Accessible museums in Italy: an overview

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Abstract

The number of people with disabilities is increasing worldwide. The result is the need for their greater involvement in the economy, to build an inclusive society. The cultural sector must also play its role, in a wider project of welcoming tourism. This paper illustrates the evolution and the current situation of accessible museums in Italy, presenting some valid experiences to propose useful benchmarking to public entities, associations, etc. After an adequate review of international literature, a summary of the evolution of the Italian situation is presented, obviously linked to other tourist-cultural initiatives such as museums, natural and archaeological parks, etc. Despite some limitations, Italy, as a privileged international tourist destination, can be a valid reference for many other nations that want to develop accessible cultural tourism.

Keywords: Accessible museums, tourism in Italy, accessible tourism, universal tourism, disability, benchmarking.

Introduction

The Institute of Italian Statistics (Istat, 2017; Laganà, 2017) estimates a growth in the population with disabilities, mainly due to the improvement of hygienic conditions and health progress. Censis (2014) predicted that people with disabilities will be about 6.7 million in 2040. Their increase poses ethical, social and economic problems, especially in times of crisis in which public services often suffer resource shortages. The need for an inclusive society designed and managed “for all” is the subject of frequent reflection (Migliaccio, 2015a & 2016a; Levitas, 2005).

In particular, the need for greater involvement of people with disabilities in the economy seems to emerge, developing the logic of “disability management” (Metallo et al., 2009; Migliaccio, 2015b, 2016b and “in press”; Angeloni, 2010, 2011, 2013b; Angeloni & Borgonovi, 2016 & Borgonovi & Angeloni, 2017). Naturally this involvement presupposes a cultural growth of people with disabilities (Attanasio, 2009) that also occurs in privileged places, such as, for example, museums which obviously must be accessible to all. They are privileged destination of all the tourist flows that must be accepted according to a wider project inspired by ethical principles (Nicolaides, 2018a; 2018b, 2018c; Ramphal & Nicolaides, 2018; Nicolaides & Grobler, 2017), as well as by the profits.

This demand of customers with “special” needs is of great interest to Italy, considering the abundance of historical artifacts preserved in museums. In it, the attraction of tourist flows remains high, continuing the positive trend of previous years (ONT, 2018), despite the growing competition from developing countries.
Objectives, methodology and structure of the paper

The main purpose of this paper is to illustrate the situation of accessible museums in Italy, presenting some valid experiences that can be an example for other nations that want to develop a cultural and, indirectly, tourist experience of this type.

The general hypotheses to be verified are the following:

- H1: public authorities and private companies carefully manage the needs of the population with disabilities;
- H2: Italy is progressively improving its investments to make the most important museum tourist sites accessible.

From these conditions to be verified, there are some research questions:

- RQ1: what are the main initiatives to promote access for people with disabilities to major museums?
- RQ2: can Italian experiences be exported to other countries that wish to undertake this path of welcoming and including tourists with "special" needs?

To answer these two general questions, the paper presents the experiences of inclusive museum tourism that characterizes Italy today, after a brief review of international literature. It develops the benchmarking methodology, proposing potentially useful experiences also in other countries (Fondazione Cariplo, 2008; Garbellano, 2006; Keegan & O'Kelly, 2007; Watson, 1995). In fact, the comparison with exemplary realities allows the identification of gaps and makes proposals to achieve better performance.

Benchmarking can be useful to public authorities and private companies, because it facilitates the identification of the actions necessary to fill the gaps.

Tourism is a privileged topic for benchmarking (Buhalis et al., 2012; De Salvo et al., 2013) considering its peculiarities; accessible tourism, *a fortiori*, considering the delays that are recorded in a large part of the planet.

Literature Review

In general, the theme of accessible tourism has had a remarkable development only in recent years. There are some contributions related to the main studies. For example, Small & Darcy (2010a) and Ibarra *et al.* (2016). The most relevant contributions related to the psychological and economic characteristics of tourists with disabilities are numerous and are obviously treated by scholars of different cultural backgrounds (Gallucci & Marino, 2009; Lurgi, 2009; Gassiot *et al.*, 2018; Zajadacz, 2015; Figueiredo *et al.*, 2018). However, tourists with special needs have common characteristics (Zenko & Sardi, 2014). However, all authors agree on the importance of a person with a disability having moments of leisure, even if of a cultural nature (Lehto *et al.*, 2018; Eichhorn *et al.*, 2013; Pagán, 2012; Kulichova, 2014; Popiel, 2014; Foggin, 2010; Small & Darcy, 2010b; Kastenholz *et al.*, 2015).

Therefore, particular initiatives are multiplying in this regard (Shaw, 2011), despite the effect of a more favorable legislation for people with disabilities (Goodall *et al.*, 2004; Shaw & Coles, 2004). The situation is very different in different countries (Devile & Kastenholz, 2018; Domínguez Vila...
et al., 2015; Le et al., 2012; Patterson et al., 2012; Gröschl, 2007; Cernaianu & Sobry, 2011; Buhalis et al., 2012; Morad, 2007).

To improve the situation, it is necessary to spread a culture of inclusion, working in schools (Bizjak et al., 2011) also making use of non-profit companies in the third sector (Hunter-Jones & Thornton, 2012). The international bibliography on accessible museums is not very wide, confirming a still reduced sensitivity on this theme. It mainly specifies the use of ICT for the benefit of the population with disabilities (Migliaccio, 2016b). Therefore, technical-economic writings are prevalent, where the technical aspect is in any case dominant. This is the case, for example, of the study by Conaway (2002) which describes creating web-accessible databases for museums, and those very similar to Cameron (2001) and Fourie (2001).

Similarly, in the article by Landau et al. (2005) dedicated to creating accessible science museums with user-activated environmental audio beacons. The system nicknamed “Ping!”, allows users to navigate an exhibit area, listen to audio descriptions, and interact with exhibits using a cell phone-based interface. It is effective, both as a way-finding tool and as a means of providing accessible information on museum content.

Different technologies with similar purposes are proposed by Ghiani et al. (2008). The authors believe that tilt-based interaction, along with RFIDds for localization, can be exploited to support blind users in interacting with mobile guides that can be used by blind users. Advanced technologies are also found in the Madrid museum as described by Ramírez et al. (2008); the GVAM project aims to create an ICT solution through a portable device that is fully accessible and interactive, allowing its use by people with or without disabilities. It is based on three approaches: software for the global management of all the multimedia and interactive content; portable device with a high degree of flexibility, implemented with an easy navigation and configuration, towards a universal accessibility; high accuracy positioning system and wireless connectivity networks.

Still different technologies to offer a virtual tour of the museum accessible to the blind are also proposed by Dulyan & Edmonds (2010) who describe the AUXie system upon sonification techniques used in previous implementations of audio-based 3D environments to develop a prototype of blind-accessible virtual tours specifically tailored to the needs of cultural sites. A navigable 3D world is presented using spatially positioned musical earcons, accompanied by synthesised speech descriptions and navigation aids.

There are still generalist publications that develop the theme in its complexity, highlighting the structural changes necessary for museums to become accessible, combining tactile exploration, audio descriptions and mobile gestures (Anagnostakis et al., 2016; Samuels, 2012). However, the precious and necessary technologies must also be accompanied by understandable modes of expression, especially by those who are penalized by other senses that are injured or missing. For this reason, already at the end of the last century, the Australian Museum of Sydney of natural history started a project for the analysis of the illustrative texts of the above (Ravelli, 1996). Obviously better and clearer and more transparent communication has beneficial effects on all users, and especially on blind people.

International literature also presents scientific contributions in which the necessary reference to
new technologies is subordinated to the illustration of value aspects that accentuates the social and economic value of the problem. The recent contribution of Neves (2018), for example, underlines the importance of the diffusion of accessible culture, in the belief that the twenty-first century will be characterized by the rise of a collective awareness towards inclusion and the provision of equal access to all people in a vast array of contexts, from health to education; from work to entertainment; and from travel to the media, among others. Accessible museums are placed in this context considering, however, also the economic aspects for the sustainability of a restructuring plan (Wickens et al., 2018). Jamrichová (2016) also believes that accessible culture is not only a legal obligation, but also a moral and ethical imperative, that every cultural institution make itself and its activities accessible to the public which includes people with various special needs. He also proposes several types of such accessibility-improving measures by type, e.g. a guiding line through the exhibition, labels in Braille, haptic models and audio guides for those with visual impairments, video monitors and sign-language guides for those with auditory impairments, improved physical access for those with reduced mobility and alike.

Similar fundamental values are found in the writings of Miglietta (2017). In the field of international literature, it is also necessary to mention other valuable articles that critically present cases of museums that have become accessible over time and that are proposed as examples to be imitated in different contexts. For example, the contribution of Dessens (1997) related to The Netherlands Maritime Museum; the study of Las Vergnas (1994) about The Villette Museum; Koh (2015) who illustrated the strategies of the National Heritage Board in its most recent effort to make itself accessible; Linzer (2013) about Whitney Museum of American Art. Special attention must be given to the Jakarta museum, in which specific studies have been done to make it an example of accessibility, sustainability and equitable participation by all makeup what is known as tourism for all (Wiastuti et al., 2018). Restructuring guidelines have considered information, transport, common requirements, universal design, and accessibility.

The Italian bibliography to which this study refers contemplates the recent contribution of Agovino et al. (2017) which focuses on the limits and opportunities of tourism for the disabled in Italy and the contributions of Angeloni (2013a) and Migliaccio (2014), the first bibliographic source of the subsequent writings. There are also general contributions on accessible tourism (Gelarda & Bardi, 2011; Leone, 2013 & 2018; Lepri, 2011; Citarella, 2016; Bardelli, 2007; Arenghi, 2001; Fauzzi et al., 2008) and useful operational guides (Consorzio cooperative integrate, 1992; Fantini & Matteucci, 2003; Touring, 2004) sources of appreciable reflections on the subject. An important and recent publication on accessible museums has been edited by Santagati (2019).

**Description and Discussion**

**Accessible tourism: evolution in Italy (notes)**

The first “White Paper” on tourism for all in Italy (Struttura di Missione per il Rilancio dell’Immagine dell’Italia, 2013), also subject to appropriate assessments (Angeloni, 2013a), has outlined the main phases of accessible tourism: from constitutional principles, to the European year of tourism (1990) and, in 1995 the International Tourism Exchange, in Milan. In 1997, the “Italy for all” project was launched and then the National Committee “Si, travel ... tourism for all” and the project “STAre - Tourist Services for Accessibility and Comfortable Residence”.

Then there were some interventions, sometimes disjointed from the various Italian regions that
assumed exclusive power in the field of tourism. To mention the activities of the “SiPuò” Association, and the INAIL (National Institute of Accident Insurance at Work) and, in 2001, the First International Conference for Sustainable Tourism, with the drafting of the Rimini Charter containing recommendations to the “Sustainability of tourism”, even mass. In 2002 the Madrid Declaration was drafted in the European Congress on disability, in the same year as the International Conference “The Park belongs to everyone. The world too”. A vast literature on accessible tourism was created: Laura & Petrangeli (2003), Fantini & Matteucci (2003), Touring (2004), etc.

In 2004 the C.A.R.E. project begins. (Accessible Cities of European Regions); in 2006 the ENAT (European Network for Accessible Tourism) was born, a network of organizations that deal with accessible tourism that involves numerous subjects in more than 30 countries and 5 continents. In 2009 the interregional tourism development project “Interregional itineraries of tourism for all” begins, which proposes thematic itineraries and the foundation of the IsITT, Italian Institute for Tourism for All, as well as the Calypso project. It was also the year of the “Manifesto for the promotion of accessible tourism”. In 2011 there was the Charter of Rights of the Tourist with disabilities. The most recent five-year period is characterized by further initiatives that confirm the described guidelines: today disability has full citizenship rights in national political and cultural choices. All these initiatives were promoted also thanks to a different international and national legislative framework that favored the culture of accessible tourism (Baratella, 2009; Borzetti, 2008; Fondazione Serono, 2016; Foggetti, 2017).

Accessible tourism: some main innovations (notes)

In Italy, work was first carried out on transport, breaking down architectural barriers and providing assistance through competent personnel (Serluca, 2009). The hospitality has also improved, making many hotels and restaurants accessible, according to a specific set of guidelines (Vitali, 2009), even if sometimes there are unreported deficiencies that cause inconvenience (Leone, 2018). Many places of worship have become accessible both for the exercise of religious functions and for allowing everyone to visit them (Arenghi, 2003; Della Torre & Pracchi, 2003).

A similar effort has characterized the protected natural areas (Lancerin, 2003; Vacca, 2010) and the Italian archaeological heritage that is among the first in the world in terms of historical importance and vastness. There are also positive experiences for sports facilities (Jannelli, 2009; UEFA & CAFE, 2011) and beach resorts.

Accessible museums: an introduction

Accessibility to museums is different depending on the type of disability:

- for people with motor disabilities it is necessary to remove architectural barriers;
- for the blind it is necessary to provide audio guides and systems to detect obstacles, allowing tactile exploration of the works or of their architectural, pictorial or photographic reproductions in relief, or even reproducing odors and sounds;
- for deaf people with multimedia material guides subtitled or in sign language;
- for intellectually disabled persons, communicative attention is required for the understanding of the object observed by competent specialized personnel.
Accessibility to museums is obtained, however, especially in tactile museums (Caruso, 2011; Bellini, 2000; Associazione amici dell’accademia Carrara Onlus) which, by allowing you to touch an object reproduction, provide additional perceptions to external descriptions. Therefore they perform an irreplaceable function of integrated development of the residual senses, enhancing perceptive, cognitive and intellectual faculties.

Reproductions aimed at multisensoriality may concern objects of:

- architecture, reproducing buildings, monuments or their details;
- painting, with bas-reliefs of images;
- photography, with relief transposition;
- geography of the territory, with three-dimensional models;
- fauna and flora, with three-dimensional plants often accompanied by reproduction of fragrances and sounds.

Already today, and increasingly in the future, "virtual visits" to some museums are possible: it is the new frontier of "Telepresence in the Museum": technology allows you to visit a museum from home, using a robot equipped with a camera and remotely controlled.

Accessible museums: Italian experiences

In Italy, the first important reference for multimedia communication is the blog https://museisenzabarriere.org/ dedicated to museum accessibility for all. Since 2013 it has been promoting Italian and foreign good practices aimed at inclusion. The actors are part of the scientific work group of the project "Museum for all" (https://museopertutti.it/) aimed at building paths and tools to make the museum heritage accessible also to people with intellectual disabilities. To these sites are added the institutional ones of the competent Ministry and those of the individual museums that provide information on the accessibility of each site.

In Italy there are some positive experiences (Migliaccio, 2014) that are only representative of a very long list that is constantly increasing (https://www.disabili.com/viaggi/musei):

- The National Gallery of Modern Art in Rome that guarantees total accessibility to people with disabilities thanks to the use of elevators, elevating platforms and adequate services (http://lagallerianazionale.com). An initial orientation model directs everyone. There are multimedia teaching benches that can be used by people with motor disabilities. For the blind a handrail facilitates the path to follow and thermoformed tables with Braille writing provide information. Deaf people can follow a video in sign language, etc.

- The Archaeological Museum of Cremona is becoming accessible by developing social history with images and text of "alternative augmented communication" that replaces, integrates, increases verbal language. To it is added the facilitated map of the museum and several cards in easy language with the help of images and drawings of each section of the site (http://www.musei.comune.cremona.it).

- The Parma Opera Museum has equipped itself with the innovative SeSaMoNet system, as part of the WiMove Project to create infomobility services. A special stick is connected to a smartphone
and a headset that leads the disabled person into the guide corridor. The telephone connected to
the stick provides information about the location (http://www.operamuseo.parma.it).

- The Castello D'Albertis in Genoa is becoming accessible by developing social history with
images and text of "alternative augmented communication". To it is added the facilitated map of
the museum and a multisensory station.

- **The Tactile State Museum Omero of Ancona** (http://www.museoomero.it/) is probably the best
Italian museum experience of tactile observation because it allows to touch faces, bodies,
gestures, expressions, discover volumes and perspectives through the hands. It offers a space in
which artistic perception passes through extra visual multi-sensorial suggestions. In it there are
original archaeological objects: ceramic, lithic and metallic finds, etc., scale models of the main
historical buildings and monumental churches, originals, casts and plaster copies of the most
famous sculptures etc.

- **The Tactile Museum Omero of Ancona** follows the positive experiences of the Tactile Museums of
Madrid and Ancona (http://www.museotattilevarese.it). It houses a collection of tactile wooden
models that reproduce aspects of the landscape, architecture, art, archeology and design. They
perform an educational and emotional function. The museum also hosts multi-sensory itineraries
and installations, capable of combining fun with interest in experimentation.

- **The Museum of Innocenti in Florence** (https://www.istitutodeglinnocenti.it) is creating a facilitated
reading guide with easy to read texts and a sensory map.

- **The Tactile Museum of the Regional Braille Stamperia of Catania** (http://www.stamperiabrailleuic.it) which, in addition to producing books and magazines,
reproduces in scale Sicilian monumental buildings. In 2000 square meters are concentrated
activities and initiatives scattered individually in the rest of the continent: a showroom of articles
unique in Italy, reproductions of sculptures and three-dimensional architectural models, a dark
bar, a sensory garden full of Sicilian fragrances.

- **The Pompeii Excavation Museum** (http://pompeisites.org) provides a path for the blind with a
synaesthetic model of the "Ercole Infante", the famous fresco of the House of the Vettii. A
multisensory perception is possible, through a sophisticated computerized system and the aid of
sounds and audio guides.

- **The Tactile Museum Anteros of the Institute of the blind people "Francesco Cavazza" of Bologna**
(https://www.cavazza.it) exhibits a collection of three-dimensional works in bas-relief of famous
historical paintings, especially of the Renaissance. The service focuses on the scholastic and
social integration of blind people and uses the psychology of optical and tactile perception
combined with the theory of art and special pedagogy. The basic objective is to educate the
integrated use of the residual senses to enhance the perceptive, cognitive and intellectual
faculties of people with disabilities, but also to educate non-blind people.

- The **Archeological Civic Museum of Bologna** (http://www.comune.bologna.it/museoarcheologico) provides a tactile path to follow with some
original pieces and some copies documenting the local archeology.
- The Museum of Comparative Anatomy of Bologna (https://sma.unibo.it/it/il-sistemamuseale/collezione-di-anatomia-comparata) allows the manipulation of anatomical pieces of various vertebrate animals, showing changes and skeletal adaptations in some organs and apparatuses.

- The Alinari National Museum of Photography in Florence (http://www.mnaf.it/) has set up a path for the blind and the disabled at the motor level. Once the architectural barriers have been eliminated, some photographs are transposed in relief with natural elements consistent with the figure, useful to blind and able-bodied people involved in a new emotional perception.

- The Prehistoric Museum of Pofi (http://www.comune.pofi.fr.it) has, among other things, human fossil skulls placed in containers attached to the exhibitors to be manipulated. A "special" experience!

- The Tactile Museum of natural sciences of the lake and the mountain of Trarego, Cheglio and Viggiona (http://www.prolocotraregoviggiona.it) reproduces the environments reconstructed in the dioramas present in the exhibition area. Entire environments are recreated with live plants and naturalized animals, as well as objects and natural elements, also proposing typical smells and sounds.

- The Museum of Musical Instruments of Rome, as well as accessible guides, allows you to touch instruments of particular value (http://www.museostrumentimusicali.it/).

- The Glass Museum of Villa Rosa in Altare (http://www.museodelvetro.org/) has tactile tiles in enlarged characters and a tactile laboratory with selected pieces to manipulate.

- The Textile Museum of Busto Arsizio (https://www.comune.bustoarsizio.va.it) also allows textile processes to be experimented using multiple sensorial channels.

- The Royal Venaria of Turin (http://www.lavenaria.it/it) is realizing the social history of the Royal Palace and of the vegetable garden with texts in easy to read, as well as having sensorial maps, and easy-to-read cards for each section.

- The Civic Museum of S. Francesco of Montefalco (https://www.museodimontefalco.it/) has broken down architectural barriers.

Some considerations

From the previous illustrative list, we can see the growing sensitivity towards an alternative and more complete way of proposing the beauties preserved in museums. Italian multisensory exhibitions show everyone that even a small nation, with modest investments, can make cultural environments accessible to the benefit of all.

Therefore, there is a greater awareness of accessibility, probably due to the younger management more ready to govern this delicate issue. In Italy, the effects of more modern legislative rules also played a decisive role. Unfortunately, the reduced public financial resources mainly concern
education and culture and, therefore, also investments in accessible environments that require greater resources, despite the lower costs of new technologies and the greater availability of private foundations and associations which, at least in part, fill the gaps of the minor presence of the State.

Conclusion and implications

The described experiences of a small nation, with modest economic possibilities, show that it is still possible to make museums accessible for the benefit of non-disabled people.

The illustrative overview confirms the two initial hypotheses: the Italian Republic is characterized by a progressive attention to the needs of the population with disabilities (H1), with a decisive acceleration in the last 20 years. Thus, the second starting hypothesis (H2) is also confirmed: Italy is progressively improving its investments to make its museums accessible, in the context of accessible tourism development despite some historical delays still present (Leone, 2018).

These confirmations derive from the examination of the main initiatives that favored the access of people with disabilities to the main museums, responding to the first research question (RQ1). Therefore, it can be concluded that the Italian experiences can be exported also to other Nations that wanted to undertake this path of inclusion (RQ2), obviously considering the peculiar local connotations and the size of the latent demand (Agovino et al., 2017). The response of each state also depends on the prevailing cultural trends (Migliaccio, 2018) and from public and private economic resources.

This study is descriptive and necessarily brief. In the future, it can become a reference framework for the development of detailed analyzes of each museum case. It can favor the policies of governments and Ministries responsible for tourism and equal opportunities. Other beneficiaries are associations and foundations dedicated to assisting people with disabilities. Finally, even private companies active in the tourism sector and authors who study the social phenomena of the neediest citizens, could be interested in this study.

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