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Conference Paper

The exhaustion principle in copyright and modern digital markets

ITS 33rd European Conference 2025: "Digital innovation and transformation in uncertain times", Edinburgh, UK, 29th June – 1st July 2025

Provided in Cooperation with:
International Telecommunications Society (ITS)

Suggested Citation: Howell, Bronwyn E.; Potgieter, Petrus H. (2025) : The exhaustion principle in copyright and modern digital markets, ITS 33rd European Conference 2025: "Digital innovation and transformation in uncertain times", Edinburgh, UK, 29th June – 1st July 2025, International Telecommunications Society (ITS), Calgary

This Version is available at:
https://hdl.handle.net/10419/331276

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The exhaustion principle in copyright and modern digital markets

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June 2025

Abstract

The exhaustion principle, or first-sale doctrine, limits copyright holders' control after the authorised sale of a tangible copy, enabling resale, lending, and preservation. In digital markets, however, this principle has largely become irrelevant, as distribution models now rely on licences that prevent secondary use. This paper examines how the disappearance of copyright exhaustion affects four key digital markets – books, music, video, and software – along six dimensions: access, preservation, privacy, transactional clarity, user innovation, and platform competition. Drawing on a structured review of legal and economic literature, it assesses both the erosion of these benefits and possible remedies, including forward-and-delete technologies, common law exhaustion, relaxed anti-circumvention rules, and enhanced fair use provisions for libraries. The study argues that digital distribution has shifted the balance of rights too far towards copyright holders and that differentiated regulatory reforms may be needed to restore a socially beneficial equilibrium that preserves both market efficiency and user rights.

1 Introduction

The exhaustion principle, also known as the "first-sale doctrine" in copyright law, plays a crucial role in the dissemination of copyrighted works by limiting the rights of copyright holders after the first authorised sale of a tangible copy of a product. This principle, while often seen from a legal perspective, has significant economic implications, particularly in secondary markets, innovation, consumer welfare, and business strategies of copyright holders. Economically, this principle creates a balance between protecting the creator's rights, consumer rights and wider social externalities. Socially desirable consequences include the circulation in the market through resale, lending, and redistribution as well as facilitating archiving and preventing the creation of orphan works and disappearing content for digitally distributed works (Lemley, 2021).

In the early days of digital distribution, Varian (2005) and others considered the economics of copying. At the time, concern that rampant digital piracy would undermine the existing incentive model was widespread. This led to a bias in focus on preserving the revenues of rights-holders, over consideraton of wider societal rights. This led to reliance upon digital access models whereby no second copy was ever produced. Hence the principle of exhaustion is essentially moribund in modern markets for software and digital media (Rognstad, 2024), including books and possibly the outlet where the reader is accessing this paper. Four extensively documented benefits of the exhaustion principle – access, preservation, privacy and transactional clarity (Perzanowski & Schultz, 2010) – are thereby to some

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extent put in peril. Perzanowski & Schultz (2010) highlight to further benefits of exhaustion: user innovation and platform competition. Court decisions in the EU and in the US have however apparently eliminated the viability of a digital form of copyright exhaustion (Péter Mezei & Sganga, 2024).

The research problem addressed by this paper is to assess the state of copyright exhaustion in practice from the markets for books, music, video and software (respectively) and to examine possible remedies. We also document the effects for each market along the dimension of the six benefits of exhaustion identified by Perzanowski & Schultz (2010) and consider – as suggested by Kerber (2016) – possible suitable remedies, separately for each market. The methodology is a survey and synthesis of the existing literature, together with some innovations proposed by the authors. The imperative that copyright should in practice balance the rights of authors (or copyright owners) with those of consumers in a way that is socially beneficial, guides the study.

This study looks mainly at economic and social aspects of the issue but the extensive jurisprudence in intellectual property law is relevant to the research. Copyright law is national (with a possible supra-national dimension, for example in the EU) and governed by many international treaties but this research refers to specific jurisdictions only where it serves to illustrate general principles since it is not primarily a legal work. Section 2 provides the background and theoretical underpinnings of the study as well as gaps in existing research. Our assessment methodology is described in section 3 whereas section 4 provides the analysis and main findings. A further discussion of the findings can be found in section 5 and section 6 concludes.

2 Methodology

This research employs a structured review and synthesis of existing literature, supported by conceptual proposals put forward by the authors. It primarily relies on qualitative analysis, seeking to evaluate how the principle of copyright exhaustion operates across the markets for books, music, video, and software. Secondary sources – including academic studies, legal cases, policy documents, and institutional reports – are examined to reveal both the economic and social implications of the first-sale doctrine (exhaustion principle) without generating new empirical data.

Relevant publications were identified through targeted keyword searches in academic and legal databases, using terms such as “copyright exhaustion”, “digital goods”, “software licensing”, and “secondary markets”. Works were screened for their focus on the six recognised benefits of exhaustion identified by Perzanowski & Schultz (2010), thereby enabling comparisons across diverse jurisdictions and media formats. Each source was further assessed against conceptual clarity, market-specific issues, policy and legal precedents, and socio-economic outcomes, ensuring a cohesive examination of how exhaustion has been defined, challenged, and reinterpreted – especially within digital contexts.

Findings from this literature review were then integrated to propose practical solutions aimed at preserving both economic efficiency and the public interest in copyright. Although our analysis references multiple jurisdictions, it does not undertake a full comparative legal study. Instead, by highlighting principal challenges and emerging trends, the methodology offers a solid foundation for future research into policy reforms and strategies that can more effectively balance the rights of copyright holders with those of consumers.

Our assessment starts by examining the effect of digital online distribution on the six benefits (enumerated above) of copyright exhaustion, differentiating between the effect on books, audio, video and software respectively. We then, as suggested by Kerber (2016), the ameliorating effects of the existing proposed solutions as well as alternative measures which we have identified in our conceptual analysis.

3 Benefits of copyright exhaustion

In this section, we discuss the six benefits of copyright exhaustion that were highlighted by Perzanowski & Schultz (2010).

3.1 Access

Perzanowski & Schultz (2010) observes, copyright exhaustion "improves both the affordability and availability of copyrighted works by fostering secondary markets for lawful copies and distribution models that operate outside of copyright holder control" (p 894). In the physical world, this has enabled libraries to lend a single copy of a work to multiple subscribers, with limited restrictions on their use (for example, each was able to to copy portions for personal use). Access was thus increased, albeit limited by the physical condition of the item after multiple uses. For digital works, the lack of copyright exhaustion means costly pay-per-view access, or for libraries, facing a stringent licencing agreements that limit digital lending (Kariyawasam & Subburaj (2025)). These arrangements allow publishers to recover costs and prevent users without legitimate credentials from accessing the content (Rub (2024)).

However, publishers frequently impose and enforce strict access controls, such as encryption and time-limited access, which can undermine lawful uses of the work, such as text mining for research purposes, or interlibrary loans (Katz (2016)). The former conflicts with academic objectives promoting open inquiry, as researchers cannot freely analyze or repurpose legally-acquired content. The latter problem is particularly acute in lower-income countries, where paywalls, high subscription fees and restrictive licensing pose barriers to accessing content that exacerbate "digital divides" (Mpalo, 2013). It is noted that the library model of sharing a single copy amongst many users was fundamental in the fostering of increased literacy in low-income areas of both the global north and south; similar shared access could facilitate increased digital literacy and, importantly, knowledge spillovers arising from access to a range of relevant content curated for that purpose, such as is possible in a library.

3.2 Preservation

Copyright exhaustion "enables preservation of public access to works that are no longer available from the copyright owner.These include works copyright owners have determined are no longer commercially viable, works withdrawn or suppressed by copyright owners for cultural or political reasons, and so-called orphan works whose copyright owners are either unreachable or no longer exist" (Perzanowski & Schultz (2010), p 895). The full potential value of a creative work may not be realized until many years after its creation, and potentially after the copyright has expired. The copyright holder is unlikely to fully appreciate this potential value, because it pertains to the value held by future users, whose tastes, preferences and objectives are truly unknown to the holder, and to which the rights holder has no legitimate claim. Consequently the rights holder may make decisions about the work's storage and retention that exclude consideration of these benefits.

By way of example, consider the memories of a schoolgirl kept during a period in world history or in a location that seems not especially unusual, circulated in a limited print run (e.g. in a school journal). However, subsequent activities or even just the passing of time may lead to these seemingly commonplace observations assuming much greater significance when combined with information subsequently revealed. In a physical world, copyright exhaustion means that control of the various copies is held by individuals other than the copyright holder so some of the copies may not be destroyed. One of these may subsequently be "discovered", and become either the source data for research or the basis for further derivative works. In a digital world, however, the copyright holder only can make access and retention decisions. Access may be removed or the digital master destroyed without due consideration of the rights or uses of these future users. There will be no copies serendipitously

preserved because no exception was made for a second or subsequent digital copy to be legally retained by anyone other than the rights-holder.

Lemley (2021) observes that the effect is that, rather than moving to a world where all content is available to all, "we're moving backwards. Content is disappearing – not just becoming available only in limited times or circumstances, but becoming entirely unavailable" as new technologies and licensing arrangements (e.g. streaming services) remove the ability for users to download a copy. He suggests that "[i]f the copyright owner can't or won't continue to provide a published work, others should be permitted to pick up the slack. Fair use should encompass a right of access to published content" (abstract).

3.3 Privacy

Copyright exhaustion makes it possible for people to legally consume media (practically) anonymously because they are able to obtain access to the material without notifying the copyright holder. Rub (2015) believes that the obviously socially desirable privacy of consumption/readership is a weak advantage of copyright exhaustion. Individuals' private consumption of material is compromised in many other ways e.g. through credit card transaction records, libraries' electronic lending records or other forms of surveillance/tracking.

3.4 Transactional efficiency

Copyright exhaustion in physical copies, makes it simple for buyers and sellers to know whether they are legally acquiring a copy of a work. There are no complicated licence conditions to interpret and check. The exception is related to imported works. Copyright is territorial and, for example, Australia does not deem the rights of the copyright holder in Australia to have necessarily been exhausted by a legal sale in another country and it can block parallel imports. Other jurisdictions have their own interpretations of the principle, either on national level or regionally as for the European Economic Area (EEA) in which European Union and other member countries have to implement a regional form of copyright exhaustion where the first legal sale of a copyrighted good, rights are exhausted in the entire EEA (Pope, 2011). International agreements governing intellectual property essentially leave it open to jurisdictions to determine whether copyright exhaustion will be on a national basis, as in Canada or Turkey, or not (Mpalo, 2013). Informal parallel imports of copyrighted goods in a traveller's suitcase, have of course always been possible.

3.5 User innovation

Users are able to legally modify works subject to copyright exhaustion in order to create both works of art and useful tools and services. When it started, Netflix was able to acquire and distribute legal copies of DVDs without a licence because of copyright exhaustion. In the US this was possible for DVDs but not for CDs because of specific limitations on copyright exhaustion for sound recordings (Varian, 2005).

3.6 Platform competition

Although platform competition has always been an issue for software (even when distributed as tangible copies), it has been trivially non-existent for other copyrighted goods. A phonograph or DVD from one publisher could be played on devices from a range of manufacturers. It is no longer true that a book purchased for the Amazon Kindle can be read anywhere outside the Kindle application however. One cannot watch a series from Apple TV on the (much better) Netflix player. The use of such "tethered

Figure 1: Work by William Kentridge using a copyrighted book, display here presumed to be fair use.

technologies" has in the past and will in future imply that "purchasers" of content lose access, as happened with an earlier Google video-purchasing platform (Graber, 2015).

4 Proposed remedies

If one is convinced that the balance between rights that existed in earlier copyright law has been disturbed by the loss of the exhaustion principle in the world of digital distribution, what are the possible remedies?

4.1 Forward-and-delete technologies

One straight-forward way to apply digital copyright exhaustion in the digital world would be for a third party to mediate the second-hand sale of content while it guarantees (a) that the content had been deleted on the seller's devices and (b) that the buyer is not able to make further copies of the same content. In *Capitol Records, LLC v. ReDigi Inc.* (Southern District of New York 2013), confirmed by a Second Circuit court in 2018, the court found that the ReDigi service, which sought to achieve exactly this by mediating the sale of songs purchased on Apple's iTunes platform, violated the copyholder's rights by creating an unauthorised copy in the process and refused to consider it as an application of the copyright exhaustion doctrine (Dobson, 2014). As argued by Dobson (2014) and others, forward-and-delete appears on the surface to be a reasonable digital application of the doctrine. However, the concept faces many conceptual difficulties including that any software that enables it must perforce

- have access to all documents on a user's device;
- be able to handle encryption technologies used by the platform provider for the content and hence require the content provider to cooperate and assist in mediating the transfer.

The development of delete-and-forward technology that meets all requirements appears to present many difficulties but nevertheless Apple and Amazon have filed for a US patent for such technologies and a US patent was granted to Amazon in 2013 (Peter Mezei, 2015).

4.2 Common law exhaustion

Perzanowski & Schultz (2010) (p45) argue that the strict provisions of copyright statutes do not extinguish the ability of the courts to continue to address questions – the establishment of exclusive rights, their ownership, scope, infringement, exceptions, and limitations – through the common law process. They claim the common law development of two particular limitations on the exclusive rights of copyright holders, misuse and fair use, shed some light on the viability of a non-statutory exhaustion defense. The misuse doctrine has expanded and evolved over time, in the United States at least, absent either guidance or recognition from Congress, "demonstrating that statutory exceptions and limitations are only a subset of the available defenses to infringement." Although exhaustion is not entirely absent from the US statutory definition, "there is no doubt that common law defenses to infringement can thrive in the shadow of the Copyright Act" (p46). As evidence, they draw attention to the fair use defense that continues to evolve despite its statutory recognition.

Fair use is arguably the single most important limitation to copyright exclusivity. It is the feature that most surely underlies the ability to create derivative works. Much like fair use, the first sale doctrine and the exhaustion principle it embodies are rooted in judicial, rather than legislative, decision making. United States case law has relied on the basic purposes of copyright protection, the necessity of balancing the interests of rights holders and the public, and the specific facts presented in order to address gaps in the statutory scheme and ease copyright's core tension between incentives for creation and the accessibility and enjoyment of creative works (e.g. Bobbs-Merrill). This flexible, fact-sensitive approach closely mirrors the basic operation of the fair use doctrine, a methodology largely responsible for its power and longevity. We suggest that courts can employ a similarly flexible approach to exhaustion in order to rebalance the interests of rights holders and copy owners in the information economy. So long as the rules applied by courts do not conflict with the terms of copyright legislation, there appears to be no barrier to the parallel development of purely judicial exhaustion doctrines.

4.3 Relaxing anticircumvention

The US Digital Millenium Copyright Act (DMCA, like similar legislation elsewhere) prohibits the circumvention of software controls on access to copyrighted material as well as the creation or distribution of tools for that purpose (Perzanowski & Schultz, 2010). This means that a person who purchases a film on, say, their Apple iPad and somehow manages to make a copy to watch on another device that they own – an act that would in most jurisdictions amount to legitimate fair use – is actually committing an infringement of the DMCA. An early test case with an encouraging outcome was the prosecution of then 20 year old Jon Johansen in Norway for writing software (at the age of 15) that allowed DVD owners to access the content of a DVD without using a licenced DVD player. The Norwegian court found that since Jon himself had not violated copyright (having used if only on his own DVDs), there was no crime but case law in the US has taken steps in a different direction (Liu, 2005). A more limited reading of anticircumvention legislation in the US is, according to Perzanowski & Schultz (2010) in line with the original intention of the legislature. It is likely also to be helpful for the development of acceptable and beneficial technologies and marketplaces that could restore the benefits of copyright exhaustion in tangible copies.

4.4 Fair use and libraries

The copyright fair use doctrine is a principle in United States law that allows limited use of copyrighted material without obtaining permission from the copyright holder. It is intended to balance the interests of copyright owners with the public interest in the broader distribution and use of creative works. Fair use is codified in Section 107 of the Copyright Act and is evaluated using a flexible, four-factor test

that considers:

- The purpose and character of the use (including whether it is commercial or for nonprofit educational purposes);
- The nature of the copyrighted work;
- The amount and substantiality of the portion used; and
- The effect of the use on the potential market for or value of the original work.

The doctrine is intentionally broad and adaptable, allowing courts to apply it to new situations and technologies as they arise.

Libraries rely on fair use to support their missions of access, preservation, and education. While there are specific statutory exceptions for libraries (such as Section 108, which allows certain copying for preservation and interlibrary loan), these exceptions are limited in scope. Fair use fills the gaps, enabling libraries to undertake activities not explicitly covered by other provisions, such as:

- Digitizing materials for preservation or access
- Making materials available for research and scholarship
- Facilitating access for users with disabilities.

Fair use is especially important for libraries as it allows them to adapt to technological changes and serve the evolving needs of their communities. For example, digitizing works to create searchable databases or to provide remote access can be considered transformative uses under fair use, even if the entire work is copied, provided the new use serves a different purpose than the original.

Controlled Digital Lending (CDL) has been proposed as one means of libraries utiizing fair use by scanning the physical copy of an item held and then lending out the scanned copy, with smilar restrictions to those applying to the physical copy, for example only one borrower at a time may access the digital copy and removing the physical copy from distribution, to replicate the frictions prevailing in the physical world. However, in Hachette Book Group, Inc. v. Internet Archive, the court found that there was insufficient transformative use in the scanned copies to satisfy the fair use claim. The decision has proved controversial as it appears not to have taken into account the particular role of libraries in making content available to individuals who would never have purchased personal access in the first place, and the attendant externalities arising vrom library sharing of content. Further more, in focusing tightly on the commercial outcomes for rights-holders, the court may hace put insufficient weight on the social benefits provided by library access (Wu (2024)).

In light of the Hachette decision, Rub (2024) have proposed two alternative frameworks: a digital public lending rights (ePLR)arrangement whereby libraries can freely relend digital materials, but authors receive compensation (albeit from taxpayer funding); and categorizing readers (borrowers) in novel ways enabling price discrimination to be practised. These solutions also focus on commercial considerations, potentially at the expense of the benefit of a library-held digital copy providing additional assurance against loss of the work should the rights-holder cease to provide an access service to its sole copy.

5 Discussion and analysis

The advent of digital distribution caused a panic about piracy, for very understandable reasons. At the time, valuable cultural goods such as films and music were already available as tangible digital copies (on CD or DVD) that were easily copied and redistributed online. As computers became more powerful and the capacity of networks grew, the problem threatened to become acute. Purely online distribution (through streaming services such as Netflix or Spotify) of content has apparently largely solved the piracy problem but this has likely come at the cost of shift of the balance of rights towards

the copyright holders.

Copyright exhaustion has many concrete benefits that are well known from its applications to tangible copies of cultural goods. There is however evidently no single technological solution that restores the right of first sale to digital copies of goods. Despite decisions like the Tom Kabinet case in the EU that seem to preclude a direct application of digital copyright exhaustion (Sganga, 2021), it is imperative that civic society, courts and legislatures consider the possible remedies discussed above in the light of the long established counterbalance of the right of first sale to the excessive rights granted to copyright holders. Simply declaring that copyright exhaustion is dead, is neither reasonable nor likely to be conducive to maintaining the considerable economic and social gains of the copyright regime in tangible products.

Many "sales" today are really licence agreements, some of which come with very silly conditions like the Goldman Sachs font that was released under the condition that it not be user to disparage the firm (Rub, 2021). The substitution of contracts for sales en masse gives copyright holders rights that were never envisioned by copyright law e.g. making a breach of contract and automatic copyright infringement, Rub (2021) also believes. Copyright holders would prefer to use the strong enforcement mechanism of copyright law (essentially, involving the police) in cases where it is really a contractual dispute which normally would not involve the police.

6 Conclusion

The exhaustion principle was first firmly established in U.S. copyright law with the case *Bobbs-Merrill Co. v. Straus* of 1908 (Graham & McJohn, 2020).

One of the most significant economic effects of the exhaustion principle is its facilitation of secondary markets. In these markets, consumers can resell, lend, or rent goods that contain copyrighted content, such as books, movies, and software. Secondary markets have several economic benefits that include lowering of prices, individual consumer surplus as purchasers can recover part of the initial purchase price by reselling the product as well as general market efficiency. The existence of secondary markets also introduces competition for copyright holders.

When consumers opt to purchase second-hand goods instead of new ones, copyright holders might experience a decrease in new sales. This has led some to argue that the exhaustion principle can erode profit margins for creators, particularly in industries with high production costs and low marginal costs, such as software and digital content creation. The principle also has implications for innovation. On one hand, it may reduce the financial incentives for creators and businesses to invest in developing new works, particularly when secondary markets erode potential profits. On the other hand, it encourages businesses to innovate in their business models, pushing for new ways to monetise intellectual property that do not rely solely on the sale of physical copies.

In digital markets, the exhaustion principle faces significant challenges due to the nature of digital goods, which can be copied infinitely at near-zero marginal cost. The application of the exhaustion principle to digital goods, such as electronic books, software, and digital music, would be catastrophic as the resale of these goods could lead to a collapse of primary markets. This creates an economic dichotomy: while secondary markets are beneficial in traditional goods, the digital sphere must be protected from resales and digital copyright holders have employed licensing agreements that limit the applicability of the exhaustion principle, ensuring they retain control over how their works are used post-sale and this is protected by special digital copyright legislation as well as by software and encryption.

The exhaustion principle amounts to a balance between consumers' rights and copyright holders' economic incentives. The increasing irrelevance of it for digital goods has many implications, including

for the European single market in copyrighted goods (Cook, 2010; Signoretta, 2024). Peter Mezei (2015) and others have argued that a digital exhaustion principle should be considered and we support this view with practical recommendations for introducing partial recognition of a digital exhaustion principle on national level. While it is technically feasible for this to be achieved via court processes according to common law principles, experience to date does not instil confidence that judiciaries are taking full account of the wider social benefits accruing from having more than one copy of a creative work controlled by different interests in existence. This suggests that if the matter is to be sufficiently well-addressed, legislative changes may be necessary.

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