innovation and the transfer and dissemination of technology," balancing benefits for both creators and users and promoting overall social and economic welfare. Article 8 of the TRIPS Agreement provides that IP laws should consider the public interest, particularly in important sectors and for social development. These provisions indicate that intellectual property law should balance protection for authors' rights with public access to works, benefiting society as a whole. The Marrakesh Treaty obligates states to make copyrighted works accessible to visually impaired individuals, highlighting the need for better access to educational materials, especially in the digital age.

Further, The recognition of the need to protect a 'public domain' (or occasionally, a 'commons'), where intellectual property laws do not apply, is a common feature of the main justifications for intellectual property rights (IPRs). The Lockean theory[112], for instance, emphasises the importance of preserving an intellectual commons, ensuring that 'enough and as good' remains accessible to others even after intellectual creations are claimed. Similarly, the utilitarian justification for IPRs acknowledges the necessity of limiting intellectual property protection. This is achieved by restricting the duration of protection so that once IPRs expire, intellectual creations return to the public domain, allowing others to use them in their own creative endeavours. The law and economics approach also highlights the economic efficiency of refreshing the public domain with works whose protection has expired[113].

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[111] Madhavi Sunder, Intellectual Property and Development as Freedom, in The Development Agenda: Global Intellectual Property and Developing Countries 259 (Neil Weinstock Netanel ed., 2008) (online ed., Oxford Academic, Jan. 1, 2009), https://doi.org/10.1093/acprof:oso/9780195342109.003.0019 (last visited June 8, 2024).
[112] Hughes, *supra* note 18.
[113] Davis, *supra* note 3, at 1.

2.10 Conclusion

In conclusion, Chapter Two has provided a comprehensive overview of intellectual property (IP) and the concept of exhaustion, elucidating their fundamental definitions and the intricate legal framework that governs them. Through detailed explanations, the researcher explored the various types of intellectual property rights (IPR) and their pivotal role in protecting creative and innovative initiatives. The chapter also delved into the concept of exhaustion, commonly known as the first sale doctrine, highlighting its historical development and traditional applications. By examining national, regional, and international exhaustion, the researcher gained insight into how different jurisdictions handle the distribution and resale of IP-protected goods. This foundational understanding sets the stage for a more profound analysis of digital exhaustion, which will be discussed in subsequent chapters, highlighting the significance and complexities of managing intellectual property in a globalised digital world.

Chapter Three

Digital Trade and Digital Exhaustion

3.1 Introduction

Globalisation and technical advancement in information technologies are the most transformative developments of the twenty-first century. Each of these advancements reshaped the world in its own way and complemented the other one. Globalisation increased the trans-boarder flow of goods, services and technology, making nation-states interconnected.[114] Amid the increased political tension among nation-states, trade can be identified as a significant reason for interdependence and do away with existing conflicts.[115] It enabled technological transfer for the development of information technologies, and the technology, in return, accelerated trans-border free trade and transformed globalisation.

Post-1950, global trade growth exploded, which can be quantified as twice the growth of the output rate.[116] Around the same time, with the fastest-growing connectivity provided by the internet and other technological advancements, business models like e-commerce and e-libraries emerged. Gradually, Digital trade has become increasingly prevalent in the current global economy. Today, almost all types of international transactions involve some form of digital element.[117]

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[114] Vandana Singh & Mehak Sethi, *Digital trade AND artificial intelligence: Role of intellectual property*, Vol. 10 NTUT Journal of Intellectual Property Law and Management 45 (2021), available at: https://www.researchgate.net/publication/353751060_Digital_Trade_AND_Artificial_Intelligence_Role_of_Intellectual_Property (last visited Mar 15, 2024).

[115] Simon Armstrong, Anthony Bergin & David Lang, Background Paper: Economic Cooperation in the Asia–Pacific and Sustaining the Rules-Based Order in International Trade, in Strengthening Rules-Based Order in the Asia–Pacific: Deepening Japan–Australia Cooperation to Promote Regional Order 22, 30 (Australian Strategic Policy Institute 2014), available at http://www.jstor.org/stable/resrep04211.7. (last visited Mar 15, 2024).

[116] Id.

[117] James Manyika et al., Digital Globalization: The New Era of Global Flows, McKinsey Global Institute 2 (2016), available at: https://www.mckinsey.com/~/media/mckinsey/business%20functions/mckinsey%20digital/our%20insights/digital%20globalization%20the%20new%20era%20of%20global%20flows/mgi-digital-globalization-full-report.pdf. (last visited Mar 15, 2024).

Digital trade means facilitating the exchange of goods, services, and information across borders using digital platforms and electronic networks. The goods and services traded through digital mediums are often subject to IP protection; the digital trade system itself is often attached to IP protection. Intellectual Property can be considered as both a stumbler and an enabler of international trade.

Current International legal frameworks regulating global trade are dated and cannot applied easily to Digital trade.[118] similarly, though IP rights are a modern law, they were conceived during the pre-digital era. In the era of rapid digitisation, they cannot be transposed seamlessly to digital goods and services. While formulating most IP doctrines and regulations, the focus was on tangible objects that embody their IP-protected matters. Applying principles like exhaustion in digital trade has some complexities due to the nature of the digital product and the ease of copying. When a physical product is bought and resold, it is passed to another person. However, one can retain a copy in a digital medium, which amounts to the reproduction of work and IPR infringement. The doctrine is applicable only when the owner disposes of his rights. Other complexities include the strategy of renaming the agreement as a 'licence' rather than a sale, the quality of second-hand digital products, etc.

3.2 Defining Digital Trade

Digital trade means facilitating the exchange of goods, services, and information across borders using digital platforms and electronic networks. There are no generally accepted single definitions for the term 'Digital Trade'.[119] However, globally, Several attempts have been made to define digital trade. The WTO defines digital trade as 'the production, distribution, marketing, sale, or delivery of goods and services by electronic means'.[120]

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[118] Stefan Zleptnig, The GATS and Internet-Based Services: Between Market Access and Domestic Regulation, in The World Trade Organization and Trade in Services 381, 388-89 (Kern Alexander & Mads Andenas eds., 2007).

[119] José López González & Matthieu Jouanjean, *Digital Trade: Developing a Framework for Analysis*, OECD Trade Policy Paper No. 205, OECD Publishing, Paris (2017), http://dx.doi.org/10.1787/524c8c83-en. (last visited Mar 15, 2024).

[120] World Trade Organization, Work Programme on Electronic Commerce (1998), WT/L/274 (Sept. 30, 1998). Available at: https://www.wto.org/english/tratop_e/ecom_e/ecom_work_programme_e.htm (last visited Mar 15, 2024).

The USITC developed a much broader definition of digital trade, describing it as "US domestic commerce and international trade in which the internet and internet-based technologies play a particularly significant role in ordering, producing, or delivering products and services."[121] OECD defines digital trade as 'all international trade that is either digitally ordered or digitally delivered'.[122] In a broader sense, it can be defined as "Digital Trade is the production, distribution, marketing, sale or delivery of goods & services by electronic means, the sale and/or shipment by traditional means of digital goods (products and services), the transmission or storage of information as a service in its own right, as well as the cross-border transfer of information whether for remuneration or not".[123]

Digital trade comprises not only the cross-border movement of goods and services facilitated by digital technologies but also the flow of data across borders. This includes data flows themselves as a form of trade and the productivity gains from utilising digital services.[124]Digital trade addresses both digitally delivered and physically delivered goods and services. The digitally delivered products have an intangible character and are accessed through electronic means, such as e-books and remote computing services. while the physically delivered are those tangible goods purchased from online marketplaces.

The traditional physical trade was more focused on business-to-consumer (B2C) interactions. The advent of digital trade introduced and promoted new types of businesses, such as Business-to-Business (B2B), Business-to-Government (B2G), Consumer-to-Consumer (C2C), Consumer-to-Business (C2B), and

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[121] Joshua P. Meltzer, *Governing Digital Trade*, 18 WORLD TRADE REV. S33 (2019). Available at doi:10.1017/S1474745618000502 (last visited Mar 15, 2024).
[122] UNCTAD/DTL/ECDE/2023/8, Handbook on Measuring Digital Trade (2 ed.), https://unctad.org/system/files/official-document/dtlecdc2023d8_en.pdf (last visited Apr 30, 2024).
[123] Georgios Petropoulos & Andre Sapir, *Socio-economic effects of digital trade and artificial intelligence on EU industries including their value chains and EU imports and exports with major trade partners*, Policy Department for External Relations, PE 653.617 (Nov. 2019), http://dx.doi.org/10.2861/23699.
[124] Joshua P. Meltzer, *Maximizing the Opportunities of the Internet for International Trade*, ICTSD and World Economic Forum (2016), available at https://ssrn.com/abstract=2841913. (last visited Mar 15, 2024).

Consumer-to-Government (C2G),[125] and created new opportunities for businesses, consumers, and governments to engage and interact in trade.

The definitions and interpretations of the concept of 'Digital Trade' have two perspectives: a broader one and a narrow one.[126] The narrow perspective simply reduces 'digital trade' to the online transactions of goods and services. In contrast, the broader perspective pertains to facilitating innovation and the free flow of information through the digital medium. These differences are significant not only in the academic sense but also in terms of the legal and policy implications of international trade. For instance, from WTO negotiations[127], we can trace that countries like China have advocated for a narrow perspective, while the US support a more comprehensive, broader approach.

The term "electronic commerce" is often used instead of "digital trade".[128] Some scholars demotivate it, as they have the opinion that digital trade is a much broader concept, and its scope extends beyond the concept of electronic commerce.[129] However, there is a counter view that in the international legal regime, the WTO's definition of electronic commerce-meaning "the production, distribution, marketing, sale or delivery of goods and services by electronic means"-is wide and generic enough to address the majority of contemporary trade of goods and services through digital mediums.[130]

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[125] José López González & Matthieu Jouanjean, *Digital Trade: Developing a Framework for Analysis*, OECD Trade Policy Paper No. 205, OECD Publishing, Paris (2017), http://dx.doi.org/10.1787/524c8c83-en. (last visited Mar 15, 2024).

[126] Mira Burri & Rodrigo Polanco, *Digital Trade Provisions in Preferential Trade Agreements: Introducing a New Dataset*, 23 J. INT'l ECON. L. 187 (2020). Available at: https://EconPapers.repec.org/RePEc:oup:jieclw:v:23:y:2020:i:1:p:187-220.(last visited Mar 19, 2024).

[127] Henry Gao, *Digital or Trade? The Contrasting Approaches of China and US to Digital Trade*, 21 J. Int'l Econ. L. 297 (2018). Available at: https://EconPapers.repec.org/RePEc:oup:jieclw:v:21:y:2018:i:2:p:297-321.(last visited Mar 19, 2024).

[128] Andrew D. Mitchell & Neha Mishra, *Data at the Docks: Modernizing International Trade Law for the Digital Economy*, 20 VAND. J. ENT. & TECH. L. 1073 (2018). Available at: https://ssrn.com/abstract=3064396 .(last visited Mar 19, 2024).

[129] See, e.g., Dig. Trade in the U.S. & Glob. Econs., Part 2, Inv. No. 332-540, USITC Pub. 4485, at 29 (Aug. 2014); Mira Burri, Designing Future-Oriented Multilateral Rules for Digital Trade, in Research Handbook on Trade in Services 331, 331 (Pierre Sauvé & Martin Roy eds., 2016).available at: https://ssrn.com/abstract=2549552(last visited Mar 19, 2024).

[130] Gen. Council, Work Programme on Electronic Commerce, 1.3, WTO Doc. WT/L/274 (Sept. 30, 1998) ; Jia-Xiang Hu, When Trade Encounters Technology: The Role of the Technological Neutrality Principle in the Development of WTO Rules, in Science and Technology in International Economic Law: Balancing Competing Interests 75, 76-77 (Bryan Mercurio & Kuei-Jung Ni eds., 2014).

3.2.1 Digitalisation and International Trade

The transformation from traditional physical trade or GVC to digital trade has resulted in quantitative and qualitative changes in international trade. The advancements, fueled by technology and connectivity, are creating new markets and reshaping global commerce. Digitally enabled trade with growing connectivity increased access to foreign markets and decreased the cost of cross-border distribution of goods. The explosion in the number of online platforms has resulted in an increasing volume of small packages being shipped across international borders. It transformed what we can trade and the way we trade.[131]

In the digital age, new technological advancements increased the number of tradable goods across borders. The variety of tradable goods includes 3D-printed products, IoT-enabled smart devices, digital content like e-books and streaming media, and advanced electronic components such as microchips and sensors. With cloud computing, big data analytics, cybersecurity, and quantum computing services, the landscape of cross-border service flow has also transformed. Trade in services has the potential to drive international trade and have a higher growth rate than trade in goods.[132] Digital marketing, telemedicine, online education, virtual/augmented reality experiences, and freelancing platforms offer new avenues for international trade. Subscription-based Software as a Service (SaaS), fintech solutions, and digital twin services are also driving innovation in trade.

New technologies also change trade methods, that is, how goods and services are produced and supplied across borders. Emerging technologies like distributed ledgers (blockchain) and additive manufacturing (3D printing) can further potentially transform the way we trade. Blockchain can enhance transparency, security, and efficiency in transactions, while 3D printing allows for on-demand, customised production, reducing the need for traditional manufacturing and logistics. These innovations are poised to impact global trade practices significantly.

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[131] Organization for Economic Co-operation and Development, Current Trade Challenges and Opportunities (OECD, France), available at https://www.oecd.org/trade/understanding-the-global-trading-system/trade-challenges-and-opportunities/ (last visited june. 6, 2024).

[132] Oxford Analytica, Digitalisation will drive cross-border services trade, Expert Briefings (2019), available at https://doi.org/10.1108/OXAN-DB247037. (last visited june. 6, 2024).

3.3 Intellectual Property and Digitalisation

Digital trade transactions generally include products with intellectual property licenses. The intellectual property provides rules governing the protection and enforcement of the legal rights associated with innovations, designs, and creative works. It gives the creator of any unique idea or distinguishing production-specific rights and makes it illegal to copy or recreate that work without authorisation. It is a state-sanctioned right that provides the holder a limited monopoly on the use and control of property for a limited time, and it is considered intellectual property. Intellectual property protection in digital transactions mainly has two aspects: Product-based and System-based.

Unlike other commercial models, digital trade includes transactions of both digital and analogue products, with IP rights attached to them. It might attract issues like selling counterfeit products, parallel trade of products, etc. Digital or intangible products include music, movies, books, etc. Similarly, any copyrighted artistic work can be reduced into digital work and sold through digital platforms like e-commerce. Peer-to-peer online file-sharing of various file formats was made possible with the implementation of Web 2.0, and it opened the door towards online piracy.[133]WIPO treaties were an international response to this issue.

The IP is also involved in the Digital trade systems. The systems, like software, network, and interface that allow the platform to function properly, are IP-attached and are often protected by IP rights[134]. Hence, it is essential to identify each such IP-protected element of digital trade systems, forming an IP portfolio and protecting it.

Every digital trade system consists of several innovations, technologies, and concepts. Some entities own Many of them exclusively, but making every digital platform work effectively is important. Hence, the transborder sharing of technology and IP rights becomes crucial. IP is involved in the sharing by licensing or trade of technologies required to make digital trade platforms work.

IP rights were once considered as the intangible element attached to tangible objects. However, with technological advancement, the e-products evolved, and the intangible

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[133] Peter K. Yu, Digital Copyright Enforcement Measures and Their Human Rights Threats, in Research Handbook on Human Rights and Intellectual Property 1 (Christophe Geiger ed., Edward Elgar Publ'g 2015). Available at: https://ssrn.com/abstract=2363945 (last visited june. 6, 2024).

[134] IP in the Digital Economy, available at https://www.wipo.int/export/sites/www/sme/en/documents/pdf/ip_panorama_8_learning_points.pdf. (last visited june. 6, 2024).

character of the e-product made it challenging to protect the IP rights attached to it. For instance, With a 3D printer, anyone can print a patented device if a pirated digital model file is available.[135] These technologies, becoming affordable, have made it difficult for IP rights owners to protect their patents from pirated digital model files.

The current IP legal regime is inconsistent in addressing these kinds of issues related to IP rights protection in digital trade.[136]For example, The current WIPO treaties, while providing member states a template for enforcing copyright in their respective domestic regime, failed to include a proper enforcing mechanism.[137]

3.3.1 Intellectual Property and Trade

The importance of intellectual property in trade is increasing day by day. The global trade community uses IP rights as both aggressive and Defensive tools. Exclusivity of products; Access to new markets through licensing, franchising, and joint ventures; Protection of adaptation; Marketing of the product; and controlling counterfeiting are some of the benefits IP rights provide to traders.[138]

People often mistake IP rights as universal rights, but in reality, they are territorial in origin and nature. They are established and safeguarded within their relevant jurisdiction and do not extend beyond the territorial boundaries of protection.[139] The reasons are bifold; it can be explained with the doctrine of sovereignty or IP as a Policy limits its history, scope and inception in a particular jurisdiction.[140] For years, the sovereigns have used IP as a policy tool to protect and incentivise the industrialisation and development of their respective nations. The respective legislature could devise IP legislation that suits

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[135] Lucas S. Osborn, *Regulating Three-Dimensional Printing: The Converging Worlds of Bits and Atoms*, 51 San Diego L. Rev. 553, 560-61 (2014). Available at: https://scholarship.law.campbell.edu/fac_sw/97 (last visited may. 9, 2024).

[136] Sapna Kumar, Regulating Digital Trade, 67 FLA. L. REV. 1909 14 (2015). Available at: https://scholarship.law.ufl.edu/flr/vol67/iss6/2 (last visited may. 9, 2024).

[137] Mimler, M. Intellectual Property - A Friend or Foe of Digital Trade?, 27 Int'l Trade L. & Reg. 134 5 (2021). Available at : https://openaccess.city.ac.uk/id/eprint/30462/ (last visited may. 9, 2024).

[138] World Intellectual Property Organization, IP Panorama: Learning Points 9 , https://www.wipo.int/export/sites/www/sme/en/documents/pdf/ip_panorama_9_learning_points.pdf.

[139] "IP rights tend to be territorial they only give protection in the countries where they are granted or registered." – Intellectual Property Office, IP Basics, GOV.UK (2017), https://www.gov.uk/government/publications/ip-basics/ip-basics.

[140] Lydia Lundstedt, Territoriality in Intellectual Property Law, 79 (Stockholm University, 2016).

their developmental and industrial goals. But, when we enter global trade premises, the same principles of territoriality hinder trade. Diverging sets of IP rules in different countries is not conducive to trade.[141] For instance, in a cross-border trade between countries A and B, an IP-protected product X of country A may not be listed under IP regime of Country B. It impacts the outcome of trade dealings and creates uncertainties. International trade law identifies similar divergence as a ‘ non-tariff barrier to trade in goods or services’.[142] The international community, especially after World War II, made several attempts to regulate non-trade barriers and protectionism. However, Intellectual property became a concern only after the Uruguay Round and the adoption of the TRIPS agreement. Later, multilateral agreements like WIPO treaties, regional agencies like EUIPO at the international level, and changes in respective domestic laws were made to remove non-tariff barriers.

3.3.2 Intellectual Property as an Enabler of Trade

IP protection addresses the issue of free-riding by granting an exclusive right to owners, which helps in the commercialisation of intangible goods.[143] They protect information and exclusive content of the business. These rights allocate specific intellectual property to individuals or entities under intellectual property law, which enable the sale, licensing, and income generation through royalties and other means.[144]

The WIPO Internet treaties, for example, introduced the right of communication to the public, allowing right holders to authorise public access to their works online, covering on-demand, interactive communication like YouTube services. IP protection attracts the venture capital[145] necessary for developing the business models and lowers transaction

[141] Mimler, *supra* note 137, at 6.
[142] Graham Dutfield & Uma Suthersanen, Global Intellectual Property Law 12 (2d ed. Edward Elgar 2020).
[143] Sacha Wunsch-Vincent, The Economics of Copyright and the Internet, in Handbook on the Economics of the Internet 229, 231 (Johannes M. Bauer & Michael Latzer eds., Edward Elgar 2016).
[144] Keith Maskus, 'Fostering Innovation in Digital Trade', in Intellectual Property and Digital Trade in the Age of Artificial Intelligence and Big Data — Global Perspectives for the Intellectual Property System 19, 25 (Xavier Seuba, Christophe Geiger & Julien Pénin eds., 2018, 5 CEIPI-ICTSD).Available at: https://pureadmin.qub.ac.uk/ws/portalfiles/portal/278596781/CEIPI_ICTSD_Issue_5.pdf (last visited may. 9, 2024).
[145]Mary Juetten, Do Venture Capitalists Care About Intellectual Property?, Forbes (2015), https://www.forbes.com/sites/maryjuetten/2015/08/11/do-venture-capitalists-care-about-intellectual-property/?sh=1204e8d35b87 (last visited Jun 11, 2024).

costs by eliminating the need for physical storage and logistics. Trade in IP-protected digital goods helps lower transaction costs.[146] Digital distribution allows consumers to choose specific content, such as individual songs or articles, leading to significant changes in content consumption, including in the music, audiovisual, and video game industries.[147]

3.3.3 Intellectual Property as a Stumbler Trade

The application of IP rights in trade has certain drawbacks. IP rights were created to address intangible character attached to tangible products. In digital trade, Transferring traditional IP doctrines from an analogue to a digital context can lead to unintended consequences. For instance, applying the traditional definition of copyright poses issues in tackling reproduction. Extending the definition to include copies 'in any material form' could restrain the unauthorised use of digital copies and also have overreaching effects on the display of goods on internet browsers.

another drawback is related to the territoriality of IP in conjunction with its exclusivity, which allows for market segregation along territorial lines through selective licensing by right holders. Moreover, the response to the threat posed by digitisation and the internet often involves expanding IP rights and their scope. However, this increased control over content by right holders may hinder the seamless flow of data and information over the internet, which is essential for digital trade.

Transposing traditional IP doctrines from an analogue world to a digital one can have unwanted consequences for digital trade. For instance, extending copyright infringement to include digital reproductions ensures that the unauthorised use of digital copies can be restrained by right holders. However, this extension can have overreaching consequences, such as affecting the display of goods on internet browsers, which creates reproductions in the computer's cache.[148] The potential chilling effects due to the uncertainty of being sued by right holders could lead to a breakdown in internet communication. While the WIPO Internet Treaties did not address this issue, the InfoSoc Directive provided an

[146] Wunsch-Vincent, *supra note* 143, at 231.
[147] Id.
[148] K M Garnett et al., Copinger & Skone James on copyright. 7.31 (2016).

exception for temporary acts of reproduction.[149] This example highlights the regulatory challenges in creating an IP framework that supports digital trade.

3.4 Second-Hand Market for Digital Goods; A background

This business model attracted international attention in 2013 when Amazon.com was awarded a patent for a 'secondary market for digital objects'.[150] This system was supposed to allow users to sell, trade, and loan various digital objects such as audio files, eBooks, movies, apps, and other digital content. Amazon.com was not the only company that came up with this idea. the start-up company ReDigi introduced a similar business model a year before in 2012.[151] These business models were considered novel and supposedly would have ensured the people's right to resell a product they legally acquired and access to knowledge. However, both these business models were packed up due to the threat of litigation due to copyright infringement. In both cases, the inapplicability of the Doctrine of Exhaustion, as in physical goods, attracted copyright violations.

3.5 Digital Exhaustion

Digital exhaustion is a concept related to digital trade. The term 'Digital exhaustion' is used by scholars[152] to denote the application of the doctrine of exhaustion or first sale into digital trade.[153] While defining digital trade, we have already discussed above that digital trade includes the sale of physical and digital goods. Digital goods are tangible in nature and seamlessly transacted through digital mediums. It includes E-books, Software, Music

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[149] Directive 2001/29, art. 5(1), 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, 2001 O.J. (L 167) 10 (EC). [hereinafter InfoSoc]

[150] Tim Worstall, Is The Patent System Broken? Well, Amazon's Just Patented The Sale Of Second Hand Goods, Forbes (2013), https://www.forbes.com/sites/timworstall/2013/02/06/is-the-patent-system-broken-well-amazons-just-patented-the-sale-of-second-hand-goods/ (last visited Jun 11, 2024).

[151] Ben Sisario, A Setback for Resellers of Digital Products, The New York Times, Apr. 2, 2013, https://www.nytimes.com/2013/04/02/business/media/redigi-loses-suit-over-reselling-of-digital-music.html (last visited Jun 11, 2024).

[152] Authors Such as, Péter Mezei;Caterina Sganga;Ariel Katz;Aaron Perzanowski; Jason Schultz

[153] Niemi, *supra* note, at 69

and other digital goods. Most of these goods are the results of human intellect and hence protected with copyright. The application of traditional copyright law to digital trade poses certain shortfalls. The doctrine of Exhaustion is one such shortfall. The doctrine of exhaustion provides that the IP owner's exclusive right to control the sale of protected items lapses at the commencement of the first sale.

The traditional exhaustion doctrine, which was introduced as a principle to balance copyright protection and consumer rights in the distribution of physical goods, requires complex reinterpretation as digital content becomes the norm in the modern marketplace.[154] The shift in the nature of goods traded through digital mediums poses challenges to the traditional concept of exhaustion.[155]

When exhaustion was introduced into the material world in the twentieth century, it was widely adopted without any significant challenges. The chances of using exhaustion to exploit the original work were very limited. The original sale and second-hand sale have different demands and customers in the material world.[156] The Physical copies deteriorate over time as they are subject to wear and tear, their marketability and value decrease as compared to the first copy, and the second-hand sale requires the original owner to give up possession of their copies. Additionally, the legal boundaries of material exhaustion are clear and well-defined.[157] The tangible nature of physical copies and their commercialisation through implied sale contracts eliminate any further confusion between the physical object and the intellectual creation, as well as between property rights over the physical object and copyright over the intellectual work.[158]

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[154] K. S. Brown, *Reconceptualizing Copyright Exhaustion in the Digital Age*, 23 J. Copyright L. 345 (2019).
[155] R. A. Johnson & L. B. Miller, *Rethinking Copyright Exhaustion for the Digital Age,* 28 Digital L.J. 165, 165-82 (2021).
[156] Andreas Wiebe, The Economic Perspective: Exhaustion in the Digital Age, in Global Copyright: Three Hundred Years Since the Statute of Anne, From 1709 to Cyberspace 321 (Lionel Bently, Uma Suthersanen & Paul Torremans eds., Edward Elgar 2010).
[157] Caterina Sganga, *Digital Exhaustion after Tom Kabinet: A Non-exhausted Debate (June 15, 2020), in EU Internet Law in the Digital Single Market* (T. Synodinou et al. eds., Springer 2021), available at https://ssrn.com/abstract=3803940. (last visited Jun 11, 2024).
[158] Stavroula Karapapa, *Reconstructing Copyright Exhaustion in the Online World*, Intell. Prop. Q. 307 (2014), https://ssrn.com/abstract=2862300.(last visited Jun 11, 2024).

In contrast, in the digital environment, the quality of copies does not deteriorate over time. It remains identical to the original copy[159], and it can be easily distributed and shared across the globe.[160] the sharing of a copy creates a new copy, which leads to reproduction and violation of copyrights. This increases the risk of piracy[161] and chances for competition between the original and secondary markets for the work.[162] For illustrative purposes, imagine a student needing a textbook for an academic year. That Student is ideally left with two options: first, he can buy a hard copy of that textbook, and second, the student can buy an ebook from an online platform. Now, after completing the academic year, the student wishes to sell the textbook. In the first case of hard copy, the student, after the academic year, could sell the textbook and collect the resale value of the hard copy. The copyright owners cannot restrict it as the exhaustion doctrine applies here. However, in the second case of an ebook, the student cannot resell the ebook as it amounts to copyright infringement, and exhaustion is not applicable in digital trade. Thus, a key concern for digital trade involving copyright-protected goods is determining if and when exclusive rights are exhausted in the digital trade. Creating a secondary market for used digital goods, just as in the case of physical books being resold without copyright interference in the material world, could be a beneficial objective. To enable such a business option, the issue of digital exhaustion should be interpreted and defined properly. Advocates of the concept of digital exhaustion strive for this desirable goal.

In a positive sense, digital exhaustion as a doctrine that inhibits the exclusive rights of the IP owner to regulate his rights on the product he sells is not a widely accepted doctrine. The international legal fraternity accepted it in its negative sense as a doctrine not applicable to digital trade. The traditional positivist approach supports it in its negative sense. In contrast, constructive realist scholars demand its extension to the digital environment.

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[159] Ariel Katz, Digital Exhaustion: North American Observations, in Research Handbook on Electronic Commerce Law 164 (John A. Rothchild ed., Edward Elgar 2016). Available at: https://ssrn.com/abstract=2857729 (last visited Jun 11, 2024).

[160] Id

[161] Caterina Sganga, *A Plea for Digital Exhaustion in EU Copyright Law*, 2018 JIPITEC 212, 213. Available at: https://www.jipitec.eu/archive/issues/jipitec-9-3-2018/4802/JIPITEC_9_3_2018_211_Sganga (last visited Jun 11, 2024).

[162] Wolfgang Kerber, *Exhaustion of Digital Goods: An Economic Perspective*, 8 Zeitschrift fuer Geistiges Eigentum/Intellectual Property Journal 149 (2016). https://dx.doi.org/10.2139/ssrn.2777459

3.5.1 Arguments in favour of Digital Exhaustion

Scholars supporting the concept of digital exhaustion highlight its broad economic and societal benefits. Regardless of the format, whether digital or physical, second-hand markets are still markets with economic implications.[163] It contributes to the economic welfare of society by increasing the gross domestic product. This secondary market increases the availability of goods[164] and offers goods at competitive prices, making them accessible to consumers who might not be able to afford them at full retail price.[165] It helps to disseminate information and to protect the right of access to knowledge Thus, protecting such markets serves both economic growth and consumer interest.

The exhaustion creates competition between the secondary market and the original market.[166] In order to compete with second-hand market offerings and keep consumers engaged with their products, Rights holders are motivated to innovate continuously, creating updates or new versions of software and other works.[167] Exhaustion can also serve as a strong justification for various non-commercial personal uses of copyrighted material by consumers.[168]

From a policymaker's standpoint, exhaustion defends the 'second-hand market of ideas.'[169] Whatever may be the format of expression of these ideas, whether digital or physical, is less irrelevant. Priority should be given to ensuring the free circulation of information. The exhaustion doctrine plays a significant role in the digital sphere by preventing copyright holders from monopolising control over works. Regardless of the

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[163] Ruth Anthony Reese, *The First Sale Doctrine in the Era of Digital Networks*, 44 B.C.L. Rev. 577 586 (2003). DOI: https://dx.doi.org/10.2139/ssrn.463620

[164] Aaron Perzanowski & Jason Schultz, *Reconciling Intellectual & Personal Property*, 90 Notre Dame L. Rev. (2014). Available at: https://scholarship.law.nd.edu/ndlr/vol90/iss3/6 (last visited Jun 11, 2024).

[165] Id.

[166] Molly Shaffer Van Houweling, *The New Servitudes*, 96 Geo. L.J. 885, 898-905, 914-16 (2008). https://lawcat.berkeley.edu/record/1121235/files/fulltext.pdf (last visited Jun 11, 2024).

[167] Aaron Perzanowski & Jason Schultz, *Digital Exhaustion*, 58 UCLA L. Rev. 889 (2010). Available at: https://www.uclalawreview.org/pdf/58-4-1.pdf (last visited Jun 11, 2024).

[168] Aaron Perzanowski & Jason Schultz, *Copyright Exhaustion and the Personal Use Dilemma*, 96 Minn. L. Rev. 2067 (2012). Available at: https://scholarship.law.umn.edu/mlr/424/ (last visited Jun 11, 2024).

[169] Tomasz Targosz, Exhaustion in Digital Products and the "Accidental" Impact on the Balance of Interests in Copyright Law, in Three Hundred Years Since the Statute of Anne, From 1709 to Cyberspace 337 (Lionel Bently, Uma Suthersanen & Paul Torremans eds., Edward Elgar Publishing 2010).

medium used and advancement in technology, the principle of the free flow of ideas should be protected.

Consumer privacy in the acquisition, transfer of works and enjoyment is significantly impacted by exhaustion principles.[170] In the absence of the exhaustion principle, consumers or resellers need to obtain permission from copyright owners for every redistribution, potentially compromising the anonymity of users going or likely to buy the second-hand product.[171]

The secondary market can also preserve works that are old or no longer available from the copyright owners, such as works withdrawn for political reasons, orphan works or censored work[172], by allowing their wider distribution. This preservation provides an opportunity to maintain digital works having cultural significance and prevent their permanent loss.[173]

Exhaustion maintains authorial incentives and consumer incentives. Authors are fairly compensated in the first sale, Exhaustion applies only when a rightsholder transfers ownership of goods for a price they set; thus, exhaustion encourages fair compensation for authors. The first buyers compensated the purchase price when they sold copies in the secondary market at a price they set. Exhaustion preserves consumer incentives to engage in legitimate copyright markets by giving purchasers meaningful property rights in their purchases as they can store, collect, curate, donate, or bequeath their purchases. This encourages participation in authorised transactions and discourages reliance on unauthorised sources where pirated copies are available at low or no cost.[174] Thus, a legalised second-hand digital market provides a viable alternative to piracy or illegal downloads. Most people use pirated works as they cannot afford original work. If

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[170] Joseph P. Liu, *Owning Digital Copies: CopyrightLaw and the Incidents of Copy Ownership*, 42 WM. & MARY L. REV. 1245, 1303, 1310–11, 1320–21, 1330–33, 1336 (2001) Available at: https://scholarship.law.wm.edu/wmlr/vol42/iss4/5 (last visited Jun 13, 2024).

[171] Julie E. Cohen, *A Right to Read Anonymously: A Closer Look at 'Copyright Management' in Cyberspace*, 28 Conn. L. Rev. 981 2(1996).
Available at: https://scholarship.law.georgetown.edu/facpub/814 (last visited Jun 13, 2024).

[172] Reese,*supra note* 163 at 584.

[173] Id.

[174] John A. Rothchild, *Exhausting Extraterritoriality*, 51 Santa Clara L. Rev. 1187 104 (2011). Available at: https://digitalcommons.law.scu.edu/lawreview/vol51/iss4/5/ (last visited June 13, 2024).

consumers can legally purchase copies at lower prices, the incentive to seek out illicit options decreases gradually.[175]

Lastly, Exhaustion can be regarded as a *numerus clausus*[176] principle of intellectual property[177]; it helps to minimise transaction costs by limiting the forms of transactions and preventing complex bundles of rights. The Lengthy license agreements imposed by rightsholders to circumvent exhaustion may increase consumer information costs, leading to transaction inefficiencies.

3.5.2 Arguments against digital exhaustion

As we discussed in the introduction, One of the key differences between tangible and non-tangible items is that non-tangible items, like software, can be easily copied and resold without degrading the original. Unlike a physical book, which transfers ownership when sold, an eBook can be duplicated infinitely without losing quality. This blurs the line between primary and second-hand markets for digital products, making it hard to distinguish an original from a copy and preventing a drop in price or desirability for digital items. Consequently, rationalising digital exhaustion becomes challenging.

Another argument against digital exhaustion is that it was originally designed to limit the copyright owner's right to distribution, not reproduction. The doctrine of exhaustion addresses the first sale or transfer of ownership, whereas online distribution often involves simultaneous reproduction, such as when sharing a file via email. This makes it difficult to separate the concepts of ‘reproduction’ and ‘distribution’ regarding digital items.

In order to protect the copyright holder's exclusive reproduction rights, the original copy must become unusable upon resale.[178] However, verifying the deletion of the original is

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[175] A. Chatzimichali, *The Limits of Intellectual Property: Exhaustion of Rights, International Trademarks and Digital Copyright* 13 (2021). Available at: https://osf.io/6zbhu/download/?format=pdf (last visited June 13, 2024).

[176] The numerus clausus principle limits the variety of legal rights and transactions available within a certain legal framework.

[177] Christina Mulligan, *A Numerus Clausus Principle for Intellectual Property*, 80 Tenn. L. Rev. 235 (2012). DOI http://dx.doi.org/10.2139/ssrn.2017023

[178] Case C-128/11, UsedSoft GmbH v. Oracle Int’l Corp., [2012] 3 C.M.L.R. 44, [2012] E.C.D.R. 19, [2013] R.P.C. 6, ¶ 79. [Hereinafter UsedSoft]

practically challenging. Although technical solutions might exist, using technology to police and destroy duplicate copies raises concerns.[179]

Lastly, streaming companies' attempts to escape ownership claims shifted the delivery process of content from 'selling content' to 'licensing it'. Moreover, it has the ease from digital duplication, which could potentially come with downloading content to a local system, leading to the exploitation of exhaustion as a means to facilitate widespread infringement. The licensing enables the original owner to incentivise their work without transferring their ownership of the work, thus avoiding the complexities of infringement.[180]

We will discuss these challenges in detail in Chapter 4, one by one.

3.6 Digital Exhaustion in International Treaties

Article 6 of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) leaves an option for member states to choose their own territorial rules regarding exhaustion, that is, either national or international exhaustion.[181] The debate over pharmaceutical parallel imports led to the exclusion of exhaustion from dispute settlement considerations, allowing WTO Members to establish their own exhaustion regimes without challenge.[182] However, TRIPS does not specifically provide exhaustion rules addressing digital content, and it addresses exhaustion exclusively concerning goods put on the market by

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[179] Maria A. Pallante, *The Next Great Copyright Act*, 36 Colum. J.L. & Arts 332 (2013), available at http://copyright.gov/docs/next_great_copyright_act.pdf.(last visited June 13, 2024).

[180]Aaron Perzanowski & Jason Schultz, *Legislating Digital Exhaustion*, 29 Berkeley Tech. L.J. 1543 (2015), https://www.jstor.org/stable/26377575 (last visited June 2, 2024).

[181] Art.6 of TRIPS; Article 6 states 'For the purposes of dispute settlement under this Agreement, subject to the provisions of Articles 3 and 4 nothing in this Agreementshall be used to address the issue of the exhaustion of intellectual property rights'.

[182] See Doha Declaration on TRIPS and Public Health WT/MIN(01)/DEC/W/2 of 14 November 2001, para. 5(d): "The effect of the provisions in the TRIPS Agreement that are relevant to the exhaustion of IPRs is to leave each Member free to establish its own regime for such exhaustion without challenge, subject to the MFN and national treatment provisions of Articles 3 and 4."

or with the right holder's consent.[183] This issue has been discussed in international forums following TRIPS.

The World Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT) of 1996 (effective from 2002, collectively known as the WIPO Internet Treaties) were brought into effect with the aim of updating the Berne Convention and the Rome Convention to address technological and market advancement. These treaties extend intellectual property protection to computer programs, databases, and digital rights management and address aspects related to distribution rights and the right to communicate with the public.

The Agreed Statements to the WIPO Internet Treaties limit distribution rights of literary and artistic works, performances, and photographs to fixed copies that can be circulated as tangible objects.[184] Consequently, as per WIPO treaties, both the exclusive right of distribution and the doctrine of exhaustion apply only to physical goods and not to intangible digital content. In other words, reselling of legally purchased digital content without authorisation from the copyright holder is prohibited.

3.7 Digital Exhaustion in Domestic Jurisdictions

Due to the lack of proper international agreement on digital exhaustion, the judiciary and domestic legislature play a crucial role in creating and applying domestic law to determine the practical scope of exhaustion. The growing use of electronic channels for purchasing digital products raises the question of whether legal distinctions between online and offline transfers should persist, especially when they result in counter-intuitive

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[183] See Footnote 13 to Article 51 of TRIPS, which excludes from the obligation of border measures "imports of goods put on the market in another country by or with the consent of the right holder." This wording mirrors Article 6.5 of the Treaty on Intellectual Property in Respect of Integrated Circuits (1989), which has been incorporated into the TRIPS Agreement through Article 35. ; Wolf R. Meier-Ewert & Jorge Gutierrez, *Intellectual Property and Digital Trade: Mapping International Regulatory Responses to Emerging Issues*, WTO Staff Working Paper No. ERSD-2021-4, World Trade Organization, https://doi.org/10.30875/38c801bc-en (2021).

[184] WCT Articles 6 and 7, along with the agreed statement for these Articles, clarify that the terms "copies" and "original and copies" mentioned in the right of distribution and the right of rental apply exclusively to fixed copies that can be circulated as tangible objects. Similarly, WPPT Article 12 and its corresponding agreed statement specify that "copies" and "original and copies" subject to distribution and rental rights pertain only to fixed copies that can be circulated as tangible objects.

differences between products that are otherwise identical from the consumer's perspective.[185] To understand the development of digital exhaustion, it is essential to look into the evolution of digital exhaustion in the US and EU through copyright legislation and Judicial Interpretations.

3.7.1 United States

The Doctrine of exhaustion or First sale doctrine (known as in the US) in US law originated from judicial interpretation, notably with the landmark US Supreme Court decision in *Bobbs-Merrill v. Straus*[186] of 1908, which established a precedent. It was later incorporated into the U.S. Copyright Act of 1909 (also known as the United States Code) and has undergone several amendments to accommodate technological advancements and international copyright law obligations.[187]

The US legal system has differentiated the concept of digital exhaustion from the traditional first-sale rule. This distinction is codified in Title 17 of the United States Code. Section 106 of Title 17 of the United States Code grants several exclusive rights to copyright owners, including the rights for the reproduction and distribution of copyrighted material. Section 109 (a) asserts that the owner of a lawfully made copy or phonorecord is entitled to sell or otherwise dispose of the possession of that copy or phonorecord.[188] Additionally, in section 109(d), it was provided that the owner may freely rent or lend their copy unless these are phonograms and software.[189] While reproduction and adaptation of a copy are generally prohibited, reproduction of software copies is permissible when necessary ‘as an essential step in utilising’ the computer program, albeit subject to certain limitations.[190]The doctrine of first sale provided in the Copyright Act 1909 refers to the tangible copies of the copyrighted work.

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[185]Antony Taubman, *Digital Disruption – Reshaping Markets for IP*, in *Competition Policy and Intellectual Property in Today's Global Economy 2* (Anderson, Carvalho & Taubman eds., Cambridge Univ. Press 2021).DOI http://dx.doi.org/10.2139/ssrn.3857808

[186] Bobbs-Merrill Co. v. Straus, 210 U.S. 339, 350-51 (1908).

[187]Péter Mezei, Copyright Exhaustion: Law and Policy in the United States and the European Union 78 (2d ed. 2022).

[188] 17 U.S.C. §109 (a) (2022)

[189] 17 U.S.C. §109 (d) (2022)

[190] 17 U.S.C. §117(a)(1) (2022).

In the US, the law relating to digital exhaustion is notably complex. The laws and judgments depend upon the nature and purpose of the object. Hence, different rules and judgments apply to different types of digital objects. To understand the approach of US lawmakers to digital exhaustion under US Copyright Law, it is essential to refer to some case laws.

3.7.1.1 Pre-ReDigi Cases

In *MAI Systems Corp. v. Peak Computers Inc.*[191], the US court addressed the question of whether copying computer software into temporary memory constitutes a copy under US Copyright Law. The court ruled that loading copyrighted computer software from a storage medium into the temporary memory of a CPU indeed results in a copy being made. This decision underlines that US legislation does not adopt a flexible approach regarding copyright exhaustion, restricting this right solely to physical copies of the copyrighted work.

Similarly, In A&M Records, Inc. and Napster, Inc.[192], which was decided by the United States Court of Appeals for the Ninth Circuit in 2001, The court found that Napster, an online media sharing service, was in violation of copyright protections held by numerous record companies. Napster's website allowed users to upload MP3 files from their computers, which could then be browsed and downloaded by other users. Napster argued that its operations were protected under the fair use doctrine as specified in Section 107[193]. However, the court rejected this defence, holding that Napster's business practices violated the exclusive rights of reproduction and distribution granted to copyright holders under section 106.[194] Although the court did not directly address the issue of digital exhaustion, as the defence was not raised, the case set a significant precedent for digital copyright infringement.

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[191] Mai Systems Corp. v. Peak Computers Inc., 991 F.2d 511 (9th Cir. 1993).
[192] A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004 (9th Cir. 2001).
[193] 17 U.S.C. §107 (2022)
[194] 17 U.S.C. §106 (2022)

3.7.1.2 United States v. Wise.

There are instances where US courts have reached different conclusions on similar issues. One notable case is *United States v. Wise.*[195] The court addressed the fine distinction between an owner and a licensee in this case. The court held that if a license grants the licensee the right to retain the copy of the work, the licensee effectively becomes the owner, and therefore, the transaction is considered a sale. In such cases, the first sale doctrine applies, allowing the resale of the copy. Conversely, if the license does not confer ownership rights, then the transaction is not considered a sale, and the first sale doctrine does not apply. This nuanced approach underscores the importance of the specific terms of the license agreement in determining the applicability of the first sale doctrine.

3.7.1.3 Re Digi Case

The *ReDigi* case refers to *Capitol Records, LLC v. ReDigi Inc*.[196][Hereinafter *ReDigi*], a landmark decision by the U.S. District Court for the Southern District of New York in 2013. ReDigi Inc. was a company that allowed users to resell their legally purchased digital music files from iTunes. They acknowledged that their business model was unique and innovative in addressing copyright issues. The ReDigi's system claimed to transfer the music files from the seller's computer to its servers and then to the buyer's computer. Users of ReDigi must download a "Music Manager," which uses a "verification engine" to ensure that only one copy of a music file exists per user. Theoretically, it removes the original file from the seller's machine to ensure that only one copy exists at any given time. This system is designed to prevent users from retaining a copy of the music file they have sold. If ReDigi detects any remaining copies of the music file on the user's computer, it requests the user to delete them. Failure to comply results in the termination of the user's account. However, Capitol Records sued ReDigi, claiming that its business model infringed on their reproduction and distribution rights.

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[195] United States v. Wise, 550 F.2d 1180 (9th Cir. 1977).
[196] Capitol Records, LLC v. ReDigi Inc., 910 F.3d 649 (2d Cir. 2018). [hereinafter ReDigi]

Capitol Records ' contention Against ReDigi: From Capitol Records' perspective, ReDigi's process of transferring music files from one user to another involved creating unauthorised copies of those files, thereby infringing on Capitol Records' exclusive rights provided under the Copyright Act. Capitol Records argued that ReDigi's business model amounted to copying, which the Copyright Act prohibits without the copyright holder's permission. They also complained about a thirty-second-long preview on ReDigi's platform without their authorisation.

ReDigi's counterarguments: ReDigi defended its business model by asserting that its activities only involved 'space shifting,' a practice that they argued did not constitute copyright infringement. Space shifting refers to transferring content from one medium or device to another, which ReDigi claimed was legal and should be considered fair use. ReDigi also invoked the "first sale doctrine," which allows the owner of a legally purchased copy of a work to resell that copy.

Court's Ruling and Reasoning: The court ruled against ReDigi, determining that the resale of digital music files constituted unauthorised reproduction and distribution under the U.S. Copyright Act. the court's decision was based on several key points.

Firstly, the court emphasised the point that transferring a digital music file from one device to another inherently involves making a copy of that file. A new copy is created when a user uploads a file to ReDigi's server, even if the original file is deleted. The court cited *London-Sire Records, Inc. v John Doe*[197], in which it was concluded that downloading a digital music file to a hard disk constitutes the creation of a new phonorecord; thus, any transfer, regardless of the number of copies, constitutes reproduction. So, the court, in this case, concluded that the process violates the copyright holder's exclusive right to reproduce the work. Consequently, the court determined that ReDigi had infringed on the copyright.

Secondly, the court found that the business model used by ReDigi constituted an unauthorised distribution. Under the U.S. Copyright Act, the copyright owner holds the

[197] London-Sire Records, Inc. v. Does 1-4, No. 04-cv-12434 (D. Mass. filed Dec. 15, 2004).

exclusive right to distribute copies of their work.[198] ReDigi's model, which facilitated the transfer of digital music files between users, was seen as infringing this right.

Thirdly, the court ruled that the first-sale doctrine, which allows the owner of a legally purchased copy of a copyrighted work to sell or otherwise dispose of that copy, does not apply to digital goods. This doctrine traditionally applies to physical items, where the transfer of ownership does not involve creating a new copy. The court highlighted that because digital transfers inherently involve copying, applying the first-sale doctrine in this context would undermine the copyright owner's control over reproduction. It clarified that the doctrine only pertains to a 'particular' copy, which refers to the exact copy received from the right holder. Whereas ReDigi's transactions involved digital copies that were not the original file received from the right holder.

3.7.1.4 Vernor v. Autodesk

Vernor v. Autodesk, Inc.[199], addresses the concern regarding the applicability of the first sale doctrine on the computer programs transferred to the user under the shrink wrap licence. Timothy Vernor purchased copies of Autodesk AutoCAD software from an architect and then resold them on eBay, an online secondhand market. Autodesk claimed that the resale of the software by Vernor infringed their copyright because the software was only licensed and not sold by them. End User License Agreement (EULA) of Autodesk imposed restrictions on the use and transfer of the software, including a prohibition on its resale.

The case revolved around whether Autodesk's transactions with its customers constituted a sale or a license. This distinction is crucial because the first sale doctrine, which permits the resale of legally acquired copies of copyrighted works without the permission of the copyright holder, applies only to items that have been sold and not to those which are licensed. The Ninth Circuit applied a three-part test to determine whether a transaction constituted a sale or a license:

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[198] 17 U.S.C. §106 (3) (2022)
[199] Vernor v. Autodesk, Inc., 621 F.3d 1102 (9th Cir. 2010).

1. *Whether the Copyright Holder Specifies That the User was Granted a License:* EULA of Autodesk explicitly stated that users were granted a license, not ownership, of the software. The court noted that the agreement's language was clear and unambiguous in describing the transaction as a license.

2. *Whether the Copyright Holder Significantly Restricts the Ability of User to Transfer the Software:* The EULA restricted the user's ability to transfer the software, including prohibiting resale. The court found that these restrictions were consistent with a licensing arrangement rather than a sale.

3. *Whether the Copyright Holder Imposes Notable Use Restrictions:* The EULA included several use restrictions, such as limitations on the number of installations and prohibitions on decompiling or modifying the software. These restrictions further supported the characterisation of the transaction as a license.

Court's Decision: The Ninth Circuit concluded that Autodesk's AutoCAD distribution was a license rather than a sale. As a result, the first sale doctrine did not apply, and Vernor's resale of the software was deemed to be an infringement of Autodesk's copyright. The court relied heavily on the explicit language and restrictions in Autodesk's EULA. The EULA clearly defined the transaction as a license and imposed significant limitations on transfer and use, distinguishing it from a sale. The decision emphasised the importance of the terms and conditions set by the copyright holder in determining the nature of the transaction.

This decision highlights the distinction between licensing and selling digital products, affecting how the first-sale doctrine is applied to software and other digital goods. Thus, Vernor v. Autodesk decision had significant implications for the software industry and the secondary market for software. It reinforced the ability of software companies to control the distribution and resale of their products through licensing agreements.

The decision was criticised in the US as it limited the applicability of the first sale doctrine in the digital age, raising concerns about consumer rights and the secondary market for software. Critics argued that the ruling gave software companies excessive

control over how their products were used and transferred, potentially stifling innovation and competition in the marketplace. This case underscores the evolving nature of copyright law in the context of digital goods. It set a precedent for future cases involving the resale of software and other digital products.

The legal precedents established by the above-mentioned cases, such as Napster, ReDigi, and *Autodesk,* significantly constrain the arguments in favour of digital exhaustion. In a digital environment, the movement of data inherently involves reproduction, a process that courts have interpreted as violating the exclusive rights of copyright holders under 17 U.S.C. section 106.

3.7.2 European Union

Before the advent of international treaties addressing copyright law, the European Economic Community (EEC), later known as the European Union (EU), had already made considerable strides in harmonising the exhaustion doctrine within copyright law. The EU's approach to the exhaustion doctrine is notably territorial, applying only within the EU. This means that goods lawfully sold in one Member State can circulate freely within the EU but not beyond, prohibiting international exhaustion. The ECJ's ruling in the Laserdisken case emphasised that Member States could not provide for a broader scope of exhaustion than the Community-wide rule, as this would create barriers to the free movement of goods and services.

3.7.2.1 EU Legislation On Digital Exhaustion

The EU legislature was initially hesitant to regulate the principle of exhaustion. Instead, they relied on the extensive case laws developed by the Court of Justice of the European Union (CJEU) to address the exhaustion issues.[200] This judicial precedent was considered sufficient for a long time, delaying legislative action. Eventually, the principle of exhaustion was formally established through two key legislative texts: the Software

[200] Commission, Green Paper on Copyright and the Challenge of Technology – Copyright Issues Requiring Immediate Action, COM (1988) 172 final, available at: https://op.europa.eu/s/zKy1. [Hereinafter Green Paper]

Directive I (1991)[201] and the Rental Directive I (1992).[202] These directives drew clear distinctions between sale-style and service-style rights, applying the exhaustion principle to the former while excluding rental and public communication rights.[203]

Software Directive I introduced a rental right for software producers that excluded rentals from exhaustion principles but allowed for the resale of tangible and intangible copies. The Rental Directive of 1992 expanded distribution rights further to various entities but excluded rentals from the exhaustion doctrine. A German corporation[204] involved in sound recording rentals challenged this exclusion, which was addressed by the European Court of Justice, which upheld the distinction between rental and distribution rights, emphasising the need to safeguard huge investments required in creating copyrighted works related to phonograms.

Notably, the early directives for applying the exhaustion principle did not explicitly require a condition that copies be tangible. The distinction between tangible and intangible copies was first highlighted in a Commission report on the implementation of the Software Directive[205] and later in the Follow-up to the Green Paper on Copyright in the Information Society[206], which categorised online exploitation of work as a service. The Database Directive (1996) further built on these definitions, explicitly excluding exhaustion for re-utilising materials extracted from online databases.

Further, to implement the WIPO Copyright Treaty (WCT) through the Information Society Directive, the EU legislator incorporated the treaty's provisions on the right of distribution and exhaustion. Article 4 of the Directive closely mirrored Article 6 of the WCT, and Recital 28 incorporated the Agreed Statement's limitation to tangible copies.

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[201] Council Directive 91/250/EEC of 14 May 1991 on the Legal Protection of Computer Programs, 1991 O.J. (L 122); [Hereinafter Software Directive]

[202] Council Directive 92/100/EEC of 19 November 1992 on Rental Right and Lending Right and on Certain Rights Related to Copyright in the Field of Intellectual Property, 1992 O.J. (L 346) 61.[Hereinafter Rental Directive]

[203] See, Art. 4(c) software directive, supra note 201 I; Art. 1(4) Rental Directive I.

[204] Case C-200/96, Metronome Musik GmbH v. Music Point Hokamp GmbH, [1998] E.C.R. I-1978, ¶¶ 18-20.

[205] Commission, *Report on the Implementation and Effects of Directive 91/250/EEC on the Legal Protection of Computer Programs*, COM 199 final, 17 (2000).

[206] Commission, *Follow-up to the Green Paper on Copyright and Related Rights in the Information Society*, COM(96) 568 final, ch. 2, para. 4.

The Directive also excluded the right of communication to the public (Article 3(3)) and services and copies made from online services from the exhaustion principle (Recital 29).

The resale royalty right (droit de suite) limits the principle of exhaustion for tangible works of visual art. This inalienable right allows artists to receive royalties from subsequent sales of their works, ensuring ongoing compensation for their creations. The EU directive on resale rights specifies that this right applies only to visual artists and excludes literary authors and composers. This resale right, applicable to works involving art market professionals, introduces a controlled flow of tangible copies, contrasting with the principle of exhaustion's aim of free property disposal.

Despite these efforts, the EU legislator did not address the complexities of "grey" forms of exploitation, such as the permanent transfer of digital files over the Internet.[207] This lack of clarity left significant interpretative challenges as digital business models advanced rapidly. Consequently, the boundaries between the right of distribution and the right of communication to the public remained ambiguous, necessitating further judicial interpretation and development of the principle of exhaustion, echoing its judicial origins from the early 1970s.[208]

3.7.2.2 Early CJEU case laws (1970s-1990s)

Most of the early cases in the EU regarding exhaustion were focused on the territorial principle of the exhaustion doctrine. The concept of exhaustion in the EU dates back to the 1970s, originating from the *Deutsche Grammophon case*,[209]. In this case, CJEU established the doctrine of community exhaustion. The fact of this case involved a licensing scheme introduced by the plaintiff based on a net of exclusive national distributors of sound recordings, which segmented the internal market based on national borders. The CJEU found that national exhaustion conflicted with the essential purpose of EU treaties and restricted the free movement of goods. CJEU ruled that copyright

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[207] Caterina Sganga, *Digital Exhaustion after Tom Kabinet: A Non-exhausted Debate, in EU Internet Law in the Digital Single Market* (T. Synodinou et al. eds., Springer 2021), available at https://ssrn.com/abstract=3803940. (last visited June 4, 2024).
[208] Id.
[209] Case C-78/70, Deutsche Grammophon Gesellschaft Gmbh v. Metro-SB-Großmärkte GmbH & Co. KG, [1971] E.C.R. I-499.

could not be used to partition markets or restrict the free movement of goods within the EEC; any prohibition or restriction on trade must not constitute arbitrary discrimination or disguised restrictions on trade between Member States. This decision emphasised the importance of safeguarding rights while balancing fundamental freedoms. Despite the CJEU's articulated arguments, the EU legislator only incorporated tangible criteria and excluded services from exhaustion, deviating from the WCT's requirements.

The CJEU reaffirmed this principle in the Membran case[210], in which it ruled that copyright could not be used to prevent or restrict the importation of sound recordings lawfully marketed in another Member State. The court highlighted that neither the copyright owner nor their licensee could rely on exclusive exploitation rights to partition the market, as this would entrench national market isolation, which the Treaty sought to abolish. In the Coditel I case of 1980[211], the CJEU clarified the application of the exhaustion doctrine to services. The court confirmed that granting territorial exclusivity to "show" cinematographic works was not arbitrary discrimination or a disguised restriction. Consequently, prohibiting the broadcasting of such works by an unlicensed cable television company receiving signals from another Member State was permissible.

3.7.2.3 Laserdisken case (2006)

Laserdisken ApS v. Kulturministeriet[212] is a significant case in the interpretation of copyright regulations within the European Union (EU). The Danish company Laserdisken ApS is a retailer of audiovisual media, such as DVDs and Blu-ray discs, which it imports from various countries. The conflict arose when Laserdisken imported these media from outside the EU and sold them in Denmark without the consent of the original copyright holders. The Danish Ministry of Culture contended that such actions violated the copyright holders' distribution rights as protected under Danish law, which implemented the EU Copyright Directive.[213] The Directive establishes that the

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[210] Cases 55 & 57/80, Musik-Vertrieb Membran GmbH and K-tel Int'l v. GEMA-Gesellschaft für musikalische Aufführungs- und mechanische Vervielfältigungsrechte, 1981 E.C.R. 147, paras. 15, 18.
[211] Case 62/79, SA Compagnie Générale pour la Diffusion de la Télévision, Coditel, and Others v. Ciné Vog Films and Others, 1980 E.C.R. 903, ¶¶ 15-17.
[212] Laserdisken ApS v. Kulturministeriet, Case C-479/04, [2006] E.C.R. I-8089.
[213] *Id*. at para 13-15.

distribution right is exhausted only when a copyrighted work is sold within the EU with the rights holder's consent, effectively prohibiting the unauthorised import and resale of copyrighted works from outside the EU. The core legal question in this case was whether the principle of exhaustion of distribution rights, as outlined in the EU Copyright Directive, applied to goods imported from outside the EU. Specifically, it questioned whether Laserdisken's practice of importing and selling audiovisual media from non-EU countries without the consent of the rights holders constituted a breach of the Directive. The case was initially heard by Danish courts, which ruled against Laserdisken, leading to an appeal that eventually brought the matter before the European Court of Justice (ECJ).

European Court of Justice judgement: The ECJ ruled in favour of the Danish Ministry of Culture (Kulturministeriet), upholding the principle that the exhaustion of distribution rights does not apply to goods imported from outside the EU. The Court clarified that the EU Copyright Directive aims to create a harmonised legal framework for copyright protection within the EU, ensuring that the rights of copyright holders are uniformly protected across member states. Among other issues, the case examined the validity of the first sale rule under Article 4(2) of the 2001 Directive.[214] The Grand Chamber confirmed the validity of this rule and determined that it applies when two conditions are met.[215] First, the work or copies of the work must be placed on the market by the rightsholder.[216] Second, the first sale rule is applicable only if the work or copies thereof have been placed on the market within the EU.[217]

3.7.2.4 The Used Soft Case (2012)

The Court in *UsedSoft GmbH v. Oracle International Corp*., [Hereinafter *UsedSoft*][218] held that the exhaustion of the right extends to the distribution of an intangible copy through the intangible medium. Companies attempt several strategies to avoid their

[214] *Id.*. Para 16
[215] *Id.*. Para 21
[216] *Id.*.
[217] Id..
[218] UsedSoft GmbH v. Oracle Int'l Corp., Case C-128/11, EU:C:2012:407.[Hereinafter UsedSoft]

software being entered into second-hand markets.[219] Until the judgement of the *UsedSoft* case, it was unclear whether exhaustion was applicable to software as an exception to exclusive resale rights; it created uncertainties in selling used software. Moreover, in a previous case[220], the Court ruled exhaustion under the Information Society Directive only applies to tangible work.[221]

Oracle, a major software company, marketed its software through licensing agreements that allowed customers to download and use its software. *UsedSoft*, a German company specialised in reselling used software licenses, acquired licenses from Oracle customers and resold them, enabling new users to download the software directly from Oracle's website using these second-hand licenses. In other words, *UsedSoft* is a digital marketplace for second-hand software.

Oracle argued that its software licenses were non-transferable under its licensing agreements. it brought a lawsuit against *UsedSoft* in the German courts, seeking to stop the resale of its licenses by Oracle. The case eventually reached the Bundesgerichtshof (German Federal Court of Justice), which referred questions to the CJEU regarding the interpretation of the EU Software Directive (Directive 2009/24/EC) and the doctrine of exhaustion of the distribution right in the context of software.

The core legal issue was whether the doctrine of exhaustion, traditionally applicable to the sale of physical goods, extended to the sale of software licenses and, if so, whether this principle could be applied to downloaded software. Specifically, the court needed to determine if the first sale of a software license, where the software was downloaded rather than physically delivered, exhausted the rightsholder's exclusive distribution rights under Article 4(2) of the Software Directive.

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[219] Louise Longdin & Pheh Hoon Lim, *Inexhaustible Distribution Rights for Copyright Owners and the Foreclosure of Secondary Markets for Used Software*, 44 Int'l Rev. Intell. Prop. & Competition L. 541 (2013); Lisa R. Pitell, *Non Transferability of Software Licenses in the European Union*, 26 Eur. Intell. Prop. Rev. 390 (2004).
[220] Art & Allposters International BV v. Stichting Pictoright, Case C-419/13, [2015] E.C.R. I-0227
[221] Id.

The CJEU ruled in favour of *UsedSoft*, establishing a landmark precedent for digital exhaustion. The court held that the principle of exhaustion of the distribution right applies to software distributed via download, provided certain conditions are met.

Exhaustion of Distribution Right: The court held that Oracle cannot cannot oppose the resale of "used" licenses for programs downloaded from the Internet. It clarified that the distribution right is exhausted upon the first sale of the software, regardless of whether the sale involves a physical medium or a download. This means that once a software license is sold, the rightsholder cannot prevent its resale. The Court emphasised the clear intention of the European Union legislature to treat tangible and intangible copies of computer programs equally for the purposes of protection under the Software Directive.[222] This interpretation does not conflict with the InfoSoc Directive, as the Software Directive is a lex specialis.[223]

Conditions for Exhaustion: For the application of the exhaustion principle, the rightsholder must have received a fee corresponding to the economic value of the software copy. This effectively can equate to the transfer of ownership of the copy, thus exhausting the distribution right.

License Transfer: The Court defined a sale as an agreement where a person, in return for payment, transfers ownership rights of a tangible or intangible item. Therefore, granting a license for an unlimited period, in this case, is equivalent to a transfer of ownership. This holds true regardless of whether the transfer occurs via a tangible medium or a download. The ruling emphasised that the initial license acquirer must make their copy unusable at the time of resale to prevent multiple uses from a single license. Thus, the license can only be used by one party at a time, maintaining the integrity of the original licensing agreement.

However, the Court did not extend this exhaustion principle to services. Distribution rights do not cover service contracts.[224] The unique element of this case lies not in the use

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[222] This was based upon art. 1(2) of the software directive, supra note 201

[223] *UsedSoft*. at pt. 56. This was later confirmed by CJEU, Judgment in case Case C-355/12, *Nintendo Co. Ltd. v. PC Box Srl*, ECLI:EU:C:2014:25.

[224] *UsedSoft, supra note 218,*. at Pt. 66.

of the exhaustion principle for copyrighted material but in its application to an intangible copyrighted work, a software program initially sold online. The *UsedSoft* judgment significantly impacted the digital exhaustion domain in the EU by extending the traditional exhaustion doctrine to the digital realm. This decision recognised that the principle of exhaustion applies not just to tangible goods but also to digital products, provided they are sold rather than merely licensed on a subscription basis.

One of the immediate effects of the ruling was the creation of a legitimate secondary market for used software licenses. Companies like *UsedSoft* could lawfully resell software licenses, giving consumers more options and potentially lowering software costs. This also encouraged software publishers to reconsider their licensing models and adapt to the new legal landscape where resales could not be easily restricted.

Although the case specifically addressed software, its implications could have been extended to other types of digital content, such as digital music, e-books and videos. However, the European Court explicitly decided to limit the effect of the decision to software in a landmark judgment. This will not violate the Infosoc Directives as the Software Directive is a lex specialis.

3.7.2.5 Nintendo Case (2014)

The judgement of CJEU in Nintendo v PC Box[225] has an influence that extends beyond the videogame industry. This case is about Nintendo, a leading video game developer and publisher, efforts to prevent the sale of devices, such as mod chips, that allowed users to circumvent TPMs on Nintendo consoles, enabling the unauthorised use of Nintendo games.The CJEU confirmed that TPMs entailing both software media and hardware are admissible. Moreover, according to the CJEU, if a software product also contains other copyrighted media, the general provisions of the European copyright law concerning copyright take precedence over software-specific provisions.[226] The article discusses to what extent additional protection of TPMs was made available to hardware

[225] Case C-355/12, *Nintendo Co. Ltd. v. PC Box Sr*l, ECLI:EU:C:2014:25.
[226] B. Widła, *More than a Game: Did Nintendo v. PC Box Give Manufacturers More Control over the Use of Hardware?*, 33 Comput. L. & Sec. Rev. 65 (2017), https://doi.org/10.1016/j.clsr.2016.11.013.

manufacturers who are also copyright holders to software which allows the hardware to perform its function.[227]

The decision in the *Nintendo* Case significantly limited the scope of the *lex specialis* doctrine. This legal doctrine suggests that a specific law overrides general laws in cases of conflict. The Nintendo case diluted this doctrine by limiting its scope and emphasising the applicability of general copyright law (InfoSoc Directive) to hybrid works over specific software provisions (Software Directive). The CJEU concluded that for hybrid works, the general copyright provisions (InfoSoc Directive) are more applicable, thus narrowing the application of the Software Directive.

Unlike the *UsedSoft* case, which expanded the principle of digital exhaustion to software distributed online, Nintendo v. PC Box did not directly address digital exhaustion. However, it indirectly affected the principle. When stronger protections are available under the General rule (InfoSoc Directive) for hybrid works, it could potentially limit the applicability of digital exhaustion in such contexts.

3.7.2.6 Tom Kabinet Case (2020)

Since the UsedSoft judgment in 2012, there has been uncertainty about whether a similar interpretation would apply to works covered by the EU InfoSoc Directive.[228] In December 2019, the CJEU Grand Chamber, in the judgement of The Tom Kabinet Case, provided clarity on this issue. The Tom Kabinet Case (Nederlands Uitgeversverbond v Tom Kabinet Internet BV)[229] is one of the latest cases in which CJUE dealt with Digital Exhaustion. In this case, CJUE considered the applicability of the InfoSoc and Software Directives in digital E-book trade.

Tom Kabinet, an online startup company, operated a platform for the resale of second-hand eBooks. The eBooks were acquired without any Digital Rights Management

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[227] Id.
[228] Geiregat, *supra note* note 63, at 9
[229] Case C-263/18, *Nederlands Uitgeversverbond v. Tom Kabinet Internet BV*, [2020] E.C.D.R. 1

(DRM) and sold on their digital platforms.[230] In order to avoid the sale of pirated copies, the sellers are required to acknowledge that they acquired the eBook through legal means.[231] To address the copyright issues, Tom Kabinet introduced a method of watermarking to distinguish 'legally acquired original' copies from pirated ones. In addition, they mandated their users to delete the ebooks from devices soon after they sell them in Tom Kabinet software.[232] They even had a system to give 20 per cent of the profit to the original author.[233] However, on the eighth day after starting it in 2014, it attracted infringement cases from a Publishers' association in the Netherlands; the Dutch Trade Publishers Association (Nederlandse Uitgeversbond).[234] Publishers argued that this activity infringed their copyright, as eBooks were being resold without their authorisation.

Following failed negotiations, the Publishers Association sued Tom Kabinet and requested preliminary injunctions to shut down the website. The court denied the injunctions, citing that under the *UsedSoft*[235] decision, the resale of used e-books may not be prohibited by European law.[236] Moreover, the court highlighted Tom Kabinet's efforts to add watermarks to e-books to prevent illegal trade and criticised the publishers for not cooperating with Tom Kabinet before initiating legal action.[237]

Eventually, the Dutch Court of Appeals (Hof Amsterdam) issued a preliminary injunction to shut down Tom Kabinet, ruling that while the application of the *UsedSoft* decision to e-books couldn't be excluded outright, a full trial was needed to determine compliance with EU law. The court agreed with the plaintiff's argument that the website facilitated

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[230] Nate Hoffelder, Publishers Lose First Round of Lawsuit Against Used eBook Marketplace, The Digital Reader (2014), https://the-digital-reader.com/publishers-lose-first-round-lawsuit-used-ebook-marketplace/ (last visited Jun 11, 2024).
[231] Franco Rizzuto, *The European Court of Justice Rules in Tom Kabinet that the Exhaustion of Rights in Copyright has Little Place in the Age of Online Digital Formats (Case Comment)*, 26(4) Comput. & Telecomm. L. Rev. 108, 108-115 (2020).
[232] Id.
[233] Nate Hoffelder, Used eBook Website Faces Lawsuit in Europe, The Digital Reader (2014), http://the-digital-reader.com/2014/06/27/used-ebook-website- (last visited Jun 11, 2024).
[234] Id.
[235] UsedSoft GmbH v. Oracle International Corp., Case C-128/11, ECLI:EU:C:2012:407.
[236] District Court of Amsterdam, Nederlands Uitgeversverbond and Groep Algemene Uitgevers v. Tom Kabinet, C/13/567567/KG ZA 14–795 SP/MV, July 21, 2014.
[237] Joke Bodewits, *The Reselling of Second Hand E-Books Allowed in the Netherlands*, E-Commerce L. Rep., Issue 4/2014, at 11.

the resale of illegal copies and stated that the injunction could be lifted if Tom Kabinet proved its system was only used for the resale of legally acquired e-books.[238] No appeals followed.

In June 2015, Tom Kabinet modified its business model. The company began purchasing e-books from official distributors or individuals in its reading club and selling them to registered members. Users were encouraged to resell or donate e-books back to Tom Kabinet for credits or a discount on membership fees and were required to delete the e-books from their devices upon resale or donation. Tom Kabinet also used digital watermarks to indicate the lawful nature of the e-books.

Based on these changes, the same associations sought an injunction from the District Court of The Hague to stop Tom Kabinet's website. The court ruled that Tom Kabinet's service did not constitute communication to the public under the InfoSoc Directive[239] but was uncertain about whether the right of distribution and the doctrine of exhaustion applied and if the reproduction right needed to be exhausted for the service to remain lawful. Consequently, the court referred four questions to the CJEU.

Advocate General (AG) Szpunar examined the norms, CJEU case laws, and policy considerations extensively. Although he is a strong supporter of digital digital exhaustion, he ultimately rejected it in this case on several grounds. AG Szpunar argued that the WCT mandated the use of the right of communication to the public for digital dissemination. He noted that market realities had changed significantly since the adoption of the WCT in 1996 and the InfoSoc Directive in 2001, with e-commerce blurring the lines between goods and services. Despite this, European legislation clearly followed the WCT's logic.

AG Szpunar doubted whether the distribution right under Article 4 of the InfoSoc Directive applied to online digital content, as digital materials are not subject to ownership and cannot be sold. He questioned whether exhaustion could limit contractual freedom and rejected the 'new copy theory' because no limitations applied to the

[238] Court of Appeal of Amsterdam, Nederlands Uitgeversverbond and Groep Algemene Uitgevers v. Tom Kabinet, 200 154 572/01 SKG NL:GHAMS:2015:66.
[239] Art. 3 of the InfoSoc Directive, supra note 149,.

reproduction of new copies. While he analysed *UsedSoft*, he refused to apply the theory of functional equivalence to e-books, citing the fragility of markets for protected works other than software. However, he agreed with Tom Kabinet that the CJEU's ruling on digital lending would be meaningless without digital exhaustion. Finally, he referenced the CJEU's case law on linking and concluded that it did not apply to downloading works.

Despite AG Szpunar's opinion, the CJEU based its judgment on historical, teleological, and systematic analyses of EU norms. It found that the preparatory work, recitals of the InfoSoc Directive, and the WCT indicated that the right of communication to the public includes interactive dissemination of copies. The Court ruled that Tom Kabinet's service constituted 'communication' to a 'new public' and was not considered when the e-books were originally sold. It excluded e-books from the Software Directive's scope and argued, consistent with the Nintendo ruling, that the InfoSoc Directive takes precedence for mixed works. The Court rejected the theory of functional equivalence for e-books, stating that they do not deteriorate and could harm the original market for rights holders.

The CJEU ruled that the doctrine of exhaustion does not apply to digital books. The court, while giving judgement, referred to preparatory notes of Infosac Directives and concluded that the legislator, while formulating the Directives, intended to restrict the doctrine to original physical copies and, therefore, should read with the Agreed Statement of WCT.[240] The court further distinguished between tangible and intangible goods, stating that digital files do not deteriorate with use, unlike physical books. Consequently, held that the resale of eBooks would affect the copyright owner's ability to control distribution and reproduction. Computer programs are an exception to these principles, as the software directive has a *Lex specialis* nature.[241]

The *Tom Kabinet* case aligns EU law on digital exhaustion more closely with the United States approach. The US version of the exhaustion principle, known as the 'First Sale'

[240] Péter Mezei, Copyright Exhaustion: Law and Policy in the United States and the European Union 78 (2d ed. 2022).
[241] C-355/12, Nintendo Co. Ltd, Nintendo of America Inc., Nintendo of Europe GmbH v. PC Box Srl and 9Net Srl.

doctrine, is established in Section 109 of the US Copyright Act. Unlike the US, which recognises international exhaustion, meaning the first sale of copyrighted work anywhere in the world triggers exhaustion, the EU only acknowledges exhaustion within its region. US copyright law The US Copyright Office has consistently maintained that the first sale doctrine does not apply to digital goods. This stance was definitively confirmed with the conclusion of the *ReDigi* case, which established that digital exhaustion is not recognised in the US.

3.8 Conclusion

In conclusion, Chapter Three has highlighted the critical role of digital trade in the global economy and examined the application of the exhaustion doctrine to digital goods and services. Through an in-depth analysis of digital exhaustion, the researcher explored arguments favouring and against its implementation and significant precedents in the digital context. The comparative analysis of digital exhaustion in EU and US jurisdictions and various case laws such as *UsedSoft,Redigi and Tom kabinet,* revealed notable complexities and discrepancies in how these legal systems address the issue. This chapter sets the foundation for understanding the challenges and ongoing debates surrounding the application of exhaustion principles to digital products. The analysis of various challenges will be detailed in the next chapter.

Chapter Four

Challenges in Application of Digital Exhaustion

4.1 Introduction

Exhaustion is a doctrine that enables the resale of copyrighted products by restricting the exclusive right to distribution of copyright holders attached to the product upon its first sale. The public right to access knowledge, consumers' right to resale, and the copyright owner's exclusive rights are balanced with this doctrine. However, applying the same doctrine to digital transactions poses different challenges due to the peculiar nature of products and platforms involved in digital trade. The legislature and judiciary in the US and EU attempt to address these concerns via rules and interpretations in various precedents. While giving judgment, the judiciary prioritised the economic rights of copyright owners over their consumer rights.[242] It is quite understandable as the economic loss for copyright owners will be huge as digital content is transferred much faster and can be easily pirated. When analysing the precedents, it can be inferred that multiple challenges exist in extending Exhaustion to digital trade. The primary concern lies in the materiality of digital products. Digital products are intangible in nature and may or may not be contained in an intangible medium. Unlike a physical copy, it will not deteriorate and can easily be reproduced in an intangible medium. Value for digital products is attached to the intangible intellectual property of the products. Transfer of Digital content through digital medium creates a ‘new copy’ and leads to the reproduction of copy, thus violating copyrights. Businesses employing strategies like licencing to evade Exhaustion pose another challenge. The ‘buy’ option provided in digital trade platforms does entitle property to a purchaser. In most cases, platforms such as EULA provide shrink-wrap agreements, which may deceive the purchaser. Some of these challenges are discussed and settled in precedents. This chapter is a humble effort to analyse each such challenge in light of relevant presidents and statutes.

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[242] Aydan Mammadli, Digital Exhaustion, 7 BAKU St. U.L. REV. 94 (2021).

4.2 Non-Tangible Character of Digital Product

The aspiration of humankind for technological advancement led to innovations that transformed the nature of tradable products and resulted in a new kind of trade. i.e., Digital trade. The digital trade mostly involves the trade of digital goods, which has an intangible nature. Unlike tangible goods, which people can touch, hold, and physically interact with, digital goods exist in a digital format and can only accessed, transferred, stored, and consumed electronically. For example, they include e-books, software, music files, videos, online courses, and digital artwork. Two major concerns regarding the tangibility character of digital goods are the absence of wear and tear and ease of replication and distribution. Firstly, Digital goods can be copied and distributed quickly and at virtually no cost as they are in digital format. This is in contrast to the characteristics of physical goods, which require resources and effort to manufacture, replicate, and transport. Secondly, Digital goods do not deteriorate with their use over time. An e-book or digital song remains in the same condition regardless of how often it is read or played.

The concept of sale is based on the transferability of property on goods. The Blackstonian concept of property defines the right to property as "that sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual in the universe."[243] A mere transfer of ownership is insufficient to have a property on goods.[244] The appropriator of ownership of goods should have a complete right to exploit the goods to their fullest extent.[245] However, this notion of 'Property' was formulated in relation to tangible goods having materiality, where, along with ownership, material possession can be transferred, allowing the new owner to exercise complete control over the object, excluding all others, including the prior owner. In the case of digital goods, the value of goods or property often lies in the intangible intellectual property attached to them rather than in

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[243] 2 William Blackstone, *Commentaries on the Laws of England* 2 (1766).
[244] Thomas W. Merrill & Henry E. Smith, *What Happened to Property in Law and Economics?*, 111 Yale L.J. 357, 359-60 (2001) (arguing that mere transfer of ownership does not constitute full property rights). Available at: https://scholarship.law.columbia.edu/faculty_scholarship/411(last visited on 05 may)
[245] Carol M. Rose, *Canons of Property Talk, or, Blackstone's Anxiety*, 108 Yale L.J. 601, 603-04 (1998) Available at: https://core.ac.uk/download/pdf/215559322.pdf (last visited on 05 may)

physical materials.[246] The general assumption is that the digital transfer of goods creates a new copy of the same kind.[247] For instance, When a person shares a digital copy electronically, the original copy remains in the sender's system, and only a copy is transferred to the receiver's system. In that case, the acquirer cannot exploit the property attached to digital goods to its fullest extent. The courts in various jurisdictions regarded this 'new copy theory' as a reproduction that amounts to copyright infringement. In all these cases, the courts were attempting to find whether the copying amounts to copyright or the doctrine of Exhaustion. They failed to consider whether this case meets the original purpose and objective of Exhaustion.

The core objective of the Exhaustion doctrine is to enable the purchaser to enjoy property rights in the copy they purchased without restriction. This principle should logically extend to digital products. Even the international framework too failed to recognise the core objectives of the Exhaustion doctrine. The WIPO Internet Treaties, namely the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT), introduce an artificial distinction between tangible and digital copies concerning the Exhaustion doctrine. Article 6 of the WCT confers on copyright owners the right to distribute their work by sale or other transfers[248]. Nonetheless, it is made clear in the Agreed statement regarding Articles 6 and 7 that this only pertains to fixed copies that are able to be distributed as physical goods.[249] This limitation is seen as restricting the Exhaustion doctrine to physical goods alone.[250] WCT, with this distinction, fails to acknowledge that the intent of the doctrine is to balance the rights of copyright holders with those of purchasers, irrespective of the nature of trade. The common law principle of restraint on alienation should not be confined to physical copies alone. Excluding digital copies from the Exhaustion doctrine would grant copyright holders undue control over

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[246] Pamela Samuelson, *The Digital Dilemma: Intellectual Property in the Information Age*, 57 Emory L.J. 473, 475-76 (2008) Available at: http://www.cs.yale.edu/homes/jf/DigitalDilemma.pdf (last visited on 05 may)

[247] MAI Systems Corp. v. Peak Computer, Inc., 991 F.2d 511, 518-19 (9th Cir. 1993) .

[248] World Intellectual Property Organization, *WIPO Copyright Treaty* art. 6-7, Dec. 20, 1996, S. Treaty Doc. No. 105-17, 2186 U.N.T.S. 121. [Hereinafter WCT]

[249] WIPO art. 6 ; Agreed Statements concerning WIPO Copyright Treaty (1996).
Available at: https://www.wipo.int/wipolex/en/text/295456 (last visited on 05 may)

[250] J A L Sterling et al., Sterling on world copyright law 566 (2015).

sold copies merely because the trade was carried out in an intangible medium, effectively creating a monopoly and infringing on the purchaser's rights.

While considering logical facts, digital content seems intangible, but it also has a corporeal form.[251] During a transfer, throughout the process, these files undergo changes, starting on the Source server and continuing through the internet network and connections to the buyer's system.[252] For instance, video CDs have physical pits stamped into them to store data as '1' and '0' bits, which are read by lasers to reproduce video.[253] Similarly, in magnetic or solid-state drives, data exists as electromagnetic 'fields', which represent its tangible materiality in digital form. When these files are moved or transferred, electromagnetic waves and electrical signals physically relocate these fields from one storage device to another, akin to how computer software operates.[254] Thus, these files involve tangible physical substance and nature despite their digital nature. However, the court often failed to address these aspects[255]; rather, they were focused on the transferability of property of goods. For instance, In *Hamm Audiobooks*[256], the court characterised downloads as 'transfers of instructions to local memory' and observed that there is a lack of physical substance being transferred. This agrees with the dominant German view that digital files not incorporated in the physical medium are intangible copies.[257] In contrast, a departure from this view can seen in the case of software. In the United States, the Supreme Court of Louisiana, at least in the context of taxability, held

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[251] Djakhongir Saidov & Sarah Green, *Software as Goods*, J. Bus. L. 161, 165 (2007) http://www.cisg.law.pace.edu/cisg/biblio/green-saidov.html (last visited on 05 may)

[252] Determann, Lothar. *Digital Exhaustion: New Law from the Old World*. 33 Berkeley Tech. L.J. 185, 185-232 (2018). Available at: https://www.jstor.org/stable/26490157 (last visited on 05 may)

[253] James Huguenin-Love, *Song on Wire: A Technical Anaysis of ReDigi and the Pre-Owned Digital Media Marketplace*, 4 N.Y.U. J. INTELL. PROP. & ENT. L. 1, 15 (2015). Available at: https://jipel.law.nyu.edu/vol-4-no-1-1-hugueninlove/ (last visited on 05 may)

[254] Ibid.

[255] Orin S. Kerr, *Searches and Seizures in a Digital World*, 119 Harv. L. Rev. 531 (2005). Available at: https://canvas.harvard.edu/files/4230791/download?download_frd=1 (last visited on 05 may)

[256] Oberlandesgericht Hamm [OLG Hamm] [Higher Regional Court of Hamm] May 15, 2014, ZEITSCHRIFT FOR URHEBER UND MEDIENRECHT-RCHTSPRECHUNGSDIENST [ZUM-RD] 715 (724), 2014 (Ger.).

[257] Christina Stresemann et al., *Münchener Kommentar zum Bürgerlichen Gesetzbuch: BGB [Munich Commentary on the Civil Code]* vol. 5, 90 at 25 (7th ed. 2015).("Electronic data and computer programs do not qualify as 'things' because they do not possess the distinct physical attributes typically associated with the conceptual idea of a 'thing'."); ; see also Bundesgerichtshof [BGH] [Federal Court ofJustice] Nov. 15, 2006, NEUE JURISTISCHEWOCHENSCHRIFT [NJW] 2394, 2007 (Ger.) (regarding computer programs stored on a physical data carrier).

'software' to be tangible personal property[258], citing its physical existence on tangible media and its ability to cause physical effects.[259] German courts also acknowledged the tangible character of software in *UsedSoft*[260] for the purpose of Exhaustion. Conversely, German rulings on audiobooks held that the Exhaustion doctrine applies only when ownership of the protected subject matter is transferred, which does not occur with digital data.[261] A major takeaway from the CJEU's ruling in *UsedSoft* was its definition of a sale as the transfer of ownership rights in both 'tangible' and 'intangible' items.[262] This interpretation, however, is not universally accepted across various legal systems. Different countries define 'property' differently. For example, Austria, the Netherlands, and Canada recognise property interests in intangibles, while Germany does not.[263] Regardless, courts in Germany, Austria, and the Netherlands have accepted that computer programs can be traded without assigning ownership of the intangible software data.[264]

A similar view was taken by The US court in *ReDigi* while discussing ownership of downloaded music files. It held that as much as software is in a physical medium, a consumer can claim ownership under US copyright law. Thus, we can conclude that digital content in the tangible medium will come under the purview of Exhaustion. At the same time, the court negates Exhaustion in the case of the sale of digital media itself or as contained in an intangible medium.

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[258] S. Cent. Bell Tel. Co. v. Barthelemy, 643 So. 2d 1240, 1241 (1994).
[259] Id. 1246
[260] *UsedSoft, supra note 218,*. Pt. 55
[261] In the *Le Corbusier* case, the CJEU highlighted that Article 4(1) of Directive 2001/29, which addresses 'distribution by sale or otherwise,' should be interpreted in alignment with the WCT and WPPT treaties as involving a transfer of ownership. See, C-456/06, *Peek & Cloppenburg KG v. Cassina SpA*, ECLI:EU:C:2008:232, [2008] E.C.R. I-2731 (Apr. 17, 2008).
[262] *UsedSoft, supra note 218,*. at Pt. 42 and 49.
[263] Péter Mezei, Copyright Exhaustion 120 (2022).
[264] Id.

4.3 Right to Reproduce and Digital Transfer of Work

The copyright act primarily grants two exclusive rights to the creator: The right to Distribution and the right to reproduction.[265] The doctrine of Exhaustion applies solely to the right of distribution. Exhaustion does not limit the reproduction right of the right holder. In the United States, the copyright owner maintains the right to distribute copies or phonorecords of the copyrighted work to the public through sale or other forms of transfer of ownership, as well as through rental, lease, or lending.[266] Likewise, the EU's InfoSoc Directive requires member states to grant authors the sole authority to authorise or deny any public distribution of their original works or copies thereof, whether through sale or other means. [267] These provisions align with the WCT, which affirms that the copyright holder has the exclusive right to regulate the distribution of their works through sale or other transfer of ownership.[268] Thus, reproduction of any copies without consent of the copyright holder amounts to infringement. But as we discussed above, in the digital process, every transfer creates a new copy, which is often considered by various precedents as a reproduction of work and thus creates complications.

4.3.2 New Copy Versus Transfer & Forward-and-Delete Technologies

The Doctrine of Exhaustion grants specific rights to the owner of a ‘copy’. Traditionally, a ‘copy’ referred to a tangible, physical object such as a book, CD, or DVD. These copies were finite, stable, and held independent value. However, rapid advancements in storage, distribution technologies, and evolving consumer behaviours related to media consumption transformed the concept of ‘copy’ and its nature. The concept of the ‘new copy theory’ is well-established. The sharing of the digital file by a user through the internet to another user creates a copy in the receiver device, and moving inside a single device may create a ‘new copy’ in the same device itself. Under the doctrine of

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[265] Ian H Witten, Marco Gori & Teresa Numerico, *CHAPTER 6 - WHO CONTROLS INFORMATION? A human in the node, and the insidious braids of control.*177 (Ian H Witten, Marco Gori, & Teresa Numerico eds., 2007), Available at https://www.sciencedirect.com/science/article/pii/B9780123706096500096. (last visited on 05 may)
[266]17 U.S.C. § 106(3) (2022).
[267] InfoSoc Directive, supra note 149, art. 4(1).
[268] WCT art. 6.

Exhaustion, the lawful acquirer can resell only the specific copy they possess.[269] They are not authorised to reproduce and sell a copy. Creating a 'new copy' can negate the applicability of the Exhaustion doctrine.[270]It is worth noting that the Exhaustion doctrine strictly limits the right of distribution; it does not extend the right of reproduction.[271]

The U.S. Green Paper highlighted that sections 106(3)[272] and 109(a)[273] pertain primarily to traditional transactions involving tangible copies and not to digital copies, as the digital transfer commonly results in new copies, with the user receiving a new one and the original remains with sender.[274] the U.S. White Paper also had a similar approach that the first sale doctrine restricts from disseminating a copy of work over the Internet because, with existing technology, the sender keeps the original copy while the recipient receives a replica of that original copy.[275]

Different Court decisions reflect divergent views on the 'new copy theory.' In the *UsedSoft* ruling, the court observed that in accordance with Article 4(2) of Directive 2009/24[276], a copyright owner cannot restrict the resale of a software copy after their distribution right has been exhausted. This makes the second and subsequent purchasers a lawful right holder under Article 5(1). The court suggested that downloading a copy sold by the first acquirer constitutes necessary reproduction for the program's use.[277]However, the UsedSoft case didn't involve a technical transfer of the program between clients, as the new purchaser downloaded a copy from Oracle's website, and only license keys were

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[269] Peter Mezei, *Digital First Sale Doctrine Ante Portas: Exhaustion in the Online Environment*, 6 JIPITEC 23, para. 125 (2015). https://www.jipitec.eu/issues/jipitec-6-1-2015/4173/mezei.pdf (last visited on 05 may)

[270] Peter Mezei, *The Doctrine of Exhaustion in Limbo - Critical Remarks on the CJEU's Tom Kabinet Ruling*, 2 Zeszty Naukowe Uniwersytetu Jagiellońskiego - Prace z Prawa Własności Intelektualnej 140 (2020), available at http://dx.doi.org/10.2139/ssrn.3560138. (last visited on 05 may)

[271] Mezei, *supra note 269 at* para. 124

[272] 17 U.S.C. § 106(3) (2022).

[273] 17 U.S.C. § 109(a) (2022).

[274] Information Infrastructure Task Force, *Intellectual Property and the National Information Infrastructure: A Preliminary Draft of the Report of the Working Group on Intellectual Property Rights*, 32 (July 1994) [hereinafter U.S. Green Paper]

[275] Information Infrastructure Task Force, *Intellectual Property and the National Information Infrastructure: The Report of the Working Group on Intellectual Property Rights*, 213–14 (Sept. 1995) [hereinafter U.S. White Paper]

[276] UsedSoft, supra note 218,. pt.80

[277] Id. pt. 81

transferred. According to Article 5(1) of the Software Directive, a lawful purchaser does not need to obtain consent to permanently reproduce a software to use it for its intended purpose. They can, therefore, duplicate the software if the second purchaser of the licence key is lawful.[278]

On the other hand, the "new copy theory" is supported by the *ReDigi* and German audiobook cases. The *ReDigi* court concluded that Section 109(a) The *ReDigi*[279] court came to the conclusion that the sale of a lawful owner's "particular" copy and phonorecord, regardless of whether it was originally downloaded onto an iPod or computer hard drive, is protected by Section 109(a)[280]. The Oberlandesgericht (OLG) Hamm[281] made a similar opinion in 2014. According to the US White Paper from 1995, even if the copy was first obtained through transmission, the first sale doctrine is applicable if it is the one distributed. The application of the doctrine is complicated by the fact that typical users frequently download content to their computer's hard drive and then duplicate it on other devices. The Exhaustion doctrine is violated if the original acquirer copies a lawfully purchased work, retains the copy, and then sells the original data carrier. This behaviour has drawn criticism from academics and is prohibited by statutes and case law. This issue is evident in the *ReDigi* case, which introduced the concept of 'migration' relating to forward-and-delete technologies. *ReDigi*'s business model attempted to ensure that only one copy of the digital file exists at any time by erasing the legally purchased iTunes tracks during transmission to *ReDigi*'s Cloud Locker. However, the U.S. White Paper in 1995 refuted the forward-and-delete concept, stating that such transmissions result in reproduction on the receiving computer, violating the reproduction right.[282] Forward and delete protection in *ReDigi* was criticised for its requirement for affirmative action from the sender's side after transmission. It was costly, and the consumer had to bear its cost. However, in 2024, the technologies will be developed enough to revisit the

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[278] software directive, supra note 201, art. 5(1)
[279] ReDigi at 82‑83
[280] 17 U.S.C. § 109(a) (2022)
[281] OLG Hamm, May 15, 2014 (22 U 60/13) – Keine Erschöpfung bei Audiodateien – Hörbuch-AGB, GRUR, Issue 9/2014, at 853-863.
[282]Information Infrastructure Task Force, *Intellectual Property and the National Information Infrastructure: The Report of the Working Group on Intellectual Property Rights*, 213–14 (Sept. 1995)

possibilities of this forward and delete concept. None of the strategies was fully efficient in protecting the subject matter. Piracy issues are still very common after the implementation of DRM and the shift to streaming from downloading. Like all other crimes, piracy will also persist; proper awareness and education against copyright violations, sanctions, and preventive technology may work to an extent.

4.3.3 Distribution versus Making Available to the Public

The WIPO Internet treaties under WCT and WPPT introduced the 'umbrella solution' to address online usage. This approach envisages a technology-neutral 'right to make works available to the public', covering all on-demand data transmissions via the Internet while allowing member states to integrate this right into their domestic laws.[283] Different nation-states adopted the right differently; some integrate it into the right of communication to the public like the EU did, and others into the right of distribution, like the US did.[284] The primary goal was to protect holders' rights in scenarios where end-users could access content from any place and at any time they choose.

The U.S. did not follow the WCT treaty's exact wording, which led to the interpretation that the right of distribution includes the right to make works accessible to the public. This interpretation is inspired by district court decisions that categorise electronic file transfers as distributions.[285] Similarly, the Federal Appellate Court of Hamm followed a similar interpretation. However, The CJEU differentiates between two types of internet usage to make digital content available to the public. One method uses technologies that do not create permanent reproduction or sale of a copy, such as streaming services. For example, making an eBook available at the Amazon Kindle store or posting an article behind a paywall. The CJEU has recognised that mere internet data transfers generally fall under communication rights, particularly the 'right to make them available to the public'.[286]At the same time, if there is a transfer of ownership by the transfer of digital goods, then it constitutes an Exhaustion, and this transfer constitutes a 'Distribution

[283] WCT, art. 6(1).
[284] WCT, art. 8; WIPO, art. 10.
[285] ReDIgi I
[286] UsedSoft, supra note 218,. Pt. 50

right'.[287] This involves permanent copies received by the end-user in exchange for a purchase, such as buying a track from iTunes.

Critics of this logic have pointed out that all protected subject matter under EU copyright law is covered by the right to make it available to the public, which has been harmonised by the InfoSoc Directive and in compliance with WCT/WPPT. As a result, these tools are essential for understanding the Software Directive and the online distribution of computer programmes.[288] However, examining the business models of companies like UsedSoft and *ReDigi*, it becomes evident that access to specific content is conditional, requiring users to purchase the subject matter under specific terms. Thus, it is not truly on-demand but is blurred with a paywall. This distinction justifies the CJEU's differentiation between various internet uses, affirming the rationality of judicially distinguishing these uses.[289] Nonetheless, the CJEU's ruling does not entirely align with other decisions, such as the German audiobook cases, where contractual interpretations were paramount.[290] Additionally, the *ReDigi* case was not much concerned about the right to make it available to the public; rather, it concentrated more on the dichotomy between distribution and reproduction.[291]

4.4 Supply Models and Digital Transfer

The digital Content can be delivered using different methods. Different business models use different types of delivery mechanisms, each posing unique challenges to the concept of digital Exhaustion. These models include the supply of physical media (hard copies), digital downloads, and online access rights.

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[287] UsedSoft, supra note 218,. Pt. 42 & 52
[288] InfoSoc Directive, supra note 149, I, art. 3(2).; WCT, art. 8
[289] A Ohly, *The broad concept of "communication to the public" in recent CJEU judgments and the liability of intermediaries: primary, secondary or unitary liability?*, 13 J. INTELL. PROP. L. & PRAC. 664 (2018), available at https://academic.oup.com/jiplp/article-abstract/13/8/664/5045928. (last visited on 05 may)
[290] E Rosati, *The CJEU Pirate Bay judgment and its impact on the liability of online platforms*, (2017), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3006591. (last visited on 05 may)
[291] L Shikhiashvili, *The Same Problem, Different Outcome: Online Copyright Infringement and Intermediary Liability under US and EU Laws*, INTELL. PROP. & TECH. L.J. (2019)

4.4.1 First Generation: Physical medium

The oldest business model involves supplying digital content via physical mediums, such as CDs, DVDs, or USB drives. This model closely aligns with traditional copyright-exhaustion principles, where the sale of a tangible object (the physical media) exhausts the copyright holder's distribution right. Once the physical copy is sold, the purchaser can freely resell it without infringing on the copyright. From a consumer perspective, copyrighted content embedded in the material medium can resold in the market without inviting infringement of the copyright owner's exclusive right. However, this does not apply if the same file has been copied into another physical medium.

The applicability of Exhaustion in this context becomes problematic with digital content embedded in physical media, especially when these works require activation keys or online accounts to access additional features or content.[292] These added layers can complicate the straightforward application of Exhaustion, blurring the lines between ownership and access.

4.4.2 Second Generation: Digital Downloads

The advent of fast internet connections facilitated a shift towards the supply of digital content via downloads. In this model, consumers can download and store digital content on their devices, effectively transferring a copy of the work to the consumer's control. This scenario raises significant questions about the application of Exhaustion to digital downloads.

The Tom Kabinet case highlighted the ambiguity in EU law regarding digital Exhaustion. Unlike physical media, digital downloads do not inherently degrade over time and can be duplicated effortlessly, potentially undermining the market for new sales. The CJEU's reluctance to extend Exhaustion to digital downloads reflects concerns about the uncontrolled distribution and replication of digital works, which could harm rights holders' interests.

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[292] J Rothchild, *Protecting the Digital Consumer: The Limits of Cyberspace Utopianism*, 74 IND. L.J. 893 926 (1998). Available at: https://core.ac.uk/download/pdf/232671763.pdf (last visited on 05 may)

In *UsedSoft*, the Court of Justice of the European Union (CJEU) ruled that the software supply for permanent download constitutes a sale, even under a license agreement. The *Aleksandrs Ranks v Microsoft* (2016)[293] case extended the principles established in the UsedSoft decision. The CJEU held that a lawful owner of software on a physical medium can sell the particular copy if they have an absolute license for the use of the software.

4.4.3 Third Generation: Online Access Rights

Cloud services from major providers like Amazon, Apple, Google, and Microsoft offer consumers nearly unlimited access to media stored remotely, with minimal cost and without the need for physical handling or storage. Today, digital content is often accessed as temporary, networked data rather than permanent physical copies. Consumers can purchase, access, and use media directly from the cloud without ever possessing a physical copy. This transition from ownership of copies to access via cloud-based platforms is driven by advancements in computational power, storage capacity, and pervasive internet connectivity. The legal concept of the 'copy' is now being tested as digital technologies enable new forms of access and consumption that blur the distinction between ownership and temporary access.

These technological advancements reflect changing consumer preferences. Streaming services like Netflix, YouTube, Spotify, and Pandora illustrate a preference for accessing media libraries over owning physical copies. Similarly, innovations in the gaming industry, such as OnLive and Sony's PlayStation Now, highlight a shift towards streaming games rather than purchasing individual copies.

The most recent model involves supplying digital content through online access rights. This approach allows consumers to stream or interact with content as long as they remain connected to a network without actually transferring a copy of the content to the consumer. Services like Netflix and Spotify exemplify this model, where access is often tied to subscription models that restrict the user's ability to transfer or resell content.

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[293] Aleksandrs Ranks and Jurijs Vasiļevičs v. Microsoft Corp., Case C-166/15, ECLI:EU:C:2016:762, 2016 E.C.R. I-762 (CJEU).

This model presents unique challenges for digital Exhaustion. Since consumers do not obtain a permanent copy of the work, traditional notions of ownership and resale do not apply. The ongoing control exercised by the service provider over access to the content effectively precludes the application of Exhaustion, as there is no "sale" of a tangible or digital copy that could trigger Exhaustion.

4.4.4 Hybrid Models and Their Implications

Many modern digital content supply methods are hybrids of the aforementioned models, combining elements of physical media, digital downloads, and online access. For instance, some e-books are sold with physical copies of books, and streaming services like Netflix and Spotify allow for limited downloads that are accessible offline.

Hybrid models further complicate the application of digital Exhaustion. Determining whether one form of supply is accessory to another becomes crucial. For example, digital content accompanying a physical book may be considered an accessory to the physical sale, potentially allowing for resale under Exhaustion principles. Conversely, the temporary download capabilities of streaming services are designed to ensure continued subscription and control by the provider, thereby avoiding Exhaustion.

The question arises whether the Exhaustion doctrine should apply to computer programs incorporating other protected content, such as sound recordings, audiovisual content, and graphic works. The ECJ in the *PC Box case*[294] recognised that video games, which include these elements, are protected by copyright under the InfoSoc Directive, leading to potential conflicts with the Software Directive's Exhaustion principles. Graphic user interfaces (GUIs) are excluded from specific protection under both EU and US copyright law, as affirmed by the ECJ in *BSA v. Ministerstvo kultury.*[295] However, if GUIs satisfy originality requirements, they might still be protected as graphic works. This dual nature complicates the Exhaustion doctrine's application to complex digital works incorporating multiple types of content.

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[294] Case C-355/12, *Nintendo Co. v. PC Box Srl*, ECLI:EU:C:2014:25, [2014] 3 C.M.L.R. 17.
[295] Case C-393/09, *BSA v. Ministerstvo kultury*, ECLI:EU:C:2010:816, [2010] E.C.R. I-13971.

4.5 Challenges Related to Different Subject Matters

Computer programs are treated differently by various courts in their judgements. Unlike eBooks or music, computer programs embedded in a physical substance have given a tangible character. Several policy-related compulsions were there upon the court to consider computer programs as a different subject matter in contrast with other digital goods. The value of the software exists in its functionality rather than in creativity, which is not an interest of copyright.

4.5.1 Software and Lex Specialis

Computer programs are protected as literary works under international and domestic copyright law. The general assumption is that WCT expressly mandated tangible character for applying the Exhaustion doctrine. As per the international norm, the InfoSoc Directive of the EU applies the doctrine of Exhaustion only to tangible objects. In contrast, EU Software Directive[296], under its Exhaustion doctrine, treats both physical and intangible copies of software equally. The *UsedSoft* case raised two immediate concerns. Firstly, should the Exhaustion doctrine be applied equally to software and other digital content? Secondly, do the rules for Software represent lex specialis? .[297] The ECJ considered the economic equivalence between selling software on a physical medium (such as USB or DVD) and selling software via the internet website.[298] This perspective hinges on the technological necessity for the source code to be loaded onto the hardware's memory, making the initial transfer method (whether it used a physical or digital medium for transfer) irrelevant.

However, this reasoning has limitations. The ECJ interpreted Article 4(2) of Software Directive[299], acknowledging the principles of equal treatment to confirm that In the European Union, irrespective of the tangibility character of software, the Doctrine of first sale applies on commencement of the first sale.[300] This interpretation appears to

[296] software directive, supra note 201 art. 4
[297] UsedSoft, supra note 218,. p.t. 34.
[298] UsedSoft, supra note 218,. p.t. 61.
[299] Directive 2009/24
[300] software Directive, supra note 201 art. 4 (2)

purposefully align with economic principles, even if it diverges from the agreed statements of the WCT, which did not specify distribution rights for computer programs, implying that general rules should also apply to software.

The WCT's lack of a specific right of distribution or Exhaustion for computer programs which allows signatories to provide stronger protections or broader limitations. According to Peter Mezei, the argument that the Software Directive became lex specialis before the WCT's acceptance is misleading, as the Software Directive predated the WCT ratification. EU implemented the WCT through the InfoSoc Directive, harmonising general distribution rights and Exhaustions without specific references to different subject matters. Therefore, as a general rule, WCT should have prevailed.

The InfoSoc Directive left the Software Directive's provisions intact unless provided in InfoSoc Directives. Recital 29[301] of the InfoSoc Directive provided such an exception to software directives. This implies that the exceptional application of the Exhaustion doctrine to software is contradictory to prevailing International and EU copyright norms. However, The Software Directive's codification in 2009, without amending the WCT's agreed statement, reflects either an intentional legislative choice or a legislative oversight. Nevertheless, it indicates that European law does not support a different rule for software copies on resale, which differs from other intangibles. It affirms the primacy of the InfoSoc Directive.

4.5.2 Functional Equivalence and Different Subject Matters

The theory of functional equivalence questions whether the principles applied to software in *UsedSoft* should extend to other digital content. The ECJ suggested that online transmission of software is 'functionally equivalent' to selling a physical storage medium

[301] InfoSoc Directive Recital 29 provides that: "The issue of Exhaustion doesn't arise concerning services, especially online services. This also holds true for physical copies of a work made by a user with the copyright owner's consent through such services. Consequently, the same principle applies to renting and lending original works or copies, which are inherently service-based. In contrast to CD-ROM or CD-I, where intellectual property resides in a physical medium, online services constitute actions that require authorization where copyright or related rights dictate.." -

.[302] This economic equivalence does not hold for sound recordings, audiobooks, and e-books, which can be marketed and used differently across various devices.

From a technological standpoint, sound recordings and audiobooks do not require permanent copying for use, unlike software, which necessitates installation inside another location, like a hard drive. This difference reinforces the argument against applying functional equivalence across different subject matters.

4.5.3 National Perspectives and Technological Neutrality

The *Supreme Court of Canada, in ESA v. SOCAN*[303], highlighted the technological neutrality, stating that there is no discernible difference in practice between downloading an artwork online, receiving it by email, or purchasing a durable copy in-store.[304] The court maintained that the delivery method should not impose additional protections or fees, advocating for technological neutrality in copyright interpretation.

This perspective contrasts with the US and German courts, which declined to apply the doctrine to sound recordings and audiobooks. The Dutch court in *Tom Kabinet* suggested that *UsedSoft* might extend to e-books, reflecting differing interpretations of economic equivalence and functional equivalence in copyright law.[305]

4.6 Sale versus license Debate.

Most intellectual property owners aim to retain their exclusive rights to their products and make maximum profit out of them. They attempt to implement various strategies to retain exclusive rights. Simply renaming trade agreements as ‘license agreements’ rather than a ‘sale agreement’ is one such strategy often taken by digital businesses in order to incentivise their works without transferring their ownership of the work, thus avoiding

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[302] Mezei, *supra* note 260, at 120.
[303] Entertainment Software Association v. Society of Composers, Authors and Music Publishers of Canada, [2012] 2 S.C.R. 231 (S.C.C.)
[304] Cameron J. Hutchison, *The 2012 Supreme Court Copyright Decisions & Technological Neutrality Case Comment*, 46 U.B.C. L. Rev. 589 (2013), 2013 CanLIIDocs 890. Available at: https://www.canlii.org/en/commentary/doc/2013CanLIIDocs890 (Last visited 05 june 2024)
[305] Leo James Claughton, *Tom Kabinet: The Case of Digital Exhaustion*, INTERSCRIPT, 9 (2021).; Ansgar Kaiser, *Exhaustion, distribution and communication to the public – the CJEU's decision c-263/18 – tom kabinet on e-books and beyond*, 69 GRUR INTERNATIONAL 490 (2020), https://doi.org/10.1093/grurint/ikaa043 (Last visited 05 june 2024)

the application of Exhaustion. In the United States, ‘first sale’ is a primary condition for application of the First sale doctrine. This condition also extends to Sections 109 and 117 of US copyright. This is the rationale behind two major strategies: changing the contract’s wording to ‘license’ and shifting to License contracts.

The shift from ‘selling content’ to ‘licensing it’ in the content delivery process is another attempt to escape consumers' ownership claims. In software industries, companies often use an End User License Agreement (EULA), which is a legal shrink-wrap agreement between a software publisher and a user that outlines the terms and conditions for using the software. EULA is usually previewed before the software downloads or installation process, and it mandates that users agree with the terms before using it. These agreements are usually lengthy and complex, so users agree with the terms before properly understanding them. Users' right to negotiate is limited in non-negotiated EULA. Moreover, it affects consumer rights as the chances of hiding important details inside EULAs to deceive users are high.

A number of businesses and copyright holders are making an effort to turn their digital trade into a non-exhausting transaction by taking advantage of Sale versus License Tension.[306] For example, according to their eBook subsidiary Kindle’s Terms of Use, Amazon claims that the ‘Buy now with one-click®'[307] button does not grant ownership of the downloaded copy. Instead, users are prohibited from selling, renting, or distributing Kindle Content unless explicitly indicated otherwise.[308] This makes the ownership rights of buyers ambiguous.[309]

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[306] Aaron Perzanowski & Jason Schultz, Legislating Digital Exhaustion, 29 Berkeley Technology Law Journal 1543 (2015), https://www.jstor.org/stable/26377575 (last visited Jun 02, 2024).

[307] One-Click is a patented feature of amazon that allows users to purchase items with a single click without having to manually enter their billing and shipping information each time. The feature uses a predefined address and credit card number stored by the payment processor from the user's first purchase.

[308] The Amazon kindle’s Terms of Use under title ‘content’ provide that “the Content Provider grants you a non-exclusive right to view, use, and display such Kindle Content. Kindle Content is licensed, not sold, to you by the Content Provider” and under title limitation provide that, “Unless specifically indicated otherwise, you may not sell, rent, lease, distribute, broadcast, sublicense, or otherwise assign any rights to the Kindle Content or any portion of it to any third party”. see, Kindle Store Terms of Use - Amazon Customer Service:
www.amazon.in, https://www.amazon.in/gp/help/customer/display.html?nodeId=201014950 (last visited Jun 10, 2024).

[309] Perzanowski & Schultz, *supra note 180,* at 154

Sale and license are two methods used to transfer a right. A sale involves the transfer of both 'property' and 'ownership' of the work. On the other hand, a license is a contract in which the property owner leases his property right to someone by allowing them to use and benefit from it; a license agreement does not involve the transfer of the 'ownership'. The relationship period between a buyer and a seller in a sale is too short compared to a license. The relationship concludes with concluding the agreement, transfer of property, and compensation. However, relationships and liability in the license are continuous as long as the agreement exists. Still, the practice of using a license agreement instead of a sale for transferring rights is increasing day by day as digital trade companies realise the benefits of restricting resale through licensing terms. EU and US courts interpreted their respective legislation to address this dichotomy. However, The current US Copyright Act is unclear on which kind of transactions trigger 'ownership' and Exhaustion, with sections 109 and 117 limiting their defences to the 'owner' of a copy. Although the Act clarifies who owns copyright, it does not address broader consumer property interests in digital content or define 'copy ownership.' As tangible copies become less relevant, identifying some form of consumer ownership remains essential for the functioning of the doctrine of Exhaustion.

The courts in various jurisdictions responded to this licensing practice with inconsistent rulings on whether consumers truly owned their purchased digital goods.[310] In the initial phase, the courts have allowed the use of the term "licensing' to facilitate rightsholders to escape from Exhaustion, but these precedents mostly addressed the software industry only.[311] The court tested whether the agreement prima facia retains ownership in the copyright owner and concluded whether a trade is a sale or license. However, this strategy has a big impact on the larger copyright economy and consumer ownership rights, especially in a context where more retailers impose restrictive terms of service and more copyrighted works choose digital distribution as a transfer method.[312]

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[310] See e.g., United States v. Wise, 550 F.2d 1180,1192 (9th Cir. 1977) (film prints); Vernor v. Autodesk, Inc., 621 F.3d 1102 (9th Cir. 2010); UMG Recordings, Inc.v. Augusto, 628 F.3d 1175 (9th Cir. 2011)
[311] See, for e.g MAI Sys. Corp v. Peak Computer, 991 F.2d 511, 518.
[312] Id.

Eventually, courts departed from the previous approach and attempted to test economic facts in the transaction. For instance, In the *UsedSoft* case, the ECJ determined held that if a licence allows the use of software 'indefinitely' and the copyright holder is adequately compensated for the economic value of the work, then the licence could be deemed as a sale.[313] The ECJ emphasised that simply labelling a contract as a 'license' does not allow one to bypass the Exhaustion doctrine.[314] It can considered as a test to determine when a license amounts to a sale.

This decision has attracted considerable debate on the sale versus license dichotomy. Scholars like Christopher Stothers criticised the ECJ for overstepping its role by potentially capping the earnings of right holders.[315] According to him, intellectual property rights provide an exclusive absolute right to distribute and own property, and the prices are fixed in accordance with several negotiations.[316] However, scholars like Péter Mezei[317] opined that the CJEU did not restrict the ability of right holders to negotiate the price of their work. Instead, it clarified that once the protected work is distributed into the market with the copyright holder's authorisation in return for reasonable compensation, then the right of distribution automatically ends. The ECJ suggested that rights holders should aim for reasonable, not maximal, remuneration, aligning with the reward theory.[318]When a contract grants indefinite use of a work for a one-time fee, it constitutes a sale, regardless of the contract's label or usage limitations. This interpretation has been supported in other cases like *Wise*[319] and *SoftMan*.[320]

The restriction on transferring ownership of digital goods conflicts with copyright law's traditional understanding of copy ownership and contradicts consumers' expectations

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[313] *Ibid.* para 49.
[314] *Ibid*
[315] Christopher Stothers, When Is Copyright Exhausted by a Software Licence? UsedSoft v. Oracle, Eur. Intell. Prop. Rev., Issue 11/2012, at 790. Available at: https://www.arnoldporter.com/en/perspectives/publications/2012/11/when-is-copyright-exhausted-by-a-software-licenc__ (Last visited June 01)
[316] Id.
[317] Mezei, *supra note 269 at* para. 40.
[318] Mezei, *supra* note 260, at 119.
[319] United States v. Wise, 550 F.2d 1180, 1191, 1192 (9th Cir. 1977)
[320] SoftMan Prods. Co. v. Adobe Sys. Inc.,171 F. Supp. 2d 1075, 1085, 1087 (C.D. Cal. 2001)

when they ‘buy’ the digital content.[321] Rather than clarifying and developing the concept of ‘ownership’, the increasing licensing use for digital media transactions has added confusion. The increasing endorsement of licensing demonstrates that the existing legal framework lacks the flexibility to expand the doctrine of Exhaustion to the digital environment.

4.7 Conclusion

In conclusion, Chapter Four thoroughly analyses case laws, EU and US statutes, and international legal frameworks and concludes regarding the challenges of extending the exhaustion doctrine to digital trade. By examining the materiality and reproducibility of digital products, the researcher underscored the complications arising from the intangible nature and easy duplication of digital goods. This chapter also sheds light on how industries leverage licensing and deceptive agreements to evade exhaustion, supported by key legal precedents and statutes. The insights gained here illustrate the significant hurdles in applying traditional exhaustion principles to the digital realm, highlighting the need for legal and regulatory adaptations to address these issues effectively. Moreover, most of the issues arises due to a lack of technical advancement during the judicial precedent. Various literature shows that technologies are developed enough to address issues like reproduction and new copy theory. The next chapter will focus on Web 3.0 technologies and their implications on exhaustion.

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[321] Perzanowski & Schultz, *supra note 180,* at 154

Chapter Five

Digital Exhaustion in an Era of Web 3.0

5.1 Introduction

One of the major concerns while considering the Digital exhaustion was ensuring the authenticity of Digital products. The technology was not developed enough to address the credibility issues of Digital content while delivering most of the precedents. The basic understanding was that transferring a digital file creates a new copy in the receiver's computer, and the Original remains in the sender's system. It leads to the reproduction of the work.

Ever since the commercialisation of copyrighted works, piracy has been an issue. Even in Exhaustion cases, piracy was a focus of the judiciary. For instance, In ReDigi, the court criticised the company for not addressing piracy issues that may arise if the uploader copies the original file before uploading it to the ReDigi server.[322] Even though the court did not look into the verification process in detail, it emphasised the need for a proper authenticating mechanism in the reseller's system to ensure copyright is not violated in their business model.

Both the Copyright holders and digital businesses have attempted various strategies with the help of technologies to protect their work. The prominent strategies include Geo-Blocking, Digital Rights Management (DRM), Automated Take Down Tools, WaterMarking, Code Obsuscation, Tokenization, and digital fingerprinting.

5.1.1 Digital Rights Management System

Digital Rights Management (DRM) is the preventive mechanism embodied in a digital product to prevent the reproduction of the work or differentiate the legitimacy of the

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[322] Monica L. Dobson, *ReDigi and the Resale of Digital Media: The Courts Reject a Digital First Sale Doctrine and Sustain the Imbalance between Copyright Owners and Consumers*, 7 AKRON INTELL. PROP. J. 179 (2015). Available at: https://ideaexchange.uakron.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1069&context=akronintellectualproperty (last accessed on 10 june 2024)

original product from that of a pirated one. It regulates the use of digital products after their distribution. Encryption, access control, and usage monitoring are some of the earlier methods used in DRM.

- *Encryption:* In the encryption method, content is converted to 'Cipher text' and protected. A decryption key is required to decrypt it back to the original format.
- *Access control:* Restrict the access so that permitted people can only view, copy or share content
- *Usage monitoring:* it deploys technology to track how the digital content is accessed, distributed and utilised.

In its beginning, DRM was highly successful in preventing piracy. However, gradually, the role of DRM diminished with the development of counter techniques to overcome DRM successfully.[323] Anyone intending to overcome a DRM can find dozens of methods from the internet to detach DRM mechanisms attached to their digital content. Traditional DRM mechanisms can easily tackle simple piracy, but they are not well-equipped to establish the legal authenticity of digital products.

In other words, the traditional DRM mechanisms were insufficient to verify the authenticity of each previous transaction; one cannot infer whether the previous owner acquired it legally using a traditional DRM mechanism. In the case of ReDigi, their in-house software 'Music Manager' acts as a verification engine to check and ensure that – only one copy exists in the user's computer system.[324] Upon any successful detection of any remaining copies of the uploaded music file on the user's computer, it requests the user to delete them. A failure to comply results in the termination of the user's account. This was introduced as an innovative step to tackle copyright infringement. However, technology was not innovative enough to tackle two possibilities: firstly, the authenticity

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[323] Sarah Reis, *Towards a "Digital Transfer Doctrine"? The First Sale Doctrine in the Digital Age*, 109 Nw. U. L. Rev. 173, 181 (2015). Available at: https://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1193&context=nulr (last accessed on 10 june 2024)

[324] Adrienne Clare Barbour, *Used iTunes: The Legality of ReDigi's Model for a Second-Hand Digital Music Store*, 15 TUL. J. TECH. & INTELL. PROP. 165 170 (2012). Available at: https://journals.tulane.edu/TIP/article/view/2608 (last accessed on 10 june 2024)

and legality of uploading Music files. Those may be either pirated copies or not belong to the uploader. Secondly, ‘Music Manager’ cannot identify any pre-replicated files stored outside the installed machine where it runs. The possibility of replication and copying in different machines cannot be ignored, especially in an era where a single person owns more than one computing device.

Similarly, in the Tom Kabinet case, the user was required to acknowledge that they acquired the eBook by legal means and mandated the user to delete the original eBook file soon after uploading it. While prima facie, this may seem satisfactory in addressing Tom Kabinet's moral and legal obligation to circumvent Copyright infringement, it was not sufficient to address concerns related to piracy as in ReDigi’s case. Users can copy and transfer files to the cloud or any other external storage device. This may have an impact not only on piracy but also on the business model itself. This technological inadequacy has been dragging down the digital second-hand market business models since its inception. Various judiciary and policymakers have considered this technological limitation while making decisions related to applying the Exhaustion doctrine to digital trade. However, the recently developed Blockchain technology is advanced enough to address these inadequacies. It validates every transaction in a chain of transactions and thus helps the reseller, buyer and Legal authority authenticate a previous transaction.

5.2 Blockchain Technology and Its Application in the Digital Industry

The internet infrastructure is in the transition phase to Web 3.0, a decentralised internet system. Web 3.0, unlike previous versions, gives priority to transparency and privacy. Its decentralised architecture based on Blockchain technology ensures transparency, which allows business and users to access their transaction records. The online second-hand Digital content market can flourish with Web 3.0, as the credibility of transactions can be ensured with available immutable blockchain ledgers. So, what is Blockchain?

Blockchains are networks of identical ledgers shared and synchronised across multiple locations, entities, or regions, which are capable of recording transactions occurring

simultaneously in various places.[325] It is a distributed ledger in which information is stored in blocks linked together using cryptography. Blockchain came into discussion in 2008 when Satoshi Nakamato[326] published a white paper[327] cryptocurrency to replace trust-based[328] third-party electronic financial institutions with an electronic 'peer to peer', 'irreversible' cryptographic payment system.[329] Blockchain addresses the long-time drawbacks of the online transaction of digital assets, i.e. Double spend problem and Copy-paste problem.[330] Data in a blockchain system are decentralised[331] and not stored in a centralised cloud or server system. Data are stored in 'blocks' linked together with cryptography. Every data block is hashed and thus has a unique 'fingerprint' to identify it.[332] Blockchains are immutable ledgers that can reduce risk as chances for tampering[333] data are decreased; thus, transparency is improved. This is due to the decentralised system in which every block has a copy of their transaction.[334] Blockchain also helps in cost cutting as third parties are not involved, like trust-based systems, and costs for brokerage and mediations can be saved.

The technological advancement in blockchain technology has spread its application into domains other than cryptocurrencies, such as Smart Contract and Non-Fungible tokens (NFT). These advancements will help fill the gap in digital markets. These technologies

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[325] Andres Guadamuz, *Non-fungible tokens (NFTs) and copyright*, WWW.WIPO.INT (2021), available at, https://www.wipo.int/wipo_magazine/en/2021/04/article_0007.html. (last accessed 01 june 2024)

[326] Satoshi Nakamato is a pseudo name used by creators of first crypto currency Bitcoin.
See for more: Michael Adams, *Who Is Satoshi Nakamoto? – Forbes Advisor*, WWW.FORBES.COM (2023), https://www.forbes.com/advisor/investing/cryptocurrency/who-is-satoshi-nakamoto/. (last accessed 01 june 2024)

[327] Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System* (Aug. 21, 2008), available at http://dx.doi.org/10.2139/ssrn.3440802. (last accessed 01 june 2024)

[328] Id. at 1

[329] Id

[330] Usman W. Chohan, *The Double Spending Problem and Cryptocurrencies* (Jan. 6, 2021), available at https://ssrn.com/abstract=3090174 or http://dx.doi.org/10.2139/ssrn.3090174.

[331] S. Ali, G. Wang, B. White & R. L. Cottrell, *A Blockchain-Based Decentralized Data Storage and Access Framework for PingER*, in *2018 17th IEEE International Conference on Trust, Security and Privacy in Computing and Communications / 12th IEEE International Conference on Big Data Science and Engineering (TrustCom/BigDataSE)* 1303, 1303-08 (2018), doi: 10.1109/TrustCom/BigDataSE.2018.00179.

[332] Nakamoto, *supra note 327 ,at 2*

[333] Ali Dhanani & Ryan Dowell, *Introduction to Blockchain Technologies and Smart Contracts*, 57 Hous. Law. 18, 18-19 (2019).

[334] Arvind Narayanan et al., Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction 61 (2016).

have already started rolling a few years back. For instance, in 2021, Beeple sold his NFT in an auction for a whopping sixty-nine Million dollars.[335]Since 2017, several NFT marketplaces like OpenSea, Rarible, and Foundation have been actively trading NFTs. NFT is often predicted as an alternative to the licensing system currently used in digital platforms.[336] NFT provides copyright owners with a new way to capitalise their work and consumers with an option to protect their rights to the value they purchased.

5.2.1 What are Smart Contracts?

Smart contracts are digital self-executing contracts in which contract terms and conditions are written with codes. These contracts are normally attached to the blockchain networks and run in the background. The smart contract was first introduced by Nick Szabo.[337] Despite the name 'Contract, ' it is not a legal contract.[338] Basically, it is a computer code that can execute or implement the conditions given in its source code.[339] Automatically, It enforces the agreement upon meeting pre-defined conditions. Unlike the traditional contract, which relies on third-party involvement in executing the contract, smart contracts depend on blockchain technology and transparency. They are irreversible, and transactions can be effectively tracked.[340] Contracts become tamperproof and immutable once attached to the blockchain, ensuring terms are not edited later by anyone. There is no enforcing mechanism or regulating authority for smart contracts. Smart contracts have applications in various fields, including automated payments, loans and

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[335] Jacob Kastrenakes, Beeple sold an NFT for $69 million, The Verge (2021), available at: https://www.theverge.com/2021/3/11/22325054/beeple-christies-nft-sale-cost-everydays-69-million.

[336] Leighton Emmons, *Why the Future of NFTs Goes Far Beyond Gaming and Digital Art Work*, NASDAQ.COM (2021), https://www.nasdaq.com/articles/why-the-future-of-nfts-goes-far-beyond-gaming-and-digital-art-work (last visited May 24, 2024).

[337] Nick Szabo, *Smart Contracts: Building Blocks for Digital Markets*, 16 Extropy J. Transhuman Thought 50, (1996). Available at: https://api.semanticscholar.org/CorpusID:198956172 (last visited May 24, 2024).

[338] David M Adlerstein, *Are Smart Contracts Smart? A Critical Look at Basic Blockchain Questions - CoinDesk*, COINDESK: BITCOIN, ETHEREUM, CRYPTO NEWS AND PRICE DATA, https://www.coindesk.com/tech/2017/06/26/are-smart-contracts-smart-a-critical-look-at-basic-blockchain-questions/ (last visited May 24, 2024).

[339] Scott A. McKinney, Rachel Landy & Rachel Wilka, *Smart Contracts, Blockchain, and the Next Frontier of Transactional Law*, 13 WASH. J. L. TECH. & ARTS 313 (2018). Available at: https://digitalcommons.law.uw.edu/wjlta/vol13/iss3/5/ (last visited May 24, 2024)

[340] Claudio D'Alonzo, Legal Issues About NFTs, 13 Acad. J. Interdiscip. Stud. 173 (2024), https://doi.org/10.36941/ajis-2024-0073 (last visited May 19, 2024).

real estate. Smart contracts provide multiple benefits: they facilitate direct rights transfers, enable control over pricing and terms by right holders, track content consumption, enhance revenue distribution, it can track the movement of goods and payments, verify the authenticity of products, trigger payments upon delivery[341] and can be used to build digital second-hand market.[342] Like any other technology, smart contracts also have drawbacks. The technology is still in the development phases, and hence, chances for bugs and other errors are unavoidable.

5.2.3 What is NFT?

NFT is a technique which upgrades creative digital works to authentic, verifiable assets traded with the aid of blockchain technology.[343] Non-fungible tokens (NFT) are unique digital assets with invisible cryptographic attachments indicating their ownership and transfer information. Every transfer of Digital assets is recorded in the blockchain and made available to parties. Unlike the cryptocurrency, which is fungible and has similar characters for each unit, each unit of NFT has a different nature and is distinguishable.[344] This uniqueness in NFT technologies extends its application to digital arts, eBooks, music, video games, and other tradable digital assets. For example, consider an eBook, 'Malgudi Days'. It is fungible; every PDF copied and produced using traditional technology looks similar and can replace one another. But when we buy the NFT of 'Malgudi Days', every other NFT is hashed and distinguished from our NFT and can be resold as a valuable good.

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[341] Stuart D. Levi & Alex B. Lipton, *An Introduction to Smart Contracts and Their Potential and Inherent Limitations, Harv. L. Sch. F. on Corp. Governance* (May 26, 2018),available at: https://corpgov.law.harvard.edu/2018/05/26/an-introduction-to-smart-contracts-and-their-potential-and-inherent-limitations/. (last visited May 25, 2024).

[342] Sebastian Pech, *Copyright Unchained: How Blockchain Technology Can Change the Administration and Distribution of Copyright Protected Works*, 18 NW. J. TECH. & INTELL. PROP. 1, 36 (2020). Available at: https://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1338&context=njtip (last visited May 25, 2024).

[343] Michael D. Murray, *NFT Ownership and Copyrights*, 56 IND. L. REV. 367 (2023). https://uknowledge.uky.edu/law_facpub/782 (last visited May 25, 2024).

[344] C. Pinto-Gutiérrez, S. Gaitán, D. Jaramillo, & S. Velasquez, *The NFT Hype: What Draws Attention to Non-Fungible Tokens?,* 10 Mathematics 335 (2022). https://doi.org/10.3390/math10030335 (last visited June 05, 2024).

An NFT is attached to the smart contract, which decides how the NFT interact with the blockchain and its user.[345] Commonly, it is attached to a blockchain named Ethereum, which enables the creation of smart contracts.[346] NFT will be transferred upon completion of the given condition in the smart contract. The NFT has a high reliability and trust factor as ownership and transaction records are transparent.[347] The original goods need not be objects of alienation and should not be attached to NFT.[348] It may rest with the creator or any previous owners in that case, and NFT becomes 'Identification token[349]' a demonstration of having a right over it.[350]

Similarly, The original digital file may or may not be attached to the blockchain. Whether Metadata resides as On-chain or Off-chain will decide what an NFT really 'looks like'. On-chain is expensive, and hence, the ERC721 standard provides a facility called 'tokenUri' that allows developers to command NFT where to store the metadata.[351] The NFT works as a digital deed to an IP-protected work, which is attached to the blockchain and can be commercialised as normal artwork. As mentioned earlier, the metadata may be attached to blockchain or external servers. With the transfer of the NFT, one must automatically lose all the rights attached to the NFT, including access to the NFT. In an ideal NFT, No person can double spend as it is the basic purpose behind blockchain.[352]

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[345] Shafaq Naheed Khan et al., *Blockchain smart contracts: Applications, challenges, and future trends*, 14 PEER-TO-PEER NETWORKING AND APPLICATIONS 2901 (2021), available at: https://link.springer.com/article/10.1007/s12083-021-01127-0 (last visited May 25, 2024).

[346] Id.

[347] Kathleen Fisher, *Once Upon a Time in NFT: Blockchain, Copyright, and the Right of First Sale Doctrine*, 37 Cardozo Arts & Ent. L.J. 629 (2019). Available at: https://www.cardozoaelj.com/wp-content/uploads/2019/03/Fisher-Once-Upon-a-Time-in-NFT.pdf (last visited May 19, 2024).

[348] D'Alonzo, *supra* note 340, at 173

[349] Neil Andrew Macleod, *The Boom of NFTs between art, intellectual property and rights at auction (Il Boom degli NFT tra arte, proprietà intellettuale e diritti all'asta)*, ALTALEX (2021), available at: https://www.altalex.com/documents/news/2021/05/24/boom-nft-tra-arte-proprieta-intellettuale-e-diritti-asta (last visited May 26, 2024).

[350] Roberto Moro Visconti, *Digital Art Valuation* (July 20, 2021), available at https://ssrn.com/abstract=4132424 or http://dx.doi.org/10.2139/ssrn.4132424.

[351] Joshua Durham, *The Growing Popularity of NFTs: How to Protect Your NFT Personal Property Rights*, WAKE FOREST JOURNAL OF BUSINESS AND INTELLECTUAL PROPERTY LAW (2022), available at: https://jbipl.pubpub.org/pub/xptfofeo/release/2. (last visited May 20, 2024).

[352] Simanta Shekhar Sarmah, *Understanding Blockchain Technology*, 8 Computer Sci. & Eng'g 23 (2018) DOI:10.5923/j.computer.20180802.02 (last visited june 09, 2024)

NFT itself is not the expression of an IP-protected entity; instead, it is metadata that acts as a token and authenticates the source of the entity.[353] The copyright law is applicable to digital products attached to NFTs and sometimes extends to NFT itself[354] because when a person sells an NFT, the buyer gets access to the particular asset attached to the NFT; it may not be the only exclusive copy of the work of the copyright owner, as he has the right to reproduce it. However, the buyer of NFT receives access to only the particular copy attached to the blockchain. He can sell the copy but cannot reproduce it as the copyright still resides with the original owner.

NFT protects consumers' right to claim ownership and prevents others from claiming ownership of a digital product at the same time.[355] A creator or buyer relies on contract laws to ensure their rights and needs on NFT. They can tokenise their digital work and sell it directly to buyers without third-party involvement. This provides a creator more control over his work and fair compensation for their work.

The three major characteristics of NFT are non-fungibility, immutability, and authenticity.

1. *Non-Fungible:* The cryptocurrency is fungible, while NFT is non-fungible. Each unit in a fungible asset has a similar value and character. In other words, while doing trade, one fungible unit of the asset can be substituted by another unit. This is not the case with NFT. It has a unique, distinguishable character, and it provides different NFT assets with different values. They are scarce and indivisible. This character helps NFT represent a distinguished kind of one-kind digital work.[356]
2. *Immutability:* Data attached to the Blockchain cannot be edited later. With the minting, the condition the creator placed in the code becomes permanent. Such conditions can include a buyer's limitations on the use of the NFT, payment conditions, and record of ownership. For example, Australian artist Attafuah

[353] E. Behzadi, *The Fiction of NFTs and Copyright Infringement*, Univ. Pa. L. Rev. Online 2022, 170:1-7, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4025604. (last visited june 09, 2024)
[354] D'Alonzo, *supra* note 340, at 173
[355] Kan Jie Marcus Ho, *Towards an Idea of Digital Asset Ownership*, 8 CAMBRIDGE L. REV. 41 (2023).
[356]Gang Wang & Mark Nixon, *SoK: tokenization on blockchain* (2022), https://doi.org/10.1145/3492323.3495577. (last visited june 09, 2024)

attached a condition for ten per cent equity in the artwork so that wherever a resale happens, they automatically receive ten per cent of the sale price.[357]

3. *Authenticity:* One of the major drawbacks of digital artwork was the hardships of establishing authority. Once a digital work is uploaded to the website, anyone can download it and reuse it multiple times. This led to the reproduction of artwork and copyright infringement. This issue can be tackled with the non-fungibility and immutability functions of NFT. As the owners are only provided with access to the digital product, chances to create multiple copies are avoided. NFT ensures that it cannot be copied or reproduced. NFT ensures the credibility of the transaction, and one can enter the transaction without doubting its authenticity.[358]

5.3 NFT and the Application of Doctrine of Exhaustion

The Doctrine of Exhaustion regulates the distribution rights of the artist by limiting the right to control distribution after the commencement of the first sale.[359] Exhaustion enables a purchaser to consume and exploit the work he purchased. This creates scope for the secondary market.[360] However, the Incorporation of this doctrine into digital trade failed, as any act of sharing traditional Internet technologies led to the reproduction of the work. The replication of a digital work is often a simple, zero-cost task, and it makes identifying the original and authenticating the ownership difficult. These challenges can be resolved with the NFT mechanism and smart contract. NFT can be considered as the technology that the Second Circuit predicted in *ReDigi*.[361] It can address the legal obstruction put forward in *ReDigi*, such as the incapacity to transfer a copy without

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[357] Chelsea Lim, *The Digital First Sale Doctrine in a Blockchain World: NFTs and the Temporary Reproduction Exception*, 91 Fordham L. Rev. 721 (2022). Available at: https://ir.lawnet.fordham.edu/flr/vol91/iss2/12 (last visited june 09, 2024)

[358] Fanny Lakoubay, Stina Gustafsson & Maria Paula Fernandez, *There is no Such Thing as Blockchain Art - A report on the current status of the intersection of Blockchain and art*, THERE IS NO SUCH THING AS BLOCKCHAIN ART (2019), https://www.academia.edu/39464761/There_is_no_Such_Thing_as_Blockchain_Art_A_report_on_the_current_status_of_the_intersection_of_Blockchain_and_art (last visited May 10, 2022).

[359] Reese,*supra note* 163 at 584.

[360] J. Stevens, *The Secondary Sale, Copyright Conundrum: Why We Need a Secondary Market for Digital Content*, 26 Austl. Intell. Prop. J. 179 (2016). Available at: https://eprints.qut.edu.au/221857/ (last visited May 10, 2022).

[361] ReDigi, at 659

reproduction, the incapability to sell without infringing distribution rights, double spending[362], and associated fungibility issues.[363] With Blockchain technology, IP owners can create scarcity[364] and authenticity in the digital market. NFT can balance the interests of the consumer and IP owner simultaneously. NFT has moved far ahead of the forward and delete mechanism discussed in the *ReDigi* case. The terms of the NFT can be programmed to minimise any probable duplication and piracy. This is not an easy task, and have a couple of concerns.

5.3.1 Blockchain as a Copy or Phonorecord

The NFT can be considered as a 'copy' or 'phonorecord' under section 109(a) of US copyright. Both can be defined as a material thing in which work is embedded and can be perceived or reproduced later. A digital medium in which work is stored is also considered a copy or phonorecord. Similar logic can also be extended to NFT. When the digital file or metadata is minted on-chain, that part of the blockchain is the 'copy' or 'phonorecord' as the work exists in the portion of the blockchain itself. The copy or phonorecord is fixed in nature as blockchains are immutable. When NFT is off-chain, the server or external storage system where it is stored can be considered a copy or phonorecord.

The blockchain network is a tangible object. Data is stored in each individual physical node. A database is simply where the work is stored. Thus, blockchain can be considered a material object where work is stored. Hence, the first sale doctrine under section 109 can be extended and applied to NFT.

5.3.2 NFT; Double Spending and Reproduction of Copy

When applying the first sale doctrine in digital form, the question was never about applicability in digital form; it does apply in digital form. Instead, the major question was whether the sharing creates a new copy in the receiver's system and keeps the original file

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[362] Double spending is the risk of digital content being transferred more than once while retaining the original due to its electronic nature and lack of physical presence.
[363] ReDigi, at 658–59
[364] Digital scarcity is the idea of producing digital assets or goods that are unique and limited in numbers, thus decreasing its availability as in material world.

in the sender's system.[365] In the event that the transfer does not result in a copy being retained by the original owner, The first sale doctrine can also apply to digital assets.[366] The risk of 'potential multiplication of copies[367]' can be ameliorated with currently available NFT technologies.

The dilemma in digital exhaustion has always been technological rather than legal due to the new copy theory. The NFT avoids the chances of duplication and reproduction once it is minted in the blockchain. The use of NFT will address the Double spending issue,[368] even though it does not act as a teleporting device to transport the files without making a copy.[369]

The NFTs are attached with smart contracts created by codes that facilitate the NFT's sale or transfer and do not always replicate attached digital assets. For instance, as mentioned earlier, Ethereum Blockchain is based on the ERC721 standards, and it defines simple transfer functions that allow users to send, sell, or otherwise transfer their NFTs. A simple transfer function for an NFT owner is as structured as follows:

```
function transfer(address _to, uint _deedId) external payable;
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Whenever an owner intends to transfer an NFT, they fill up two parameters in the above function, "address _to" and "uint _deedId", and call the function. These parameters

[365] U.S. COPYRIGHT OFFICE, REGISTER OF COPYRIGHTS, *A Report of the Register of Copyrights Pursuant to §104 of the Digital Millennium Copyright Act*, at v (2001). Available: https://www.copyright.gov/reports/studies/dmca/sec-104-report-vol-1.pdf (last visited May 10, 2022). [hereinafter DMCA SECTION 104 REPORT]

[366] INFO. INFRASTRUCTURE TASK FORCE, *Intellectual Property and the National Information Infrastructure: The Report of the Working Group on Intellectual Property Rights* 92 (Sep. 1995). Available at: https://www.eff.org/files/filenode/DMCA/ntia_dmca_white_paper.pdf (last visited May 10, 2022).

[367] INTERNET POL'Y TASK FORCE, U.S. DEP'T OF COM., *White Paper On Remixes, First Sale, And Statutory Damages* 67-68 (2016). Available at: https://www.uspto.gov/sites/default/files/documents/copyrightwhitepaper.pdf (last visited May 10, 2022).

[368] Phillip Shaverdian, *Blockchain-Based Digital Assets and the Case for Revisiting Copyright's First Sale Doctrine*, UCLA L. REV. (Feb. 19, 2019), available at : https://www.uclalawreview.org/blockchain-based-digital-assets-and-the-case-for-revisiting-copyrights-first-sale-doctrine-2/ (last visited June 05, 2022)

[369] John Browning, *Hugh Jackman's Conundrum: Can the Blockchain Revitalize the First Sale Doctrine Under Copyright Law?*, JD SUPRA (Mar. 16, 2016), available at: https://www.jdsupra.com/legalnews/hugh-jackman-s-conundrum-can-the-78979/ (last visited June 05, 2022)

specify the recipient and the specific NFT ID, respectively. In this scenario, actual assets are not transferred. Rather, the new ownership details are recorded in the respective blockchain. Like a sale deed, the transaction acts as a demonstration of ownership of NFT. Since the NFT and the digital assets are neither copied nor moved, the NFT transfer function does not infringe on the owner's reproduction rights. Imagine a case of transferring an apartment. The function may consist of an apartment NFT ID (uint _deedId) and recipient details (address _to), and the ownership is transferred to a new person. The apartment is not replicated nor moved; it remains in a fixed place. Similarly, in the case of NFT of Digital works, whether it is attached to a smart contract or off-chain in a server, ownership and access only shift while metadata remains at the same location. Since the NFT transfer does not replicate or move the metadata of copyrighted work, there is no infringement of the reproduction right of the work. This also avoids the chances of double spending. Double spending is the risk of digital content being transferred more than once while retaining the original due to its electronic nature and lack of physical presence.

Confusion may arise due to the blockchain structure with the distribution of numerous independent computers similar to an internet network, which could imply that an NFT is unlawfully reproduced at each node. But in reality, a blockchain maintains a single state and functions as a single distributed computer. The application of the first sale doctrine is unaffected by the misconception that a blockchain is not a unified state machine because each node, as a tangible unit, constitutes an individual copy or phonorecord. Whenever deployment requires the reproduction of copies, the NFT owner obliquely authorises the reproduction of copies on each node.

Despite the technological advancement, the NFT still fall under reproduction under the definition of the US patent office.[370] For the first time, while minting with the blockchain, there is a chance for a digital file to undergo reproduction. To mint to the blockchain, the uploader uploads the file, which creates a new file and attaches to the Blockchain, and the original files remain in the uploader's system. Therefore, reproduction occurs for a moment in time, and two digital copies come to life. The one copy in the NFT blockchain

[370] DMCA SECTION 104 REPORT, 109-110

is immutable. On the other hand, one in the Uploaders system raises concerns as it can be replicated or sold again. This concern could be solved by implementing a delete and forward mechanism, the Uploader certifying the deletion of the file after uploading or relaxing the first sale doctrine to include the first necessary reproduction. In the Oracle case, the court allowed temporary reproduction of digital copies whenever it was deemed necessary, which is known as the *First-Download Doctrine*[371]; it has a three-prong test[372] with conditions: authorisation for download, permission to use it for unlimited time, and proper remuneration.[373] In EU Infosoc, Article 5(1) permits temporary reproduction if the process is an integral and essential part.[374] Although Infosac explicitly mentions the word Reproduction, the term Download can be interpreted as a reproduction for the purpose. It requires reproduction to be non-economical and not permanent.

According to advocates of the *First-Download Doctrine* in American legal contexts, the temporary reproduction of digital copies is considered an integral component of the technology process. Therefore, doctrine inherently covers the issue and imposes a degree of responsibility on the sender to ensure its transitory nature. Therefore, when extending the First-Download Doctrine to NFTs, the original digital file utilised for minting is viewed as a byproduct of a fleeting action.

This concern about the original copy remaining with the uploader arises only when the uploader is not the copyright owner or someone assigned by him transfers, or he transfers all his rights related to digital goods to the buyer. In normal cases, the exclusive right to reproduction lies with copyright; in that case, the owner can reproduce ‘n’ number of copies, like physical copies. At the same time, like a single physical copy, an NFT-attached digital asset cannot replicated and distributed by anyone other than the owner of the NFT. NFT acts like a tangible good. The right to distribute normally rests in the owner of NFT unless specified otherwise in the contract.

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[371] Lukas Feiler, *Birth of the First-Download Doctrine- The Application of the First-Sale Doctrine to Internet Downloads under EU and USCopyright Law*, 16 J. OF INTERNET L. 1, 17 (Oct. 2012).
[372] Id.
[373] UsedSoft, supra note 218,, pt. 88
[374] InfoSoc Directive, supra note 149, art. 5(1).

5.5.3 NFT and Other Concerns

(a) NFT and non-deteriorated nature of Digital assets

Digital goods, unlike physical goods, do not degrade eventually. This creates an issue in the second-hand market of digital goods. The original digital file sold by the owner and the secondhand product both have the same quality and thus create competition for the original owner. This creates an imbalance in the market. A suggestion against this issue is to resolve it by attaching a condition in smart contracts,[375] such as to provide a fixed percentage as equity or fee to the original owner.[376] Thus, he earns from every subsequent resale as compensation.

However, this raises concerns regarding the first sale doctrine itself, as the purchaser's right is affected, and it allows the original owner to receive payment for subsequent sales after the first sale.

(b) Who has the right to create NFT out of a copyrighted work?

Only the person with exclusive copyright ownership can create an NFT from their work. However, this becomes complex when the owner licenses some of the rights or the authorship or creator ships are shared. Then, the agreement will decide on the right to create NFT if explicitly provided. In some cases, licensing rights and full authority were given way before the advent of NFTs, and the original owner may not have intended to give an NFT authority. The absence of terms and clarity creates chaos, and it is up to the judiciary to decide who can create an NFT.

(c) Owning an NFT Versus Owning a Work

Merely buying an NFT does not shift copyright to reproduce and distribute the work along with it; it all depends on the terms of smart contracts. Generally, it is assumed that

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[375] Balázs Bodó, Daniel Gervais & João Pedro Quintais, *Blockchain and Smart Contracts: The Missing Link in Copyright Licensing?*, 26 Int'l J.L. & Info. Tech. 311 (2018). Available at https://doi.org/10.1093/ijlit/eay014 (last visited June 10, 2022)

[376] Alexander Savelyev, Copyright in the blockchain era: Promises and challenges, 34 Computer Law & Security Review 550 (2018).
Available at: https://www.sciencedirect.com/science/article/abs/pii/S0267364917303783 (last visited June 10, 2022)

copyright owners retain it unless otherwise specified. Buying an NFT immediately will not make one a sole proprietor of all the rights attached to the work in NFT. It depends on the contractual terms, which provide the kind of rights an original owner intends to transfer. The buyer does not own an asset until the original creator expressly sells it via smart contract. When we buy an NFT, we are directly gaining possession of work instead of receiving access and authority to control the smart contract attached to the work stored in a blockchain, and the ownership details of the buyer will recorded in it.

5.6 Conclusion

The development of NFT technology at least addresses some of the deficiencies in digital exhaustion. It underlines the need for a more nuanced approach towards legal frameworks. From cases like *ReDigi* and *Tom Kabinet*, we can infer that existing laws do not fully account for the unique properties of digital assets. Blockchain technology and NFTs provide a conceivable solution to some of the major challenges in digital exhaustion. NFT provides mechanisms to manage reproduction rights, distribution rights, and the double-spending problem. NFTs' immutable and non-fungible characters offer a way to ensure authenticity and limit unauthorised reproductions, thus potentially giving a tangible nature to digital goods and aligning more closely with the first sale doctrine's principles. It is urgent for both legislative bodies and judicial systems to adapt and provide clear, updated regulations that address the particularities of digital assets like NFTs.

Chapter Six

Conclusion and Suggestions

6.1 Introduction

Exhaustion as a doctrine impedes complete enforcement of a copyright owner's exclusive rights and improves knowledge dissemination. It hinders a copyright holder from perpetually profiting from an expression of his work that has already been sold. Application of this doctrine of exhaustion in digital trade is complex as the doctrine was introduced to handle analogue goods and failed to evolve with expectations and the peculiar nature of digital goods. From the research, it was found that the Legal domain around the world was hesitant to extend the doctrine into the digital environment.

The way forward in the Digital Exhaustion domain depends on the question of whether its application of doctrine is really needed in the digital world. More and more digital content services are shifting to licensing rather than selling their content. The concept of sale is diminishing in relation to digital products. Digital exhaustion is a balancing tool between monopolising information and public access to information. Once ignored in digital trade, the concept of ownership is now emerging strongly with technological development in Blockchain technology. The Exhaustion will act as an essential instrument to enable the concept of ‘virtual ownership’ in a sale.

In this context, the demand has risen from constructive realist scholars who favour digital exhaustion. The doctrine is considered an essential means for implementing the digital secondhand market, Disseminating information, limiting the perpetual exploitation of copyright owners, and enhancing consumer rights. Most of the concerns raised by the court in precedent cases were regarding the infringement caused by shortcomings of then-existing technologies. The court was less concerned about the purpose of the Doctrine. Moreover, most of the technological shortcomings can be overcome with recent innovations in blockchain technology and decentralised Web 3.0 Internet Infrastructure.

6.2 Major Findings and Conclusion Drawn from Research

The summary of findings and conclusions drawn by the researcher are as follows:

6.2.1 Understanding the Legal Framework and its Complexities.

No international harmonised definitions or regulations of doctrine are currently available, and nation-states have not reached a consensus on the nature of digital exhaustion and its applicability. For the purpose of this study, the researcher referred to international and regional treaties, domestic legislation, case laws of the EU and US, and scholarly articles by various authors.

In the US legal system, the first sale doctrine was drawn for the first time in *Bobbs-Merill Co. v. Straus*[377]. Later, the Doctrine was codified under Section 109(a)[378] of the Copyright Act as a limitation to exclusive rights provided in Section 106.[379] *ReDigi* cases established that this limitation is not applicable to digital goods. In order to include digital goods, either the interpretations of 'Copy' and 'Phonorecord' should be flexible enough to include digital goods or the current Copyright code should be amended.

The EU legislature first relied upon various judgements to address Doctrine and later legislated it in two directives: Software Directive [380] and Infosoc Directive.[381] The former provides an application of Exhaustion in the case of software, whereas Infosac limits it to tangible products. The reason was quite obvious: the software Directive was legislated before the ratification of WCT by the EU parliament. Later, the EU ratified Infosoc according to WCT. WCT, in its agreed statement to articles 6 and 7, explained that exhaustion principles would not extend to digital goods.[382] Hence, the EU purposefully skipped the extension to Intangible goods. The agreed statement becomes a hindrance to

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[377] Bobbs-Merrill Co. v. Straus, 210 U.S. 339 (1908).
[378] 17 U.S.C. § 109 (a) (2022).
[379] 17 U.S.C. § 106 (2022).
[380] Council Directive 91/250/EEC of 14 May 1991 on the Legal Protection of Computer Programs, 1991 O.J. (L 122) 42.
[381] 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, 2001 O.J. (L 167) 10.
[382] WCT art. 6, Dec. 20, 1996, S. Treaty Doc. No. 105-17 (1997); Agreed Statements concerning WIPO Copyright Treaty (1996). Available at: https://www.wipo.int/wipolex/en/text/295456

most countries formulating policies in favour of digital exhaustion as most of the countries are party to WCT and have ratified it. This must be amended as a first step towards applying exhaustion in digital products, and amendments should be followed into the respective domestic legal framework.

6.2.2 Complications in Understanding the Traditional Doctrine Exhaustion

The doctrine evolved in the EU as a limitation to the right to distribution of copyright owners and in the US as a defence against copyright infringement. The concept of Exhaustion was always considered and described in a negative sense as a limitation, Restriction or Exemption. There is a lack of consensus among scholars in the EU and US on whether it grants any 'right' to the purchaser or is just a limitation on copyright owners' right to distribution. The approach towards digital exhaustion requires careful reconsideration. The Doctrine should be flexible enough to accommodate concepts like digital ownership and technological development, such as NFT and 3D printing. The exhaustion doctrine should be constructed as a right of the consumer. It is worth noting that none of the jurisdictions considered the doctrine an exclusive consumer right.

6.2.3 Complications in Understanding The digital Exhaustion

The term 'Digital exhaustion' is used by scholars[383] to denote the application of the doctrine of exhaustion or first sale into digital trade.[384] The researcher found that the term "digital Exhaustion" has two connotations. It can be approached in both positive and negative sense. In a positive sense, digital exhaustion acts as a doctrine that inhibits the exclusive rights of the IP owner to regulate their rights on the products they sell. And in its negative sense as a doctrine that cannot extended to digital trade. The international legal fraternity accepted it in its negative sense, and the traditional positivist approach supports it in its negative sense. In contrast, constructive realist scholars demand its extension to the digital environment adhere to the term's positive connotation. Throughout this research, the researcher used the term "Digital Exhaustion" in its positive connotation.

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[383] For example scholars like Péter Mezei;Caterina Sganga;Ariel Katz;Aaron Perzanowski; Jason Schultz

[384] Seth Niemi, *Managing Digital Resale in the Era of International Exhaustion*, 30 IND. J. GLOBAL LEGAL Stud. 377 (2023)

6.2.4 Application Of Doctrine of Exhaustion into Digital Environment Poses Challenges

The first objective of the research was to determine the extent to which the Doctrine of exhaustion in intellectual property rights applies to digital trade, considering the unique characteristics and challenges of digital goods and services. After ample research, the researcher can conclude that applying the doctrine of exhaustion in digital trade is complex as the doctrine was introduced to handle analogue goods and failed to evolve to deal with the peculiar nature of digital goods. The researcher identified that the major challenges are arising in relation to the sale versus licence dichotomy, Tangibility of Digital goods, Reproduction rights and new copy theory, nature of Supply models and Subject matter. Any further attempt to implement digital exhaustion should address and find possible solutions to the following issues.

6.2.4.1 Issues related to the tangibility of Digital products

Unlike analogue products, digital products are intangible in nature. Two major concerns regarding the tangibility character of digital goods are the absence of wear and tear and ease of replication and distribution. Firstly, Digital goods can be copied and distributed quickly and at virtually no cost as they are in digital format. Secondly, Digital goods do not deteriorate with their use over time. The concept of ‘Property’ was formulated in relation to tangible goods having materiality, where, along with ownership, material possession can be transferred, allowing the new owner to exercise complete control over the object, excluding all others, including the prior owner. This notion cannot applied to digital transfer as the new copy theory frustrates the reproduction right. In several cases where exhaustion was used as a defence against Infringement, the courts were trying to find whether the copying amounts to Reproduction. They failed to consider whether these cases meet the original purposes and objectives of the Doctrine. The objective of the doctrine is to balance the rights of copyright holders with those of purchasers, irrespective of the nature of trade. Excluding digital copies from the vicinity of the Exhaustion doctrine would grant copyright holders undue control over sold copies merely

because the trade was carried out in an intangible medium, effectively creating a monopoly and infringing on the purchaser's rights.

Digital products involve tangible physical substance and nature despite their digital nature. However, the court often failed to address these aspects. A departure from this view can seen only when software is the subject matter of transfer. From the ReDigi case, we can conclude that digital content in the tangible medium will come under the purview of Exhaustion. At the same time, the court disregarded the application of exhaustion in the case of the sale of digital content alone or as contained in an intangible medium.

6.2.4.2 Issues Posed by Licences on Digital Exhaustion.

Licensing is widely used by copyright holders as a technique to escape exhaustion. Two major strategies are changing the contract's wording to 'license' and shifting to License contracts. The occurrence of a 'First sale' is an essential condition of the doctrine. Licensing enables the copyright owner to commercialise his protected work without transferring its ownership. The usage of shrinkwrap agreements like EULA in the software industry limits the negotiation power of consumers and is often used to deceive them. Shifting to licensing raises concerns about the ownership rights of consumers. The current US Copyright Act is unclear on which kind of transactions trigger 'ownership' and Exhaustion, with sections 109[385] and 117[386] limiting their defences to the 'owner' of a copy. EU and US courts interpreted their respective legislation to address this dichotomy. They laid down tests to check whether a licensing agreement constituted a sale. In most digital markets, the "Buy Now" option does not initiate a sale or transfer exclusive product ownership to the purchaser. The increasing endorsement of licensing demonstrates that the existing legal framework lacks the flexibility to expand the doctrine of Exhaustion to the digital environment.

6.2.4.3 Issues Related to the Right to Reproduce and Digital Transfer of Work

International norms and various domestic laws recognise the exclusive right to reproduce a protected work. The Exhaustion doctrine applies solely to the Right to distribution and

[385] 17 U.S.C. § 109 (2022).
[386] 17 U.S.C. § 117 (2022). (Limitations on exclusive rights related specifically to Computer programs)

does not extend to the Right to reproduction. According to 'New Copy Theory'. The transfer of the digital file by a user through electronic technology to another user retains the original copy in the sender's device and creates a new copy' in the receiver device, and moving inside a single device may create a 'new copy' in the same device itself. Existing precedents such as ReDigi and interpretations of statutes suggest that this act of transfer in electronic medium amounts to copyright infringement. In the *Usedsoft* case[387], the court referred to article 4(2) of the Software Directive[388] to establish that copying software for a necessary intended purpose will not amount to infringement. However, the Lux specialis put forward by the software directive is questionable as it predates the ratification of WCT in the EU parliament and the adoption of Infosac.

A *Forward and Delete technology* was a technical solution that was brought to ensure proper migration of the original file during the sale. However, the court in *ReDigi* and *Tom Kabinet* held that this technology has limitations; one could save a copy before deleting or uploading, which creates the possibility for piracy. Two major issues can be inferred from analysing the Redigi and Tom Kabinet judgments. Firstly, both the CJEU and the Second Circuit are economically and technologically prejudiced. They disagreed on treating the technological solution ReDigi and Tom Kabinet introduced as equivalent to an offline market and refused to apply the doctrine of exhaustion in their product. Secondly, both courts ignored AG Szpunar's conclusion, favouring the acknowledgement of the exhaustion rule for works downloaded for permanent use. AG Szpunar contended that digital exhaustion should be recognised from a teleological and legal standpoint.

Researchers found that until technology properly develops to address the new copy theory, acknowledging the *First-Download Doctrine*[389], which allows the temporary reproduction of non-economical and non-permanent digital copies whenever it is deemed necessary, will resolve this issue to an extent. In EU Infosoc, Article 5(1) permits temporary reproduction if the process is an integral and essential part.[390] Although

[387] UsedSoft, supra note 218,, ¶ 49 ..
[388] software Directive, supra note 201,, art. 4(2).
[389] Lukas Feiler, Birth of the First-Download Doctrine- The Application of the First-Sale Doctrine to Internet Downloads under EU and USCopyright Law, 16 J. OF INTERNET L. 1, 17 (Oct. 2012).
[390] InfoSoc Directive, supra note 149,, art. 5(1).

Infosac explicitly mentions the word Reproduction, the term Download can be interpreted as a reproduction for the purpose. It requires compliance with a three-prong test[391] which has conditions: authorisation for download, permission to use it for unlimited time, and proper remuneration.[392]

In the *UsedSoft* case, the court allowed the *First-Download Doctrine,* which refers to the temporary reproduction of digital copies whenever it was deemed necessary. Article 5(1) of Infosoc permits temporary reproduction if the process is an integral and essential part.[393] Although Infosac explicitly mentions the word Reproduction, the term Download can be interpreted as a reproduction for the purpose. It requires reproduction to be non-economical and not permanent. This doctrine can be extended to situations where reproduction is part of technology and an unavoidable part of technology. Extending this doctrine to Blockchain technology avoids the possible reproduction during the minting process.

6.2.4.4 Issues Related to Subject Matter

(a) Lux Specialis

It could be found from precedents and statutes that the doctrine of exhaustion applied separately to software when compared to other digital goods. Article 4(2) of the Software Directive establishes that copying software for a necessary intended purpose will not amount to infringement. But this legality of lux specialis put forward by the software directive is doubtful as the act predates the ratification of WCT in the EU parliament and the adoption of Infosac.[394] In the *Usedsoft* case, the court relied on this article and interpreted equal treatment to intangible software. This interpretation is a purposeful attempt to align with economic principles. It diverges from the agreed statements of the WCT that exhaustion does not extend to computer programs.[395] As per general rule, WCT

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[391] Id.
[392] UsedSoft, supra note 218,, ¶ 88.
[393] InfoSoc Directive, supra note 149,, art. 5(1).
[394] The Software Directive was adopted in 1991; WCT in 1996; InfoSoc in 2001
[395] WCT art. 6 ; Agreed Statements concerning WIPO Copyright Treaty (1996). Available at: https://www.wipo.int/wipolex/en/text/295456 (last visited 10 June)

should have prevailed. The adoption of a software directive ignoring the agreed statement can be regarded as a legislative choice or an oversight.

(b) Functional equivalence test

In the *UsedSoft* case, the court tested the functional equivalence between selling software on a physical medium (such as USB or DVD) and selling software via the internet website. The ECJ suggested that online transmission of software is 'functionally equivalent' to selling a physical storage medium.[396] The researcher found that applying the functional equivalence test across different subject matters is unnecessary. From a technological standpoint, sound recordings and audiobooks do not require permanent copying for use, unlike software, which necessitates installation inside another location, like a hard drive. From the Judgement of the *ReDigi* case, we can infer that this functional equivalence does not hold for sound recordings, audiobooks, and e-books, which can be stored, marketed and consumed in different ways across various devices.

Therefore, the researcher found that there exist different rules regarding exhaustion in the digital context depending on the nature of the digital goods or services involved. In the *UsedSoft* case, *Lex specialis* for software was applied based on the functional equivalence test.

(c) Technological neutrality

The precedent in *ReDigi* and *Tom Kabinet* shows that courts' application of technological neutrality has been inconsistent. Treating digital files and tokens, which have proprietary interests, as similar to tangible goods could harmonise the interpretation of digital ownership. The CJEU's *Austro-Mechana*[397] decision indicates a shift towards a technologically neutral interpretation of limitations and exceptions. Canadian law also demonstrates that technological neutrality can balance copyright, distinguishing between

[396] UsedSoft, supra note 218, 61 .
[397] Case C-433/20, Austro-Mechana Gesellschaft zur Wahrnehmung mechanisch-musikalischer Urheberrechte Gesellschaft mbH v. Strato AG, ECLI:EU:C:2022:1012, para. 27.

permanent and impermanent access to copy of work.[398] Over-emphasising streaming technologies monopolises information and limits innovation and alternative business models essential for preserving and accessing different cultures.

6.2.5 Application of Exhaustion Doctrine in Web 3.0

The researcher attempted to find out whether the technological limitation to the application of exhaustion doctrine into traditional technology still exists in the era of much-decentralised Web 3.0 and whether underlying blockchain technology resolves issues pointed out by previous cases and policymakers. Web 3.0 is the next-generation Internet technology based on the blockchain technology. It has a decentralised system. The transactions are immutable and irreversible and are recorded properly. The exact ownership of digital goods attached to a blockchain can be tracked. The NFT and Smart contracts are Blockchain-based technologies that could change the perspective of digital exhaustion. NFT provide solutions for challenges, such as Double spending and Infringement of the right to Reproduction and Distribution, which arise while applying the doctrine of exhaustion to traditional technologies. NFT can be considered as the technology that the Second Circuit suggested in *ReDigi*.[399] It can address the legal obstruction put forward in *ReDigi*, such as the incapacity to transfer a copy without reproduction, the incapability to sell without infringing distribution rights, double spending, and associated fungibility issues. With the use of Blockchain technology, IP owners can create scarcity and authenticity in the digital market. Each NFT is non-fungible, immutable, hashed and can only accessed by the owner.

6.2.5.1 The New Copy Theory can be addressed With NFT

Two major concerns in most of the referred cases were the ‘New copy theory’ and its impact on the right to reproduction of copyright holders and the issue of piracy and its

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[398] Entertainment Software Ass'n v. Soc'y of Composers, Authors & Music Publishers of Can., [2012] 2 S.C.R. 231 (Can.).

[399] Ella McElwaine, *NFTS and Their Digital First Sale Doctrine Applicability*, 64 IDEA 518 533(2024). Available at: https://law.unh.edu/sites/default/files/media/2024-03/mcelwaine_publication_nfts-and-their-digital-first-sale-doctrine-applicability.pdf (Last visited on 10 June 2024)

economic impact on copyright holders. The use of NFT can minimise these issues. When an NFT is transferred, the ownership and access are only shifted from one person to another and recorded in the blockchain. Meanwhile, the digital assets remain in the same location. This avoids the chances of reproduction and replication during transfer. and thus limits the probability of piracy.

6.2.5.2 Authenticity And Piracy in NFT

Each and every NFT is hashed and different from one another. The authenticity of the NFT can be traced from the respective smart contract or NFT attached to the blockchain. This limits the chances of Piracy. Non-fungible characters enable NFT uniqueness and separate value, thus increasing marketability. The transactions in NFT are transparent and trackable.

6.2.5.3 Minting Process and Reproduction Issue

This research found that the only probable issue of reproduction arises during the minting process of digital assets to the blockchain, which results in the production of a new copy, and it will be uploaded and remain in the blockchain if it is the case of the on-chain system and remains in other servers if it an off-chain system. It should be noted that concern surfaces only when this minting process is carried out by a person other than the copyright owner or his agent. It is suggested that the use of advanced *forward and delete* technology or the application of the *First download doctrine* can solve this issue.

6.2.5.4 Other Concerns

Unlike a physical copy, digital copies do not deteriorate. The second-hand sale of digital assets competes with the original products, and both have the same value. This issue is suggested to be resolved by placing a condition in smart contact that a fee be given to the copyright owner whenever a subsequent sale occurs. But it questions the idea of traditional first sale right itself. The researcher suggests that in order to exhaustion be applied to digital trade, it should be flexible and balance both consumer and copyright owners' demands.

6.2.5.5 NFT Purchase and Exclusive Rights

Transfer of an NFT does not mean a person will have the right to distribute the digital assets. Owning an NFT Indicates purchasers' access to the digital assets. It does not necessarily make one the owner of Copyright. The transfer of copyright and transfer of exclusive rights depends on contractual terms in NFT. The contractual terms in a smart contract will decide whether the original owners had an intention to transfer a right.

6.3 Suggestions

From the research, the researcher could allude that The Doctrine of exhaustion is a rusted law in the modern age. Addressing the challenges in applying digital exhaustion by updating policy factors to support it and making necessary changes to the existing copyright laws can restore it in Digital times and ensure consumers' property rights and resale rights. For this cause, the researcher has some suggestions as follows:

6.3.1 Reconstruction of Copyright Legal Framework

The Copyright regime was developed decades ago with tangible goods in mind. The international and domestic copyright legal framework has undergone amendments several times. A decade ago, Scholar Pamela Samuelson related the US copyright law to "a patchwork quilt" due to the many amendments brought to it over the years.[400] This analogy can be used to refer to most of the Copyright Regime worldwide, as they all undergone numerous amendments to stay relevant with economic and technological development.[401]A similar situation can be seen in Supra-national bodies like the EU, where directives such as Copyright Directive, Software Directive and Infosoc directive have been amended several times. Since its inception, Copyright law faced several

[400] See STATEMENT OF PAMELA SAMUELSON in: *A Case Study For Consensus Building: The Copyright Principles Project Hearing Before The Subcommittee On Courts, Intellectual Property, And The Internet Of The Committee On The Judiciary House Of Representatives One Hundred Thirteenth Congress First Session*, 39 (2013), https://www.govinfo.gov/content/pkg/CHRG-113hhrg80976/pdf/CHRG-113hhrg80976.pdf (last visited Jun 05, 2024).

[401] Paul S. Berman *The Globalization of Jurisdiction*, 151 U. PA. L. REV. 311 (2002). Available at: https://scholarship.law.upenn.edu/penn_law_review/vol151/iss2/1 (last visited Jun 05, 2024).

technological challenges. Digital exhaustion poses such a challenge to the copyright regime. The researcher found that Current international and Domestic regulations are insufficient to deal with Digital Exhaustion. One of the suggestions this research puts forward is forming an international consensus on digital exhaustion and establishing a super code under the TRIPS agreement. The demand for a super code is not a novel Idea, It has been there for a long period and will continue in future.[402] One such demand was made by scholar P. Morris.[403] He suggested burning the outdated Berne agreement and revising the international copyright legal framework under TRIPS to accommodate Digital Exhaustion and other emerging challenges. Another scholar, Alan Story, also had a similar opinion on the Berne Convention as it geographically divided consumer and copyright holder's rights.[404] He argues that the current International Copyright system is created by placing the Copyright owner in the centre, and imbalances result from MNCs using the copyright system as a tool to commercialise it further across the globe.

Reconstructing the International legal framework of Copyright to accommodate Digital Exhaustion is not as easy as it seems. Firstly, the TRIPS agreement places it at the discretion of the nation-state to adopt the exhaustion regime of their choice. Factors like sovereignty, Diverse national interests, the territorial character of the Copyright, historical context and practices, and Market interest were taken into account while making this decision. Exhaustion is a balancing Instrument between the Consumer Interest and Copyright Holder interest, Whereas TRIPS prima facia focuses on the interests of the market and copyright holders. The policies are often influenced by stakeholders' interests. Market Interest and Lobbying to avoid Digital exhaustion are only tackled with international consensus.

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One may misunderstand that copyrights are international in nature, but in reality, they are territorial and apply only to the nation-state in question. Adopting an International framework has an effect on the territoriality of copyright laws. Moreover, there will be a divergence in norms due to historical reasons. The super copyright code could include exceptions that recognise customary territorial copyright norms to address these divergences. Nations implementing the super copyright code could maintain certain traditional copyright customs, provided they have a long history of applying these norms in copyright infringement cases.

6.3.2 Other Suggestions

1. Implement policies to protect consumer rights in the digital marketplace to ensure fair use and the ability to resell or transfer digital goods. The approach towards digital exhaustion requires careful reconsideration. The Doctrine should be flexible enough to accommodate concepts like digital ownership and technological development, such as NFT and 3D printing. The exhaustion doctrine should be constructed as a right of the consumer. It is worth noting that none of the jurisdictions considered the doctrine an exclusive consumer right.

2. More clarification is needed on the legal distinctions between digital goods and services to ensure consistent application of laws across various digital content. This includes categorising digital downloads, streaming services, and online subscriptions under existing legal frameworks. Updating copyright laws to distinguish between ownership and access-based consumption will be recommended.

3. Create a hybrid model contract that incorporates aspects of both goods and services in online contracts. This model should reflect the unique nature of digital content and provide a balanced approach to consumer rights and copyright protections.

4. The shift from Owner-based to Access-based systems is real. It will be ideal to increase competition among established rights holders and new market entrants to

provide better consumer services and innovations, ensuring the digital marketplace remains dynamic and consumer-friendly.

5. More pragmatism is required in temporary reproduction. A pragmatic approach to temporary reproduction could mean recognising internal, typically temporary copies made for digital content sales during the minting process of NFT or resale between end-users as integral but secondary elements of electronic distribution. Therefore, the temporary reproduction issue should be bypassed in legal evaluations, focusing instead on the proper categorisation of the “sale” itself. Article 5(1) of EU Infosoc, which permits temporary download if the process is an integral and essential part, can be taken as an example.

6. Remove or Amend the Agreed Statement of WCT for Art.6 and Art.7, limiting exhaustion to tangible goods only. The agreed statement becomes a hindrance to most countries formulating policies in favour of digital exhaustion as most of the countries are party to WCT and have ratified it. This must be amended as a first step towards applying exhaustion for digital products.

7. To include digital goods under the scope of the First Sale Doctrine in the US, it is necessary to update the legal definitions and framework within the current Copyright code. Here, it is suggested that either it requires flexibility in interpreting 'Copy' and 'Phonorecord' in Section 109 or research proposes amendments to the Copyright code:

8. Explore technology-driven solutions, such as blockchain, to track and manage digital content ownership and transfers. The proper application of the Blockchain mechanism will help tackle the challenges of digital exhaustion. The digital second-hand market business model can be implemented effectively using blockchain technology.

9. Encourage the development of voluntary remuneration systems[405], like those envisaged by the court in Tom Kabinet or ReDigi, to facilitate the resale of lawfully acquired digital content. Provide legal frameworks that recognise and support these systems and Encourage industry collaboration to develop standardised practices for digital content resale.

10. Encourage the development of flexible digital licensing models that consider both the interests of copyright holders and consumers. The licensing models cannot be ignored in their totality. Ensuring the rights and negotiating capacity of consumers is the option left.

11. Public Access to knowledge can be ensured by encouraging the development of digital content archiving strategies that respect the principles like Libraries and archives, which have certain exceptions under copyright law (e.g., Section 108 of the U.S. Copyright Act) that allow them to reproduce and distribute works for preservation and access purposes. Encourage the development of digital content archiving strategies based on the first sale doctrine.

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APPENDIX

THE NATIONAL UNIVERSITY OF ADVANCED LEGAL STUDIES

Kalamassery, Kochi – 683 503, Kerala, India

CERTIFICATE ON PLAGIARISM CHECK

NAME OF THE CANDIDATE	MUHAMMED HASHIR N
TITLE OF THE DISSERTATION	REVISITING DIGITAL EXHAUSTION: ANALYSING THE DOCTRINE OF EXHAUSTION IN THE CONTEXT OF CONTEMPORARY DIGITAL TRADE
NAME OF THE SUPERVISOR	Mr. HARI S. NAYAR
SIMILAR CONTENT (%) IDENTIFIED	CHAPTER ONE: 3% CHAPTER TWO: 4% CHAPTER THREE: 3% CHAPTER FOUR:2% CHAPTER FIVE: 1% CHAPTER SIX: 3%
ACCEPTABLE MAXIMUM LIMIT	10%
SOFTWARE USED	GRAMMARLY
DATE OF VERIFICATION	24th June 2024

CHECKED BY (NAME & SIGNATURE	Mr. HARI S. NAYAR
NAME & SIGNATURE OF THE CANDIDATE	MUHAMMED HASHIR N
NAME & SIGNATURE OF THE SUPERVISOR	Mr. HARI S. NAYAR

Chapter one: Introduction

by Muhammed Hashir N

General metrics

16,141	2,345	133	9 min 22 sec	18 min 2 sec
characters	words	sentences	reading time	speaking time

Score

This text scores better than 94% of all texts checked by Grammarly

Writing Issues

48	5	43
Issues left	Critical	Advanced

Plagiarism

6 sources

3% of your text matches 6 sources on the web or in archives of academic publications

Chapter Two Intellectual Property and Exhaustion

by Muhammed Hashir N

General metrics

39,687	5,926	296	23 min 42 sec	45 min 35 sec
characters	words	sentences	reading time	speaking time

Score

This text scores better than 89% of all texts checked by Grammarly

Writing Issues

169	15	154
Issues left	Critical	Advanced

Plagiarism

18 sources

4% of your text matches 18 sources on the web or in archives of academic publications

Chapter Three: Digital Trade and Digital Exhaustion

by Muhammed Hashir N

General metrics

66,159	9,849	477	39 min 23 sec	1 hr 15 min
characters	words	sentences	reading time	speaking time

Score

87

This text scores better than 87% of all texts checked by Grammarly

Writing Issues

299	22	277
Issues left	Critical	Advanced

Plagiarism

3 %

26 sources

3% of your text matches 26 sources on the web or in archives of academic publications

Chapter Four: Challenges in Application of Digital Exhaustion

by Muhammed Hashir N

General metrics

36,735	5,532	276	22 min 7 sec	42 min 33 sec
characters	words	sentences	reading time	speaking time

Score

88

This text scores better than 88% of all texts checked by Grammarly

Writing Issues

164	18	146
Issues left	Critical	Advanced

Plagiarism

2 %

8 sources

2% of your text matches 8 sources on the web or in archives of academic publications

Chapter five: Digital Exhaustion in an Era of Web 3.0

by Muhammed Hashir N

General metrics

26,403	4,154	233	16 min 36 sec	31 min 57 sec
characters	words	sentences	reading time	speaking time

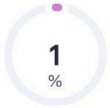
Score

This text scores better than 86% of all texts checked by Grammarly

Writing Issues

141	11	130
Issues left	Critical	Advanced

Plagiarism



3 sources

1% of your text matches 3 sources on the web or in archives of academic publications

grammarly Report: Chapter Six Conclusion

Chapter Six Conclusion

by Muhammed Hashir N

General metrics

32,713	4,829	286	19 min 18 sec	37 min 8 sec
characters	words	sentences	reading time	speaking time

Score

This text scores better than 85% of all texts checked by Grammarly

Writing Issues

160	8	152
Issues left	Critical	Advanced

Plagiarism

8 sources

3% of your text matches 8 sources on the web or in archives of academic publications