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FACETS OF DIGITAL CURATION IN THE POST-CUSTODIAL PARADIGM: COLLECTIVE AND SOCIAL CURATION

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ABSTRACT

Post-custodial paradigm proposes, to libraries, archives, and museums, a Digital Curation of heterogeneous social narratives, of polysemic voices in the contemporary society. However, the existing curation process is not clear in relation to the participation of stakeholders in curation actions. In this sense, we question whether the Digital Curation Model presented by Higgins (2008) meets the post-custodial need of postmodern society and whether other facets are possible in Digital Curation to favor the opening of museum institutions to stakeholders, turning them into producers of cultural content to be cured. For that, the actions and processes present in the Digital Curation Model by Higgins (2008) are presented, and other possibilities of curation that include the stakeholders in the curatorial processes are explored, in a participative way, in the construction of a collective and crosscultural narrative.

Keywords: Digital Curation, post-custodial paradigm, collective and social curation, cross-cultural narrative, museum.

RESUMEN

En la sociedad contemporánea la poscustodialidad propone a las bibliotecas, archivos y museos una Curación Digital de narrativas sociales heterogéneas y de voces polisémicas. Sin embargo, el proceso curatorial existente no es claro en lo que respecta a la participación de los sujetos y de las comunidades de interés en las acciones de curación. En ese sentido, reflexionamos sobre si el Modelo de Curación Digital presentado por Higgins (2008) satisface la necesidad poscustodial de la sociedad postmoderna y proponemos que existan otras facetas de la Curación Digital que propicien la apertura de las instituciones museológicas a los sujetos y a las comunidades de interés y los conviertan en productores de contenidos culturales que puedan ser curados. Para ello, se presentan las acciones y procesos del Modelo de Curación Digital de Higgins (2008) y se exploran las posibilidades de Curaciones Colectiva y Social que incluyen a las comunidades de interés en los procesos curatoriales, de forma participativa, en la construcción de una narrativa transcultural.

Palabras clave: Curacíon Digital, poscustodialidad, Curaciones Coletiva y Social, narrativa transcultural, museo.

1 INTRODUCTION

Libraries, archives and museums, responsible for preserving humanity's cultural heritage, become complex environments as they reflect contemporary society. In this context, Museology has sought to overcome, in its theoretical field, the limits of the custodial, technicist and Cartesian paradigm, by developing post-custodial theories and practices that consider such complexity in their institutions. Thus, they propose/design new models of services, products and actions that feed both the dynamism of the theoretical field and the practices of the area.

Museums guard collections composed of goods, tangible and intangible, considered to be the humanity's cultural heritage. They are two-dimensional or three-dimensional objects that represent "[...] a period, a know-how, a creative process of the human being in a given context" (SISEM, 2010, p. 31). They become primary informational sources for evidencing or witnessing the environment in which a social group inhabits.

As research sources, objects carry information that allows knowing the meanings of cultural manifestations, scientific, technological and historical practices and the motivational principles of their creation, as well as justifying their preservation for society and for posterity (SISEM, 2010). This information is systematized through museum documentation, which involves activities of searching, gathering, organizing, preserving and making information available on museum objects, the fundamentals for cataloging and the documental processes of legal-administrative control.

Museum Documentation helps to guide conservation and preservation practices, management and monitoring of collections, curating exhibitions and carrying out educational activities (SISEM, 2010). In that regard, museums show a very strong systemic relationship with their collections' documentation, which is essential for almost all museum actions.

Hernández Hernández (2016, p. 86) considers documentation "[...] one of the museum's most important functions, to the point where the museum is viewed as a true documentation centre where information on cultural heritage is gathered, managed and

disseminated". For the author, museum documentation is "[...] a set of very diverse documents in terms of supports, contents, origins and cultural value" (Hernández Hernández, 2016, p. 86).

In contemporary times, the concept of museum goes beyond the idea of keeping museum objects; it consists of "[...] a complex, living and dynamic system, open to society for culture dissemination and for heritage investigation, protection, conservation and defense" (Ceballos, 2006, p. 102, our translation). Museology turns to the community to represent it in its different contexts and in its numerous cultural manifestations.

The opening of the museum to society is also evidenced by Hernández Hernández (2016). The author, while understanding the museum as a curator of collective memory (tangible and intangible assets) – to be considered as a source of information for the community –, presents it as "[...] the place where society participates the recreation of that memory" (Hernández Hernández, 2016, p. 86). Cultural heritage, in this conception, becomes an informational input for new memory creations – different points of view, perspectives and narratives of the same story. They are official memories built by a minority or by a dominant class, that is, a hegemonic narrative preserved in libraries, archives and museums.

In addition to the museum documentation, the actions of the museums contemplate the exhibition preservation and curation. The preservation of collections is part of the principles of museums (ICOM, 2009), which means "[...] to protect, defend, safeguard the cultural assets from any damage or future danger to ensure its availability continuous availability" (SISEM, 2010, p. 85, our translation).

Object deterioration may occur due to numerous factors, such as environmental ones (light, temperature, humidity and atmospheric gases), ongoing ones (inappropriate handling, storage or exposure), and biological ones (micro-organisms and insects). Interventions for object conservation are divided into preventive or corrective. Preventive intervention focuses on indirect interventions on the object, that is, adequate and favorable actions to slow down the museum object decay (control of environmental conditions, adequate cleaning and storage, correct handling, lending and exhibition procedures, among others). Corrective interventions focus on the recovery of the deteriorated

object, which, as direct interventions, follow guidelines established by the International Council of Museums (ICOM) (SISEM, 2010).

For exhibition curation, planning needs to include research, objective, target audience, date, financial resources, collection, narrative, visual identity, among other elements that must consider and include activities carried out before, during and after the exhibition (IBRAM, 2017). The concerns traditional on-site museums are based on three fundamental actions: museum documentation, preservation and exhibition. They are part of the curation in museums, guided by policies, guidelines and plans developed by these institutions. In these institutional actions, the community has only acted as information consumer.

However, Information and Communication Technologies (ICTs) have led to a new reality in museum contexts. Digital virtuality breaks the boundaries of museums through the use of digital environments, including repositories and social media, which expand and enhance information access and sharing and cultural heritage held in museum institutions.

In addition to objects on physical supports, digital objects that need curation emerge in digital-virtuality, which turns museums into hybrid environments, composed of collections of both types. On the other hand, despite the expansion of information access and its sharing provided by ICTs, digital objects have become vulnerable due to technological obsolescence. In this sense, museums turned their concerns to their collections' management and digital preservation. By highlighting the plurality of voices in society and their transformation into transcultural museum institutions, post-custodial paradigm proposed the deconstruction of homogeneous narratives and an opening for the curation of heterogeneous social narratives to these institutions. Information scalability in these environments made Collective and Social Curation mandatory, in addition to Digital Curation, as it comprises the curation of unofficial narratives of marginalized communities present in contemporary society.

In view of the post-custodial reality, the following question is presented: does the Digital Curation Model proposed by Sarah Higgins (2008), and adopted by the DCC, meet the post-custodial need of contemporary social reality? Are there other facets of Digital

Curation that allow museums to open up to stakeholders and make them producers of cultural content to be curated?

To answer to these questions, we present the DC process proposed in the Higgins model (2008) and explore other curatorial possibilities that include the participation of stakeholders in the curation process (planning and implementation of curation actions), in the construction and reconstruction of narratives, through information, knowledge and culture access and sharing on social platforms and on information representation and digital preservation systems.

2 DIGITAL CURATION

ICTs have introduced new digital formats, new devices and information production methods, which have modified curation processes and required new management and preservation methodologies in the digital environment from museum institutions. In this context, Digital Curation (DC) manifests itself as an interdisciplinary concept and inter-institutional practices that require "[...] knowledge of applicable technologies that were not included in predigital curation practices and involves a lifecycle" (Sabharwal, 2015, p. 14).

In 2004, a distributed collaborative service center named the Digital Curation Center (DCC) was created, aimed at discussing political, technological and practical problems of digital curation and preservation processes and the need to understand the curation process (Higgins, 2011). DCC succinctly defines DC as "[...] the longterm management and preservation of digital data/information". In addition to the DCC, Beagrie (2004) presented implicit elements and presupposed an opening of the curation to new value adding, which can be configured in productions of polysemic narratives of the cultural heritage existing in society: particularities still neglected in postmodernity and in principles of collective and social curation of data and memories representing stakeholders.

The curation actions comprise curation, preservation and management activities, which Lord and Mcdonald differentiates as curation, archiving and preservation:

Curation: The activity of, managing and promoting the

use of data from its point of creation, to ensure it is fit for a contemporary purpose, and available for discovery and re-use. For dynamic datasets this may mean continuous enrichment or updating to keep it fit for purpose. High levels of curation will also involve maintaining links with annotation and with other published materials.

Archiving: A curation activity which ensures that data is properly selected, stored, can be accessed and that its logical and physical integrity is maintained overtime, including security and authenticity.

Preservation: An activity within archiving in which specific items of data are maintained over time so that they can still be accessed and understood through changes in technology. (Lord & Mcdonald, 2003, p. 12).

The authors highlight that, despite the difference, the three activities – curation, archiving and preservation – are related, "[...] preservation is an aspect of archiving, and archiving is an activity needed for curation" (Lord & Mcdonald, 2003, p. 12), thus curation is dependent on archiving and preservation.

The DCC adhered to the DC Life Cycle model presented by Higgins in 2008. For the author, actions can "[...] ensure the maintenance of authenticity, reliability, integrity and usability of digital material" (Higgins, 2008, p. 135). The model (Figure 1) provides an overview of the steps for proper curation, as it identifies curation actions within the digital object lifecycle sequentially (Higgins, 2008).

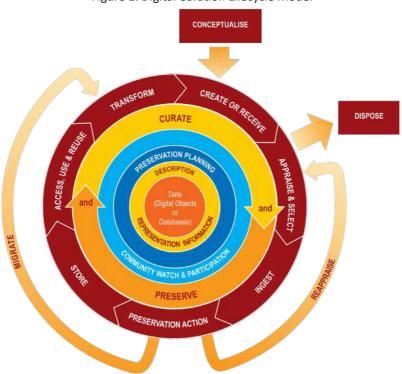


Figure 1: Digital Curation Lifecycle Model

Source: Higgins (2008).

The model is divided into two actions thought and worked on in the conceptualization: macro actions - aimed at curation planning and structuring - divided into information description and representation, preservation planning, community watch and participation, and curation and preservation, represented in the gradient of colors between yellow and orange; and micro actions – aimed at the implementation and practices involved in the process – composed of creating and receiving, appraising and selecting, ingesting, preserving, storing, accessing, using and re-using, and transforming, represented in the model in red. Occasional actions are also present – reappraising and migrating, represented in the model by the external vectors in orange.

Conceptualization is a phase before the production of the

digital object and it is when the conception and planning of the digital object creation, and the capture methods and storage options are decided (Higgins, 2008).

Sabharwal (2015) mentioned the possibility of the participation of community representatives together with the institution's specialized staff in planning and curation. However, by making this participation optional and limited, the collective contribution in the curation processes is devalued. In conceptualization, issues related to copyright (which imply the restriction of access to collections) are also considered to the development of collections (established according to the museum's profile and its collection, exerting an influence on the collection appraisal), the capture methods, metadata and collection classification schemes (different according to the museum's profile), and the use of social tags (open classification on social networks that do not comprise standard classifications) (Sabharwal, 2015). These points should be discussed and considered in planning for the implementation of the DC process and that vary according to the institution.

According to Sabharwal (2015), metadata development and management are established by curators and catalogers before recording the items – structured in a spreadsheet that will be used to record the items. The preservation plan must be "[...] throughout the curation lifecycle of digital material. This would include plans for management and administration of all curation lifecycle actions" (Higgins, 2008, p. 137).

For Higgins (2008, p. 137), the **community watch and participation** should "[...] maintain appropriate community activities, and participate in the development of shared standards, tools and suitable software".

For curation and management, "[...] the curator has to be aware and carry out the management and administration of the actions planned for the promotion of curation" (Higgins, 2008, p. 137), which are sequential, starting with the creation and reception of data.

The **create and receive** action refers to the creation of data and metadata – administrative, descriptive, structural, technical and, optionally, preservation (Higgins, 2008). Data creation can be the record of historical or cultural events – considered intangible heritage

in museums – such as oral histories (eyewitnesses with a critical account of events in the first person)¹ or institutional events. According to Sabharwal (2015, p. 104), "Curators will create administrative descriptive, structural, technical, and preservation metadata that documents the creation, provenance, and other important data pertaining to its lifecycle."

In the digital environment, new dimensions have expanded the use of metadata, making them essential in information representation, in facilitating access, in the exchange between systems, in technical and semantic interoperability. Metadata is presented as a solution to the problem of preservation from the "[...] identification of a set of data and information, expressed in the form of metadata that anchor the digital preservation management processes" (Sayão, 2010, p. 3, our translation).

It is noteworthy that the DC can be performed according to the use of software designed from schemes, norms and standards of metadata established by international entities and councils. Some free software, such as Archivematica, Dspace, AtoM and RODA, which include administrative, descriptive, structural, technical and preservation metadata. Such systems facilitate the work of curators, who must turn their attention to choosing the right software to meet the institution's needs.

As for the action **receive** from donor collections, it is the history of ownership and transfers of the collection throughout its lifecycle, and this information is recorded in the field provenance of the technical metadata – the reliability of the collection and the repository depends on the integrity of these data (SABHARWAL, 2015). The data receipt must follow collection policies and the allocation of appropriate metadata (Higgins, 2008).

The action **appraise** helps to define the collection values among which, in the museum context, are confirmative, informative, historical and cultural. The action **select** must reflect the institution's policies and legal regulations in choosing the content to be curated and preserved.

¹ Example: Museu da Pessoa is a virtual museum responsible for recording life stories. Available at: https://museudapessoa.org/about-the-museum/. Access on: 24 Sep. 2020.

The action **ingest** is the data transfer to a file, repository, data center or other custody (Higgins, 2008, p. 138). This phase involves legal, intellectual and technical aspects. "Laws govern the transfer of intellectual property and the protection of privacy, and no popular demand or other interests may supersede these laws" (Sabharwal, 2015, p. 105), which affect collections' open information availability.

The technical aspects require professionals to understand the system, its design and operation, which implies facilitating the data ingestion, whether through its sets, digital objects or descriptive metadata (Sabharwal, 2015) – the ingestion form differs from one software to another. In addition to skills in the area of information and curation, the information professional needs technological knowledge to understand the design, processes, workflow and functioning of repositories so that they are used properly and efficiently.

The **preservation action** undertakes "[...] actions to ensure long-term preservation and retention of the authoritative nature of data. Preservation actions should ensure that data remains authentic, reliable and usable while maintaining its integrity" (Higgins, 2008, p. 138). Systems based on the OAIS model and other international standards aimed at managing and preserving information should ensure these elements to digital objects.

In the archival context, these are trusted digital repositories for digital archive records. According to Conarq (2015, p. 9, our translation), "A trusted digital repository is a digital repository capable of maintaining digital materials authentic, preserving them and providing access to them for as long as necessary".

In this sense, Lampert (2016) recommends Archivematica for the digital object preservation: "[...] Archivematica's main feature is digital preservation, based on strategies of emulation, migration and standardization, and stands out for the generation of information packages for admission, access and archiving according to the OAIS model. (Lampert, 2016, p. 152, our translation).

Higgins (2008, p. 135) mentions that the OAIS Model is for system building:

Workflow design, management issues, identification of processes and use of best practices can all be

enhanced through application of standards such as OAIS (International Organization for Standardization [ISO], 2003) and ISO 15489 (ISO, 2001, n.p.).

Using the model facilitates data exchange and interoperability between systems. For information access, Archivematica needs to converge with other interoperable systems, such as AtoM (both free and developed by Artefactual System), free and open-source software (meaning that they are constantly updated and that can guarantee the preservation in the long term).

The action **store** converges formats to keep the digital object secure and this depends on the institution's technology and financial resources. Short-term storage methods generally include a computer's hard drive, other devices (flash drives), and network drives on the intranet. However, in the long term, the use of specific hard drives, network drives and cloud storage will be common, but they are not equivalent to preservation despite periodic security backups (Sabharwal, 2015).

Repositories for curation can be commercial or open source – with their storage capacity –, "In both cases, the storage may be physical, virtual, or cloud based, which raises questions about the quality of the storage media, integrity of files and directories, and the frequency of backups" (Sabharwal, 2015, p. 107).

The actions **access, use and reuse** are the "Ensure that data is accessible to both designated users and reusers on a day-to-day basis." (Higgins, 2008, p. 138). For the author, robust access control and authentication procedure in access systems are also possible. Despite the curated information, there is no guarantee for their access to all stakeholders.

The action **transform** refers to the creation of new data from the original object, "[...] for example: by migrating into a different format; by creating a subset, by selecting or query to create newly derived results, perhaps for publication" (Higgins, 2008, p. 138). Transformations of data, databases, files and directory structures are performed by the curator when the technology used to create the content is no longer accessible. This change also happens with metadata, as "[...] metadata interoperability standards, Open Archives Initiative Protocol for Metadata

Harvesting, and best practices change with time" (Sabharwal, 2015, p. 107).

The action **re-appraise**, according to Higgins (2008, p. 138) comprises the "Return data which fails validation procedures for further appraisal and reselection". Disposal, although a rare action in cultural heritage, may occur, and consists of the permanent removal of the collection for destruction or transfer to other custodian institutions (Sabharwal, 2015).

The action **migrate** implies transferring collections to a new repository, and migrating the data to different formats, transforming the metadata record and reorganizing the collection to suit the system design (Sabharwal, 2015). This is due to the fact that each system has its own structure and design. It is noteworthy that in free and open-source software, even though the system is the same, when migrating to a more updated version changes and information losses may occur in the data export process.

When describing the process of DC actions, it is observed that DC Lifecycle is a broad model aimed at data management and digital preservation. As for the community watch and participation, it is an alternative and must be decided by the institution, however, details are not clear in the proposed model.

In **community watch and participation**, information professionals watch is reduced to the needs of the community, which can result in the creation of services and products that meet the identified needs. However, postmodernity understands that stakeholders are producers of information and culture. Therefore, library, archive and museum institutions must disrupt the hegemonic discourse present in their collections and, for that, start from polyvocal narratives. Such narratives construct and reconstruct the cultural values of digital objects and evidence the multiple collective voices.

On digital environments, other facets are necessary for effective information communication in a time when stakeholders and individuals need to feel represented by institutions and cultural facilities. Converged with the DC, they bring about Collective and Social Curation, which includes social and community participation in the curation processes.

3 COLLECTIVE AND SOCIAL CURATION

The Digital Curation Lifecycle model considers stakeholders and informational subjects as users, reducing them to information consumers, devoid of memories, ideas and new knowledge that can be shared and preserved.

The concept of user is a term used in the custodial and technicist paradigm, which, despite widely used in contemporary society, does not fit the post-custodial paradigm nor the post-modern condition. According to Terry Cook:

> [...] postmodernism seeks to emphasize the diversity of human experience by recovering marginalized voices in the face of such hegemony and, hence its emphasis across a whole range of academic disciplines on issues of gender, race, class, sexuality and locality. (Cook, 2001, p. 17).

The advent of Information and Communication Technologies (ICTs) enabled museums to negotiate

[...] different meanings and interpretations of the same knowledge, understanding that they can acquire new signifiers through non-specialized, but representative voices. (Cagigal, 2017, p. 28, our translation).

The emergence of Web 2.0 and social platforms transformed users into content producers, which allowed information production and sharing on these media. Such means enhance socialization of interpretations of cultural heritage and their narratives by stakeholders, activating other voices, generally not or well-articulated by established cultural institutions. (Meehan, 2020).

The neglected voices of the marginalized communities in modernity mentioned by Cook translate cultural heritage that represents and defines the very identity of these communities and that must be healed for current and future generations. Cultural heritage brings together facets of the creations of human beings at a given time and place in history that differ from one community to another and create heterogeneity in society.

Hernández Hernández (2019, p. 13, our translation) understands

cultural heritage as the set of assets "[...] tangible and intangible, ethnological, historical, artistic, archaeological, paleontological, scientific, songs, festivals, real estate, natural heritage and cultural landscapes", which have polysemic value as they cover different cultures and peoples. Added to this concept are beliefs, customs and intangible traditions (Welch & Ipinch Project, 2014).

These cultural heritages require collective and social curation in which communities collaborate and participate in the process. The first facet of Curation, Collective, is part of a curation in which stakeholders participate in decision-making processes, that is, in curation planning. The second, Social, the community participates in the implementation processes of cultural heritage curation actions, whether in the creation of content, in helping to describe and attribute value to cultural objects and in the transcription of manuscripts, for which they use the Crowdsourcing² method.

Sabharwal introduces Social Curation for museum environments, understanding community feedback through social media platforms with the aim of "[...] adding meaning to the collections and enriching public discourse on collections or exhibition themes" (Sabharwal, 2015, p. 10).

Collective Curation has three types of approaches, which define the intensity of stakeholder involvement in the curatorial process, which are: collaborative, participatory and empowering (Fetterman *et al.*, 2018). The collaborative approach consists of a consultation with the community – the institution seeks to obtain information from other stakeholders about their interests and knowledge before making decisions (Ingles, Musch, & Qwist-Hoffmann, 1999, p. 4) – although there is some kind of community participation, planning is top-down.

The participatory approach, in turn, enables institution members to share decision-making with the community (Ingles, Musch, & Qwist-Hoffmann, 1999). A horizontal plan of curation actions is observed, in which the decisions of the active individuals have the same weight as the decisions of the institutional members. It is a joint effort from start to finish.

In the empowerment approach, decision-making is controlled Available at: https://themuseumofthefuture.com/2011/01/27/ about-crowdsourcing-and-us/. Access on: 11 Sep. 2021.

by stakeholders as in community museums and ecomuseums, with the help of external professionals to maintain institutional characteristics and their responsibilities (Fetterman *et al.*, 2018).

According to Hernández Hernández (2019), museums need to strengthen shared leadership and make room for innovation and review projects and ideas from time to time, as all the people are part of museums and can contribute with their ideas and their creative capacity (Hernández Hernández, 2019, p. 40). In this way, museum institutions build a collective memory, bearer of social belonging.

From this perspective, it is necessary that "[...] the museum is willing to compromise in the construction of its narrative and is able to answer complex questions of who represents the community, what voice is maintained and how" (Cagigal, 2017, p. 28, our translation). For the author, museum versatility can provide a collective narrative, endowed with authenticity, legitimacy and value, focused on the needs of participating communities and on the processes of social cohesion between various sectors.

Uniting all these approximations and narratives that make up the plurality and vivacity of digital memory is a challenge for museums, and the protection of "[...] politically guided or interpretations that seek to appropriate symbols and objects distorting the facts" (Cagigal, 2017, p. 28, our translation), because every narrative has a political dimension.

Collective and Social Curation based on the access and sharing of memories, experiences, information and community knowledge, provides a diversity of narratives in museums that represent them and respect cultural diversity. This opening of museums and information professionals to the collective allows to reconcile with the past, sometimes correcting injustices by deconstructing existing narratives; sometimes building and recording new narratives for future generations.

It is noteworthy that community participation should take place at the time of construction of the software and systems that supports the Digital Curation. This is because these systems need to be developed respecting communities' cultural and social systems, establishing protocols and guidelines that define what can or cannot be accessed and shared.

Collective and Social Curation contribute to the construction of collective memory, which contextualizes and recontextualizes the values attributed to objects from the socialization of access and multivocal interpretations (Meehan, 2020), and highlight the intangible assets existing in contemporary society that must be preserved and shared for current and future generations. An opening for a collective resignification of its collections and a more fluid relationship with the community proposes a continuous process of critical interpretation (Cagigal, 2017, p. 26), in which libraries, archives and museums become mediators of the history, arbiter of narratives.

It is understood that ICTs provide libraries, archives and museums with a space for dialogue between stakeholders and digital museum objects and the opening to activate new voices by making existing narratives in the cultural heritage heterogeneous and representative.

4 CONSIDERATIONS

ICTs have brought about significant changes for museum collection curation; ICTs have provided the expansion of museum borders. DC is important for long-term access and preservation and, on the other hand, is a present and future reality in these institutions.

In this study, two facets necessary for the complexity of contemporaneity with regard to cultural facilities and information institutions were identified: the DC, in which community participation is limited, and the Collective and Social Curation.

Regarding the DC Life cycle model, it was found that its focus is on digital management and preservation and it restricts community participation in the curation process, limiting the community to mere information consumers. This gap is reflected in digital access and preservation systems that have interfaces with little or no interaction with informational subjects, such as Web 1.0 interfaces, which lack of interaction, production and informational sharing resources.

In postmodern society, when cultures and social structures are characterized by diversity and instability, everything is flexible, volatile and diverse, DC must involve stakeholders from planning to the implementation of curation actions and also in strategically use of social platforms.

Postmodernity allows a critical view at the curation process used in contemporary society, and the existence of multiple facets that can emerge with the opening of museums and community participation and collaboration as in these processes, the construction of a transcultural collection is evidenced, provided with values and multiple representations and voices, which disrupts the previous custodial and hegemonic paradigms, the organizational and the technicist scientific paradigm.

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