

RESEARCH ARTICLE

Measuring museum sustainability within the framework of institutional theory: A dictionary-based content analysis of French and British National Museums' annual reports

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Abstract

In the context of increasing attention on museum sustainability, this research adopts a dictionary-based, content-analysis approach to measure the degree of sustainability disclosed in European museum annual reports and similar documents. The analysis is carried out through the lens of institutional theory, assuming that the presence of formal and informal regulations positively affects the level of sustainability in annual reporting practices. Furthermore, the paper discusses the level of sustainability disclosed by different types of museums and the impact of the COVID-19 pandemic on the extent of sustainability-oriented reporting. The article compares top public museums in the UK and France, the European countries where accountability practices are most deeply rooted for legal and cultural reasons, and where the most visited museums in the world are located. The findings show that the type of museum and the country significantly affect the ESG (Environmental, Social, and Governance) score, whereas mentioning COVID-19 or the year of publication does not.

KEYWORDS

accountability, annual reporting, COVID-19, ESG, museum sustainability

1 | INTRODUCTION

Over the last decade, sustainability has become one of the most pressing needs for museums worldwide. The COVID-19 pandemic, the energy crisis, and inflation have increased awareness of the ecological transition, by exacerbating the unprecedented problems and uncertainties that emerged in the Age of Disruption (Giusti, 2023; Janes, 2014; Lindqvist, 2012; Lobo Guerrero & Zuluaga Medina, 2021). Moreover, climate change threatens cultural heritage preservation, as demonstrated by unexpected weather changes and natural disasters such as floods. When interviewed on these issues, Pomian (2022) recently argued that global warming and the need to save energy would, in the long run, be a threat to museums.

According to the philosopher, ecological ideology opens up a perspective that is difficult to reconcile with museums. As structurally loss-making institutions, they will no longer be state priorities.

In this scenario, it is not strange that climate activists have singled out museums as a backdrop for their climate protests. According to the International Council of Museums (ICOM), it demonstrates museums' "symbolic power and relevance in the discussions around the climate emergency" (ICOM, 2022a). Indeed, sustainability is intrinsically linked to each museum's mission, embedded both in its long-lasting nature as a permanent institution and in the need to serve current and future generations (Cerquetti & Montella, 2021).

When probing sustainability dimensions, environmental issues stand out as our society's most significant and complex challenge,

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calling for a radical transformation in all sectors and countries, even in cultural institutions (Da Silva & Walbe Ornstein, 2022; NEMO, 2023). Museums can specifically contribute to climate action through resource management and educational and research programs (McGhie, 2020), being responsible not only for environmentally conscious practices and use but also for shaping environmentally conscious visitor attitudes (Ásványi et al., 2021) and promoting visitors' critical thinking, introspection, and agency (Navas Iannini & Pedretti, 2022). Museums can be “key actors in initiating and supporting climate action with their communities,” and their commitment to this mission can be expressed through “educational programmes, dedicated exhibitions, community outreach and research” (ICOM, 2022a). Of the various types of museums, scientific institutions are on the front-line when it comes to promoting sustainable actions to safeguard biodiversity, save energy, and reduce pollution (Delson, 2018; Kociolek, 2006). Indeed, environmental issues are deeply rooted in natural history museums and science centers, both in their collections and in their everyday activities.

However, when analyzing how museums are responding to the climate crisis, a survey answered by 578 museums from 38 European countries between April and June 2022 revealed weaknesses in the sector (NEMO, 2023). Even though almost 80% of museums state that sustainable development goals (SDGs) are reflected in their strategic plans, only 8.9% have analyzed possible challenges resulting from climate change. The leading impediments to sustainable transitions for museums are lack of funds (59.7%), lack of support from public administration or policy direction (38.8%), and lack of knowledge (30.5%). Almost 70% think there is insufficient knowledge about SDGs and climate action. The survey results also suggest that “there is hardly any difference between small, mid-sized and large museums when it comes to prioritizing sustainability, emphasizing sustainability in the planning and management of the museums' premises and properties, or providing opportunities for training around climate-related issues or public actions” (NEMO, 2023, p. 17).

Moving on to the scientific debate, in recent years, scholars have devoted increasing attention to the analysis of museum sustainability and the impact of museum activity on society and the environment (Müller & Grieshaber, 2023; Orea-Giner et al., 2021; Recuero Virto et al., 2017). Specifically, accountability practices and social reporting have become the research object of museum management studies (Bambagiotti-Alberti et al., 2016; Manetti & Sibilio, 2014). However, sustainability remains uninvestigated as a dimension of museum accountability to be measured, evaluated, and reported (Borin, 2023). In addition, the reasons behind the sustainability orientation expressed in social reporting practices need further examination.

Within this context and in light of the new definition for museums (ICOM, 2022b), the present research aims to measure the degree of sustainability (sustainability disclosure score) that can be found in European museum annual reports and similar documents (e.g., annual reports and accounts, *rappports d'activité* and *bilans d'activité*). The different levels of sustainability disclosed by different types of museums (artistic, historical, scientific, and group of museums) and the impact of COVID-19 are also analyzed. The article adopts a

dictionary-based, content-analysis approach to compare top public museums in the UK and France, the European countries where, for legal and cultural reasons, annual reporting practices are most deeply rooted. Moreover, being home to the 20 most-visited museums in the world (TEA, AECOM, 2021, pp. 74–75), these countries are more subject to public scrutiny.

The analysis is carried out within the framework of the institutional theory with the aim of understanding whether and how formal and informal regulations affect the level of sustainability in accountability practices within the period 2019–2021. Indeed, the scientific literature has recently provided an up-to-date perspective on institutional theory and sustainability practices, however with the focus mainly on the for-profit sector. Tetteh et al. (2023a, 2023b) explored the relationship between institutional pressures, accountability practices, and the pursuit of SDGs in Ghana. With a similar approach, Naveed et al. (2023) applied the institutional lens to social and environmental sustainability, focusing on gender diversity and corporate green innovation. However, to the best of our knowledge, no studies have investigated the relationship between institutional theory and sustainability in cultural institutions. Aiming to fill this gap, our study provides insights into nonfinancial disclosure by identifying the institutional factors leading museum organizations to be more vocal about their sustainability efforts and by disentangling these factors from the impact of the exogenous shock represented by the spread of COVID-19. In addition, our study contributes to the theoretical debate on cultural heritage management since it shows how different types of museums express different levels of sustainability disclosures and explains these differences through the lens of institutional theory. Finally, our analysis can orient policymakers and museum decision-makers toward the best practices to favor sustainability isomorphic processes.

The remainder of the paper is structured as follows. Section 2 discusses the research's theoretical foundations, framing the analysis within the scientific debate on museum sustainability and accountability orientation within museums. This conceptual background allowed us to formulate our research hypotheses on museum sustainability reporting (Section 3). Section 4 presents the research context and Section 5 the research design and methodology. We then provide the main research results (Section 6) and discuss them in the light of our hypotheses (Section 7). Conclusions, managerial implications, limitations, and future research directions are drawn in Section 8.

2 | THEORETICAL FRAMEWORK

2.1 | Museums and the challenge of sustainability

On August 24, 2022, the Extraordinary General Assembly of ICOM approved the new definition for museums, recognizing a double – explicit and implicit – connection between museums and sustainability. On the one hand, the current definition explicitly states that “museums foster sustainability”; on the other, the social dimension of sustainability is implicitly recalled when shaping museums as



(Schedler, 1999). It consists in adopting a set of control and communication tools aimed at a voluntary assumption of responsibility toward the context in which organizations work. According to Ebrahim (2003a, 2003b), accountability has an external and internal function. On the one hand, it is “a means through which individuals and organizations are held responsible for their actions (e.g., through legal obligations and explicit reporting and disclosure requirements)”;

on the other, it is a set of tools through which individuals and organizations “take internal responsibility for shaping their organizational mission and values, for opening themselves to public or external scrutiny, and for assessing performance in relation to goals” (Ebrahim, 2003a, p. 815).

Since the 1990s, with the spread of New Public Management (NPM) theories and models, a novel approach to accountability has been developed in the public sector, gradually shifting from a political to a managerial sphere, according to which politicians and civil servants are responsible to all citizens (Fatemi & Behmanesh, 2012). This paradigm shift has also involved non-profit organizations (NPOs), which have become increasingly committed to providing evidence of their achievements for funding purposes (Moxham, 2009; Moxham & Boaden, 2007; Poister, 2008).

In this context, museums – as NPOs – play a variety of roles within society and are accountable to many categories of stakeholders (Anderson, 2004; O’Dwyer & Unerman, 2010; Rentschler & Potter, 1996). Accountability systems play a fundamental role in giving legitimacy to a museum’s primary mission, that is, cultural heritage preservation and enhancement: the legitimacy of a museum mainly depends on the public trust and, more specifically, on the community’s perception of its work (Bambagiotti-Alberti et al., 2016). In order to communicate their performance and objectives in a transparent and fair way, museums, as well as other public entities, began to design reporting systems, conceived as a function for internal control and a source of performance knowledge, but also as a tool of transparency and legitimization (Bud et al., 1991; Carnegie & Wolnizer, 1996; Collier, 2008; Woodward & Marshall, 2004). Thus, social reporting tools have been adopted as a valid solution to demonstrate the efficient use of resources, the soundness of the economic and financial results achieved, the ethicality and legality of actions and processes set in place, the concrete implementation of decisions taken, as well as the coherence between preservation, protection, and enhancement activities (Manetti & Sibilio, 2014, p. 222).

When focusing on museums, among management theories supporting accountability in NPOs, the scientific literature mainly considers three theories with different implications for cultural institutions – the stakeholder, legitimacy, and institutional theories.

The accountability orientation of cultural institutions is to a large extent justified by the stakeholder theory, according to which an organization has to deal with different parties, namely stakeholders, that have various roles, levels of engagement, and interests (Donaldson & Preston, 1995; Freeman, 1984). As argued by Botes et al. (2013, p. 896), “viewing accountability through the stakeholder lens clearly shows that accountability in museums can never be a mere focus on financial figures and presents museums with a broader challenge.”

Indeed, accountability systems within NPOs should face a higher complexity (Dainelli et al., 2013) because of the heterogeneous expectations of multiple stakeholders (Collier, 2008; Mulgan, 2000). Considering the influence of stakeholder theory on museum accountability, Manetti and Sibilio (2014) pointed out the need to inform stakeholders about the activities carried out and improve the relationship with some of them by identifying social reporting as a tool to create a connection and involvement with stakeholders.

Although less widely applied in the nonprofit sector, some scholars have also investigated the influence of legitimacy theory on public organizations and museums. Indeed, according to this theory, social reporting is carried out for opportunistic and strategic reasons, as it aims to influence perceptions about the impacts of an organization on the local environment, to gain the approval of stakeholders and/or avoid their opposition (Coupland, 2007; Deegan, 2002; Patten & Guidry, 2010). Thus, it is better suited to explain the orientation toward social reporting in corporations that have a clear profit motive (Campbell, 2003; Guthrie & Parker, 1989; Hummel & Schlick, 2016). As an organization is legitimate if its actions are perceived as desirable, proper, or appropriate (Suchman, 1995), social reporting practices can stimulate this recognition (Campbell, 2003) and help the organization to preserve its credibility (Gray, 2002; Gray et al., 1995). Within the museum sector, Hallgrímsdóttir and Kristmundsson (2021) considered the legitimacy theory from the perspective of a conscious social and environmental responsibility and applied the Scott’s legitimacy categories (2008), namely regulative, normative, and cultural-cognitive legitimacy, to analyze how the organizational legitimacy of the National Museum of Iceland had changed in the previous 40 years. When measuring the propensity of Italian museums toward social reporting practices, Manetti and Sibilio (2014) demonstrated the role of the legitimacy theory (together with stakeholder and institutional theories): in a context where financial and human resources are scarce, strengthening the museum’s image is necessary to increase its legitimacy, especially in the eyes of public and non-public stakeholders and funders. Thus, museums can identify social reporting as a tool for improving their image to gain consensus and support among stakeholders (Manetti & Sibilio, 2014, p. 242).

For the purpose of this study, the institutional theory has been identified as the most suitable for exploring and analyzing the influence of sustainability issues on the social reporting practices of European museums. Indeed, this theory is grounded on a kind of institutional “isomorphism” of the organization (Di Maggio & Powell, 1983), consisting of a fine-tuning activity with the external environment (Campbell, 2007). The institutional isomorphism of an organization depends on three factors, which take into account legal, regulatory, and professional structures (Di Maggio & Powell, 1983; Larrinaga-González, 2007). One source of institutional isomorphism is coercive impositions. Coercive isomorphism explains social reporting as a response to regulation or consumer pressure since it results from both formal and informal pressures exerted on organizations by other organizations upon which they are dependent and by the cultural expectations of the society where organizations operate. A second form of institutional isomorphism depends on normative impositions.

Normative isomorphism explains social reporting as a response to voluntary initiatives on the grounds of social responsibility linked with values deeply rooted in society in the absence of explicit laws or regulations that impose social reporting. As argued by Di Maggio and Powell (1983, p. 152), normative isomorphism stems primarily from professionalization, considered “the collective struggle of members of an occupation to define the conditions and methods of their work [...] and to establish a cognitive base and legitimation for their occupational autonomy.” When goals are unclear, or the environment creates symbolic uncertainty, organizations may adopt imitative behaviors, modeling their actions on what other organizations do. Thus, mimetic isomorphism, consisting of standard responses to uncertainty, occurs.

Prior research on NPOs highlights how the context in which an organization operates can influence its propensity to initiate or implement social reporting processes (Ball, 2005; Larrinaga-González, 2007; Larrinaga-Gonzalez & Bebbington, 2001; Mussari & Monfardini, 2010). In this perspective, social reporting depends on “a number of organizational dynamics and on a variety of regulative, normative, and cognitive drivers that are strictly connected to the local context within which the organization is rooted” (Bambagiotti-Alberti et al., 2016, p. 4) and represents a tool to adapt to the cultural, economic and social context and to reduce external costs and the pressure from stakeholders, legislators and other external regulators (Adams, 2002; Ballou et al., 2006; Tate et al., 2010). Accordingly, social reporting practices should be more routinely adopted in places where external stakeholders in some way require accountability, while it might not be adopted in contexts where there are no explicit or implicit pressures to do so (Bebbington et al., 2008; Milne & Gray, 2007).

3 | SUSTAINABILITY REPORTING IN MUSEUMS: HYPOTHESES DEVELOPMENT

Since sustainable development relates to the ability to meet the needs of current and future generations, organizations are increasingly required to assess and report their sustainability performance and their positive and negative environmental, economic, and social impacts on the communities they serve. This requirement is particularly relevant for NPOs because of their promise to serve the public good (Jones & Mucha, 2014). In this perspective, many scholars (Bendell, 2005; Benjamin, 2008) have highlighted that sustainability and accountability are increasingly becoming crucial issues in the management and governance of NPOs. Social reporting practices enable “organizations to consider their impact on a wide range of sustainability issues, thus allowing them to be more transparent about the risks and opportunities they face” (Manetti et al., 2019, p. 361). Over the past 20 years, social reporting practices among NPOs have steadily increased (Owen, 2008; Mussari & Monfardini, 2010; Arvidson & Lyon, 2014; Costa et al., 2014), with more specific focus on the organizational determinants and managerial motivations underpinning reporting initiatives (Owen, 2008).

During the same period, studies on museum reporting practices, performance, and accountability measurement also developed, mainly addressing the Anglosphere countries, namely the UK (Abdullah & Khadaroo, 2017; Jackson, 1991; Morse, 2018), the USA (Christensen & Mohr, 2003), Australia (Carnegie & Wolnizer, 1996; Rentschler & Potter, 1996; Wickham & Lehman, 2015), and New Zealand (Thompson, 2001; Wei et al., 2008). Investigating the European context, scholars have analyzed the cases of Italy (Bambagiotti-Alberti et al., 2016; Esposito et al., 2023; Esposito & Ricci, 2021; Paternostro & Ruisi, 2017; Pignataro, 2002), Austria (Gstraunthaler & Piber, 2007), and Portugal (da Silva Menezes et al., 2009). Some studies also adopt a comparative perspective, examining the reporting practices of leading museums in New Zealand and the UK (Wei et al., 2008) and comparing them with the European context (Botes et al., 2013). Finally, to develop a museum performance accountability disclosure index, Dainelli et al. (2013) tested the empirical validity of applying the stakeholder theory to the accountability systems of 134 national museums in the major developed countries.

When focusing on sustainability, the challenge for museums relates to the need to satisfy users and increase their likelihood to revisit them. In this perspective, Nielsen (2015) highlighted that the sustainability of a museum depends on its importance for both the community and its visitors and identified the adoption of a visitor perspective as an emerging key factor for achieving museum sustainability. Research on this matter mainly focuses on defining the concept of museum sustainability, demonstrating the need to incorporate it into museum practices and describing how various activities and measures adopted by museums have contributed or can contribute to enhancing the concept and practice of sustainable development (Di Pietro et al., 2014). One recent key perspective for cultural organizations consists in addressing sustainability in terms of the goals of the 2030 Agenda (Borin, 2023; Cerquetti & Montella, 2021; Dell'Ovo et al., 2021; Roigé et al., 2021). In this perspective, cultural organizations have become more aware of the importance of promoting cultural practices that meet sustainability criteria due to the growing awareness of the climate emergency. Thus, they have begun to include performance indicators related to these aspects in annual reports, sustainability reports, and general financial statements (Borin & Donato, 2022). Borin (2023) investigated sustainability reporting in the cultural sector by considering museums as emblematic players in this field and focusing on the implementation and characteristics of sustainability reporting in these organizations, leading to a proposal on how better to use these tools in museums and cultural institutions.

The literature provides various self-assessment methods for achieving sustainability standards in museums, such as sustainability audits or checklists (Chitima, 2015) and identifies different influencing factors and sets of indicators to measure the impact that museums can have on society (Corsane, 2006; Davis, 2008; Pop & Borza, 2016). As far as social reporting practices are concerned, one of the most widely used communication tools in museums is the annual report, which summarizes in a structured form past and future information



about museum life and activities (Solima, 2009), thus acting as a “communication lens through which stakeholders can understand and monitor organizations’ activities, operations, successes and failures” (Dhanani & Connolly, 2012, p. 1141). Other appropriate tools are mission statements (Krug & Weinberg, 2004; Rentschler & Potter, 1996) and social reports, which are more frequently used in Italy (Manetti et al., 2008; Manetti & Sibilio, 2014; Sibilio, 2014). From a sustainability perspective, sustainability reports and integrated reports have become necessary means of disclosing these aspects and making museums accountable to their stakeholders and society (Borin, 2023; Rubino et al., 2016).

Following on from what we have argued in previous sections, regulatory frameworks and oversight bodies can affect the quality of sustainability reporting as a component of accountability practices (Bovens et al., 2008; Brown, 2014). As stated by Botes et al. (2013), the attitudes of the management and the governance structures within a museum environment affect levels of disclosure. Indeed, in the comparative analysis of the US, UK, and European practices, the UK attained high disclosure scores, mainly due to regulations prescribing annual reporting. US museums, conversely, have no such constraints and are not sufficiently engaged with their stakeholders to effectively discharge their accountability (Botes et al., 2013, p. 903). This relationship is confirmed by the case of Italian museums, where less stringent regulations lead to a low level of accountability (Bambagiotti-Alberti et al., 2016, p. 9). Hence, we first state:

Hypothesis 1. The presence of regulations that prescribe annual reporting in museums positively affects sustainability in reporting practices.

Among museum institutions, scientific museums have a closer relationship with sustainability matters, especially environmental ones, such as mitigating global climate change and saving the planet. Compared to other museum types, for them, sustainability is not only a means to achieve the mission and one of the objectives of their activity but it is also the museum object, intrinsically inscribed in museum collections. Scientific museums continuously talk about sustainability through their permanent and temporary exhibitions (Delson, 2018; Navas Iannini & Pedretti, 2022): on the one hand, ecosystems and biodiversity; on the other, innovations and technologies, their impact on the natural world and their possible contribution to sustainable development. In this context, in 2016, UNESCO recognized the crucial role of scientific museums in sustainable development.¹ Thus, it is not strange that eco-sustainable museum buildings are promoted by scientific centers, such as the California Academy of Sciences, designed by Renzo Piano in San Francisco (Brophy & Wylie, 2008; Kocielek, 2006). Other scientific institutions have put sustainability at the heart of their work. Among them, the Science Museum Group (UK) has released its sustainability policy and “committed to net zero by 2033 underpinned by science-based absolute emission carbon

reduction targets that are consistent with the Paris agreement of limiting warming to 1.5°C above preindustrial levels.”² Therefore, we affirm that:

Hypothesis 2. Propensity for sustainability reporting varies across museums depending on museum type.

The COVID-19 pandemic has highlighted the vulnerability of cultural institutions, including museums, and placed their sustainability under stress (Palumbo, 2022). Lockdowns have boosted the development of digital services worldwide (Agostino et al., 2020; ICOM, 2020; NEMO, 2020; Simone et al., 2021), and the digital environment has rapidly become a tool for promoting citizen participation and ensuring heritage sustainability (Rivero et al., 2020). In this context, museums have changed their business models to guarantee sustainable competitiveness during the pandemic and post-pandemic era. In addition to a greater focus on user engagement, all stakeholders have progressively gained an increasing role (Choi & Kim, 2021). Given these premises, we can make the following prediction:

Hypothesis 3. COVID-19 increased sustainability orientation in museum reporting practices.

4 | RESEARCH CONTEXT

In Europe, there is no homogeneous regulatory framework nor a singular governing body setting out reporting requirements for NPOs. In the UK, several legislative developments have been designed in recent years to promote NPO accountability. Reporting requirements for NPOs depend on the organization's gross income: all NPOs with a gross income exceeding £500,000 are required to undergo a statutory audit and an annual report, following the features outlined by the Charities Statement of Recommended Practice (SORP), provided by the Charities Commission (Charity Commission for England and Wales, 2005). In Continental Europe, even if each nation operates under its own jurisdiction, annual reporting documents (or, more generally, social reporting documents) are not compulsory. In Italy, NPOs may adopt social reporting on a voluntary basis, using guidelines published for the non-profit sector and other national or local bodies (Manetti et al., 2019; Mussari & Monfardini, 2010; Nardo & Siboni, 2018). In France, social and environmental reporting requirements are compulsory for companies (Grenelle II Act). As far as NPOs are concerned, Decree no. 2009-540 of May 14, 2009, generically refers to associations and foundations and establishes the obligation to publish a balance sheet and an income statement for those organizations that received more than 153,000 euros of donations during the year. Thus, no obligation for annual reporting exists for NPOs. Similarly, in Spain, Law no. 11 of December 28, 2018 requires large for-profit organizations to publish a nonfinancial-reporting statement.

¹<https://www.un.org/sustainabledevelopment/blog/2016/11/unesco-science-museums-vitaly-important-for-sustainable-development/>.

²<https://www.sciencemuseumgroup.org.uk/about-us/policies-and-reports/sustainability-policy/>.

So, larger companies are now publishing integrated reports, and many others have adopted Global Reporting Initiative (GRI) guides. However, this statement is not compulsory for NPOs, with the only exception being in Catalonia, where a social report is required for foundations and public utility associations that receive public resources (Brusca et al., 2022; Puentes et al., 2012). A voluntary disclosure environment is also found in Germany, where no official regulation on how to report on social and environmental aspects exists (Gamerschlag et al., 2011; Quick, 2008).

In this heterogeneous context, our research focused on the UK and France, where, for legal and cultural reasons, annual reporting practices in national museums are most deeply rooted. The two countries provide a large, representative, and comparable sample of museums.

As far as the UK is concerned, since the 1980s, the government has implemented a reform program across public services aimed at differentiating activities at the core of the public sector from functions that can be undertaken either within or outside the public sector, thus, defining a strong legislative framework. The Charities Act (2006) extended the role and responsibilities of the Charity Commission, an institution in charge of improving the quality of narrative and financial reporting in England and Wales. Regarding self-regulation, in 2005, the National Council for Voluntary Organizations (NCVO) developed the ImpACT (Improving Accountability, Clarity and Transparency) Coalition, a code of conduct aimed at encouraging NPOs toward transparency and accountability practices. From a global perspective, in 2006, the biggest international NGOs (several of which are located in the UK) endorsed an Accountability Charter to enhance organizational transparency and accountability, encourage communication with stakeholders, improve organizational performance and effectiveness, and define shared principles, policies and practices. Finally, the Global Reporting Initiative (GRI) (2010) developed sustainability reporting guidelines for NGOs to encourage and aid members in discharging financial and procedural accountability.

Throughout this process, national museums are now required to make and publish annual reports and financial statements through the institution of the board of trustees, thus discharging accountability to external users (Wei et al., 2008, p. 32). In England, the Annual Report and Account (ARA) is a mandatory document for national museums sponsored by the Department for Culture, Media and Sport (DCMS). As stated in the Museums and Galleries Act, 1992, each body must prepare an annual statement of accounts giving a true and fair view of the state of its affairs (par. 9.4); this document must comply with directions given by the Secretary of State in terms of form, content, methods, and principles to be followed (par. 9.5). A similar situation is found in Scotland, Northern Ireland, and Wales, where national museums are supported and funded by the devolved legislatures and specific acts provide directions on annual reporting practices: the National Heritage (Scotland) Act, 1985 established that the board of trustees of national museums must prepare an annual statement following the instructions of the Secretary of State (sched. 1, par. 9.3); the Museums and Galleries (Northern Ireland) Order 1998 expressly refers to the annual report as a mandatory document, to be prepared

by the museum board of trustees and transmitted to the department (par. 11); in Wales, the majority of museums operate under the Public Libraries and Museums Act 1964, which placed public museums and art galleries under the supervision of the Secretary of State, thus allowing local authorities to provide and maintain museums and art galleries and establishing the obligation for annual reporting (par. 17).

In France, annual reporting practices for national museums are not an explicit legal obligation. Museum regulations depend on the ownership structure, specifically whether it is a nonprofit organization (NPO) or a public entity. In decree no. 2009-540 of May 14, 2009, neither museums nor annual reports are mentioned as mandatory documents. Considering the public entity's perspective, the "Code du patrimoine" establishes annual reporting as a mandatory activity only for the Haut Conseil des musées de France, a national consultative body providing recommendations to French museums, which is required to make and publish an annual report (art. R430-5). Nevertheless, the number of national museums accustomed to reporting documents (mainly *rapports d'activité* or *bilans d'activité*) is significantly high. This aspect, together with the continuity of these practices over time (the first public editions of these documents date back to 1973), shows how the need for transparency and accountability is well established in the context of French national museums.

The importance of the UK and France national museums is also reflected in their attendance figures. As reported in the 2021 edition of the Global Attractions Attendance Report, the annual attendance study for the entertainment and museum industries published by TEA and AECOM, these countries are home to the 20 most visited museums in the world: 5 museums are located in London (UK) and recorded 5.4 million visitors in 2021, and 2 are in Paris (France) with an attendance of 3.8 million visitors (TEA, AECOM, 2021, pp. 74–75).

Moving the focus to the EMEA (Europe, Middle East, and Africa) region, of the 20 most-visited museums named in the same study, 55% (11) are in the UK or France (Table 1). In 2021, taken as a whole, these 11 institutions recorded an attendance of 13.2 million visitors, corresponding to 56.5% of the total attendance of the 20 museums ranked (TEA, AECOM, 2021, p. 83).

5 | RESEARCH DESIGN AND METHODOLOGY

The research analyzed annual reports released by national museums in the UK and France between 2019 and 2021. In the UK, among the English museums and galleries sponsored by the DCMS, only 15 are defined as "national," as they were established by Acts of Parliament. The other museums are classed as "non-national," namely public-funded museums, not directly funded by the central government (NMDC, 2003). In addition, there are national museums in Scotland, Wales, and Northern Ireland, supported by the devolved legislatures. National museums in Scotland are funded by the Scottish Executive Education Department and include 5 institutions, grouped together in a single organization (named National Museums Scotland, NMS). In Wales, the national museum group, called Amgueddfa

Country	City	Museum	Attendance
France	Paris	Musée du Louvre	2,825,000
Russia	St Petersburg	State Hermitage	1,649,000
Spain	Madrid	Reina Sofia	1,643,000
Vatican	Vatican City	Vatican Museums	1,613,000
Russia	Moscow	State Tretyakov Gallery	1,581,000
UK	London	Natural History Museum	1,564,000
France	Paris	Centre Pompidou	1,501,000
UK	London	British Museum	1,327,000
Spain	Madrid	Museo Nacional Del Prado	1,175,000
UK	London	Tate Modern	1,156,000
France	Paris	Musée D'Orsay	1,044,000
France	Paris	Cité Des Sciences et de l'industrie	984,000
Italy	Florence	Galleria degli Uffizi	970,000
UK	London	Victoria & Albert Museum	858,000
UK	London	National Gallery	709,000
UK	Edinburgh	National Museum of Scotland	661,000
UK	London	Science Museum	646,000
Netherlands	Amsterdam	Rijksmuseum	625,000
Poland	Oświęcim	Auschwitz-Birkenau Museum	563,000
Netherlands	Amsterdam	Van Gogh Museum	366,000
Total attendance			23,460,000

Source: TEA, AECOM, 2021.

Cymru – Museum Wales, is funded by the Welsh government and includes 7 bodies. National museums in Northern Ireland are funded by the Department of Culture, Arts and Leisure of the Northern Ireland Executive and are grouped within National Museums NI, which looks after 4 institutions.

Therefore, for the UK, where annual reporting practices are mandatory for all museums, we considered 15 English national museums, in addition to the National Museums of Scotland (which is a group of museums), Amgueddfa Cymru (a group of museums), and National Museums NI (a group of museums). Each group of museums was considered as a single organization, both because it was led by a single unit and because it published a single annual report for all the included institutions.

In France, the network of national museums (Réseau des Musées Nationaux) includes 61 institutions.³ Of these, 18 are classed as “établissements publiques,” as they belong to public institutions, thus have administrative and financial autonomy, and 17 are “services à compétence nationale,” meaning they are part of institutions with national competence. The network also includes museums under the supervision of other ministries.

Since annual reporting is not mandatory in France, not all French museums published an annual report or a similar document within the timeframe considered in this study. For the purpose of this research,

we only included in the sample museums that have published relevant documents over the period.

Therefore, the final sample included 37 museums, 18 from the UK and 19 from France (Table 2). A total of 120 documents in both the English and French languages were analyzed: 67 annual reports and accounts (ARA) and 3 annual reviews (AR) related to UK museums, and 44 *rapports d'activité* (RdA) and 6 *bilans d'activité* (BdA) referring to French museums. As the reporting documents in the UK straddle 2 years, the last four editions of each document were considered; in the case of French museums, since the reporting activity corresponds with the solar year, the analysis included the last three editions of each document.

This timeframe also made it possible to consider the COVID-19 dimension and analyze its impact on the perception of museums regarding sustainability issues, by comparing documents published both before and after the pandemic.

Depending on the museum's main focus, we categorized each museum into one of 4 possible types: artistic, historical (including ethnographical museums), scientific, or group of museums. We adopted a dictionary-based approach to operationalize the outcome variable and other relevant variables, and to test the hypotheses. Using dictionaries to capture constructs of interest is becoming increasingly popular among management and marketing scholars (Humphreys & Wang, 2018; Moro et al., 2019; Netzer et al., 2019; Reid et al., 2023), which can now leverage the availability of a large amount of textual data on the Internet by several sources (i.e., consumers, firms, and

³<https://www.culture.gouv.fr/Thematiques/Musees/Les-musees-en-France/Les-musees-de-France/Les-musees-nationaux-le-reseau-des-musees-detenteurs-des-collections-nationales>.

TABLE 2 Museums and documents considered for the analysis.

Country	City	Museum	Type	Document	Editions
England (UK)	London	British Museum	Historical	ARA	2018/19–2021/22
England (UK)	London	Imperial War Museums	Historical	ARA	2018/19–2021/22
England (UK)	London	National Gallery	Artistic	ARA	2018/19–2021/22
England (UK)	London	Royal Museums Greenwich	Historical	ARA	2018/19–2021/22
England (UK)	Liverpool	National Museums Liverpool	Artistic	ARA	2018/19–2020/21
England (UK)	London	Science Museum Group	Scientific	ARA	2018/19–2021/22
England (UK)	London	National Portrait Gallery	Artistic	ARA	2018/19–2021/22
England (UK)	London	Natural History Museum	Scientific	ARA	2018/19–2021/22
England (UK)	London	Royal Armouries	Historical	ARA	2018/19–2021/22
England (UK)	London	Sir John Soane's Museum	Artistic	ARA	2018/19–2021/22
England (UK)	London	Tate	Artistic	ARA	2018/19–2021/22
England (UK)	London	Victoria and Albert Museum	Artistic	ARA	2018/19–2021/22
England (UK)	London	Wallace Collection	Artistic	ARA	2018/19–2020/21
England (UK)	London	Geffrye Museum of the Home	Historical	ARA	2018/19–2021/22
England (UK)	London	Horniman Museum	Historical	ARA	2018/19–2021/22
Scotland (UK)	Edinburgh	National Museums of Scotland ^a	Group of museums	ARA	2018/19–2021/22
Wales (UK)	Cardiff	National Museums of Wales ^b	Group of museums	ARew	2018/19–2021/22
Northern Ireland (UK)	Cultra	National Museums NI ^c	Group of museums	ARA	2018/19–2021/22
France	Paris	Musée du Louvre	Artistic	RdA	2019–2021
France	Paris	Musée d'Orsay	Artistic	RdA ^d	2019–2021
France	Paris	Musée de l'Orangerie des Tuileries	Artistic	RdA	2019–2021
France	Paris	Musée national d'art moderne. Centre Georges Pompidou	Artistic	BdA	2019–2021
France	Paris	Musée du quai Branly «Jacques Chirac»	Historical	RdA	2019–2021
France	Versailles	Musée national des châteaux de Versailles et de Trianon	Artistic	RdA	2019–2021
France	Paris	Musée Picasso	Artistic	RdA	2019–2021
France	Paris	Musée des civilisations de l'Europe et de la Méditerranée (MUCEM)	Historical	RdA	2019–2021
France	Paris	Musée Rodin	Artistic	RdA	2019–2021
France	Paris	Musée national de l'histoire et des cultures de l'immigration	Historical	RdA	2019–2021
France	Fontainebleau	Musée national du château de Fontainebleau	Artistic	RdA	2019–2020
France	Sevres	Musée national de la céramique à Sèvres	Artistic	RdA ^e	2019–2021
France	Limoges	Musée de la porcelaine Adrien Dubouché à Limoges	Artistic	RdA	2019–2021
France	Paris	Musée de la musique	Historical	BdA	2019–2021
France	Paris	Musée de l'Ecole nationale supérieure des beaux-arts	Artistic	RdA	2019–2021
France	Paris	Musée de l'Armée	Historical	RdA	2019–2021
France	Paris	Musée de l'air et de l'espace	Historical	RdA	2019–2021
France	Paris	Musée national de la Marine	Historical	RdA	2019–2021
France	Paris	Musée des monnaies et médailles	Historical	RdA	2019–2021

^aIt includes the National Museum of Scotland, the National Museum of Flight, the National War Museum, the National Museum of Rural Life, and the National Museums Collection Centre.

^bIt includes the National Museum Cardiff, the St. Fagans National Museum of History, the Big Pit National Coal Museum, the National Wool Museum, the National Slate Museum, the National Roman Legion Museum, the National Waterfront Museum.

^cIt includes the Ulster Museum, the Ulster Folk Museum, the Ulster Transport Museum and the Ulster American Folk Park.

^dA unique “rapport d'activité” for the “établissement public des musées d'Orsay et de l'Orangerie” is released.

^eA unique “rapport d'activité” for the “établissement public des musées nationaux de la céramique à Sèvres et de la porcelaine Adrien Dubouché à Limoges” is released.

Source: Authors' elaboration.



other organizations). Dictionary-based text analysis is a top-down approach that is particularly suited for operationalizing constructs for which a valid definition already exists, since it allows researchers to control the sensitivity of the measurement instrument by including expressions specifying the construct at the requested level of detail.

We constructed a dictionary of expressions related to sustainability. The first panel of words and expressions was constructed starting from the glossary of GRI standards and from inspection of the most frequent sustainability-related words in nonfinancial reporting documents of other well-known international organizations. More specifically, we considered the annual report of a renowned museum, that is, the Van Gogh Museum, and the sustainability report of a multinational company unrelated to the cultural sector, that is, the Ferrero Group. These two annual reports were selected as examples of sustainability reports from which an initial list of sustainability-related words could be extracted. We ensured that these two documents saturated the list of sustainability-related words that could be extracted based solely on frequency considerations. Any sustainability report that was subsequently evaluated did not provide any additional words to the original list of words. This initial bag of expressions was enriched with additions made by the authors individually and through collective brainstorming. Finally, each of the authors categorized each expression into one of four categories: the three categories of ESG reporting (environmental, social, and governance) and a transversal category encompassing general sustainability-related terms. The inter-coder agreement (De Swert, 2012) was deemed satisfactory (Krippendorff's $\alpha = 0.71$), and any disagreement on the categorization of specific expressions was solved through collective discussion. The sustainability dictionary was then translated into French, with attention paid to preserving the original meaning of words. For the French translation, all relevant synonyms were considered, while some English expressions found in duplicate were dropped from the final list. For these reasons, the English and French dictionaries did not include the exact same number of words.

Each document was tokenized and, in addition to unigrams (individual words), relevant n-grams (multiple-word expressions) were also preserved as meaningful tokens and not divided into individual words. This procedure was employed to allow the subsequent computation of frequencies of single-word and multiple-word sustainability-related expressions.

Following the textual editing stage, we computed for each document the E (Environmental), S (Social), G (Governance), and T (Transversal) scores using the following procedure:

1. Each document was divided into sentences;
2. For each sentence, the percentage of category-related words over the total occurrences of the sentence was calculated;
3. For each document, the category score (e.g., E score) was calculated as the arithmetic mean of the sentence-level category scores resulting from point 2.

The final formula is the following:

$$\text{score}_{ci} = \frac{1}{j(i)} \sum_{k=1}^{j(i)} \frac{w_{ck}}{w_k}$$

where

c = sustainability category (E, S, G, or T).

i = document.

$j(i)$ = sentences in each document i .

w_{ck} = number of words in each sentence j related to a category c .

w_k = total number of words in each sentence j .

Then, a comprehensive sustainability score (ESG score) was calculated as the arithmetic mean of the four category-scores. The E score, S score, G score, T score, and overall ESG scores were used as dependent variables (DVs) of five mixed-models with random intercept and the museum ID as the grouping variable. As independent variables, we considered two fixed-effect variables at the museum level and two fixed-effect variables at the document level. The museum-level variables were the country of origin (UK or France) and the museum type (historical, artistic, science, or group of museums). These two factors are not completely crossed, since there is no scientific museum or group of museums among French museums. In any case, this did not create estimation issues, since we were not interested in testing the interaction between country of origin and museum type. Finally, the document-level variables were the year of publication of the annual report, and a dummy variable indicating whether the document contained Covid-related words.

6 | RESEARCH RESULTS

Before running the mixed models, we checked for the presence of significant between-variance after accounting for the grouping variable (i.e., museum). To do this, we tested the null model with the ESG score as the dependent variable and no other explanatory variable except for the intercept fixed and random effects. The intraclass correlation coefficient (ICC) was 0.66, meaning that 66% of the total variance of the dependent variable was due to variance among museums. This justifies adopting a multilevel approach to studying the effects of time-level and museum-level variables on the ESG score.

Table 3 summarizes the results of the mixed models run on the ESG overall and component scores. The findings show that museum type ($\beta = 0.37$; $p < 0.001$) and country (F -value (3, 26.395) = 3.475; $p = 0.03$) have a significant effect on the ESG score.

More specifically, the average score of museums in the UK ($M = 0.942$; $SE = 0.036$) is significantly higher than the average score of French museums ($M = 0.575$; $SE = 0.055$; $t = 7.002$; $p < 0.0001$). In addition, museum type seems to affect the ESG score, since the annual reports of scientific museums ($\beta = 0.20$; $p = 0.049$) and historical museums ($\beta = 0.13$; $p = 0.008$) tend to have significantly higher ESG scores than art museums.

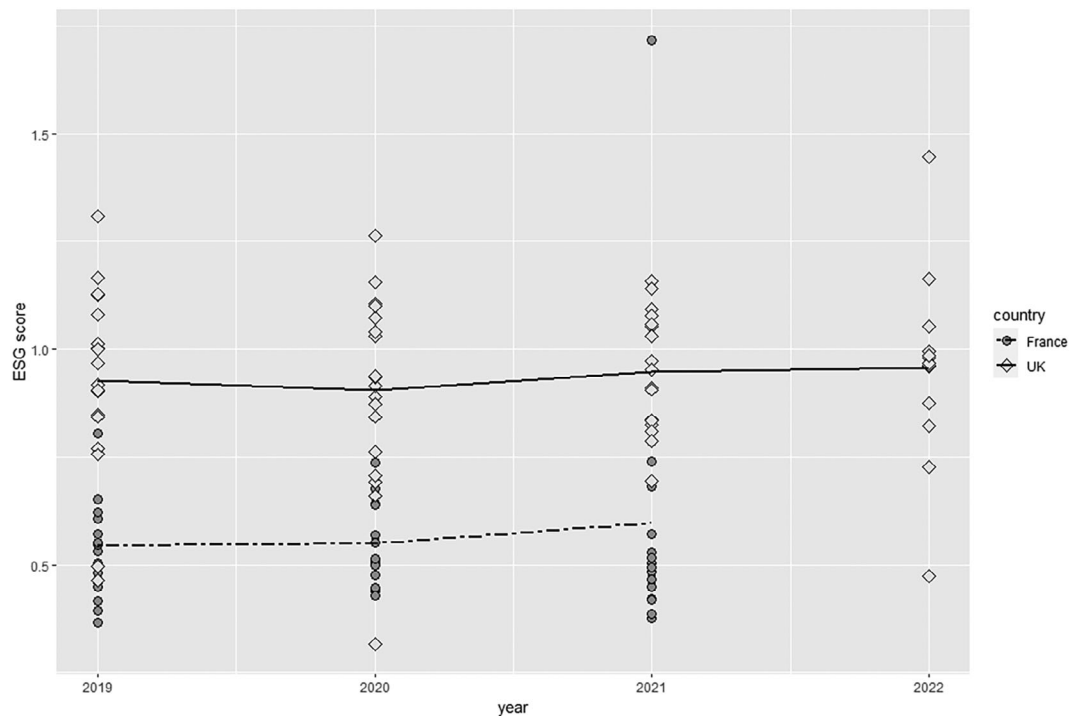
We also inspected the effects on the individual components of the overall ESG score, that is, the E score, the S score, the G score, and the T (transversal) score. None of the fixed effects turns out to be

TABLE 3 Summary of the mixed models.

Fixed effects	ESG score	E score	S score	G score	T score
(Intercept)	-23.36	-16.73	-148.38	112.18	-83.32
Country [UK]	0.37***	0.12***	0.05	1.01***	0.25
Museum type [group]	-0.01	0.05	-0.15	0.10	-0.05
Museum type [hist]	0.13**	0.01	0.14	0.15	0.22
Museum type [science]	0.20*	0.17**	0.13	0.28	0.21
COVID mentioned	0.02	0.06	-0.05	0.05	-0.04
Year	0.01	0.01	0.07	-0.06	0.04
Random effects					
σ^2	0.03	0.02	0.20	0.07	0.13
τ_{00}	0.01	0.00	0.08	0.10	0.15
ICC	0.28	0.17	0.29	0.60	0.53
R ²	0.524	0.282	0.046	0.606	0.099

* $p < 0.05$; ** $p < 0.01$;*** $p < 0.001$.

Source: Authors' elaboration.

**FIGURE 2** ESG score across the years by country. Source: Authors' elaboration.

significant in these alternative models, except for the positive effect of the country on the E score ($\beta = 0.12$; $p < 0.001$) and on the G score ($\beta = 1.01$; $p < 0.001$), and the positive effect of the scientific museum type on the E score ($\beta = 0.17$; $p = 0.009$).

In none of the cases did the mention of Covid or the year of publication significantly affect the scores (neither the overall nor the component scores).

Therefore, while there is almost no variation on average within countries across the years, French and British museums are significantly different when time is not considered (Figure 2).

7 | DISCUSSION

The study findings seem to align with the institutional view of sustainability compliance on the part of organizations. The sustainability scores measured in the annual reports of British museums tended to be higher than those of French museums. This might be explained by considering the contextual influence of the national legal and institutional setting. Indeed, it seems, in general, that British museums had a greater awareness of the sustainability impact of their activities compared to French museums. This might be due to contextual



differences, and especially to the fact that in the UK annual reports are mandatory, while in France they are not. Being required by law to publish an annual report, British organizations might feel increased pressure to comply with the law by putting greater emphasis on the positive externalities of their activities. Furthermore, this sensitivity to sustainability reporting might also be the result of greater efforts in sustainable activities. This type of compliance corresponds to the coercive and mimetic categories of isomorphism (Di Maggio & Powell, 1983). Coercive isomorphism refers to organizations adapting to institutions because of powerful stakeholders pressuring them to conform to institutional practices, such as CSR reporting (Othman et al., 2011). In this sense, British museums feel the pressure of the regulative standards of the country and are bound to comply, generating coercive isomorphism. Because of the obligation to publish an annual report, British museums are encouraged by authorities to go beyond the disclosure of financial-related information and to quantify or make tangible their efforts toward their non-financial and sustainability-related performance. Additionally, this coercive mechanism might pave the way for imitative practices (i.e., mimetic isomorphism) by peer museums participating in the same institutional context. As the duties to commit become ingrained within the organizational culture of national museums, even more skeptical organizations start imitating their competitors in order to reap benefits in terms of legitimacy and reputation. In fact, firms might tend to engage more in CSR as the number of firms in the reference peer group grows (Singh et al., 2021).

Also, the fact that the museum type affects the ESG score is in line with the tenets of institutional theory. In fact, museums of the same type are generally organized according to similar principles and tend to share similar organizational practices. Therefore, it makes sense that museums belonging to given types tend to differ in terms of sustainability performance and disclosure. It turns out that scientific museums are typically more prone to higher ESG and environmental scores. This might be due to normative isomorphism (Ali & Frynas, 2018; Di Maggio & Powell, 1983), namely to the formal and informal groups to which managers and other workers belong. The scientific backgrounds of people working in science museums might make them more sensitive to environmental and other sustainability issues. The same arguments apply to historical museums, which tend to show higher ESG general scores in their annual reports. Again, this might stem from the culture of preservation that permeates this type of organization, which, more than other kinds of museums, is concerned with safeguarding the heritage of centuries ago.

On closer inspection, the low predictivity of the models concerning the S score and the T score as dependent variables is coherent with institutionalism. Indeed, social and general sustainability concerns are already part of each museum's mission, so that additional institutional factors add little explanatory power to discriminate between organizations with good and bad social disclosure practices.

As for the impact of COVID-19, our results provide interesting insights. Indeed, it turns out that the outbreak of the pandemic was not a sufficient condition for intensifying sustainability reporting, since annual reports mentioning Covid (almost all those published

after 2020) did not end up with higher ESG scores. Thus, awareness of the pandemic does not imply greater sensitivity to the environment and the social implications of business activities. These results should be interpreted in light of the well-established institutional forces already in place within the setting in which museums operate, leaving little room for additional external shocks, such as the COVID-19 pandemic. However, it is likely that it is too early to observe the nuanced effects of the pandemic on nonfinancial disclosure and sustainability reporting. Therefore, a longer timeframe might reveal that further differences in the sustainability levels of museums can be attributed to the outbreak of the virus in 2020.

8 | CONCLUSIONS, IMPLICATIONS, LIMITATIONS, AND FURTHER RESEARCH

This study is one of the first to focus on museum organizations and the level of sustainability they disclose in annual reports. On the one hand, the research investigated sustainability as a component of museum accountability; on the other, it contributed to the theoretical debate by analyzing sustainability orientation through the lens of institutional theory.

The empirical findings are useful for orienting policymakers and business decision-makers toward the best practices to favor sustainability isomorphic processes. Specifically, it seems that the regulative framework of the nation might play a pivotal role in initiating isomorphism and spreading the culture of sustainable development. In this vein, binding museum organizations to the requirement of publishing an annual report might be beneficial for developing sustainable practices among peers. Additionally, the organizations themselves should focus on their internal resources and their background knowledge and capabilities to spur more sustainable practices and business activities.

When applying institutional theory to explain sustainability orientation in museum annual reports, the process of institutionalization arises as a mix of coercive, normative, and mimetic mechanisms. Following Higgins and Larrinaga (2007, p. 282), we can state that these mechanisms “operate at different levels and moments through the institutionalization process.” Moreover, we can identify a dependence relationship between them. Coercive mechanisms (Di Maggio & Powell, 1983) or regulative structures (Scott, 2008) play a crucial role not only in imposing requirements. Indeed, thanks to the enforcement of regulation, organizations develop an accountability culture, start sharing values, professionalize, thus develop normative mechanisms or structures, and contribute to the building of mimetic or cognitive structures. In this perspective, institutional pressures from our analysis emerged as a driver of change in museums, especially public ones.

With regard to this, museum managers could try to emulate the reporting practices of scientific and historical museums that set great store by sustainability reporting (mimetic isomorphism). The practices that have emerged in these sectors could also stimulate other types of museums to attend to the implications of their activities for environmental and social issues. For instance, in 2016, the head of the United Nations educational and scientific agency emphasized that, by

nurturing visitors' curiosity, science museums can help cultivate knowledge and expertise as well as deliver powerful messages regarding the value of scientific research for long-term prosperity. Similarly, historical museums, with their focus on documenting the past and critical past transitions, can play a key role in demonstrating at what specific time some critical events for the environment and for society have occurred. Beyond scientific and historical museums, other types of museums (e.g., art museums) could frame the objects of their exhibits to allow connections with sustainability to emerge. For instance, art museums could highlight the fact that cultural objects are part of the environment, and their fragility means they require extensive care to be preserved.

From a methodological point of view, this paper attempted to study the level of sustainability of organizations' disclosure by adopting a content analysis approach. This approach seems to be particularly suited to studying communication processes and reporting practices. However, future research might include measuring sustainability performance through additional proxies and indicators more closely linked to the activities the organizations carry out. Furthermore, it might be necessary to consider the financial performance of museums and compare it to their sustainability performance and disclosure levels, due to current challenges such as the energy crisis and inflation.

Finally, in order to study the impact of country-level institutional factors, it might be appropriate to study museums and other cultural organizations from a large pool of countries, since this would benefit the generalizability of results and would test institutional influences from very different contexts.

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