



Handling the open culture dilemma in museum management: an exploratory interdisciplinary study

Maria Della Lucia¹ · Giulia Dore¹ · Rana Muhammad Umar¹

Received: 3 April 2024 / Accepted: 18 September 2024
© The Author(s) 2024

Abstract

As part of their evolving social and digital mission, museums are tasked with fostering sustainability and inclusion throughout the physical-digital continuum and increasingly focus on accessible, participatory and representative culture. While openness is key in the service of society, museums face an open culture dilemma as copyright complicates their decision-making. Despite the topic's relevance, research is limited: little has been done to integrate the management and copyright domains, and the legal viewpoint predominates. This theoretical study adopts an interdisciplinary perspective to shed light on the open culture dilemma affecting museum strategies and practices. These aspects are closely intertwined with ethical issues and reveal contrasting perspectives within managerial and copyright frameworks. Building on convergence-divergence discourses on openness/closure of culture in these disciplines, the authors designed an exploratory matrix of approaches to open culture management in relation to copyright in museums to be operationalised and tested through empirical analysis.

Keywords Museum mission · Open culture dilemma · Copyright · Management · Theoretical matrix

Framing the research

Cultural heritage institutions' evolving role and mission feature prominently within the debate about culture's pervasive power in and transformation of contemporary society (KEA, 2006). Museums are permanent cultural institutions (Zhou et al., 2019) "in the service of society" (Betsch Cole & Lott, 2019; Golding & Walklate, 2018) explicitly tasked with fostering sustainability and inclusion (Fehér & Katalin Ásványi, 2023). Embracing diversity and ensuring equal opportunities for accessibility, participation and representation of individuals, groups and backgrounds, regardless of differences, are key ethical values and principles (Alberta Museums Association, 2021; Maranda, 2015) that guide museums' decision-making and actions (Edson, 2009) in the physical and digital environments. The Covid-19 pandemic has further accelerated the digital

✉ Maria Della Lucia
maria.dellalucia@unitn.it

¹ Department of Economics and Management, University of Trento, Trento, Italy

transformation of museums, increasing their online presence and digital activities and the online sharing of cultural heritage along with the virtual engagement of the public and other stakeholders (de Wild & Povroznik, 2024; Tinker, 2024).

Serving their social and digital missions, museums increasingly face an *open culture dilemma*: should they open up, and if so, to what extent? Handling open culture is crucial for museums if they are to be agents of social change (Chipangura & Mataga, 2021; Wine-smith & Anderson, 2020), actively contributing to address humanity's right to access and participate in cultural life (Bevan & Ramos, 2021). On the other hand, successfully navigating open culture opportunities while maintaining the public's trust requires museums' adherence to integrity and core values, commitment to transparency and accountability, and compliance with copyright law and principles (Derclaye, 2010; Schmidt, 2004).

Despite its relevance, little research has been done on the open culture dilemma at the intersection of management and copyright (Booth et al., 2022), and the theoretical separation of these fields means that the issue is not well understood and complex to manage. The lack of awareness and uncertainty that have shaped the current copyright framework make it difficult for museums to take and implement fair and equitable decisions (Benhamou & Ferland, 2022) in the interest of society. Empirical studies supporting openness in cultural heritage management have called for operative solutions (Wallace, 2022). Fresh knowledge derived from the cross-fertilisation of these fields is urgently needed to reassess the rationale of copyright exclusivity (Kouletakis, 2022) and give concrete support to open culture management in cultural heritage institutions.

This theoretical study sheds light on museums' open culture dilemma from an interdisciplinary perspective, endeavouring to bridge the gap between management and legal theory and practice. The leading research questions are:

- Q.1 How does the literature address open culture in relation to museums and to copyright?
- Q.2 Do culture management and copyright enable or hinder museums' drive towards open culture?
- Q.3 What approaches can best address the open culture dilemma and support museums in their cultural democratisation mission?

Building on cultural heritage institutions' and museums' experiences of open culture and its dilemmas, this study adopts the PRISMA approach to carry out a systematic literature review (Moher et al., 2009) of contributions in the relevant fields indexed in Scopus and Web of Science (WoS). The main constructs that emerge from the descriptive (Feliciano-Cestero et al., 2023), the co-occurrence (Mariani et al., 2023), and the content (Cruz-Cárdenaset al., 2021) analyses of the final eligible sample identify the main managerial and legal aspects of handling the open culture dilemma in museums. These aspects are closely intertwined with ethical issues and reflect contrasting Western and non-Western perspectives in managerial and copyright frameworks (Kocki, 2020; Kohn, 2013; Macmillan, 2021). The interdisciplinary body of literature was found to contain convergence-divergence discourses on open culture management in relation to copyright. Convergence refers to the degree to which managerial and legal fields are aligned to promote openness or closure. Conversely, divergence occurs when the managerial field supports open culture while the legal field restricts it, and vice versa. The discussion of these discourses allowed us to design an exploratory matrix of approaches to open culture management in relation to copyright in museums and other cultural heritage institutions. The matrix must

be operationalised and tested in empirical studies. Future research directions are suggested in the conclusion.

Open culture in museums: evolving definitions, opportunities, and copyright

Over time, international conventions have recognised the human value of cultural heritage and promoted its valorisation, establishing a universal right to culture (UDHR, 1948; ICE-SCR, 1966; UNESCO, 1970) that acknowledges individual and community representation and inclusion (Council of Europe, 2005). This emphasis on cultural engagement promotes *openness*, collaboration and sharing between individuals and communities to empower people, foster an inclusive cultural landscape, and drive innovation. The digital era has extended these principles to various aspects of cultural life. The free software (Stallman, 1986) and open-source movements (Perens & Open Source Initiative, 1997–1998) that have pioneered openness in terms of software availability, use, modification, and redistribution, have laid the foundations for and catalysed the democratisation of information across disciplines (Coghlan, 2018; Edwards & Moss, 2022). The resulting proliferation of information is reflected in a blossoming of creativity, knowledge, and culture. The concepts of Open Access (Suber, 2012), Open Science (Caso, 2022), Open Educational Resources (Thanuskodi, 2020), and Open Data (Beaulieu & Leonelli, 2011), although applied within different ecosystems (from research to education and the public interest), are all grounded in the principles of the widest possible access to information and the minimum possible restrictions on use.

Building on these concepts, the notion of Open Culture relates to the cultural domain in general. Cultural heritage institutions have not yet developed their own definition and are currently using constantly evolving concepts of openness borrowed from the leading international and non-profit advocates of equitable and sustainable open culture and knowledge. These definitions adapt and extend the original tenets of the bottom-up openness movements. Acknowledging the prominent role and evolving nature of openness (de Wild & Povroznik, 2024), the new museology is increasingly shaping its conceptualisation and implementation, emphasising a partial shift from an internal perspective centred on museums to one that is more externally focused and public-oriented (Cao, 2024, pp. 115 and 127). As museums strive to meet their social responsibilities in the digital age, they must address new copyright challenges to promote the democratisation of knowledge and equitable access to cultural heritage (Arthur et al., 2024; de Wild & Povroznik, 2024).

In the context of this rapidly evolving debate, the present study has adopted the definition of openness provided by the Open Knowledge Foundation, a leading global and non-profit movement which promotes and advances open data and knowledge. The Foundation defines openness as the freedom to “access, use, modify and share for any purpose” data and content (OKFN, n.d.). Given the broader implications of its key elements, emphasising the external and public-oriented focus of openness, this definition is adopted in various contexts. For instance, OpenGLAM shares this philosophy (OpenGLAM, 2023) and is working on a Declaration on Open Access for Cultural Heritage. Emphasising the democratisation of culture, Creative Commons (n.d.) is working on a new, wide-ranging, definition of open culture: openly shared cultural heritage as a *participatory experience* that involves not only cultural institutions and their users but also their communities, commercial entities, non-profit sector institutions, and society at large (Creative Commons, 2023).

This notion of openness offers a comprehensive framework for open culture which encompasses free access to cultural resources and encourages their utilisation and modification to foster a culture of innovation, promoting the sharing of ideas to build a collective body of knowledge.

International and EU-level museum organisations and other supranational institutions and bodies support the goals of the open culture movement. The COVID-19 pandemic has prompted these institutions to further prioritise the importance of open access to cultural resources by adopting specific policies and initiatives. The International Council of Museums (ICOM) officially acknowledges Open Access as a powerful tool for shaping museums' social missions, connecting and engaging with the public remotely and enabling the latter to participate in co-creation processes with museums (ICOM, 2023; Orlandi et al., 2021). Similarly, the Network of European Museums Organizations (NEMO) encourages museums to promote Open Access (NEMO, 2023), fostering digital engagement, learning and education. UNESCO's implementation of an Open Access policy for its publications and its call for equitable access to information have clearly endorsed the principle. The EU Commission's recommendations express its commitment to openness (European Commission, 2006, 2011) extending it to the creation of a common space (European Commission, 2021). These policies also endeavour to address the challenges of the digital landscape (de Wild & Povroznik, 2024). In particular, the rapid advancement of Artificial Intelligence (AI) (European Parliament & Caramiaux, 2020; European Parliament, 2024) further complicates the open culture dilemma, necessitating changes to copyright principles and rules. This is particularly important for issues of authorship and ownership, to strike a fair balance between the rights and interests of various stakeholders.

Despite the many elements propelling museums towards greater openness, progress is hampered by internal and external resistance which contributes to shaping the open culture dilemma. A primary concern in—particularly small and/or predominantly publicly funded—museums is their lack of organisational capacity, resources, and technology literacy (among others, Kelly et al., 2008) to adopt ethical, effective, and sustainable open culture practices. A recent study by Booth et al. (2022) shows that museums engage intensively with their ecosystems when developing their policies on open data, revealing the complementarity of virtuous/vicious circles that manifest between internal and external elements. In particular, a museum's technological capacity to address openness is frequently correlated to its size and reputation, along with its funding arrangements. Moreover, these elements affect an institution's ability to meet legal and/or ethical standards/conditions mediated by the ecosystem in which it is operating. The larger the ecosystem and the more effective the network communication, the better museums respond.

Copyright, as a branch of Intellectual Property (IP) law, plays a major and often disruptive role in shaping museum decision-making and practices related to openness (Arthur et al., 2024; NEMO & Szogs, 2020; Stamatoudi, 2022). When more inclined to openness, museums acknowledge the public domain (Boyle, 2008) or rely on mechanisms of copyright flexibility (Sganga et al., 2023) and open licensing tools to grant the public access to, and use and reuse of, cultural content. Museums may even choose not to apply copyright, despite having specific rights in works or data. When more wary of openness, museums see copyright as a tool to maintain control over cultural resources for their protection and sustainable management (Ubertazzi, 2022), particularly in cash-strapped times. In this vein, they ensure that copyright permissions are obtained, and any due royalties or other fees are paid. However, the discussion on open culture extends beyond legal considerations, encompassing the socio-political dimensions of copyright. For instance, Western and non-Western viewpoints differ on the question of stringent copyright policy. From a Western-centric

perspective, it may raise the controversial issues of the privatisation (Pessach, 2007), proprietisation (Sganga, 2018), or commodification (McDonald, 2007) of culture, leading to a process of legal enclosure that hinders equitable access to digital and cultural commons (Boyle, 2008; De Rosnay & Stalder, 2020; Péliissier, 2021). On the other hand, from a non-Western perspective, stringent copyright may enable museums to attest to the accuracy and integrity of their collections (Alberts & Hazen, 2010) and counter potential misuse (Nwabueze, 2017; Scher, 2002).

McCarthy and Wallace's (2018) survey of GLAM policy and practice shows that, in general, cultural institutions are not equipped to deal with the legal complexities of open access. In addition, the open culture dilemma is more acute in some jurisdictions than others. While countries like the USA and Canada provide for an open-ended copyright limitation (fair use, fair dealing), EU copyright law provides for an exhaustive list of exceptions and limitations (E&Ls). Moreover, cultural heritage and data protection regulations may also exacerbate closure, curbing museums' desire to share their collections widely. In the EU, countries like Italy and Greece have laws that condition the reproduction and use of cultural heritage on the authorisation of administrative authorities, often upon fee payment, potentially in contrast with EU law (Dore & Turan, 2024) allowing free reproduction of public domain works of visual art (European Parliament, 2019a). While the EU Open Data directive (European Parliament, 2019b) explicitly reaffirms the legal and ethical (Petri, 2014) principle that public domain material should stay in the public domain once it is digitised, it does allow cultural heritage institutions to charge fees that should not exceed a reasonable return on investment (Sappa, 2022). The careful application of this provision could help to resolve the dilemma.

Research methodology: systematic literature review

The complexity of the emerging open culture dilemma—evidenced in the interdisciplinary open culture literature on museums—calls for a deeper understanding of the factors impacting these institutions as they endeavour to provide (varying degrees of) open access to their collections and thereby fulfil their social and digital mission. We chose an exploratory research design based on a systematic literature review (Baima et al., 2021; Paul & Criado, 2020) to allow us to encompass important questions regarding culture management and copyright. Although systematic literature reviews in the fields of business and management have been widely used to “grasp the field's structure” and benefit from bibliometric methods “in addition to traditional qualitative literature reviews” (Zupic & Čater, 2015, p. 457), the same cannot be said for copyright and legal research, although scholars have begun to emphasise their importance (Snel & Janaina de Moraes, 2018). Consequently, to the best of our knowledge, there are still no (recent) comprehensive reviews on our chosen topic. However, abundant literature has been published on museums and copyright, providing a solid foundation for the present research. Consistent with previous literature, we consider Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) by Moher et al. (2009) to best enable transparency and replicability. A multidisciplinary team of experts in management and intellectual property/copyright was involved in the research. Following the PRISMA research protocol (Fig. 1) and previous literature based on it, the team identified the established body of studies and the final sample (Cruz-Cárdenas et al., 2021).

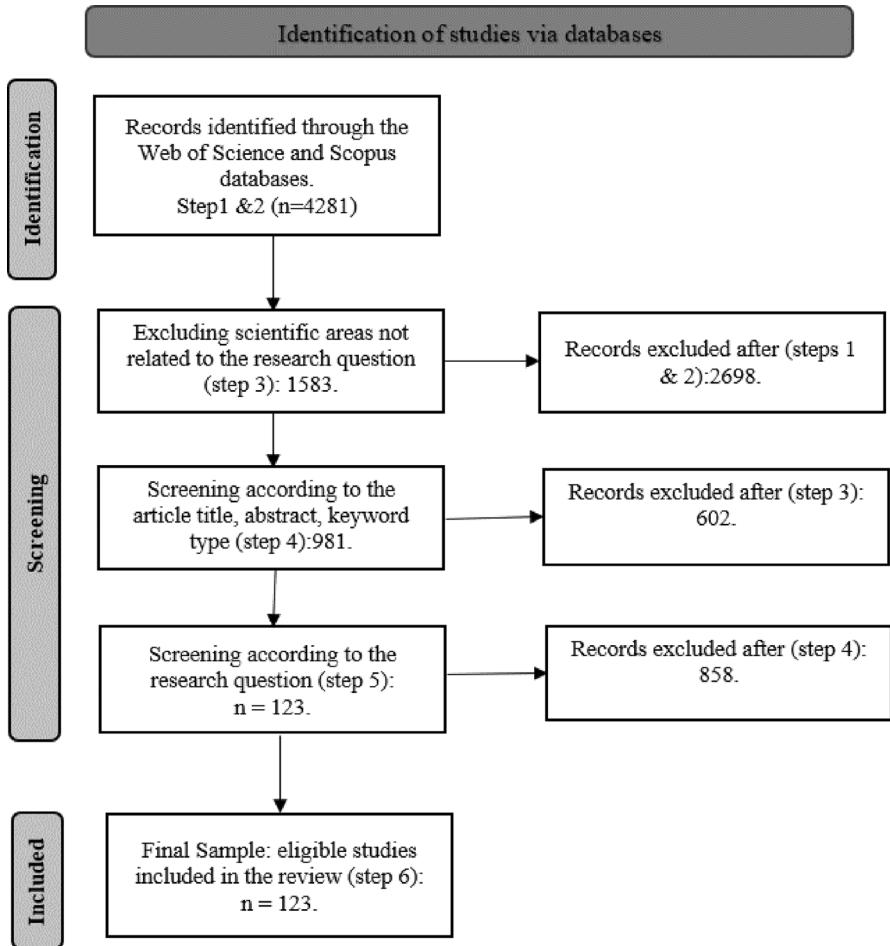


Fig. 1 The study’s PRISMA flowchart

Research protocol and description and systematisation of the eligible studies

The research team identified and combined ad-hoc keywords in a research string to identify records (Talwar et al., 2020), associating them with Boolean logic, namely “OR”, “AND”, and truncation (i.e. *), in order to include variants of the keywords (Loureiro et al., 2020). The research string was used in WoS and Scopus databases, which offer the best balance between research quality and coverage for exploratory searches (Palmaccio et al., 2021). In April 2023, the query “Cultural heritage” OR museum* (Topic) AND Copyright* (Topic) and the query (TITLE-ABS-KEY (“Cultural heritage” OR museum*) AND TITLE-ABS-KEY (copyright*)) were run in WoS and Scopus. A total of 4281 records were identified: 666 in WoS and 3615 in Scopus. These numbers align with the literature reporting that most scientific contributions indexed in WoS are also indexed in Scopus (Singh et al., 2021); WoS thus provides additional coverage.

The inclusion criteria used to select articles reflected the interdisciplinary nature of the study and the latter's objectives. In WoS, the areas selected were Management, Law, Art, Hospitality and Leisure, Sport & Tourism, Management, Anthropology, Sustainability science, and Social Psychology; in Scopus, subject areas covered the social sciences and business, management, and accounting. The team selected peer-reviewed articles only, written in English and published before the end of April 2023. Article titles, keywords and abstracts were assessed manually to exclude articles irrelevant to the research questions. As the team read through the material, we cross-checked our assessments and resolved any disagreements in discussions with fellow team members. These steps reduced the final eligible sample to 123 records (the full article list is provided in Table 4 in the appendix): 46 articles from the WoS, and 77 articles from Scopus.

In line with previous systematic literature reviews (Feliciano-Cestero et al., 2023), the studies included in the review were considered appropriate for further—descriptive, bibliometric and qualitative—analyses. Descriptive (Siemieniako et al., 2021), co-occurrence (Mariani et al., 2023) and content (Cruz-Cárdenas et al., 2021) analyses were performed on the final sample to describe the characteristics of the 123 articles, organise content, and identify the main issues and their interrelationships. Lastly, the literature was systematised.

Descriptive analysis

The main descriptive statistics were calculated on an Excel spreadsheet of data extracted from the sample. They include aspects relevant to the purposes of the study: journal titles, publication years, and the concepts coded by the authors highlighting the main literature trends; the research domains of the articles (which capture the interdisciplinarity of the present study); the countries where authors were based and the countries analysed in their contributions (thus showing where most contributions originated, and which countries have been most frequently researched). The descriptive analyses provide an overview of current knowledge in the field and how knowledge—of concepts, research domains, and countries—has evolved.

Co-occurrence analysis

For the purposes of the study, a keyword-based co-occurrence analysis (Mariani et al., 2023) was considered an appropriate bibliometric technique to analyse the final sample produced by our systematic literature review as it enables the identification of main concepts and emerging themes and the established or developing interconnections among them (Nicolas & Geldres-Weiss, 2023). VOSviewer 1.6.19 is commonly used for this analysis (Van Eck & Waltman, 2010, 2014). While it is recommended to consider terms with a minimum of five co-occurrences for analysis, scholars can opt to include terms with at least three co-occurrences. As the number of eligible articles is manageable, we chose the latter option to map emerging concepts and trends. In so doing, during the data clean-up, general terms (e.g. articles, place names, internet, directives etc.) were removed, and similar terms were merged into one (e.g. digital libraries/digital library, digitisation/digitisation, fair use/fair uses etc.) (Cruz-Cárdenas et al., 2021). VOS viewer grouped keywords based on an algorithm for solving an optimisation problem that combines normalisation, mapping of the nodes in a two-dimensional space and clustering techniques (Van Eck & Waltman, 2014). The function assigning the keywords to colour-coded clusters dictates the number of clusters, as each keyword can only occur in one cluster (Klarin, 2024). Six

Table 1 Clusters of keywords co-occurring in the eligible body of literature

Clusters	Title	Size	Anchor	Other co-occurring keywords
Cluster 1 (Red)	Intangible cultural heritage (ICH) and IP regulation	96 keywords in 22 articles	ICH	Traditional knowledge, material culture, authenticity, cultural diversity, law, intellectual property rights, digital copyright, moral rights
Cluster 2 (Blue)	Copyright and museums	89 keywords in 26 articles	Copyright	Museums, archives, publishing, appropriation art, fair use, public domain
Cluster 3 (Purple)	Digitisation and copyright	113 keywords in 35 articles	Digitisation	Mass digitisation, cultural heritage, extended collective licensing, orphan works, out-of-commerce works
Cluster 4 (Green)	Open Access and copyright	48 keywords in 14 articles	Open Access	Copyright law, originality, licensing, libraries, information literacy, preservation, digital preservation
Cluster 5 (Aqua)	Database and cultural property	62 keywords in 10 articles	Databases	Digital cultural heritage, cultural property, protection, repatriation
Cluster 6 (Ochre)	Digital libraries and standards	86 keywords in 16 articles	Digital libraries	Digital collection, Metadata, Standardised rights statement, case study

Systematisation of the literature

Finally, we leveraged the convergence-divergence on the openness/closure of culture that emerged from the current interdisciplinary body of literature to systematise the co-occurring keywords and related issues and build an exploratory matrix of approaches to open culture management in relation to copyright (Fig. 6). Convergence-divergence discourses were inspired by the perspectives on preserving or developing old-industrial areas and industrial UNESCO World Heritage sites (Oevermann & Mieg, 2021). From a social science standpoint, these perspectives can be understood as informing the two central discourses to be addressed when dealing with industrial heritage (and other forms of culture). Based on the following premises, we extended and adapted these perspectives to open culture. First, like industrial heritage, culture is a complex endowment that includes both material and immaterial assets and the natural, built and virtual environment in which they are located. Second, open culture represents an evolved concept of development driven by cultural, social and technological changes. In the context of open culture, convergence refers to the degree to which managerial and legal fields are aligned to promote openness or closure. Conversely, divergence occurs where the managerial field supports open culture while the legal field restricts it, or vice versa.

The convergence-divergence discourses were operationalised using the Cartesian product (Weiss et al., 2017), a mathematical concept used to identify the set of all possible ordered pairs that can be formed by combining elements from two or more sets, representing all possible combinations on a Cartesian plane (Fig. 3). As each thematic cluster comprises interconnected (co-occurring) concepts and issues (Table 2), we selected the main concepts of each cluster and attributed them to their field or set X and Y, i.e. culture management (X) or copyright (Y). For each cluster i ($i = 1$ to 6), the Cartesian product was used to pair each item of X_i and Y_i sets to identify a new set I_{ijw} containing all possible ordered pairs (x_{ij}, y_{iw}) , where x_{ij} is the item j of the set X_i and y_{iw} is the item w of the set Y_i . This new set represents all possible combinations between elements of two sets in the same cluster. These pairs illustrate the relationships between the key culture management and copyright concepts that emerge from the current interdisciplinary literature on open culture.

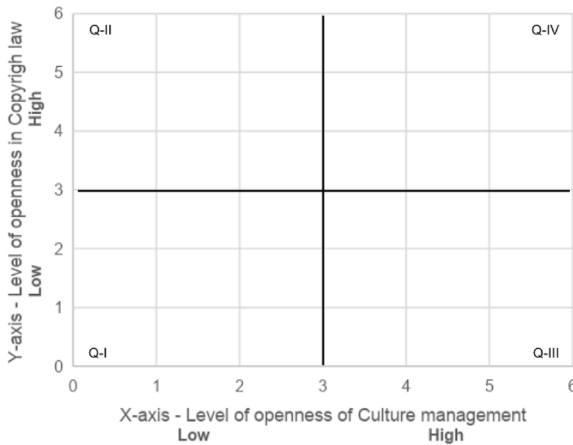
$$I_{ijw} = (X_i) \times (Y_i)$$

i =cluster number, from 1 to 6, X_i =set of culture management item j of the cluster i , Y_i =set of copyright items w of the cluster i .

In order to represent all possible pairs on the Cartesian plane (Fig. 3), the research team measured the items of all possible ordered pairs (x_{ij}, y_{iw}) (48 pairs) on a five-point Likert-type scale. Each item's level of openness was assessed according to the predominant scientific domain discourse on it, where 1=full closure, 2=conditional closure, 3=neutral, 4=conditional openness and 5=full openness. A third ordinal value $z = 1$ was attributed to each pair (x_{ij}, y_{iw}) of ordinal values to determine the relative size of the bubble. For different pairs of items with the same combination of ordinal values (i.e. recurring pairs of values and overlapping bubbles), the z -value we attributed is the sum of the z -value of each pair (e.g. $z = 2, 3, \dots$). The larger the bubble, the more representative it is of the same combination of ordinal values. The position of each pair on the Cartesian plane (Fig. 6) is decided by both its x -and- y -ordinal values. Point 3 of the Likert scale (neutral) is used to set the thresholds that discriminate between high (openness) and low (closure) levels of open culture on the x -and- y axes, thus determining four main quadrants.

Table 2 Main concepts and issues associated with the thematic clusters and the fields of culture management or copyright

Cluster	Culture management	Copyright
1. Intangible cultural heritage (ICH) and regulation	Traditional knowledge protection Equitable sharing of benefits	Indigenous/Community rights Legal uncertainty, Moral rights, Cultural commons,
2. Copyright and museums	Market exploitation, Social/Digital mission, Virtual Museum	Fair use/E&Ls, Open licences, Public domain
3. Digitisation and copyright	Transaction costs, Rights clearance, Mass digitisation	Diligent search, ECL, Copyright infringement
4. Open access and copyright	Funding issues, Digital preservation, Market-service approach	Exclusive rights, Institutional repositories, Open Access
5. Database and cultural property	Repatriation claims of heritage, Secure management, User engagement	DRM/TPMs, Database protection
6. Digital libraries and standards	Digital libraries, Collection management capacity, Blockchain/NFTs	Copyright literacy, EU data policy, Standardised rights metadata/statements, EU data policy, EU data policy



Note:
 Q-I=low levels of openness on the x-and-y axes; Q-II= low levels of openness on the x-axis and high levels on the y-axis; Q-III= high levels of openness on the x-axis and low levels on the y-axis; Q-IV= high levels of openness on the x-and-y axes.

Fig. 3 Sample figure of the Cartesian plane.

Four well-identified clusters—with very similar numbers of pairs comprising each—and seven intermediate positions—whose x_{ij} or y_{iw} ordinal values are neutral—appeared when all possible pairs (x_{ij}, y_{iw}) of items/values were positioned in the matrix. The latter combines the level of openness—from low (closure and conditional closure) to neutral and high (conditional openness and openness)—contained within culture management (x-axes) concepts and IP and copyright concepts (y-axes), and their respective representativeness (bubble). We denoted this matrix as an exploratory framework of *approaches to open culture management in relation to copyright* (Fig. 3). Two clusters are positioned in quadrants—*full closure (I)* and *full openness (IV)*—that denote interdisciplinary *convergence areas* produced by an orientation towards either openness or closure within culture management and copyright law. The other two—*conditional closure (II)* and *conditional openness (III)*—lie in *divergent areas* due to opposing orientations towards openness/closure. The clusters situated in each convergence area are discussed in terms of factors and processes that hinder openness (full closure) or enable it (full openness). The clusters located in divergence areas are discussed in terms of managerial/internal (conditional closure) or copyright/external (conditional openness) barriers/challenges categorised at the micro, meso, and macro levels (Booth et al., 2022). The *ambivalent areas* corresponding to intermediate positions represent opportunities to make the museum more open or to monitor and maintain a (to varying degrees) open position.

Description and systematisation of the relevant literature

The main insight and constructs revealed by the descriptive, co-occurrence and content analyses allowed us to identify how the prominent discourses in the current interdisciplinary literature shape museums’ open culture dilemmas in relation to copyright. We have outlined four approaches, based on a discussion of interdisciplinary convergence, divergence and ambivalence (Fig. 6).

General characteristics of the body of eligible literature

Cultural heritage, digitisation and copyright were already attracting academic interest in the early 90 s and in the last 12 years this interest has increased (Fig. 4). Ore (1994), a study of the copyright on maps used in architectural history projects, is the earliest published work included in our analysis; subsequently one or two papers were published every year until 2009. The number of publications then rose noticeably between 2010 and 2014 and from 2017: 86% of the articles were published between 2010 and 2023 and 54% between 2017 and 2023.

This development reflects a growing scholarly interest in cultural heritage institutions’ exploration of digitisation and copyright (Fig. 5). While the number of studies on copyright without digitisation has been growing since 2011, more than 80% of papers on the intersection of the two fields were published between 2016 and 2023. No classical or systematic literature review has been performed on this corpus, although empirical studies exist.

This development of the literature is also evident in the number of journals (105) in which the 123 eligible articles were published, showing the fragmentation of knowledge across disciplines. Law, specifically IP law, emerges as the dominant subject area or category. Notably, 58 of the 105 journals deal predominantly with IP and most of the major journals with the highest number of articles (2 to 6 per journal) (Table 3). Six studies were published in the Queen Mary Journal of Intellectual Property; 15 others in five journals, including the Journal of Intellectual Property Law and Practice, Santander Art and Culture Law Review, International Review of Intellectual Property and Competition. Only five management journals appear including culture, tourism and hospitality management (e.g. the International Journal of Culture, Tourism and Hospitality Research), and planning and development (e.g. Cities). The others (42) are multidisciplinary and wide-ranging journals covering museology and the conservation of cultural heritage. Their approach to digital culture is typically protection/conservation oriented, a perspective reflected in a focus on using IP for these purposes. They include the International Journal of Intangible Heritage, the International Journal of Cultural Property, Museum International, the Journal of African Cultural Studies, and the Journal of Cultural Heritage. Knowing the journals’ aims and

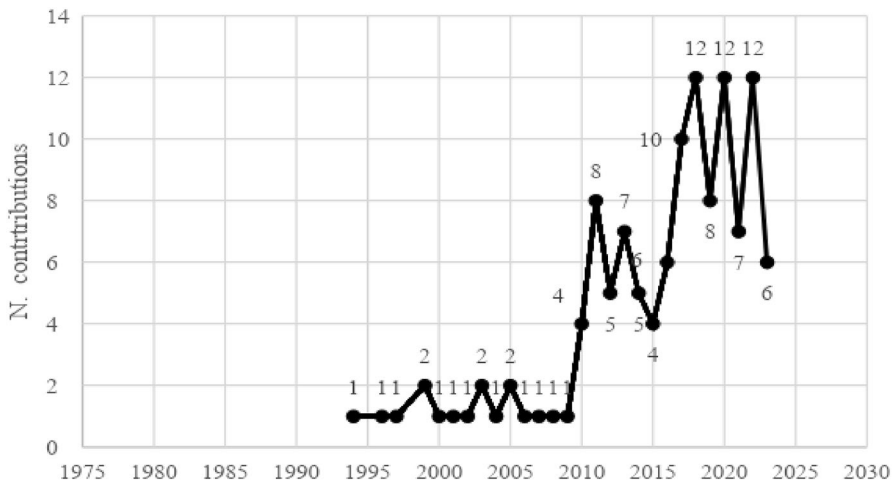


Fig. 4 Development of the literature. Contribution numbers in 1994–2023

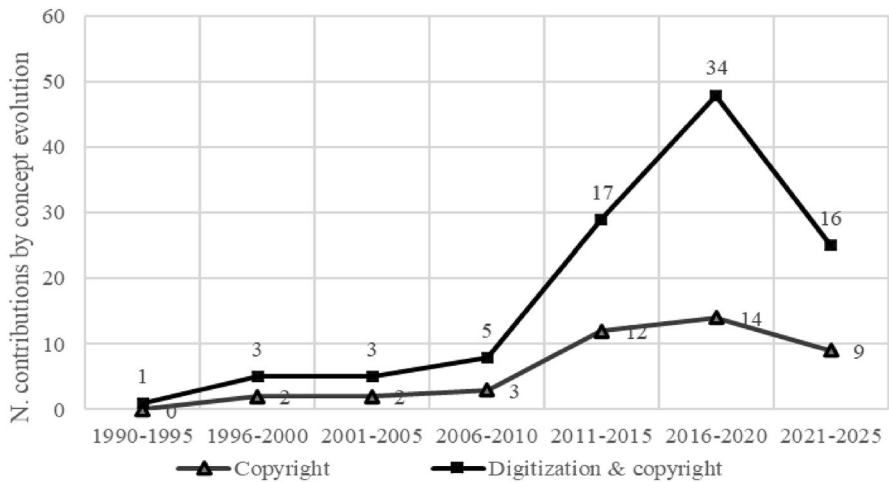


Fig. 5 Evolution of concepts in the relevant literature. 1994–2023

scope is necessary but insufficient to identify the subject category of the articles. However, this information is sufficient to confirm the existence of multidisciplinary interest in and knowledge of the field(s), although almost all studies were in either Law or Management.

A final aspect of the examined corpus is its global reach in terms of the authors’ countries of residence and the places analysed in their empirical contributions. Most authors have chosen to investigate how the issues in question manifest in their own countries; most (65 out of 123) contributions come from Europe, which is also the most investigated region (67). The United Kingdom (14), Poland (7), the Netherlands (6), and Italy (5) account for the majority of contributions. North America, mainly the US (41 authors and 36 contributions) is next; the remaining articles (17 authors, 20 contributions) cover the rest of the world, including China, India, Indonesia, and Australia.

Thematic clusters and content

The current interdisciplinary literature was systematised into six clusters of co-occurring keywords (Fig. 2 and Table 1) and their main issues (Table 2).

Cluster 1: intangible cultural heritage (ICH) and IP regulation

Cluster 1 (Red) features “intangible cultural heritage” as a prominent node and gathers terms describing specific forms and associated values of ICH, such as “traditional knowledge, material culture, authenticity, cultural diversity”. It also identifies the legal framework for protecting ICH and its values at a broader level, such as “IP and IP rights” and more specific ones, such as “digital copyright” or “moral rights”. Issues frequently discussed by scholars are ICH’s IP protection per se (Collins, 2018; Gibson, 2011) or from unregulated use, alteration and degradation (Scher, 2002), or misappropriation (Adewumi, 2022; Nwabueze, 2017).

ICH-specific forms and values reflect competing rights and interests around the fair representation of multiple perspectives and backgrounds, particularly colonial legacies and

Table 3 Major publishing journals

Journals	No. of articles	Main domain
Queen Mary Journal of Intellectual Property	06	Law
Journal of Intellectual Property Law and Practice	03	Law
LIBER Quarterly	03	Library and Information Sciences
International Review of Intellectual Property and Competition Law	03	Law
Santander Art and Culture Law Review	03	Law
Art Documentation	03	Art history
Int. Journal of Cultural Property	02	Law
Int. Journal of Law and Information Technology	02	Law
Grey Journal	02	Entrepreneurship
Other journals	96	Multiple fields
Total	123	Interdisciplinary

vulnerable groups (Sherman, 2008). Recognising and protecting moral rights, i.e. non-economic rights safeguarding the author’s personality and reputation (Karol, 2019; Jagielska-Burduk, 2020), gives legally invisible and misrepresented people and communities a voice (Macmillan, 2015) and allows them to safeguard the authenticity and integrity of their heritage (Bradley, 2005; Jerzyk, 2021; Nwabueze, 2017).

The specially tailored forms of protection, such as Indigenous IP/Copyright, which some scholars have called for, guarantee strong ethical foundations (Kennedy & Lacznia, 2014) and embrace the idea of communal rights (Collins, 2022; Mahendrawa, 2020; Paulus & Kelli, 2023), or emphasise the importance of a recognised cultural commons (Vallely, 2014). Most regulatory frameworks, in fact, are grounded in Western-centric notions of the individual and their personal rights (Kennedy & Lacznia, 2014; Macmillan, 2021; Vallely, 2014) rather than acknowledging the collective and their rights. Some level of “protectionism” (Garon, 2012) generally favoured by non-Western countries (Hansen, 2011), Indigenous people (Stanley, 2004), and local communities aims to legitimise, preserve and safeguard place-sourced knowledge and ancestral heritage (Bell, 1998; Nwabueze, 2013). However, IP regulations are also shown to be grounded in factors other than morality (Lea, 2006). In the case of former colonies, for instance, copyright is not only a way to reaffirm pre-colonial identities (Collins, 2018), but also a tool for economic development through the equitable sharing of any benefits derived from allowing access to/use of copyright protected resources (Hansen, 2011; Purwandoko et al., 2020; Wanda George, 2010). Nevertheless, few policies or management protocols have been put in place to implement these regulations (Nwabueze, 2013; Singh et al., 2013), and the situation continues to be highly complex and uncertain (Beamsley, 1999; Bock, 2011; Conley & Bemelmans, 1997; Oruç, 2022).

Cluster 2: copyright and museums

Cluster 2 (Blue) links the anchor-word “copyright” to terms identifying cultural institutions such as “museums, libraries and archives” that increasingly deal with copyright when “publishing” and managing “art” in the digital era (Rosenblum, 2008). Leveraging digitisation, museums (Giannini & Bowen, 2019; Styliani et al., 2009) can manage their collections and become highly attractive to multiple stakeholders (e.g., experts, students, tourists). Scholars have advised that a market-friendly approach is needed to manage copyright-protected works held in museum collections (Pantalony, 2017) in the interest of artists, copyright holders, collectors, museums and funders. However, other scholars are concerned that this approach might compromise museums’ engagement with the public. If the use and sharing of cultural resources are limited or hindered (Markellou, 2013), the museum’s role and the social function of intellectual property are compromised (Geiger, 2013; Ng Boyte, 2023). Copyright fraud (Needham, 2017)—i.e. when copyright is claimed on works in the public domain—is also a serious concern (Allan, 2007; Angelopoulos, 2012; Pittman, 2020) since it contradicts the ethical principle of making public domain works available for all and by all means (Crews, 2014; Petri, 2014).

To facilitate digitisation and the management of digital collections, museums must adequately address “fair use”, which is the US legal doctrine that allows some uses of copyright-protected works (under certain conditions) without the right holder’s permission. It is broadly similar to fair dealing provisions in other countries (like Australia, Canada and the UK) and to the EU list of exceptions and limitations to copyright (E&Ls), which are often used to justify “appropriation art”. Unlike “public domain” works to which copyright does not apply (e.g. facts or government works) or has expired or been waived, fair use, fair dealing, and E&Ls are designed to permit copyright flexibility. However, determining what constitutes fair use or fair dealing is not easy (Conley & Bemelmans, 1997). Likewise, E&Ls are limited, sector-specific and, in some cases, not mandatory. Thus, they are seldom used—and sometimes misused—by cultural institutions (Gerhardt, 2014).

Cluster 3: digitisation and copyright

In *Cluster 3* (Purple), digitisation is the central node linked to words identifying the process of “mass digitisation” and the objects of digitisation like “cultural heritage” in general and “orphan works” specifically. It also refers to “extended collective licensing (ECL)”, the framework that allows cultural institutions to manage copyrighted works through collective management organisations (Guibault & Schroff, 2018). However, while ECL can streamline the licensing process, e.g., of an artwork’s reproduction, they are country and issue-specific.

“Orphan” works, whose rights holders are either unknown or untraceable, and “out-of-commerce” works, which are not available for purchase or licensing (Bensamoun, 2014), complicate digitisation efforts (Montagnani & Zoboli, 2017). Cultural institutions can be overwhelmed by mass digitisation projects of such works, and they face considerable challenges in seeking and obtaining permission from right holders (Borghi et al., 2016; van Gompel & Hugenholtz, 2010). The steps involved in undertaking the requisite “diligent search” are extremely complex and time-consuming (Schroff, 2017); if a museum cannot demonstrate that it has made all reasonable efforts to find rights holders, it may be accused

of copyright infringement (Kracher & Corritore, 2004) and unethical practices (Ang, 2013). This risk increases when authorship is allocated to a community or group (Lor & Britz, 2012).

In keeping pace with technological developments, new rules are constantly needed to enable flexible uses, facilitate licensing models, and tackle controversial issues (Pallante, 2012). The long-awaited EU directive on orphan works (European Parliament, 2012) was welcomed by cultural institutions, allowing them to digitise and make a considerable part of their collections publicly available. However, significant gaps have appeared in the directive's implementation (Corbett, 2019), and it has largely been deemed to have failed (Schroff, 2017). Similar concerns have been voiced regarding the more recent provisions in the latest EU copyright directive (European Parliament, 2019a) for out-of-commerce works and it seems unlikely that they can be effectively integrated into cultural institutions' practices (Stockton-Brown, 2022).

Cluster 4: open access and copyright

The "Open Access (OA)" prominent node in *Cluster 4* (Green) groups together words which refer to "copyright": "originality", which is a key prerequisite for copyright protection, and the "licensing" mechanisms applicable to either OA or copyright. The cluster also includes terms connected to "libraries", indicating that they are key actors in OA and copyright promoting "information literacy", and knowledge sharing while also entrusted with the "preservation" of a wide variety of "digital" and non-digital resources (Harkai, 2022).

The OA-copyright dichotomy means that copyright is often considered an obstacle to improving access to information (Rosenblum, 2008) and thereby even potentially undermining the development of democratic societies (Hombal & Prasad, 2012). Most scholars agree that copyright law should be adjusted to meet cultural institutions' needs (Cornish, 2015) and those of the public (Macmillan, 2015; Magnani & Montagnani, 2013); increasing legal awareness and training are key in this regard (Aufderheide, 2016; Stannard, 2015; Todorova et al., 2017). Likewise, the consensus is that developing OA requires cooperation among all stakeholders (Krynicka, 2012) and a balanced approach to the market (Pantalony, 2016). The literature evidences the role of open licensing in reaching this equilibrium, overcoming copyright barriers (Evens, 2016) and coupling commitment to OA with a duty to digital preservation (Anderson & Christen, 2013; Lynch, 2003), especially in mass digitisation projects (Magyn, 2011).

Cluster 5: database and cultural property

In *Cluster 5* (Aquamarine), "database" is the central node linked to keywords identifying types of structured collections of electronically stored organised data, such as "digital cultural heritage" and "cultural property" that need "protection" or must be created ad hoc to replace a physical object as in the case of "repatriation". Database protection under copyright applies to the database's structure, i.e. the compilation of data, not the content (Borissova, 2018); were the latter thus protected, its reproduction, adaptation and distribution would be prevented. Content is, however, protected by the database *sui generis* right (Oruç, 2020), which prevents the extraction and reuse of the whole or a substantial part of the content regardless of its originality.

Cultural institutions' unprecedented interest in dealing with reproduction and user engagement (Katyal, 2017) is reflected in a dramatic increase in database creation (Runhao, 2018), a means to convert cultural resources into digital form to make them available and usable for user engagement (Martins et al., 2023). When dealing with colonial legacies, creating digital versions of tangible objects can have specific ethical implications (Besterman, 2006; Murphy, 2016; Stark, 2011). The Western colonial powers took numerous cultural objects away from Indigenous communities (Kohn, 2013; Leischner, 2022). The digitisation of these objects is part of the hotly debated repatriation question (DeBlock, 2020) that reflects issues of ownership, representation and interpretation (Silberman, 2014) which museum management must properly address.

Cluster 6: Digital libraries and standards

Finally, *Cluster 6* (Ochre) identifies aspects related to digital libraries that are interwoven with what emerges from Cluster 4. The anchor-node "digital libraries" is connected to terms referring to their cultural resources such as "digital collections", or to information allowing the description, organisation and use of these digital resources, i.e., "metadata". The latter include terms that convey collections' copyright status and reuse conditions, such as the "standardised rights statements", i.e. clear, accurate and standardised information regarding the copyright status of digital cultural objects. A "case study" illustration method often documents how these terms, particularly those proposed by RightsStatements.org, are used by cultural heritage institutions to increase collection management capacity (De Armond et al., 2019; Martins et al., 2023). However, such standardised metadata cannot yet be used efficiently if copyright literacy rates continue to be low (Pääkkönen, 2016; Stützlein et al., 2018); therefore, they have been only partly evaluated (Matusiak & Werling, 2020).

Museums increasingly attempt to leverage emerging technologies for secure management of digital assets in creating their digital libraries. Blockchain, for instance, can be used to develop Non-Fungible Tokens (NFTs), which may facilitate value exchange and help to reduce transaction costs, e.g., through blockchain smart contracts (Mucchi et al., 2022). As the use of such tools in the museum sector is expected to expand rapidly (Jung, 2022), museums will likely face additional managerial and legal challenges.

Interdisciplinary convergence, divergence and ambivalence to open culture management

The interdisciplinary body of literature reveals convergence-divergence discourses on open culture management in relation to copyright, generated by the coexistence of disciplines, concepts and practices that either diverge or tend to move toward each other. These discourses are illustrated in the exploratory *matrix of approaches to open culture management in relation to copyright* (Fig. 6). The dimensions of the matrix—museum management (x-axes) and copyright law (y-axes)—illustrate the two distinct domains handling the question of open culture to varying degrees (low to high). The matrix quadrants denote areas of *interdisciplinary divergence, convergence or ambivalence* to open culture management, featuring the main factors hindering or enabling open culture: managerial barriers, copyright challenges, and ambivalence about unlocking to increase openness.

Quadrant one (Q-I) corresponds to the *full closure approach*, an interdisciplinary area of convergence towards the closure of culture at the nexus between cultural institutions' custodial preservation models (Gilmore & Rentschler, 2002) and IP legal monopoly (Stamatoudi, 2022) in which museums and copyright law maintain ownership and control over the locus of culture and knowledge.

Museums' custodial preservation reflects the Culture 1.0 paradigm (Sacco, 2011) in which all the public resources allocated to cultural heritage are devoted to representing, preserving and celebrating the past and cultivating "national" identity and pride, also highlighting a "lopsided focus on the internal functions of the museum rather than its external social responsibilities" (Cao, 2024, p. 124). The museums that (continue to) adopt preservation models are typically smaller, less-resourced, lower-skilled and thus possibly ill-equipped to manage a digital transition (Gilmore & Rentschler, 2002), or institutions with traditional conservative aims and with a narrow geographical reach. Preservation models are also reflected in the type of holdings (Oruç, 2020). External "professional bureaucracies" (Abraham et al., 1999)—the museum network, community and the government—also exert Culture 1.0 influence in setting these museums' agendas. These factors lead to more culturally relativist and preservationist approaches to curatorial work and collection management, which may also represent the voices of minorities and Indigenous communities and be relevant to their role in deciding how their cultures are revealed (when they have been/are legally invisible), represented and curated by museums (Kreps, 2008). In contrast, ambivalent relationships between conservatism and market exploitation—seen in the Egyptian art world, for example (Winegar, 2008)—testify to a drift towards professionally-oriented Western approaches. Non-Western approaches are also reflected in countries' investments in culture: heritage protection and conservation rather than innovation tend to be priorities.

Copyright law is an effective tool for closure in custodian museums. As we have seen above, Indigenous communities and museums dealing with Indigenous holdings may wish to secure tailored forms of IP exclusivity (DeBlock, 2020; Kennedy & Laczniak, 2014), also for the communal benefit of the Global South (Kouletakis, 2022). Protectionist approaches have been justified historically by Claiming moral rights (Rimmer, 2015), or even purely economic copyright, in order to safeguard heritage identity and authenticity (Nhambura, 2023). Additionally, museums struggling to incorporate international conventions on cultural heritage with outstanding universal value (Goldstein & Hugenholtz, 2019) into their own protocols, have often chosen to adopt a conservative approach (Malaro & DeAngelis, 2012). Closure may also be the preferred option when inadequate legal knowledge (Stockton-Brown, 2022) increases the complexity of negotiations and/or increases the likelihood of copyright violations. This quadrant is not a silo: to move from full to conditional closure/opening, museums can improve their collection management capacity—by relaxing protection measures to facilitate access to resources, prioritising repatriation, etc.—while complying with the applicable legal requirements.

Quadrant four (Q-IV) is the area of interdisciplinary convergence to a *full openness of culture* as reflected in museums' market-service orientation in the physical and digital environments (Palumbo, 2022) while also satisfying requirements of copyright fair balance (Senftleben, 2004). *Full openness of culture* entails museums transferring the locus of culture and knowledge on the physical-digital continuum to the many, thereby accomplishing museums' social and digital mission and fostering culture democratisation (Arthur et al., 2024; Coghlan, 2018; Edwards & Moss, 2022). Museums' market-service approach (Camarero & Garrido, 2012) fits within the emergent Culture 3.0 paradigm (Sacco, 2011) in which culture is an activity that generates social and economic value through transversal

linkages across economies, societies and physical-digital spaces. The—usually frontrunner—museums that adopt the market-service approach are large, reputable institutions with sustainable business models, technological maturity and experienced technical staff (Booth et al., 2022). They also belong to extensive inter-institutional and inter-governmental collaborative networks and are thus ideally positioned to maximise the potential of open culture (Garthe, 2022). Significantly, public funding often ties museums into agreed-upon resource-sharing structures (with or without charges). For example, as anticipated, EU Open (government) data policy allows cultural institutions to make a reasonable return on investment in their digital transformation operations; the latter, however, should remain within the bounds of reasonableness (Wallace & Euler, 2020). This setting allows museums to manage their own resources and digitisation strategies, balance the costs and benefits of the risks involved in mass digitisation and share the benefits of digitisation with other stakeholders such as authors/artists and copyright owners (Gombault et al., 2018). Effective benefit-sharing mechanisms are generally recognised to be in the interest of all stakeholders and highly supportive of further innovation and openness (Rajesh Babu, 2018).

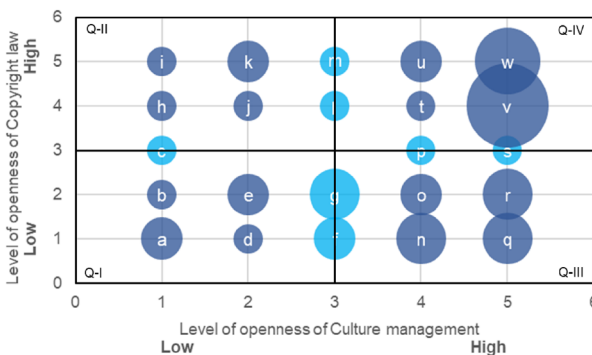
Copyright law can also catalyse this drive to openness at several levels, giving museums certain tools to help them tackle the complex and costly process of licensing and rights clearance (Crews & Brown, 2011). Extended collective licensing removes the need for individual negotiation (Guibault & Schroff, 2018). Open licensing allows museums to distribute or otherwise share access to, and the use and reuse of, their digital resources, waiving all possible rights (de Rosnay, 2020). Standardised rights statements guarantee information transparency. Similarly, fair use and fair dealing provisions or E&Ls provide copyright flexibilities for cultural heritage use in order to achieve copyright balance. Likewise, cultural commons (Madison et al., 2009) can support the balancing of interests and societal advancement in terms of cultural access and participation. However, their nature remains complex and controversial (de Clippele, 2023).

However, the fluidity of this quadrant renders it more vulnerable to slipping back into the conditional openness/closure paradigm if museums do not properly monitor and manage ambivalent factors. They must, for instance, be able to adapt their collection management capacity to evolving circumstances and requirements. To achieve a flexible and balanced approach to copyright, managers should carefully adhere to existing legal criteria, such as diligent searches for mass digitisation, and use rights metadata and statements correctly. They should also leverage copyright flexibilities and, most importantly, adequately protect the public domain in the interest of society. Museums can in fact avoid the “chilling effect” on collections’ digital transformation (Klinowski & Szafrawicz, 2023, p. 1) by not imposing further restrictions on public domain resources.

Quadrants two (Q-II) and three (Q-III) identify the areas of interdisciplinary divergence that lead to *conditional closure or conditional openness*. The former reflects managerial barriers to openness and the latter copyright challenges. Q-II combines cultural institutions’ maintenance of custodial preservation (Gilmore & Rentschler, 2002) with copyright balance. Like Q-I, Q-II does not include any frontrunner institutions (Gombault et al., 2018). Their reluctance to open may be due to the influence that representative groups’ tacit norms and moral obligations have on their custodial preservation models, or a desire to wait-and-see and learn from the best practices of frontrunner museums (Booth et al., 2021). Such an attitude is *inherited or opportunistic conservatism* (Palthe, 2014). If Q-II museums do not overcome their resistance to change, they may slip into *full closure*; if they embrace change, on the other hand, they can achieve *full openness* and its associated benefits. Managerial innovation may arise from the will of, or social and economic incentives given to, museums’ interest groups to enhance heritage by ethically extracting

value through a “balanced” or less risky open culture. Collaborations and co-curation between museums and source (e.g. Indigenous) communities have been shown to challenge conservative attitudes and catalyse the innovation of museological paradigms (Peers & Brown, 2007). Likewise, the return on investment in digitisation practices and services may be used to fund open culture activities involving the institution and its community, thereby enhancing the former’s reputation. Additionally, unlike their Q-I counterparts, Q-II museums can achieve copyright balance. As we have seen, technology and copyright provide the guarantees and tools to secure investments on digitisation: blockchain and NFTs are secure management tools that do not necessarily conflict with participatory and open-oriented approaches (Jung, 2022) and standardised rights statements ensure copyright protection for digital objects (Pantalony, 2022; Stitzlein et al., 2018). EU data policy promotes museums’ openness while allowing them to responsibly charge over marginal costs and thus generate value sustainably (Wallace & Euler, 2020).

Finally, Q-III identifies museums with a market-service orientation (Palumbo, 2022) that also align with copyright monopoly. The copyright grey areas evident in this position demonstrate the need for museum managers to equip themselves to move to an open culture and monitor ambivalent factors. By investing strategically in copyright literacy and training, museums will greatly strengthen both their mass digitisation projects and revenue management (Booth et al., 2022). Crucial areas to address include rights clearance and licensing—to limit exposure to copyright infringement and litigation—and other copyright mechanisms that can foster openness while providing risk protection. For instance, highly permissive Open licences or public domain marks on collections enable museums to provide access to and reuse resources for any (including commercial) purpose and thus allow market exploitation. To maximise stakeholder benefit-sharing mechanisms, they can apply OA to their holdings, even for commercial purposes, or link their Open Data with an inter-institutional network (Zhang, 2022). Additionally, museums may claim fair use or fair dealing, or apply E&Ls to use or create new works based on cultural objects. Even so, when modifying a copyright-protected object, museums need to ensure that they do not infringe the author’s moral right of integrity (i.e. the right to oppose any distortion or misrepresentation of the work causing prejudice to the author’s honour and reputation). Finally, to maintain their position, when conducting international and corporate operations, such as repatriation claims or commercial collaborations, museums must comply with national and supranational legal requirements and be able to handle corporate revenue negotiations.



Note: x-axes = Level of openness of Cultural management; y-axes = Level of openness of Copyright law; z = Representativeness of pairs of ordinal values; Q = quadrant

Fig. 6 Matrix of approaches to open culture management in relation to copyright

<p>Q-I</p> <p>a. Traditional knowledge protection-Indigenous/Community rights Transaction costs-Copyright infringement</p> <p>b. Traditional knowledge protection-Moral rights</p> <p>c. Transaction costs-<i>diligent search</i></p> <p>d. Funding issues-Exclusive rights</p> <p>e. Funding issues-Institutional repositories Blockchain/NFTs-Copyright literacy</p> <p>f. <i>Repatriation claims of heritage</i>-DRM/TPMs <i>Secure management</i>-DRM/TPMs</p> <p>g. <i>Repatriation claims of heritage</i>-Database protection</p> <p><i>Secure management</i>-Database protection <i>Collection management capacity</i>-Copyright literacy</p> <p>Q-II</p> <p>h. Transaction costs-ECL</p> <p>i. Traditional knowledge protection-Cultural commons</p> <p>j. Blockchain/NFTs-EU data policy</p> <p>k. Funding issues-Open Access Blockchain/NFTs-Standardised rights metadata/statements</p> <p>l. <i>Collection management capacity</i>-EU data policy</p> <p>m. <i>Collection management capacity</i>-Standardised rights metadata/statements</p>	<p>Q-III</p> <p>n. Equitable sharing of benefits-Indigenous/Community rights Rights clearance-Copyright infringement Digital preservation-Exclusive rights</p> <p>o. Equitable sharing of benefits-Moral rights Digital preservation-Institutional repositories</p> <p>p. Rights clearance-<i>Diligent search</i></p> <p>q. Mass digitisation-Copyright infringement Market-service approach-Exclusive rights User engagement-DRM/TPMs</p> <p>r. Market-service approach-Institutional repositories User engagement-Database protection Digital libraries-Copyright literacy</p> <p>s. Mass digitisation-<i>Diligent search</i></p> <p>Q-IV</p> <p>t. Rights clearance-ECL</p> <p>u. Equitable sharing of benefits-Cultural commons Digital preservation-Open Access</p> <p>v. Market exploitation-Fair use/E&Ls Market exploitation-Open licences Social/Digital mission-Fair use/E&Ls Social/Digital mission-Open licences Virtual museum-Fair use/E&Ls Virtual museum-Open licences Mass digitisation-ECL Digital libraries-EU data policy</p> <p>w. Market exploitation-Public domain Social/Digital mission-Public domain Virtual museum-Public domain Market-service approach-Open Access Digital libraries-Standardised rights metadata/statements</p>
---	---

Conclusion

Efforts to promote universal access to culture, championed by the Open Culture movement and various related initiatives, have long influenced museums. The Covid-19 pandemic and the compelling challenges of the digital landscape, including the growing impact of AI in their sector, have further pressured museums to accelerate their digital transformation and expand access to and engagement with their collections. This shift has, however, created significant copyright challenges for museums and other cultural institutions. This paper contributes to the international debate on museums as agents of social transformation (Garner et al., 2016) that catalyse the democratisation of culture and equitable access to heritage in the physical and digital environment as a pathway to diversity, equality and inclusion (Bevan & Ramos, 2021). Our interdisciplinary analysis of museums' approach to open culture in relation to copyright addresses urgent questions for both scholars and practitioners. The findings and arguments of the paper shed light on the current state of the art of knowledge in the fields of cultural management and copyright, revealing both converging and diverging perspectives on openness/closure of culture. Regarding how the literature approaches open culture, our contribution confirms that the question of open culture is still addressed from a predominantly legal

perspective, but museums' growing interest in applying a managerial perspective to the issue is leading to the rapid convergence of the two fields. In response to the question of whether culture management and copyright enable or hinder museums' drive towards open culture, we argue that prevalent concepts within both fields have been shown to either enable or hinder this shift: actors within the museum ecosystem can encourage collaboration and facilitate access to and the sharing of resources and knowledge (openness), or prioritise the need for restrictions and the protection of intellectual property (closure). Finally, our study offers a novel theoretical matrix depicting four approaches to understanding and handling the open culture dilemma at the intersection of management and copyright.

The value of this study for scholars and practitioners in both fields is multifaceted. Methodologically, the review grounding this research, which integrates quantitative and qualitative analysis, cross-fertilises legal studies with methodologies novel to the field (Snel & Janaina de Moraes, 2018) but well-established in business and management studies to foster an in-depth understanding of a research topic (Zupic & Čater, 2015). Theoretically, reviewing and systematising the extant literature on the management of cultural heritage by museums and how the latter handle the question of copyright, contributes to filling a gap (Benhamou & Ferland, 2022; Wallace, 2022) in highly topical research drawing together complex and constantly evolving social and ethical, institutional and technological elements. Our comprehensive interdisciplinary approaches to open culture management in relation to copyright provide fresh knowledge on various factors, both within and outside the museum, shaping areas of interdisciplinary divergence from and convergence or ambivalence toward, openness. The *full openness* and *full closure* approaches reveal the prominence, on the one hand, of a perspective that favours market exploitation and revenue management (Chmelik, 2019) coupled with copyright balance (Palumbo, 2022; Senftleben, 2004) and, on the other, of an orientation toward conservatism and authenticity coupled with IP legal monopoly (Gilmore & Rentschler, 2002; Stamatoudi, 2022). Divergence keeps cultural institutions in intermediate positions. In *conditional closure*, inherited or opportunistic conservatism is the main managerial barrier created by museums' representative groups' norms or moral obligations (Palthe, 2014), or exhibited by museums waiting for their pioneering counterparts to establish best practices (Booth et al., 2022). In *conditional openness*, the complexities and ambiguities that continue to dog copyright law mean that the main challenge for museums aiming to be at the forefront of open culture is to equip themselves with the (soft and hard) infrastructure needed to handle these issues (Kortelainen, 2015; Todorova et al., 2017). *Ambivalence* is shown in collection management capacity, secure management and diligent search requirements, factors that may all shift institutions from intermediate positions to better or worse ones in terms of openness. While these approaches to culture management remain valid, the organisational and copyright challenges that impact them are constantly evolving and are linked to other internal and external factors not investigated in this study. The more factors come into play, the more complex the co-occurring dynamics become, and the more areas of knowledge need to be involved in analysis and new theory building.

Finally, from a practical perspective, the matrix of approaches to open culture management in relation to copyright can be transformed into a managerial dashboard to facilitate museums' decision making, allowing them to assess and monitor their positioning and facilitate their shift towards open culture by addressing context-specific issues across regions and countries. The dashboard could capitalise on cutting-edge initiatives that raise awareness of open culture. One of them is the *Barometer of free knowledge*. This tool measures the implementation of open culture principles in different areas. It was designed

by the Italian chapter of the Wikimedia Foundation (Wikimedia Italia, 2023) which supports the right to access and share knowledge.

Limitations and future research

The present study has limitations that suggest the need for further research. The first limitation relates to the research field. While narrowing the scope of the study to museums' management of open culture in relation to copyright has allowed us to identify original and topical research, museums are only one of the cultural heritage institutions dealing with open culture. Galleries, libraries and archives have particular features that can further enrich our approaches to open culture. Future research could also be broader in scope, covering IP law more generally, including trademarks, and/or extending to other regulatory tools such as (national, in particular) data protection and cultural heritage regulations. The second limitation is methodological. This study is part of a broader research design, the primary aim of which, at this stage, has been to capture the structure of the field (Zupic & Čater, 2015). For this reason, the authors only considered academic articles in English extracted from two Scopus and Wos databases up to April 2023. This is why the final sample did not include non-English contributions, grey literature, scholarly monographs, or proceedings of professional conferences, which are rarely or never indexed in mainstream databases. Nor did it include any of the English articles indexed in the two databases published since May 2023. Upcoming research will consider these additional sources and museum practices to further advance knowledge, evaluate the interpretative capacity of the proposed exploratory matrix of approaches to open culture in relation to copyright in the museum environment and enhance and guide museums' cultural management strategies.

Finally, future research will further investigate copyright as a socio-political construct. A survey-and observation-based evaluation could additionally allow us to assess and compare both inter-jurisdictional effects—the impact that certain legal systems have on culture management with the same features and needs (e.g. management models, managerial and technical skills, constant technological transformation)—and intra-jurisdictional effects—the choices made by museums operating under the same national legal system but possessing different features and needs.

Appendix

See Table 4.

Table 4 Sample of eligible articles

Articles	Domain
Adewumi, 2022	Law
Allan, 2007	Law
Anderson, 2013	Law
Angelopoulos, 2012	Law
Barron, 2006	Law
Belder, 2010 Figure count mismatch between G and XML	Law
Bensamoun, 2014	Law
Birštonas et al., 2014	Law
Bock, 2011	Law
Borghi et al., 2017	Law
Calabrese, 2022	Law
Collins, 2022	Law
Conley & Bemelmans, 1997	Law
Corbett, 2019	Law
Cornish, 2015	Law
Crews & Brown, 2011	Law
Gerhardt, 2014	Law
Gibson, 2011	Law
Guibault & Schroff, 2018	Law
Guss, 2020	Law
Hansen, 2011	Law
Harkai, 2022	Law
Hoorn, 2011	Law
Jagielska-Burdak & Jakubowski, 2020	Law
Jerzyk, 2021	Law
Karol, 2019	Law
Keshet, 2018	Law
Klinowski & Szafarowicz, 2023	Law
Koščík, 2019	Law
Koščík, 2020	Law
Lee, 2018	Law
Li, 2022	Law
Lin & Lian, 2018	Law
Macmillan, 2015	Law
Magnani & Montagnani, 2013	Law
Markellou, 2013	Law
McCutcheon, 2018	Law
Michel, 2019	Law
Montagnani & Zoboli, 2017	Law
Oruç, 2022	Law
Oruç, 2020	Law
Paulus & Kelli, 2023	Law
Pavis, 2018	Law
Pittman, 2020	Law
Purwandoko et al., 2021	Law

Table 4 (continued)

Articles	Domain
Romano, 2018	Law
Rutledge, 1999	Law
Sarikakis et al., 2016	Law
Schroff et al., 2017	Law
Stannard, 2015	Law
Stockton-Brown, 2022	Law
Tsolis et al., 2011	Law
Tubaite-Stalauskiene, 2018	Law
van Gompel & Hugenholtz, 2010	Law
Varese & Mazza, 2019	Law
Von Hielmcrone, 2000	Law
Vujicic, 2022	Law
Wallace & Euler, 2020	Law
Zemer & Lior, 2021	Law
Booth et al., 2021	Management
Borissova, 2018	Management
Collins, 2018	Management
Kennedy & Laczniaak, 2014	Management
Lee, 1996	Management
Mahendrawati, 2020	Management
Mucchi et al., 2022	Management
Needham, 2017	Management
Nwabueze, 2013	Management
Nwabueze, 2017	Management
Ozdemir, 2009	Management
Pluszynska, 2020	Management
Pluszynska, 2021	Management
Singh et al., 2013	Management
Wanda George, 2010	Management
Ang, 2005	Multidisciplinary
Aufderheideet al., 2016	Multidisciplinary
Beamsley, 1999	Multidisciplinary
Belder, 2015	Multidisciplinary
Bradley, 2005	Multidisciplinary
Brillant et al., 2023	Multidisciplinary
Brown & Nicholas, 2012	Multidisciplinary
Cuntz & Sahli, 2023	Multidisciplinary
Dahlgren & Wasielewski, 2020	Multidisciplinary
De Armond et al., 2019	Multidisciplinary
DeBlock, 2017	Multidisciplinary
DeBlock, 2020	Multidisciplinary
Evens, 2016	Multidisciplinary
Garon, 2012	Multidisciplinary
Green, 2021	Multidisciplinary
Hall, 2021	Multidisciplinary

Table 4 (continued)

Articles	Domain
Halls, 2013	Multidisciplinary
Hombal & Prasad, 2012	Multidisciplinary
Horvat, 2013	Multidisciplinary
Isaac, 2011	Multidisciplinary
Jung, 2022	Multidisciplinary
Katyal, 2017	Multidisciplinary
Kavčič-Čolić, 2003	Multidisciplinary
Krynicka, 2012	Multidisciplinary
Leischner, 2022	Multidisciplinary
Lynch, 2003	Multidisciplinary
MacKlem, 2019	Multidisciplinary
Magÿn et al., 2011	Multidisciplinary
Malliari et al., 2022	Multidisciplinary
Martins et al., 2023	Multidisciplinary
Matusiak & Werling, 2020	Multidisciplinary
McCann, 2017	Multidisciplinary
Meyerson et al., 2017	Multidisciplinary
Ore, 1994	Multidisciplinary
Pääkkönen, 2016	Multidisciplinary
Pantalony, 2016	Multidisciplinary
Polchow, 2021	Multidisciplinary
Rosenblum, 2008	Multidisciplinary
Runhao, 2018	Multidisciplinary
Sallabedra, 2019	Multidisciplinary
Scher, 2002	Multidisciplinary
Schmidt, 2016	Multidisciplinary
Seadle M. 2001	Multidisciplinary
Stanley, 2004	Multidisciplinary
Stenalt, 2010	Multidisciplinary
Stitzlein et al., 2018	Multidisciplinary
Todorova et al., 2017	Multidisciplinary
Valdés, 2023	Multidisciplinary
Valeonti et al., 2020	Multidisciplinary
Vallely, 2014	Multidisciplinary

Acknowledgements The research is funded by Interconnected Northeast Innovation Ecosystem (iNEST), ECS000043, CUP H43C22000540006, UE - NextGenerationEU.

Funding Open access funding provided by Università degli Studi di Trento within the CRUI-CARE Agreement.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article’s Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article’s Creative Commons licence and your intended use is not

permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Abraham, M., Griffin, D., & Crawford, J. (1999). Organization change and management decision in museums. *Management Decision*, 37(10), 736–751.
- Adewumi, A. A. (2022). Protecting intangible cultural heritage in the era of rapid technological advancement. *International Review of Law, Computers & Technology*, 36(1), 3–16.
- Alberta Museums Association. (2021). *Trust and Value: The Role of Museums in Canada in the Twenty-First Century*. https://www.museums.ab.ca/media/167479/trust_and_value_the_role_of_museums_in_canada_in_the_twenty-first_century.pdf_the_twenty-first_century.pdf
- Alberts, H. C., & Hazen, H. D. (2010). Maintaining authenticity and integrity at cultural world heritage sites. *Geographical Review*, 100(1), 56–73.
- Allan, R. J. (2007). After bridgeman: Copyright, museums, and public domain works of art. *University of Pennsylvania Law Review*, 155(4), 961–989.
- Anderson, J., & Christen, K. (2013). ‘Chuck a copyright on it’: Dilemmas of digital return and the possibilities for Traditional Knowledge licenses and labels. *Museum Anthropology Review*, 7(1–2), 105–126.
- Ang, S. (2013). *The moral dimensions of intellectual property rights*. Edward Elgar Publishing.
- Angelopoulos, C. (2012). The Myth of European Term Harmonisation-27 Public Domains for 27 Member States. *IIC-International Review of Intellectual Property and Competition*, 43(5), 567–594.
- Arthur, P. L., Hearn, L., Smith, I., & Koutras, N. (2024). How “open” are Australian museums? A review through the lens of copyright governance. *Internet Histories*, 8(1–2), 136–152.
- Aufderheide, P. (2016). Leveraging exceptions and limitations for digital curation and online collections: The US case. *Libellarium Journal for the Research of Writing, Books & Cultural Heritage Institutions*, 9(2), 49–58.
- Baima, G., Forliano, C., Santoro, G., & Vrontis, D. (2021). Intellectual capital and business model: A systematic literature review to explore their linkages. *Journal of Intellectual Capital*, 22(3), 653–679.
- Beamsley, T. G. (1999). Securing digital image assets in museums and libraries: A risk management approach. *Library Trends*, 48(2), 358–378.
- Beaulieu, A., & Leonelli, S. (2021). *Data and society: A critical introduction*. Sage.
- Bell, C. (1998). Canadian supreme court: *Delgamuukw v British Columbia*. *International Legal Materials*, 37(2), 261–333.
- Benhamou, Y., & Ferland, J. (2022). Digitization of GLAM collections and copyright: Policy paper. *GRUR International*, 71(5), 403–421.
- Bensamoun, A. (2014). The French out-of-commerce books law in the light of the European Orphan Works Directive. *Queen Mary Journal of Intellectual Property*, 4(3), 213–225.
- Besterman, T. (2006). Museum ethics. In S. Macdonald (Ed.), *A companion to museum studies* (pp. 431–441). Blackwell Publishing.
- Betsch Cole, J., & Lott, L. L. (2019). *Diversity, equity, accessibility, and inclusion in museums*. Rowman and Littlefield.
- Bevan, B., & Ramos, B. (2021). *Theorizing equity in the museum: integrating perspectives from research and practice*. Routledge.
- Bock, E. M. (2011). Using public disclosure as the vesting point for moral rights under the visual artists rights act. *Michigan Law Review*, 110(2011), 153–174.
- Booth, P., Navarete, T., & Ogundipe, A. (2022). Museum open data ecosystems: A comparative study. *Journal of Documentation*, 78(4), 761–779.
- Borghini, M., Erickson, K., & Favale, M. (2016). With enough eyeballs all searches are diligent: Mobilizing the crowd in copyright clearance for mass digitization. *Chicago-Kent Journal of Intellectual Property*, 16(1), 135–166.
- Borissova, V. (2018). Cultural heritage digitization and related intellectual property issues. *Journal of Cultural Heritage*, 34, 145–150.
- Boyle, J. (2008). *The public domain: Enclosing the commons of the mind*. Yale University Press.
- Bradley, R. (2005). Digital authenticity and integrity: Digital cultural heritage documents as research resources. *Portal*, 5(2), 165–175.
- Camarero, C., & Garrido, M. J. (2012). Fostering innovation in cultural contexts: Market orientation, service orientation, and innovations in museums. *Journal of Service Research*, 15(1), 39–58.

- Cao, T. L. (2024). Rethinking openness: A social constructivist approach to the promises of the new museology. *Internet Histories*, 8(1–2), 114–135.
- Caso, R. (2022). The Darkest Hour: Private Information Control and the End of Democratic Science. In De Gennaro, H. Hofmeister, & R. Lüfter (Eds.), *Academic Freedom in the European Context Legal, Philosophical and Institutional Perspectives* (pp. 259–288). Palgrave.
- Chipangura, N., & Mataga, J. (2021). *Museums as agents for social change: Collaborative programmes at the Mutare museum*. Routledge.
- Chmelik, S. (2019). *Sustainable revenue for museums: A guide*. Rowman & Littlefield.
- Coghlan, R. (2018). 'My voice counts because I'm handsome.' Democratising the museum: The power of museum participation. *International Journal of Heritage Studies*, 24(7), 795–809.
- Collins, H. (2018). *Creative research: the theory and practice of research for the creative industries* (2nd ed.). Bloomsbury Publishing.
- Collins, P. H. (2022). *Black feminist thought: Knowledge, consciousness, and the politics of empowerment* (1st ed.). Routledge.
- Creative Commons. (n.d). *When we share, everyone wins*. <https://creativecommons.org/>
- Conley, J. M., & Bemelmans, K. (1997). Intellectual property implications of multimedia products: A case study. *Information and Communications Technology Law*, 6(1), 3–15.
- Corbett, S. (2019). Archives, museums and copyright law: Reconciling the traditional with contemporary practices. *Victoria University of Wellington Law Review*, 50(1), 587–608.
- Cornish, G. P. (2015). Reform of UK copyright law and its benefits for libraries. *Interlending & Document Supply*, 43(1), 14–17.
- Council of Europe. (2005). *Framework Convention on the Value of Cultural Heritage for Society* (CETS No. 199). <https://rm.coe.int/1680083746>.
- Crews, K. D., & Brown, M. A. (2011). Control of museum art images: the reach and limits of copyright and licensing. In A. Kur & V. Mizaras (Eds), *The Structure of Intellectual Property Law* (pp. 269–284). Edward Elgar.
- Crews, K. D. (2014). Museum Policies and Art Images: Conflicting Objectives and Copyright Overreaching. In Hueber, J., & Mendes da Silva, A. (Eds.), *Keys for architectural history research in the digital era: Handbook*. Publications de l'Institut national d'histoire de l'art. <https://doi.org/10.4000/books.inha.4927>
- Cruz-Cárdenas, J., Zabelina, E., Guadalupe-Lanas, J., Palacio-Fierro, A., & Ramos-Galarza, C. (2021). COVID-19, consumer behavior, technology, and society: A literature review and bibliometric analysis. *Technological Forecasting and Social Change*, 173, 121179.
- De Armond, M., Pilato, V., Pantalony, R. E., & Cram, G. (2019). Copyright Assessment in the Trenches: Workflow, Tools, Metadata, and More. *Art Documentation: Journal of the Art Libraries Society of North America*, 38(1), 53–69.
- de Clippele, M. S. (2023). Are digital cultural commons culturally diverse? *International Journal for the Semiotics of Law-Revue Internationale De Sémiotique Juridique*, 36(5), 2067–2086.
- de Rosnay, M. D. (2020). Open licensing peer production. In M. O'Neill, C. Pentzold, & S. Toupin (Eds.), *The Handbook of Peer Production* (pp. 109–122). Wiley-Blackwell.
- De Rosnay, M., & Stalder, F. (2020). Digital commons. *Internet Policy Review*, 9(4), 1–22.
- de Wild, K., & Povroznik, N. (2024). Editorial: Museums on the Web. *Internet Histories*, 8(1–2), 1–8.
- DeBlock, H. (2020). Objects as Archives of a Disrupted Past: The Lengnangulong Sacred Stone from Vanuatu in France. *Revisited. Museum Worlds*, 8(1), 88–101.
- Derclaye, E. (2010). *Copyright and Cultural Heritage: Preservation and access to works in a digital world*. Edward Elgar.
- Dore, G., & Turan, P. (2024). When Copyright Meets Digital Cultural Heritage: Picturing an EU Right to Culture in Freedom of Panorama and Reproduction of Public Domain Art. *IIC-International Review of Intellectual Property and Competition Law*, 55, 37–65.
- Edson, G. (2009). Practical ethics and the contemporary museum. *Museology Quarterly*, 23(1), 5–24.
- Edwards, L., & Moss, G. (2022). Democratising media policymaking: A stakeholder-centric, systemic approach to copyright consultation. *Media, Culture & Society*, 44(3), 514–531.
- European Commission. (2006). *Recommendation on the digitisation and online accessibility of cultural material and digital preservation* (2006/585/EC). <http://data.europa.eu/eli/reco/2006/585/oj>
- European Commission. (2011). *Recommendation on the Digitization and online accessibility of cultural material and digital preservation* (2011/711/EU). <http://data.europa.eu/eli/reco/2011/711/oj>
- European Commission. (2021). *Communication on 2030 Digital Compass: the European way for the digital decade* (COM/2021/118), <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52021DC0118>

- European Parliament. (2012). *Directive 2012/28/EU on certain permitted uses of orphan works* (OJ L 299). <http://data.europa.eu/eli/dir/2012/28/oj>
- European Parliament. (2019a). *Directive (EU) 2019/790 on copyright and related rights in the Digital Single Market* (OJ L 130). <http://data.europa.eu/eli/dir/2019/790/oj>
- European Parliament. (2019b). *Directive (EU) 2019/1024 on open data and the re-use of public sector information* (OJ L 172). <http://data.europa.eu/eli/dir/2019/1024/oj>
- European Parliament. (2024). *Regulation on artificial intelligence (Artificial Intelligence Act)* (OJ L 1689). <http://data.europa.eu/eli/reg/2024/1689/oj>
- European Parliament, Directorate-General for Internal Policies of the Union, & Caramiaux, B. (2020). *The use of artificial intelligence in the cultural and creative sectors: concomitant expertise for INI report: research for CULT Committee*. <https://data.europa.eu/doi/https://doi.org/10.2861/602011>
- Evens, T. (2016). Creative Commons licenses in cultural heritage institutions in Flanders. *Journal of Librarianship and Information Science*, 48(2), 209–217.
- Fehér, Z., & Ásványi, K. (2023). Differences in sustainability approaches from the mission statements of museums – the case of CEE and other European contemporary art museums. *Journal of Contemporary Central and Eastern Europe*, 31(3), 683–701.
- Feliciano-Cestero, M. M., Ameen, N., Kotabe, M., Paul, J., & Signoret, M. (2023). Is digital transformation threatened? A systematic literature review of the factors influencing firms' digital transformation and internationalization. *Journal of Business Research*, 157, 113546.
- Garner, J. K., Kaplan, A., & Pugh, K. (2016). Museums as contexts for transformative experiences and identity development. *Journal of Museum Education*, 41(4), 341–352.
- Garon, J. M. (2012). Localism as a production imperative: An alternative framework for promoting intangible cultural heritage. In S. A. Pager & A. Candeub (Eds.), *Transnational culture in the internet age* (pp. 346–369). Edward Elgar.
- Garthe, C. J. (2022). *The sustainable museum: How museums contribute to the great transformation*. Taylor & Francis.
- Geiger, C. (2013). The social function of intellectual property rights, or how ethics can influence the shape and use of IP law. In G.B. Dinwoodie (Ed.), *Methods and perspectives in intellectual property* (pp. 153–176). Edward Elgar.
- Gerhardt, D. R. (2014). Copyright at the museum: Using the publication doctrine to free art and history. *Journal of the Copyright Society of the USA*, 61(3), 393–451.
- Giannini, T., & Bowen, J. P. (2019). *Museums and digital culture: New perspectives and research*. Springer International.
- Gibson, J. (2011). Let me tell you a story... intellectual property, character, narration. *Queen Mary Journal of Intellectual Property*, 1(2), 112–129.
- Gilmore, A., & Rentschler, R. (2002). Changes in museum management: A custodial or marketing emphasis? *Journal of Management Development*, 21(10), 745–760.
- Golding, V., & Walklate, J. (2018). *Museums and communities: Diversity, dialogue and collaboration in an age of migrations*. Cambridge Scholars Publishing.
- Goldstein, P., & Hugenholtz, P. B. (2019). *International copyright: Principles, law, and practice* (4th ed.). Oxford University Press.
- Gombault, A., Allal-Chérif, O., Décamps, A., & Grellier, C. (2018). ICT adoption behaviours of heritage organizations in South West Europe: Conservative, pragmatist and pioneering. *International Journal of Arts Management*, 21(1), 4–16.
- Guibault, L., & Schroff, S. (2018). Extended collective licensing for the use of out-of-commerce works in Europe: A matter of legitimacy vis-à-vis rights holders. *IIC-International Review of Intellectual Property and Competition Law*, 49, 916–939.
- Hansen, D. R. (2011). Protection of traditional knowledge: Trade barriers and the public domain. *Journal of the Copyright Society of the USA*, 58(4), 401–436.
- Harkai, I. (2022). Preservation of video games and their role as cultural heritage. *Journal of Intellectual Property Law and Practice*, 17(10), 844–856.
- Hombal, S. G., & Prasad, K. N. (2012). Digital copyright protection: Issues in the digital library environment. *DESIDOC Journal of Library & Information Technology*, 32(3), 233–239.
- ICOM. (2023). *How to reach your public remotely*. <https://icom.museum/en/covid-19/resources/how-to-reach-your-public-remotely/>
- Wikimedia Italia. (2023). *Barometro sulla conoscenza libera*. https://wiki.wikimedia.it/wiki/Barometro_sulla_conoscenza_libera
- Jagielska-Burduk, A., & Jakubowski, A. (2020). “Narrative museums” and curators’ rights: The protection of a museum exhibition and its scenario under Polish law. *Santander Art & Culture Law Review*, 2(6), 151–176.

- Jerzyk, K. (2021). Balance of rights in directive 2019/790 on copyright in the digital single market—is the opt-out clause sufficient for the protection of author’s moral rights? *Santander Art and Culture Law Review*, 7(2), 229–248.
- Jung, Y. (2022). Current use cases, benefits and challenges of NFTs in the museum sector: Toward common pool model of NFT sharing for educational purposes. *Museum Management and Curatorship*, 38(4), 451–467.
- Karol, P. J. (2019). Permissive certificates: Collectors of art as collectors of permissions. *Washington Law Review*, 94(3), 1175–1232.
- Katyal, S. K. (2017). Technoheritage. *California Law Review*, 105(4), 1111–1172.
- Kaur, P., Talwar, S., Madanaguli, A., Srivastava, S., & Dhir, A. (2022). Corporate social responsibility (CSR) and hospitality sector: Charting new frontiers for restaurant businesses. *Journal of Business Research*, 144, 1234–1248.
- KEA. (2006). The economy of culture in Europe. <https://cultureactioneurope.org/knowledge/creatives-industries/1-the-economy-of-culture-in-europe/>
- Kelly, B., Ellis, M., & Gardler, R. (2008). What does openness mean to the museum community? *Proceedings of the International Conference on Museums and the Web*, Montréal. <https://www.museumstheweb.com/mw2008/papers/kelly/kelly.htm>
- Kennedy, A. M., & Laczniak, G. R. (2014). Indigenous intellectual property rights: Ethical insights for marketers. *Australasian Marketing Journal*, 22(4), 307–313.
- Klarin, A. (2024). How to conduct a bibliometric content analysis: Guidelines and contributions of content co-occurrence or co-word literature reviews. *International Journal of Consumer Studies*, 48(2), e13031.
- Klinowski, M., & Szafarowicz, K. (2023). Digitisation and sharing of collections: Museum practices and copyright during the COVID-19 Pandemic. *International Journal for the Semiotics of Law-Revue Internationale De Sémiotique Juridique*, 36, 1991–2019.
- Kocki, L. (2020). West and the rest: Dismantling dominant western-centric thought in global Justice. <https://laramikocki.medium.com/west-and-rest-dismantling-dominant-western-centric-thought-in-global-justice-eb5cc04c2f47>
- Kohn, M. (2013). Postcolonialism and global justice. *Journal of Global Ethics*, 9(2), 187–200.
- Kortelainen, T. (2015). Copyright literacy in Finnish libraries, archives and museums. In S. Kurbanoglu, J. Boustany, S. Špiranec, E. Grassian, D. Mizrachi, & L. Roy (Eds.), *Information literacy: Moving toward sustainability* (pp. 202–209). Springer International.
- Kouletakis, J. (2022). Decolonising copyright: Reconsidering copyright exclusivity and the role of the public interest in international intellectual property frameworks. *GRUR International*, 71(1), 24–33.
- Kracher, B., & Corritore, C. L. (2004). Is there a special e-commerce ethics? *Business Ethics Quarterly*, 14(1), 71–94.
- Kreps, C. F. (2008). Appropriate museology in theory and practice. *Museum Management and Curatorship*, 23(1), 23–41.
- Krynicka, M. (2012). Open access to national bibliography: Polish approach. *Collection Building*, 31(3), 120–125.
- Lea, D. (2006). From the Wright brothers to Microsoft: Issues in the moral grounding of intellectual property rights. *Business Ethics Quarterly*, 16(4), 579–598.
- Leischner, E. J. (2022). What happens to Indigenous law in the museum? *Museum Worlds*, 10(1), 31–47.
- Lor, P. J., & Britz, J. J. (2012). An ethical perspective on political-economic issues in the long-term preservation of digital heritage. *Journal of the American Society for Information Science and Technology*, 63(11), 2153–2164.
- Loureiro, S. M. C., Guerreiro, J., & Ali, F. (2020). 20 years of research on virtual reality and augmented reality in tourism context: A text-mining approach. *Tourism Management*, 77, 104028.
- Lynch, C. A. (2003). The coming crisis in preserving our digital cultural heritage. *Journal of Library Administration*, 38(3–4), 149–161.
- Macmillan, F. (2015). Copyright, the creative industries, and the public domain. In C. Jones, M. Lorenzen, & J. Sapsed (Eds.), *The Oxford Handbook of creative industries* (pp. 439–455). Oxford University Press.
- Macmillan, F. (2021). Western dualism and the regulation of cultural production. *Brill Research Perspectives in Art and Law*, 4(4), 1–116.
- Madison, M. J., Frischmann, B. M., & Strandburg, K. J. (2009). Constructing commons in the cultural environment. *Cornell Law Review*, 95, 657.
- Magnani, P., & Montagnani, M. L. (2013). From art displays to art experience: What protection for art exhibitions and arts festivals? *Queen Mary Journal of Intellectual Property*, 3(3), 204–223.

- Mahendrawati, N. L. M. (2020). Policy on protection of cultural heritage through communal copyright in supporting sustainable tourism. *Journal of Environmental Management and Tourism*, 11(4), 920–924.
- Malaro, M. C., & DeAngelis, I. (2012). *A legal primer on managing museum collections*. Smithsonian Institution.
- Maranda, L. (2015). Museum ethics in the 21st century: Museum ethics transforming into another dimension. *ICOFOM Study Series*, 43b, 151–165.
- Mariani, M. M., Machado, I., & Nambisan, S. (2023). Types of innovation and artificial intelligence: A systematic quantitative literature review and research agenda. *Journal of Business Research*, 155, 113364.
- Markellou, M. (2013). Appropriation art under copyright protection: Recreation or speculation. *European Intellectual Property Review*, 35(7), 369–372.
- Martins, D. L., da Lemos, D. L., de Oliveira, L. F. R., Siqueira, J., do Carmo, D., & Medeiros, V. N. (2023). Information organization and representation in digital cultural heritage in Brazil: Systematic mapping of information infrastructure in digital collections for data science applications. *Journal of the Association for Information Science and Technology*, 74(6), 707–726.
- Matusiak, K. K., & Werling, S. (2020). Implementing standardized rights statements in a digitized community archive. *Proceedings of the Association for Information Science and Technology*, 57(1), e383. <https://doi.org/10.1002/pr2.383>
- McCarthy D., & Wallace A. (2018). *Survey of GLAM open access policy and practice*. <http://bit.ly/OpenGLAMsurvey>
- McDonald, S. F. (2007). Copyright for sale: How the commodification of intellectual property distorts the social bargain implicit in the copyright clause. *Howard Law Journal*, 50(2), 541–574.
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *Annals of Internal Medicine*, 151(4), 264–269.
- Montagnani, M. L., & Zoboli, L. (2017). The making of an ‘orphan’: Cultural heritage digitization in the EU. *International Journal of Law and Information Technology*, 25(3), 196–212.
- Mucchi, L., Milanese, M., & Becagli, C. (2022). Blockchain technologies for museum management: The case of the loan of cultural objects. *Current Issues in Tourism*, 25(18), 3042–3056.
- Murphy, B. L. (2016). Charting the ethics landscape for museums in a changing world. In ICOM (Ed.), *Museums, ethics and cultural heritage* (pp. 131–140). Routledge.
- Needham, C. (2017). Understanding copyfraud: Public domain images and false claims of copyright. *Art Documentation*, 36(2), 219–230.
- NEMO. (2023). *The network of European museum organisations*. <https://www.ne-mo.org/>
- Ng Boyte, A. (2023). The social value of intellectual property. *IP Theory*, 12(3), 1–37.
- Nhambura, C. (2023). Indigenous people and the protection of intellectual property rights (IPRs) in Zimbabwe. In S. Gbendazhi Barnabas (Ed.), *Indigenous and minority populations*. IntechOpen.
- Nicolas, C., & Geldres-Weiss, V. V. (2023). Business and management research trends of sustainability assessment in the food sector. *British Food Journal*, 125(13), 220–236.
- Nwabueze, C. J. (2013). The role of intellectual property in safeguarding intangible cultural heritage in museums. *International Journal of Intangible Heritage*, 8, 181–190.
- Nwabueze, C. J. (2017). Copyright and data authenticity in the digital preservation of heritage: The case of OAPI states. *International Journal of Intangible Heritage*, 12, 94–110.
- Oevermann, H., & Mieg, H. (2021). Urban development planning and world cultural heritage: Two perspectives of planning practice dealing with industrial heritage. *Planning Practice & Research*, 36(4), 430–441.
- OpenGLAM. (2023). *A global network on Sharing Cultural Heritage*. <https://openglam.org/>
- Open Knowledge Foundation (OKF). (n.d.). *Open Definition 2.1*. <https://opendefinition.org/od/2.1/en/>
- Ore, E. S. (1994). Teaching new tricks to an old map. *Computers and the Humanities*, 28, 283–289.
- Orlandi, S., De Angelis D., Fasano P., Manasse C., Marras A.M., & Modolo M. (2021). FAQs Author’s right, copyright and free licenses for culture on the web. <https://doi.org/10.5281/zenodo.4608430>
- Oruç, P. (2020). 3D digitisation of cultural heritage copyright implications of the methods, purposes and collaboration. *Journal of Intellectual Property, Information Technology and E-Commerce Law*, 11(2), 149–159.
- Oruç, P. (2022). Documenting Indigenous oral traditions: Copyright for control. *International Journal of Cultural Property*, 29(3), 243–264.
- Pääkkönen, T. (2016). *Availability, Data Privacy and Copyrights—Opening Knowledge via Contracts and Pilots*. https://www.doria.fi/bitstream/handle/10024/124432/iber2016_Availability_Data_PrivacyCopyrights_v6_169b.pdf?sequence=4

- Pallante, M. A. (2012). Orphan works & mass digitization: Obstacles & opportunities. *Berkeley Technology Law Journal*, 27(3), 1251–1258.
- Palmaccio, M., Dicuonzo, G., & Belyaeva, Z. S. (2021). The internet of things and corporate business models: A systematic literature review. *Journal of Business Research*, 131, 610–618.
- Palthe, J. (2014). Cross-level cultural congruence: Implications for managing diversity in multinational corporations. *Journal of Diversity Management (JDM)*, 9(1), 51–62.
- Palumbo, R. (2022). Enhancing museums' attractiveness through digitization: An investigation of Italian medium and large-sized museums and cultural institutions. *International Journal of Tourism Research*, 24(2), 202–215.
- Pantalony, D. (2017). Collectors, displays and replicas in context: What we can learn from provenance research in science museums. *The Romance of Science: Essays in Honour of Trevor H. Levere*, 52, 255–275.
- Pantalony, R. E. (2016). Museum Scholarly Communications and Copyright Law: A Call for balanced and nuanced exceptions premised on museum mission and mandate. *Museum International*, 68(3–4), 110–117.
- Pantalony, R. E. (2022). 23. IP management for cultural heritage institutions. In I. Stamatoudi (Ed.), *Research handbook on intellectual property and cultural heritage* (pp. 439–446). Edward Elgar.
- Perens & Open Source Initiative. (1997–1998). *Open Source Initiative*. <https://opensource.org/history/>
- Paul, J., & Criado, A. R. (2020). The art of writing literature review: What do we know and what do we need to know? *International Business Review*, 29(4), 101717.
- Paulus, A., & Kelli, A. (2023). Intangible cultural heritage and intellectual property protection as two sides of the same human rights Coin: Memoryscapes and traditional boatbuilding in Estonia. *Nordic Journal of Human Rights*, 41(1), 28–48.
- Peers, L., & Brown, A. K. (2007). Museums and sources communities. In S. Watson (Ed.), *Museums and their communities* (pp. 519–537). Routledge.
- Pélessier, M. (2021). *Cultural commons in the digital ecosystem*. Wiley.
- Pessach, G. (2007). Museums, digitization and copyright law –taking stock and looking ahead. *The Journal of International Media and Entertainment Law*, 1, 253–283.
- Petri, G. (2014). The public domain vs the museum: The limits of copyright and reproductions of two-dimensional works of art. *Journal of Conservation and Museum Studies*, 12(1), 1–12.
- Pittman, L. D. (2020). Combatting copyright overreach: Keeping 3D representations of cultural heritage in the public domain. *New York University Law Review*, 95(4), 1192–1228.
- Purwandoko, P. H., Sulistiyono, A., & Hawin, M. (2020). The implementation of the traditional cultural expression (TCE) protection Indonesia based on article 38 law number 28 of 2014 regarding copyright. *Indonesian Journal of International Law*, 18(4), 543–570.
- Rajesh Babu, R. (2018). Protection of traditional knowledge and expressions of folklore: Locating India in the global framework. In S. Burra & R. R. Babu (Eds.), *Locating India in the contemporary international legal order* (pp. 151–183). Springer.
- Rimmer, M. (2015). *Indigenous intellectual property: A handbook of contemporary research*. Edward Elgar.
- Rosenblum, B. (2008). Digital access to cultural heritage and scholarship in the Czech Republic. *Slavic & East European Information Resources*, 9(1), 12–29.
- Runhao, C. (2018). Information porter: A study on intangible cultural heritage databases of provincial public libraries in China. *Proceedings of the Association for Information Science and Technology*, 55(1), 888–889.
- Sacco, P. L. (2011). Culture 3.0: A new perspective for the EU 2014–2020 structural funds programming. *EENC Paper*. <https://www.interarts.net/descargas/interarts2577.pdf>
- Sappa, C. (2022). Hosting the public domain into a minefield: the resistance to art 14 of the DSM Directive and to the related rules that transpose it into national law. *Journal of Intellectual Property Law and Practice*, 17(11), 924–939.
- Scher, P. W. (2002). Copyright heritage: Preservation, carnival and the state in Trinidad. *Anthropological Quarterly*, 75(3), 453–484.
- Schmidt, D. P. (2004). Intellectual property battles in a technological global economy: A just war analysis. *Business Ethics Quarterly*, 14(4), 679–693.
- Schroff, S. (2017). *Who owns the broadcasting archives? Unravelling copyright ownership of broadcast content*. DeLex.
- Senftleben, M. (2004). *Copyright, limitations and the three-step test – an analysis of the three-step test in international and EC copyright law*. Kluwer Law International.
- Sganga, C. (2018). *Propertizing European copyright. History, challenges and opportunities*. Edward Elgar.

- Sganga, C., Contardi, M., Turan, P., Signoretta, C., Bucaria, G., Mezei, P., & Harkai, I. (2023). *Copyright flexibilities: Mapping and comparative assessment of EU and national sources*. <https://doi.org/10.2139/ssrn.4325376>
- Sherman, S. R. (2008). Who owns culture and who decides?: Ethics, film methodology, and intangible cultural heritage protection. *Western Folklore*, 67(2/3), 223–236.
- Siemieniako, D., Kubacki, K., & Mitrega, M. (2021). Inter-organisational relationships for social impact: A systematic literature review. *Journal of Business Research*, 132, 453–469.
- Silberman, N. (2014). From cultural property to cultural data: The multiple dimensions of “Ownership” in a global digital age. *International Journal of Cultural Property*, 21, 365–374. <https://doi.org/10.1017/S0940739114000162>
- Singh, S., Blake, M., & O’Donnell, J. (2013). Digitizing pacific cultural collections: The Australian experience. *International Journal of Cultural Property*, 20(1), 77–107.
- Singh, V. K., Singh, P., Karmakar, M., Leta, J., & Mayr, P. (2021). The journal coverage of web of science, scopus and dimensions: A comparative analysis. *Scientometrics*, 126, 5113–5142.
- Snel, M., & De Moraes, J. (2018). *Doing a systematic literature review in legal scholarship*. Eleven International.
- Stallman, R. M. (1986). Free software foundation. *Gnu’s Bulletin*, 1(1), 8–9.
- Stamatoudi, I. (2022). The notions of intellectual property and cultural heritage: Overlaps and clashes. In I. Stamatoudi (Ed.), *Research handbook on intellectual property and cultural heritage* (pp. 8–37). Edward Elgar.
- Stanley, N. (2004). Can museums help sustain indigenous identity? Reflections from Melanesia. *Visual Anthropology*, 17(3–4), 369–385.
- Stannard, E. (2015). Order from chaos?: Copyright exceptions one year on. *Elucidate*, 12(3), 22–24.
- Stark, J. C. (2011). The art of ethics: Theories and applications to museum practice. In J. Marstine (Ed.), *The Routledge companion to museum ethics* (pp. 26–40). Routledge.
- Stitzlein, H., Han, M.-J.K., & Benson, S. R. (2018). Unraveling challenges: Rights statements in digital cultural heritage collections. *Journal of Library Metadata*, 18(3–4), 135–150.
- Stockton-Brown, M. (2022). Out-of-commerce: How the existing copyright practices in film archives impact on widening public access to cultural heritage. *Journal of Intellectual Property, Information Technology and E-Commerce Law*, 13(1), 3–19.
- Styliani, S., Fotis, L., Kostas, K., & Petros, P. (2009). Virtual museums, a survey and some issues for consideration. *Journal of Cultural Heritage*, 10(4), 520–528.
- Suber, P. (2012). *Open access*. The MIT Press.
- NEMO & Szogs, N. (2020). *Report on Digitalisation and IPR*. https://www.ne-mo.org/fileadmin/Dateien/public/Publications/NEMO_Final_Report_Digitisation_and_IPR_in_European_Museums_WG_07.2020.pdf
- Talwar, S., Talwar, M., Kaur, P., & Dhir, A. (2020). Consumers’ resistance to digital innovations: A systematic review and framework development. *Australasian Marketing Journal (AMJ)*, 28(4), 286–299.
- Thanuskodi, S. (2020). *Challenges and opportunities of open educational resources management*. IGI Global.
- Tinker, A. J. (2024). Accessing the artwork in covid-19: Loss, recovery and reimagination. *Internet Histories*, 8(1–2), 1–16.
- Todorova, T. Y., Kurbanoglu, S., Boustany, J., Dogan, G., Saunders, L., Horvat, A., Terra, A. L., Landøy, A., Repanovici, A., Morrison, C., Vanderkast, E. J. S., Secker, J., Rudzioniene, J., Kortelainen, T., & Koltay, T. (2017). Information professionals and copyright literacy: A multinational study. *Library Management*, 38(6–7), 323–344.
- Ubertazzi, B. (2022). *Intangible cultural heritage, sustainable development and intellectual property: International and European perspectives*. Springer.
- UNESCO. (1970). *Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property*. <https://www.unesco.org/en/legal-affairs/convention-means-prohibiting-and-preventing-illicit-import-export-and-transfer-ownership-cultural>
- UNESCO. (n.d.). **Open Access**. <https://www.unesco.org/en/open-access>
- United Nations. (1948). *Universal declaration of human rights*. <https://www.un.org/en/universal-declaration-human-rights/>
- United Nations. (1966). *International covenant on economic, social and cultural rights* (2200A XXI). <https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-economic-social-and-cultural-rights>
- Vallely, F. (2014). Playing, paying and preying: Cultural clash and paradox in the traditional music commongage. *Community Development Journal*, 49(1), 53–67.

- Van Eck, N., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538.
- Van Eck, N. J., & Waltman, L. (2014). Visualizing bibliometric networks. In Y. Ding, R. Rousseau, & D. Wolfram (Eds.), *Measuring scholarly impact: Methods and practice* (pp. 285–320). Springer.
- van Gompel, S., & Hugenholtz, P. B. (2010). The orphan works problem: The copyright conundrum of digitizing large-scale audiovisual archives, and how to solve it. *Popular Communication*, 8(1), 61–71.
- Wallace, A. (2022). A culture of copyright: A scoping study on open. Access to digital cultural heritage collections in the UK. <https://doi.org/10.5281/zenodo.6242611>
- Wallace, A., & Euler, E. (2020). Revisiting access to cultural heritage in the public domain: EU and international developments. *IIC-International Review of Intellectual Property and Competition Law*, 51(7), 823–855.
- Wanda George, E. (2010). Intangible cultural heritage, ownership, copyrights, and tourism. *International Journal of Culture, Tourism and Hospitality Research*, 4(4), 376–388.
- Weiss, M., Hoegl, M., & Gibbert, M. (2017). How does material resource adequacy affect innovation project performance? A meta-Analysis. *Journal of Product Innovation Management*, 34(6), 842–863.
- Winegar, J. (2008). Cultural sovereignty in a global art economy: Egyptian cultural policy and the new western interest in art from the middle east. *Cultural Anthropology*, 21(2), 173–204.
- Winesmith, K., & Anderson, S. (2020). *The Digital future of museums: Conversations and provocations*. Routledge.
- Zhang, L. (2022). Empowering linked data in cultural heritage institutions: A knowledge management perspective. *Data and Information Management*, 6(3), 100013.
- Zhou, L., Shen, H., Wu, M.-Y., Wall, G., & Shen, X. (2019). Benefits of visiting heritage museums: Chinese parents' perspectives. *International Journal of Heritage Studies*, 25(6), 565–581.
- Zupic, I., & Čater, T. (2015). Bibliometric methods in management and organization. *Organizational Research Methods*, 18(3), 429–472.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.