

The central theme of the book is museum presentation, one of the most important museological issues. It is certainly a highly topical theme especially because in today's world there are numerous approaches in developing museum presentations and in the use of presentation tools. The range of various types of museum presentation products is expanding due to technological advancement in an unprecedented way. Even though authors were mainly interested in the most typical presentation product, the exhibition, they reflected on other types of museum presentations as well. The book offers an insight into the current state of museum presentation, its theories and practice, as well as the trends of current museological thinking. This book is partly based on the research conducted by both authors and published individually in the Czech monographs by Petra Šobáňová titled *Muzejní expozice jako edukační medium* [Museum Exhibition as an Educational Medium] and by Jan Dolák titled *Muzeum a prezentace* [Museum and Presentation]. Authors have attempted to interconnect their findings on museum presentation and organise and present them to international readership in the form of this English monograph in which for the first time they formed a pair of authors.

JAN DOLÁK & PETRA ŠOBÁŇOVÁ | MUSEUM PRESENTATION

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Faculty
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Large-format Photographs on the Divides of the Book:

- 1 Pompeii in Italy, photo by Petra Šobánová, 2015
- 2 The view into the exhibition titled *The Family of Austrians* by Christian Philipp Müller (Belvedere Museum Vienna, Austria), photo by Petra Šobánová, 2018
- 3 Earth Hall, Natural History Museum, photo by Petra Šobánová, 2013
- 4 Exhibition in the area of the Roman Forum, Rome (Italy); photo by Petra Šobánová, 2015
- 5 Underground area in Louvre Museum (France) with a shopping mall; photo by Petra Šobánová, 2018
- 6 MAXXI – National Museum of 21st Century Arts, Rome (Italy); photo by Petra Šobánová, 2014
- 7 iQLANDIA – science center Liberec (CZ); photo by Petra Šobánová, 2014
- 8 Jewish Museum in Berlin (Germany); photo by Petra Šobánová, 2014
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- 10 Belvedere Museum Vienna (Austria), photo by Petra Šobánová, 2018

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Authors' Note

This book is partly based on the research conducted by both authors and published individually in the Czech monographs by Petra Šobáňová titled *Muzejní expozice jako edukační medium* [Museum Exhibition as an Educational Medium] and by Jan Dolák titled *Muzeum a prezentace* [Museum and Presentation]. Authors have attempted to interconnect their findings on museum presentation and organise and present them to international readership in the form of this English monograph in which for the first time they formed a pair of authors.

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Introduction

Dear readers,

The central theme of our book is museum presentation, one of the most important museological issues. It is certainly a highly topical theme especially because in today's world there are numerous approaches in developing museum presentations and in the use of presentation tools. The range of various types of museum presentation products is expanding due to technological advancement in an unprecedented way. Even though we were mainly interested in the most typical presentation product, the exhibition, we reflected on other types of museum presentations as well. We believe the majority of our museological principles and recommendations are generally applicable.

Our book offers an insight into the current state of museum presentation, its theories and practice, as well as the trends of current museological thinking. Though it contains plenty of concrete examples it does not give definitive guides to the 'ideal' presentation.

Rather than proposing templates, our objective was to show that museum presentation should be approached conceptually, it should be a creative process, and it should certainly reflect the current state of thinking in museology. If the authors do prefer any of the presented approaches, then it is certainly openness as opposed to rigidity, contextuality as opposed to formalism, creativity to routine activity, interactivity to lectures, efforts to go into the depth rather than superficial effectivity. The process of making a museum presentation must be a creative and well-planned activity in which invention and the designers' opinions are allowed to flourish.

The section dedicated to the classification of exhibitions or innovative elements in current museum presentation trends presents readers with various

approaches to presentation making. These chapters, are based on the research studies of museum presentations previously carried out by both authors and a detailed study of current theories, offered in the introductory sections focused on museum presentation, and museological thinking, (the authors managed to contrast and combine the findings of museology with the findings of the theory of communication, the theory of information, philosophy, pedagogy, psychology, or semiotics) and the theory of museum objects as the basis for museum presentation.

Our book thus follows the path from theory to practice. Chapters deal with the process of museum exhibition development, as well as with the individual stages of this process, and include recommendations for exhibition development and text writing. Chapters also present a summary of current trends and problems that may occur in contemporary presentation.

Thought-provoking discussions, useful clarifications of theoretical theories and efforts to provide the most precise answers that would express our research experience, shows that museum culture is today characterised by considerable variability.

Apart from new conceptions arising from often very critical reflexions on historical approaches to museum functions and to exhibition making, museum culture is also subject to society-wide issues; the democratisation of a society and the heightened attention to previously marginalised groups are two examples. The arrival of new media technology and the shift in communication capabilities are two more. We can also see shifts in human conduct, consumerism and entertainment trends, and an opposite tendency to return to traditional values; an increased interest in history and an increase in wanting 'to find' one's own identity.

The above are all linked to the development of new ways in the presentation of museum collections, and the development of specific methods for exhibiting as well as the implementation of many inspiring innovations. If we disregard showy examples of inadequate presentations (apart from traditional formalistic exhibitions these can also be found in modern digital media which some wrongly perceive as the objective rather than the means), it is the most desirable approaches and elements in an exhibition that significantly increase the quality and revealing nature of an exhibition while stimulating educational effectivity. Such exhibitions use a great deal of interactivity, new media, didactic

and entertaining elements, as well as exhibition elements that consider visitors with disabilities. An interesting innovation is creating exhibitions or adapting the whole museum building to function as a specific 'exhibit' that communicates with a visitor by way of expressive tools.

Yet, the majority of the innovations described are a result of the shift of the emphasis onto visitor experience, interaction and education which museums have been undergoing for several decades now – some more vigorously and successfully than others.

We believe the application of our ideas for procedures, approaches and evaluations could help change the opinion still held by some of the public that a museum is a lifeless and dull institution disconnected from our current lives.

**People should feel they are
looking into a mirror
when they see the exhibit –
as the basic purpose is
to show how alike we all are,
from Bombay to Boston.**

Edward Steichen, in: U.S. Camera New York, März 1953



*‘... be real things and not the shadows of things ...’
John Amos Comenius, *The Great Didactic**

‘Men must, as far as is possible, be taught to become wise by studying the heavens, the earth, oaks, and beeches, but not by studying books; that is to say, they must learn to know and investigate the things themselves, and not the observations that other people have made about the things.’

John Amos Comenius, *The Great Didactic*

1 Museum Presentation in the Context of Contemporary Museological Thinking

1.1 People and Things

Since the beginning of time people have been surrounded by things. It was the use of things and the gradual production of items that eventually separated humans from animals. Man started to make their own tools, weapons and clothing and so on, at first for purely utilitarian reasons of survival. The expansion of human materialistic culture shows us that humans were not only concerned with securing the basic necessities of life, but also with spiritual perception and needs; human culture is a complex mixture of spiritual and material values. Things that people make, transform and handle for various reasons give us an insight into their way of life (their housing, work, system of defence, transportation, and available technologies), their behaviour, religious images and rituals; and help us understand the expressivity, social stratification and customs of different social groups.

Materialistic culture can come in to existence on the premise that there exists a demand for basic needs and personal and collective property such as clothing, hunting trophies, jewellery, the quantity and quality of which reflects the skill and success of a given individual or a community and whose difference is to be shown to others. Communicating through things is that much old.

Essentially linked to their surroundings, people strive to understand and influence the way nature acts which is evidenced by the tradition of hunting and fertility rites and rituals. trophies (e.g. bear skulls) or produced things such as talismans, amulets, pipes, etc. This goes hand in hand with creating and passing on of non-material heritage, as we call it today, that is, dances, songs, customs, etc.

Developing cult like practices may have been a way to win nature's favour. Within time, people started to express themselves visually. They began to surround themselves with things they did not immediately 'need'. They felt the growing desire and need to show their differences to others. These practices recorded certain events, conserved memories; they gave us an insight into the distant histories of Ancient times, in Mesopotamia or in China for example. Well preserved finds of representative collections come from Ancient Egypt. These often originated from gifts exchanged during diplomatic visits of monarchic courts, or, were used in the developed burial practices of Ancient Egypt. Treasures collected by the Ancient world give us insights into the ways of communication, cult-like practices, the respect for traditional practices or old cultures, as well as the people's desire to own beautiful things. The role of these collections was not only to represent the power but also to prove the ownership.

As early as in the Ancient times, there were already many collections and even collectors. To name just a few examples, in Greece, collections were created not only as results of religious practices (people would place offerings to museions to express their gratitude to goddess of art and science) but also as tools to study nature (Aristoteles established a large private library and a natural science collection). However, collections as well as the entirety of material culture of certain communities and nations give evidence about the statute of their owner, about their power superiority an example of which can be found in Roman legions which displayed objects they gained from conquered lands.

In the following period, characterised in Europe by cultivating Christian universe, it was typical for both secular and ecclesiastic authorities to create collections of a religious nature. Religious treasures located at cathedrals, monasteries and convents were shown at significant events and their owners had to deal with some fundamental principles of conservation. Holy relics, a new type of object based on the Christian respect for the memory of Jesus Christ and the saints, became part of the preserved material culture. Relics could take the form of human remains or objects which were used by saints.

Collecting objects in the Early and Late periods of the Renaissance had significantly different focuses with the accent on secularity. Apart from art, these were also products of nature and thus offering the material for rational understanding of the laws of the world around us. Even though collecting is done with regards for ancient sensibleness, unwittingly it also shows a certain lack of new knowledge about the world – from the discovery of new continents, and the categorisation of the planet Earth as a mere point in the universe. The Enlightenment brings the need to engage in science and taxonomy but also the study of agricultural conditions, water and other natural sources.¹ At the end of the 18th century, the institution of a public museum with the roles it continues to play until today was established. Apart from preserving scientific collections and supporting research, museums also had other roles. Museums were seen as evidence of successfully developing an imperium (e.g. the British Museum in London) as a representative and integrating element of a nation.

Material culture preserved in collections serves not only as a tool for the continuation of the human kind and their memory, but also as the source of a scientific mode to understanding and learning about the world. Not only the life and the way of living but also the mortality of man is reflected in preserved things. No matter how old collections are, they show us that material culture represents an independent tool of human communication.

Throughout their existence, human beings have developed a number of strategies to communicate various content; to pass on their legacy, knowledge, system of cultural values, norms and meanings to the next generations. One of these strategies is represented by collecting and preserving symbolic and representative material elements that document the activities of a certain culture as well as the development of the environment in which the given culture has been developing. This cultural and, as will be shown later, culture-making human behaviour is the subject-matter of museology and is referred to as the museum phenomenon. Its institutionalised manifestation, which can be observed in developed societies for the first time approximately two centuries ago, is represented by museums.

1 It was one of the main reasons for establishing *Moravské zemské muzeum v Brně* [Moravian Museum in Brno] in 1817.



Fig. 1–2 Top – view of the classical exhibition of the British Museum in London (UK), photo by Benkid77, 2009, bottom – the exhibition hall of the Smithsonian Institution National Museum of Natural History in Washington (USA), photo by Blake Patterson, 2012

1.2 Museum

There are an infinite number of museum definitions, which often overlap with one another. From the viewpoint of our subject-matter, it is very important that the majority of museologists agree on the point that an institution can be perceived as a museum only if the preserving and communicating roles are present and well-balanced. The museum institution is a stable and public form of the *museum phenomenon*. A museum focuses not only on material evidence of the development of nature and society but also on documenting the environment from which the material evidence has been taken. They represent memory institutions together with the archives and historical funds of libraries.

According to Burke, a museum represents an institutionalised manifestation of a specific human tendency to preserve, protect and culturally use material manifestations of the development of human kind and nature. It is an institution which focuses on collecting, preserving and exhibiting the material evidence of human culture and nature. A museum together with libraries, universities, scientific societies, specialised journals and think-tanks is one of the institutionalised producers and holders of knowledge. (Burke, 2013, p. 14)

A museum has developed a firm grip on collecting information about nature and cultural reality, and has taken on the role of a gathering place, a conservator, interpreter and a mediator of these information sources. Museum depositories preserve natural world and cultural riches, and a museum can be perceived as an administrator of this data. This role, so important for a society, binds museums to spread and deepen the knowledge on all material evidence of natural and human knowledge, and to actively serve humanity through the raising of public awareness, education, and to make accessible sources for learning and pleasure. (ICOM, 2001, *American Alliance of Museums*, 2000)

The above-mentioned service is part of museum presentation which in turn is an integral part of *musealisation*. Musealisation is a process during which certain objects documenting the image of a human culture in certain periods are taken out of its reality (Stránský, 2000) and these selected material elements are, in the process of musealisation, protected against natural changes and extinction, and continue to be used for human cultural development.

While the first museums were established for the needs of human society to create certain banks of cultural memory (Dean, 1994), within years it had developed into something else: into an interpreter and a mediator of this

memory, into an agent who brings this memory to life, and something that continues to advance historical knowledge.

Physical objects are the primary communication tools in museums, and the value of collections lies in the information and values embedded in them and in the relevance they have for a given society. While other organisations also work with information, museums are the only ones that focus primarily on making conceptual collections, preserving, studying and exhibiting them to the public. (ibid)

Collections of such *museolised* elements (that is elements that have been taken out of their original context) and museum collections, are in museology referred to as thesaurus. According to Stránský and Stránská (2000), a thesaurus is scientifically assessed and authentic evidence of culturally significant natural or social reality. The key is that a thesaurus in the form of collections is not in itself an actual scientific explanation. It becomes such only through the research activity of a human being who transforms a thesaurus into a medium through which a museum initialises a direct contact of entities with these 'memory carriers'. It is through these objects and accompanying information that a museum exhibition makes knowledge accessible and motivates the understanding of the meaning of a given musealised reality. (Stránská, Stránský, 2000, p. 72) These realities are mainly represented by the prehistory, history and present of cultural phenomena, and the history and present of natural phenomena.² Objects preserved in museum collections or displayed in exhibitions are materialised authentic evidence of these realities. (Beneš, 1981)

Let us also point out that thesauri have the ability to fix a certain, achieved image of culture whereby they enable us to learn about it and study it. The presentation of thesaurus has taken different forms over time, and its extent has varied. The funding of many significant world-known museums was provided by the Church or private collectors. That is why the collections

2 We use the term *culture* here (or *cultural*) in the sense of a wide complex of spiritual and material values which were created by human kind during the prehistory and history and which is continuously being created up to today. Instead of *prehistory*, we use *past* in the context of natural phenomena, as it is commonly used in the context of the geological past of the planet Earth and extends significantly beyond the period which is referred to as *prehistory*. We perceive prehistory as the period of human history from which we have no mentefacts, or, the history of those cultures that had no written history.

were not public, and were presented only to a small group of people up until the 19th century.

Museums, established at the end of the 18th century and throughout the entire 19th century, reflected the requirement of the period for being open to the public and their establishment was often linked to the democratising tendencies in the European society. The museum presentation and its principles of that time were very different from those that are in place today. As was already mentioned above, the first museums were open to the public at the end of the 18th and throughout the 19th century. However, this was a gradual process of transforming the once private property of the aristocracy and royal families, or, collections of the Church and universities into a modern museum institution perceived as public property and as a cultural value that was to serve all people without any exception. At the beginning, this was often done by simply showing collections and making them accessible; later on, they were developed into a presentation which is, in the context of museology, perceived as a functional processing of a theme expressed by original pieces of evidence and by additional tools using visual and the technical possibilities of museum setting. (Beneš, 1981, p. 15)

Here we come to the roots of the formalistic focus of museums on collection objects, often without any regard to the visitor or related issues of museum presentation, typical for Europe until today. It was because collections were often created for different reasons³ other than for offering explanations on various themes in a public presentation. This was not part of the plan – collections continued to be exclusive; reflecting the personal interests of collectors and they were not accessible to a wider public. Collection pieces, which were collected for educational purposes (for natural sciences and their rapid development), were exclusive in another sense: they constituted a fundamental source material which again was not to be seen by wide public but studied by small groups of scholars.

The advances in science in the modern age brought many ‘modern’ collections established around a certain programme or theme (mineralogy, palaeontology,

3 Even though there is not enough space to go into in much detail, it is worth mentioning the religious and dynastic motivation for creating collections (see traditional treasury of cathedrals and collections of representative nature), the avocation of the clergy and noblemen in art, or, the modern interest of scholars in learning about nature and the universe (see the cabinets of the Renaissance and Mannerism period), and many others.

botany); however, this led to the notion that a museum is primarily a scientific institution, a place for researchers and not for the public. Collections viewed as such were the basis of research activities and museums were run precisely for the needs of given fields and not for visitors.

The frequently criticised concept of a museum as a 'storage' for collections comes from this period in which collections needed to be stored somewhere, and resolve their thesaurisation, and the access to researchers. It was science that was cultivated in museums and not the forms of presentation supporting the interaction of common visitors with musealities. Furthermore, these museums did not have depositories and the majority of collections were exhibited directly in the exhibition galleries. Museum exhibition thus often lacked any kind of conception – except for the systematic nature of collections given by the specifics of individual scientific fields – let alone any regard for visitors. People being able to enter was seen as more than enough.

However, this has changed due to extensive society-wide changes brought to Europe in the 19th century. The definition of a modern nation was formed the main characteristic being the establishment of a national state with the process of democratisation of a society underway in many areas. Especially rapid national movements of many European countries had a great impact on museum culture testing the new social role of a museum which in the future was to pull nations together and represent them all, to become 'a spiritual centre of people' and 'a temple of a nation'. (Rous, 1983)

World expositions, a new phenomenon related to museum culture, accelerated the transformation of a museum from being enclosed in various imaginable and real barriers where visitors could enter only on the basis of a recommendation or an appointment made prior to the visit. As opposed to the majority of museum exhibitions, world expositions were attractive and mass events for the wider public. They brought new modes of presentation into museum culture and gave rise to a new type of a museum institution – an industrial, or, technical museum. According to Waidacher, it was then when new types of specialised museums were also created as we know them today: art museum, museum of industrial design, cultural and historical museum, ethnographic museum, ethnologic museum, archaeological museum, and technical museum. (Waidacher, 1999) Each one of them began to develop forms of presentation in their own way while testing in practice various approaches to exhibiting collection objects.

Another key innovative aspect which entered museum culture in the 20th century was intentionality and ideological background of museum presentation, as Špét reminds us (2004). As opposed to the existing plain and simple efforts to exhibit collected objects, museums were also trying to have programme of presentations while intentionally affecting visitors. As Špét explains, collections continued to be the basis but using them no longer involved mere exhibiting of all collected materials, instead it meant a careful selection of objects with a certain educational objective in mind. (Špét, 2003, p. 64) In other words, they were not exhibiting objects for their own sake but as a tool that helped realise certain ideological intention in the scope of which the exhibition designer aimed to introduce a given phenomenon or an issue. A visitor who needs to be continuously motivated to visit a museum and to learn new knowledge was now seen as the primary goal or target. (ibid)

Many changes are related to the shift in presentation objectives, the attention focused on visitors and a social impact of museums: not only the exhibition, but the entire operations and structure of museums needed to be adjusted to the needs of visitors. It was no longer possible or effective to present an entire collection in an exhibition, instead it was desirable to present only a selection of objects that would be well thought through and exhibited in such an order and form so that a visitor could learn and navigate through them with ease.

This was closely linked to the growth of additional presentation tools which support the designer's efforts to put over a certain idea onto the public. The key role of museums should no longer dwell on extending, protecting and processing collections but it should be pedagogical in the widest sense of the word. Using their collections, the role of a museum was to educate a society, including all social groups. As Špét points out, it was only then that museums would transform from dead and barren matter into a lively and impressive organism that would attract increasingly larger circles of people and extend the ethical and material benefits resulting from it. (Špét, 2003, p. 64)

All these ideas, in many ways still topical today, were presented for the first time at the meeting of German museum workers in Mannheim in 1903 as part of the debate on the contemporary state and commitments of museums. Alfred Lichtwark joined the debate with his rather critical and visionary view. He blamed museums for being referred to by the public as something that is hard to understand, that is dusty and quite detached from real life. And he demanded engagement by museums in the field of education, popularisation

of research activities, and mediation of museum objects (see his text titled *Muzea jako místa vzdělávání* – [Museums as Places for Education], published in 1904). In all probability, he was the first to understand fully the significance of a museum for society as well as its educational potential.

In the 20th century and especially in its second half, museums became multifunctional and multidimensional organisations. (Dean, 1994) Just as in other fields we can talk about the ‘user-friendly’ trend, that is, the process of adjusting to the needs of user, and creating ‘user-friendly environments’. This process is in full swing due to the information age, new findings on perception and cognition, and due to advanced consumerism. To be able to compete over visitors with other media and leisure-time organisations, museums were forced to switch to a customer led approach. They began to put intensive efforts into attracting visitors and offering them interesting exhibitions and follow-up activities. Dean (1994) finds that in the past decades, museums have gone through a major shift not only in the activities related to collection-making and preserving but mainly in the field of collection using, that is, in exhibition activities and the organisation of educational and other programmes for the public. The level of knowledge on many technical aspects of the field of museum culture is continuously increasing and new fields and sub-disciplines are being developed. Also theoretical thinking is being incessantly advanced. However, there is one aspect of museum activities that is and most probably will continue to be the key one for the position of a museum in a society and for the identity of a museum as an institution. This aspect is exhibition activities, that is, the designing of museum exhibitions for the public. (ibid)

>> Fig. 3 The current form of the entrance hall of the Louvre Museum (France), the most visited museum in the world and one of the largest world museums; the museum is located in a building which used to be a palace of French kings, it became a public museum during the French revolution in 1793; photo by Petra Šobáňová, 2018





Fig. 4–5 Top – view of the Uffizi gallery in Florence (Italy), a prototype of a museum of art (photo by Sailko, 2006), bottom – LENTOS Kunstmuseum Linz (Austria); photo by Petra Šobáňová, 2013



Fig. 6–7 Top – friendly environment in the Victoria and Albert Museum in London (UK); photo by Petra Šobáňová, 2013; bottom – ongoing educational program for the exhibition titled ‘Hommage ā Kája Saudek’ in the Museum of Modern Art in Olomouc (CZ), photo by Petra Šobáňová, 2014

*Core of museum communication
is the exhibition.*
(van Mensch, 1992)

1.3 The Forms of Museum Presentation

Our book is primarily dedicated to museum presentation whose specific is to introduce a certain abstract fact (a theme) using particular collection objects, while it is evident that knowledge about this fact is both mediated by a museum presentation and proven by authentic objects, museal objects. Thereby a presentation leads to a representation or a reconstruction of a reality. And the emphasis on creating a representation that is adequately realistic, successful and apt is one of the most important museological issues of the praxis as well as of the theoretical museology and the theoretical and philosophical thinking regarding the representation of the world.

When creating representations using presentative activities a museum makes use of the actual collections as well as other forms and tools. To make a presentation more revealing, a museum creates various subsidiary tools of textual, visual or multimedia nature, and employs various approaches and strategies – all these are also dealt with in our book.

Although, our primary focus is on exhibition activities of museums – after all, our book is based on the research of the current exhibition activities of the Czech and world museums – the current museum culture offers many more presentation forms and innovations that will postulate a new autonomous form of a museum presentation in the future (e.g. the application of augmented or virtual reality).

Currently, museum presentation is realised mainly in the following basic forms:

- by way of various classical presentation forms, most commonly in the form of short or long-term exhibitions and other alternative presentations, or by way of an ostensis, that is, by a particular way in which human beings communicate which occurs through showing original things or events (classical forms are accompanied by other well-known forms such as specialised and popularising museum publications, etc.);

- by way of directly or indirectly facilitated educational (or educative) processes which enhance significantly the effect of classical museum presentation, react to the weaknesses of an ostensis and compliment it by offering a more effective communication and learning channel; they also increase the effectivity of making presented objects and realities accessible to museum visitors,
- by way of alternative presentation forms based on digital technologies and media; an original museum object, the basis of a museum presentation, is in such presentations replaced with its digital substitute⁴.

So far, the greatest attention within museum culture and its theories is given to classical presentation forms. It is because they offer direct interaction with authentic collection objects and because other presentation forms are based on the classical ones or they complement one another. Also, our book deals primarily with classical presentation, however, we need to emphasise that educational programs or presentations based on digital collections play a highly visible role. When referring to a museum presentation (in theory or in practice) it means increasingly more often to consider all these forms whose elaborated complex leads to a museum presentation of greater quality and of greater impact on the public.

1.4 Basic Terminology

The basic terminology in the field of museology is not agreed upon, and the application and definition of particular terms often depends on the approach of individual 'museological schools'. In spite of that, many terms, such as 'exhibit' are widely used around the world. In the context of the Czech Republic, it was Zbyněk Z. Stránský, Josef Beneš and Vladimír Tkáč, from the younger generation, who had the greatest impact on the process of standardisation of terminology. (see Tkáč, 1986, 1990) The international committee for museology ICOFOM dealt extensively with the museum terminology as well. (Desvallées, 2009) The most famous publication from France is perhaps *Concepts clés*

4 The monograph titled *Muzeum versus digitální éra* [The Museum Versus Digital Era] deals with the issue of digital technologies and presentation forms based on them, and we recommend it to all interested in this topic (see Šobánková, Lažová et al., 2016).

de muséologie by André Desvalléese and Françoise Mairesse (2010) translated into English, Spanish and later also into Czech and other languages. In 2011, the same authors published a monumental, over 700-page, book entitled *Dictionnaire encyclopédique de muséologie* (Desvallées & Mairesse, 2011), recently translated by Iranian colleagues into Farsi. Both publications reflect on the latest Czech developments. (Dolák, 2009) There are also terminological dictionaries in Japanese, Dutch and Russian. (Olševskaja, 2010) Václav Rutar (2011) has been dealing with museological terminology in the Czech Republic.

In our text, we understand and use the basic museological terms as follows. The term **short-term exhibition** refers to the presentation of scientific results or of other museum activities. It is a short-term exhibition; it is a reaction of an immediate need to share certain facts with the public. In this context, we can distinguish between *a museum exhibition* which deals with a certain field of a human activity which relates to the specialisation of a given museum, and *an exhibition in a museum* which can consist of anything that has any cultural importance (drawings of children from a local school, an exhibition of fruits from local gardeners, etc.).

The term **long-term exhibition** signifies the presentation of an interpretation of a specialised topic in relation to the collection-making profile and the mission of a given museum. It is the most fundamental authentic form of museum presentation, a long-term form. And what are its main characteristics according to Zbyněk Z. Stránský?

A long-term exhibition:

1. communicates the content brass tacks of a thesaurus and relates to the fundamental focus of the institution on documentation,
2. is not just mere showing but it also brings the explication of learned facts,
3. is a special type of illustrative way to share information which is based on authentic evidence; after being carefully selected, a collection object becomes an exhibit,
4. lasts over a long period of time. (Stránský, 1984, p. 105)

A long-term exhibition should have the character of a compendium whereas a short-term exhibition should reflect on a contemporary situation. Therefore, galleries for short-term exhibitions should be moderate and universal with an open structure and have spatial flexibility. To distinguish strictly between 'long-term'

and 'short-term' would be rather scholastic, however, it can be established that the time boundary between a short-term and long-term exhibition be a two-year duration. Another view is expressed by the Mexican Yani Herreman (2004). According to her, the word 'permanent' should be replaced with 'core' which refers to the main, fundamental, principal, and perhaps just as in this text, to something of compendium nature, and should be of minimal 10 to 15 years in duration. Yani Herreman fittingly points out that some of the smaller museums do not even have permanent exhibitions; some of the larger museums (such as the Musée de la Civilisation in Quebec) do not give much attention to them. Yani Herreman divides temporary exhibitions with reference to Michael Belcher into short-term (1–3 months), mid-term (3–6 months), and long-term (lasting for a longer period of time).

Another frequent term is the *public* which in the diction of modern philosophy and sociology refers to a group of people interested in public (political, economic, social, cultural, etc.) as well as governmental issues, and who strive to exert influence over the administration of public events usually via mass media. One of the basic functions of the public is the political and social control and the function of legitimisation (entities which need the support of public opinion for their legitimisation are interested in the public). (Reifová, 2004, pp. 307–309) In accordance to Miroslav Foret, the public is a very indefinite social category, an aggregate of members of certain (institutionalised), residential, territorial, national or even supranational units, who are mature and can express their opinion on public issues. (Foret, 1994, p. 101) The last point of Foret's definition can hardly accommodate museums because in their conception, children are also part of the public. According to Philip Kotler, the public is a group of people who have actual or potential interest in and influence over a society to reach its objectives. (See in Foret, 1994, p. 101)

A term related to the public is *public opinion*, that is, the summary of opinions (systematised or non-systematised) on various events and issues of the surrounding or inner world formed in the minds of people and in the society as a whole. Public opinion includes various levels: from imaginative ideas not based on knowledge as such, feelings, opinions, thoughts, uncertain 'ideas' on various issues up to precise; to on the other hand crystallised and clear views. (Foret, 1994, pp. 103–104)

A very common term in museology is also *communication*, which can be perceived as the transfer of information from the side of an expedient to

a recipient via media. The objective, however, is not only the actual transfer but the communicative effect that is, inducing a change on the side of a recipient. (Stránský, 1984, p. 40) *Museum communication* means any kind of a message sent or a contact established with the public.

The key museological term and the subject-matter of our book is *museum presentation*. It is the part of museum communication which deals with sharing knowledge and values of museum pieces, or, their documentation system with the purpose of inducing a change in the knowledge and the values of a recipient. It is based on the authenticity of a musealia (a collection piece) as the original, non-mediated source of knowledge and evaluation, that is, a direct witness of a documented reality. In most cases, a presentation takes the form of short-term or long-term exhibition. In a wider context, we can include in this category also the work of researchers or the variety of educational programmes and other new forms of presentation (see the presentation via web pages and portals or mobile applications). In practice, many authors find the term *museum communication* equal to *museum presentation*, so we need to perceive them (unfortunately mostly) as synonyms in references to cited works below. Stránský's (1972) fitting structuring of the process of musealisation into selection, thesaurisation and presentation justifies the specificity of the term *presentation* while establishing it as not interchangeable with *communication* which is not a purely museological term and thereby more general.

Despite certain unclear terminology, an overall agreement exists in relation to a classical presentation activity which is *exhibition*. For example, in his book *Zásady českého muzejnictví* [The Principles of Czech Museum Culture], Svoboda (1949) talks about museums publicly *exhibiting* their objects, and later he defines *exhibitions* as the manifestation of *exhibiting* activities of a museum. Beneš (1981, p. 96) prefers the umbrella term *museum presentation* and draws a distinction between its two basic forms, a *museum long-term* and *museum short-term exhibition* which also corresponds with the concepts of this text. The former is a manifestation of a long-term complex exhibition programme (focused on the profile themes of the museum), and the latter is a manifestation of a short-term additional programme of a museum and is often of a narrower specialisation. In English literature we can almost exclusively see the use of the term *exhibition*, *exhibit* or *display* (see Edson and Dean, 2013). The term *exhibition* refers in its broadest sense not only to the result of the action of displaying something (a short-term and long-term exhibition) but also the whole

of that which is displayed (exhibits) and the place where it is displayed (exhibition gallery). The term *exhibition* as well as its abbreviated form *exhibit* refers to the activity of displaying objects to the public (the presentation of exhibits, an exhibition), to the displayed objects (exhibits) and to the place in which the exhibition is located (exhibition gallery). (Desvallées & Mairesse, 2010; Edson & Dean, 2013 and other authors.)

Dean (1994, p. 3) points out that the meaning of the English words *exhibit*, *exhibition* and *display* often randomly vary and there seems to be an agreement on their use. Dean himself uses the term *display* to refer to a (public) presentation of objects without any accompanying interpretation. In his understanding, the term *exhibit* signifies a localised group of objects and interpretational material which create a kind of a compact unit of a presentation setting. On the other hand, *exhibition* refers to a complex of such units. It is a group of all exhibition elements which together form the entire public presentation of collections and information related to them.

To clarify the terminology of museum culture, we can consult the dictionary of museological terms which was prepared and published by ICOM, or its International Committee for Museology in cooperation with the Musée Royal de Mariemont.

According to this dictionary, the term *exhibition* has the following meanings:

1. Understood as the place where the contents are on display. Even though the exhibition appears to be one of the characteristics of museums, exhibition thus has a far broader reach because it can also be set up by a profit-making organisation (market, store, art gallery). It can be organised in an enclosed space, but also in the open air (in a park or a street) or in situ, that is to say without moving the objects from their original natural, historical or archaeological sites. Exhibition areas can also be defined by the users – visitors and museum professionals – the people who enter this specific area and share in the general experience of the other visitors at the exhibition. The place of the exhibition is thus a specific place of social interaction, the effects of which can be assessed.
2. As a result of the act of displaying, exhibitions are seen today as one of the main functions of the museum which, according to the latest definition by ICOM, also includes communication. Exhibitions are a fundamental feature of museums, in so far as these prove themselves to be excellent places

for sensory perception, by presenting objects to view (that is, visualisation), monstration (the act of demonstrating proof), ostention (initially the holding up of sacred objects for adoration). Showcases and picture rails are artifices which serve to separate the real world and the imaginary world of museums. They serve no other role than to mark objectivity and to guarantee distance (creating a distancing, as Bertolt Brecht said of the theatre).

3. When understood as the entirety of the objects displayed, it also includes musealia, museum objects or “real things”, along with substitutes (casts, copies, photos, etc.), display material (display tools, such as show cases, partitions or screens), and information tools (such as texts, films or other multimedia), and utilitarian signage. From this perspective the exhibition works as a specific communication system. Exhibits in an exhibition work as signs (semiotics), and the exhibition is presented as a communication process which is most often unilateral, incomplete and interpretable in ways that are often very different. The term exhibition as used here differs from that of presentation, in so far as the latter term evokes the showing of goods in a market or department store. These two levels – presentation and exhibition – explain the difference between *exhibition design* and *exhibit display*. In the first case the designer starts with the space and uses the exhibits to furnish the space, while in the second he starts with the exhibits and strives to find the best way to express them, the best language to make the exhibits speak. (Desvallées, Mairesse, 2010, pp. 34–38)

The dictionary also mentions the term *digital*, or *cyber exhibitions* which refers to exhibitions available on the internet. (Desvallées & Mairesse, 2010, p. 38)

1.5 Current Theoretical Reflexion on Presentation and Its Research

Published literature on museum presentation is rather plentiful. If we skip the early protomuseological texts, we refer to the production starting at the end of the 19th century. In the Czech region, it includes short articles by Kliment Čermák, later by Fridolín Macháček and others. One of the important earlier compendiums and in many aspects still valid till today is the one written by Jiří Neustupný and titled *Otázky dnešního muzejnictví* [The Issues of Today's

Museum Culture] (Neustupný, 1950), another one written later by Josef Beneš titled *Muzejní prezentace* [Museum Presentation] (Beneš, 1981), and a rich production on general museology of Zbyněk Zbyslav Stránský. The latest works include a monograph by Petra Šobánková *Muzejní expozice jako edukační medium* [Museum Exhibition as an Educational Medium] (Vol. 1 and 2, 2014a, 2014b) and Jan Dolák's *Muzeum a prezentace* [Museum and Presentation] (2015). Presentation is as a topic also taken up by postgraduate students at both Czech and Slovak universities.

Let us mention some of the key titles published abroad, such as *Průručka všeobecné muzeologie* [Manual of General Museology] by Fridrich Waidacher (1999) dealing with the field of general museology. There are also monographs written specifically on exhibitions. One of the latest and most significant are the works of Martin R. Schärer (2003), David Dean (1996); one of the earlier ones is titled *Ekspozicionnaja rabota v muzejach* (Zaks, 1982), and the work of an Indian professor Bedekar (1978) or the practice-oriented work of Arminta Neal (1976).

Also the International Committee for Museology ICOFOM dealt with presentation in their ICOFOM Study Series which are available on the website of ICOM. Some of the recent ones, and, thanks to various language versions, well-known practice-oriented is *Running a Museum* (Boylan, 2004) or an anthology edited by Paulette McManus (2000). Numerous seminars have been held on the topic of presentation, which have produced a number of anthologies (Szemere, 1978; Opava, 1981). Some of the recent Russian anthologies include those edited by Maria T. Majstrovská (1997), Vladimír J. Dukelskij (2010) and a high-quality anthology edited by Naděžda I. Sergejeva (1997). There have also been an extensive number of articles published in many languages around the world. One of the latest collections of articles is *Visiting Visitors* (Davis & Smeds, 2016).

As shown above, there has been a lot of work done in the field of theoretical understanding and research into museum presentation. It is, however, important to say that the texts are of variable quality. Many authors only repeat what has already been written, while others regress by many decades on the account of their lack of knowledge and their want of being original at all costs. Works that deal with presentation fundamentally are therefore rather scarce. We can even say that there are not enough texts dealing with the description and the explanation of particular exhibitions. There is an even lesser amount

of serious research studies with identifiable methodology, even though museology is defined as a science; that is a field with its theory and research. The majority of specialised texts which deal with presentation are in fact 'exhibition guides' approached as generally historical, botanic or geologic texts mostly with several snapshots of solitary exhibits (this is the most common approach) or a panoramic view into the gallery (that is significantly less common). Therefore, these texts are rather 'additional explanations' of a certain situation in history or in the past; or only serve as an introduction to an exhibition. Standardised research methods applied to analyses of presentation approaches, decoding of presentation from the viewpoint of applied ideological, gender, cultural or other implicit starting points, or, proving the effectivity of presentations and other necessary research issues thus remain mostly unexplored.

Many significant personalities from museum culture such as Beneš (1997), Waidacher (2000), Kesner (2003), Veselská (2006), Dolák (2012) and many others have repeatedly invited others to engage in an analysis of presentations and to subject it to a critical study. The last of the authors carried out a critical evaluation of archaeological exhibitions in the Czech Republic and abroad emphasising the fact that the occasional review of presentation activities are mostly focused on scientific correctness and not on the application of exhibition strategies, progressive or negative exhibition elements. (Dolák, 2012, p. 102) Šobánková (2014b) who carried out qualitative research into contemporary museum presentation in the Czech Republic points out that methodologically standardised analyses can indeed bring valid and further applicable results.

An ongoing analysis and critical study of applied presentation approaches, or of the way exhibitions are presented (Beneš, 1997, p. 12) could help overcome a routine and lacklustre approach to museum exhibition, and help search for new ways of presentation. In practice, exhibition designers have a tough job to present, often under difficult conditions, engaging exhibits' which will affect the public for many years to come. It is our belief, that the results of their work deserve due attention and research just as any other cultural and social phenomena that are traditionally subjected to critical studies. The definition and comparison of presentation approaches applied today can offer the necessary feedback which can also have impact on exhibition projects in the future.



*One can only see what one observes,
and one observes only things which are already in the mind.*

Alphonse Bertillon

2 Theory of Museum Presentation

The phenomenon of presentation can be perceived through a prism of various fields of study. Apart from museology, these also include anthropology or cultural history, the theory of communication, pedagogy, etc. The knowledge and terminology of these fields significantly enriches the theory of presentation facilitating the grasp of this specific phenomenon in line with today's accent on interdisciplinary perception of rather complicated cultural and social phenomena.

2.1 Museum Presentation as Part of the Process of Musealisation

Throughout history, humanity has developed a number of strategies which help them preserve and pass on cultural values, norms and meanings relevant for a particular society. One of these strategies includes the collection and preservation of symbolic and representative physical elements that document the activity of a given culture as well as the development of the environment in which the culture develops. This cultural and culture-making human behaviour is studied by museology and referred to as the museum phenomenon. Museums represent the institutionalised manifestation of this phenomenon. In developed societies, museum institutions appeared for the first time 200 years ago. The importance of these institutions is given by the basal human necessity to preserve cultural memory of human community. (Stránský, 2005) The existence of culture itself is directly dependent on the preservation of cultural memory, and museums represent one of the historically developed forms of preserving and passing on the evidence of acquired knowledge and the level of human culture. And it does so by way of collecting, preserving, analysing and publicly displaying authentic collected objects – museal objects.

It is one of the many social mechanisms which ensures the passing on of fundamental cultural traditions. It co-exists with the direct, transpersonal transference which is over time threatened by the negligence and incapacity or limitation of both transferees and recipients even though this type of transference may have a more prominent impact. (Sokol, 2008, p. 129) The preservation of cultural continuity and tradition, which is often at the heart of every museum, can be often in creative and enriching disagreement with innovative efforts which break down or refuse the concepts built up by their parents' generation– or alternatively they discover something their parents refused to accept. (Sokol, 2008)

It is because of the permanent human endeavour to change their environment, to create something new while rejecting old concepts, or to build on them in an innovative way, that the memory institutions including museums, libraries and archives are so important. Physical artefacts, their collection and the institutions that preserve them are tools that make it possible for a human work to come back to life; to generate interest among people, and to become part of their lives again. (Sokol, 2008, p. 142)

The preservation of cultural continuity will never cease to be a human necessity which is why human societies search for the best ways in which to continue and fix their knowledge and culture. The museum phenomenon is closely related to this specific cultural need of people while maintaining the focus on all fields of human culture, religions, arts, natural and social sciences, human customs, traditions, skills, techniques, industries, institutions, etc. Human culture and museum phenomenon influence one another in the dynamic process of development.

The museum phenomenon is the subject-matter of museology, as defined by Stránský who coined the term *musealisation* in order to grasp this phenomenon with greater ease and precision. The musealisation process is started by the existence of this phenomenon – it is its manifestation and realisation.

Musealisation is a process during which certain elements are taken out of reality. These elements document (are the authentic evidence of) the form and status of human culture in certain periods. (Stránský, 2000) These selected physical elements in which human culture is fixed are protected against natural decline during the process of musealisation – and what is important is they continue to be used for the development of human culture.

The collection and protection of these selected and fixed elements which can be referred to as physical thesauri are import to human kind for various

reasons. Firstly, thesauri have the ability to fix certain forms and shapes of culture from a certain time, and thereby they enable us to study them and learn about them.

Without preserved physical objects we would not be able to learn about cultures that do not exist anymore – or, using the phrase coined by anthropologist Kroeber – about ‘dead’ cultures. (Kroeber, 1971)⁵ This realisation brings a cultural reaction, another leap in the development, where we do not need to discover that which has already been discovered, or, where individual cultural elements and impulses are transferred into different cultural entity, as was the case with papermaking or porcelain making, or with the ways of artistic depiction (e.g. ancient templates in Christian art). The role played by physical thesauri when preserving cultural continuity can be also well demonstrated using the example of ancient monuments: although, it includes only those that were preserved ‘thanks’ to the greediness and looting of Romans, those that were not destroyed by raiders plundering Rome in the 5th century, those that were not dissembled and used as building material by new citizens of Rome, those that were not destroyed by Middle Age Christians that saw pagan immorality in them, those that were brought here to Europe (e.g. Aristotle’s scrolls) by other nations (in this case by Arabs), those that were discovered by archaeologists, etc. Even though they probably will not represent the entire ancient culture with all its aspects, given the historical difficulties following their existence, still they have made it possible to be studied later by Renaissance collectors, artists, and scholars. It is only thanks to these preserved and thesaurised elements of ancient culture that the Renaissance period could acquire its specific form and content firmly linked to ancient culture. The word *only* in the above-mentioned listing of historical events which every one of the particular elements went through suggests that these are mere relicts, incomplete fractions – but it was these

5 Kroeber (1971, p. 186) points out that the things that die out when certain national cultures cease their existence are not individual elements of the content of such cultures but their characteristic structure or system. As Kroeber maintains, it is mainly the destruction of certain accumulated cultural content, embodied in a more or less unique structure of customs that belongs to a certain nation or a group of nations. Undoubtedly, such an accumulation of structure ‘dies out’, that is, it falls apart, disappears and is replaced by new ones. Individual elements of the content of such cultures may have already spread into new cultures and are continued there.

relicts that in this particular example awakened the interest in antiquity in Europe as well as creating long-standing inspiration.

Relicts of other historical periods or cultural circles were faced with similar fates. The above given example also shows that the importance of the described role of physical thesauri grows with time which affects the physical elements of a culture with its particular devastating power which makes it impossible to preserve all elements which we would otherwise be much interested in.

To sum up: collecting, preserving and making accessible physical thesauri contributes to the preservation of culture (by enabling the process of passing things on to future generations) but also these thesauri serve as further sources of knowledge which continuously advances human culture.

The process of thesaurisation itself, the keeping and preserving of selected elements, though fundamental, is not musealisation – which is a complex series of events, which includes presenting and making accessible collected elements. It is also apparent from the above-mentioned examples that even the largest collection of historical elements will remain useless for cultural development if not made accessible to all. Just as a biblical talent that is buried in the ground cannot possibly contribute anything to the development of culture.

The key characteristics of musealisation, which is certainly the presentation of a thesaurus, has not always been obvious throughout the historical development of this phenomenon, and the extent to which it has been realised has varied. Historical collections which are today the basis of collections of many world-renowned museums were often originally in the hands of private collectors. Up until the 19th century many works were not public, and could only be accessed by limited and elite groups. However, these historical circumstances do not decrease the key role of presentation in the complex process of musealisation and mediation of collections ‘for the purposes of education, study and enjoyment’ (see the definition of museum according to ICOM, 2007) which we consider to be of growing importance today. This is evident by the diversification of the forms of presentation, their increasing quality and the overall attention which is given to the issue of presentation nowadays – be it in the practice of museums or by researchers.

As we have said, the musealisation relationship to the reality manifests itself through the natural tendency of people to separate certain elements from reality and protect them against demise or damage. People attach the role of symbols to these elements, that is, signs which on the basis of natural analogy



Fig. 8–9 Musealised relicts in situ – the area of Pompeii in Italy, bottom – musealised objects within a museum presentation – a part of the exhibition is in the Victoria & Albert Museum (UK); photo by Petra Šobáňová 2015 a 2013

refer to other, greater realities and meta-realities. (Stránský, 2000) Taken from a certain point of view, human culture is foremost a system of symbols and anthropologists often point out the immense impact these symbols and cultures have on the way we perceive and approach reality. (representing all: e.g. Murphy, 1998)

The issue of presentation can be viewed from the standpoints of various fields. Apart from museology and anthropology or culturology, we can also apply conceptual constructs from other fields of study which contribute to the theory of presentation, and help understand this particular phenomenon.

We will now attempt to define presentation from the viewpoint of the theory of communication.

2.2 Museum Presentation in the Context of the Theory of Communication and the Theory of Information

The theory of museum presentation is closely linked to the theory of communication. The original Latin meaning of the word *communicare* includes message, sharing, connecting and shared participation. The philosopher Karl Jaspers defines existential communication as a state where we are not aware of ourselves in an isolated setting but only in communication with others; we know from the reaction and view of others who we are and how others perceive us. Communication is therefore the very basis of all relationships among people. It is a process of communicating (and sharing), transferring and exchanging of meanings and values.

The actual contemporary term communication is somewhat ambiguous. It can include traffic signs but it can also be found among plants and animals. Communication takes place within the so-called system of 'first signs' (smells, animal rituals, etc.), but people also communicate using the so-called system of 'second signs' (language, speech). Apart from verbal language systems, there are also non-verbal language systems which, among others, includes museum exhibitions. For our purposes, we can perceive the term communication as a way to communicate, that is, to share thoughts, information, opinions and feelings among people. Logically, communication also includes a feedback. However, the term communication is also used in such contexts where minimal or almost no direct feedback is expected, e.g. radio broadcasting. A delayed feedback may be also given, this is a primary issue for museums.

The theory of communication shares a lot with the theory of information. The Czech philosopher Egon Bondy dealt with information from the ontological point of view. As he maintained, the transfer of information is the most fundamental, most elemental and most important phenomenon we have in the world. (Bondy, 2005) Without the transfer of information, there would be no change, which means no process thinkable – possible. Any kind of difference between mind and matter disappears. (ibid)

Considered to be the father of the theory of communication is the American philosopher Charles Sanders Peirce, who among other greatly contributed to the knowledge of sign, meaning, and communication. His approaches were later continued and developed by other experts in the field of semiotics – the science of sign systems. In the case of our subject matter, we need to distinguish between the different signs of various museum objects. While art production is perceived as original works with specific meanings and constituting individual communication entities, objects of natural sciences or archaeology are often of generic (sortal) nature. In archaeology or natural sciences, we therefore often talk about exemplification.

The central point of human culture are symbols; the ability to receive information via symbols greatly impacted the development of human kind. Symbols are tools that are placed by people between them and reality in order to be able to talk about reality even when it is not present. Thanks to communication via symbols, human knowledge can be ‘stored’ for many years.

Communication – Process, Effectivity, Functions

In his work entitled *Power and Personality* published in 1948, Harold D. Lasswell describes the act of communication as a succession of the following elements: who – what s/he says – using what channel – to whom – with what effect. (Foret, 1994, p. 19)

The most popular model of the process of communication leans on the following seven fundamental points:

1. a communicator – the carrier of thoughts and messages,
2. encoding – the transformation of thoughts into the system of symbols,
3. a message – the result of the process of coding,
4. media – the actual carrier of a message,
5. a decoding receiver,

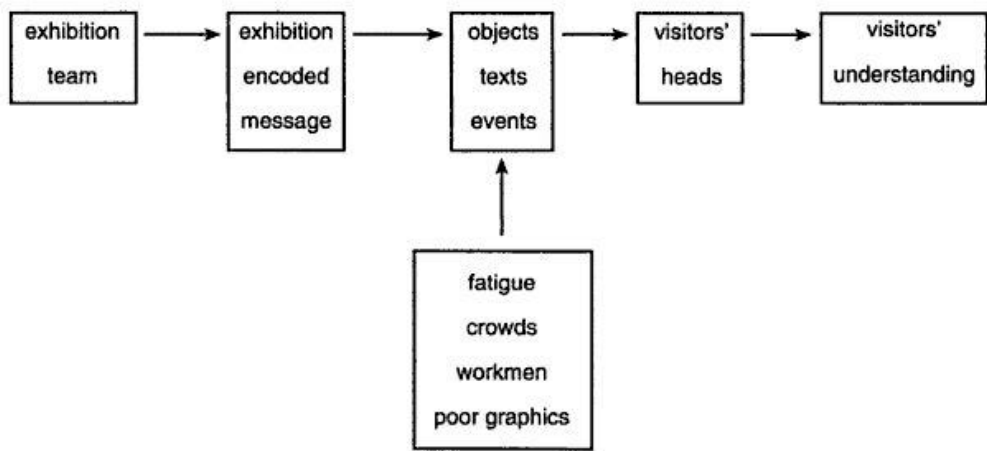


Fig. 10 Shannon–Weaver communication model applied to museum exhibitions (Marešová, 2011, p. 59)

6. a feedback – the reaction of a receiver allows for mutual and not one-way communication,
7. noise – all possible factors that change the content of a message. (Foret, 1994, pp. 24–25)

To be able to manage the whole process successfully, we need to bear in mind that we first need to encode our thought into its symbolic equivalent, which is a text, image, sound, three-dimensional object, etc. Quite naturally every symbolic system has its advantages and disadvantages, not only in the readiness but also precision. Already at this point, a sender must consider the receiver's abilities, that is, whether s/he will be able to understand the system. Subsequently, a receiver decodes the message. A sender aims to ensure the most precise copy of their thought when being decoded by a receiver.

A similar approach to the one of Lasswell was also taken by American mathematicians Claude E. Shannon and Warren Weaver. (Shannon, 1948)

However, communication can incur certain problems. What are they?

- distortion of information when flowing through a channel, typically in mediated communication through a number of subjects,

- communication clogging – occurs when a user is presented with so much information that s/he cannot manage to take it all in,
- inadequate form of message transfer that does not take the receiver into consideration, e.g. a memorandum containing over-long, foreign words and/or specialised terminology, and is transferred to people of lesser intelligence or less literate, etc.,
- the use of vague, empty words and sentences – the meaning of the whole message is thus weakened and disputed.
- inability or unwillingness to listen to the point of view of the receiver, often we want to hear only what we want and disregard criticisms. (Foret, 1994, p. 27)

The effectivity of communication often depends on the fulfilling of seven points referred to as the Seven Cs:

1. Credibility. Communication depends on an atmosphere of trust and belief; a receiver relies on the competence of a sender.
2. Context. A communication programme must be appropriate to the settings.
3. Content. A message must have a significance to the receiver, it must comply with their system of values, it must be relevant for their situation, the content determinates the audience.
4. Clarity. A message must be expressed in simple terms, theses, mottos.
5. Continuity and Consistency. Communication is a never-ending process that demands constant repetition. The message itself must be consistent (coherent, intact).
6. Channels. It is necessary to use those communication channels that already exist because new ones are difficult to create. Different target audiences prefer different channels.
7. Capability. Communication must count on the abilities of the public; it is most effective when it demands the least special effort on the part of receivers which means that a sender must know the way to communicate with them, their customs, their ability to read, prior knowledge, etc. (Foret, 1994, pp. 27–28) We can also distinguish between auditive (speech, music), and visual (writing, image, photograph, three-dimensional objects) communication. Other approaches sort communication into static and dynamic, one-way (providing information) and two-way (actual communication). A museum exhibition is almost always a mix of verbal (use of words, language) and non-verbal (use of objects, signs and symbols) communication.

Functions of Communication

The boundaries between individual functions of communication are not solid, and they have the tendency to overlap at times. The functions of communication may be:

1. informative – transferring certain information, facts or messages,
2. instructive – similar to informative but also including the explanation of meanings, descriptions, procedures, organisations, manuals,
3. persuasive – the effort to influence people into changing their opinion, approach, evaluation or way of conduct; it can be done by way of rational persuading using arguments and logic, or by way of influencing the emotional part of human thinking,
4. empowering and motivating – follows on from the persuasive function, it refers to the empowering of certain feelings such as self-confidence, feeling of one's own necessity, supporting a relationship towards something,
5. educational – implemented particularly in institutions,
6. socialising and socially integrating – the establishment of relationships among people, getting closer to one another and forming contacts, increasing the feeling of belonging and mutual dependency of personal identity – at the level of a personality, it helps us clarify and understand the concepts and notions of ourselves, it is the ratification of self-conception,
7. cognitive – closely linked to the informative function; through experiences we conserve in an abridged form all information we would otherwise not be able to experience in such an extent,
8. confiding – aims to decrease inner tension, to overcome obstacles, to share feelings,
9. offering refuge – when having unpleasant personal feelings, we can take our minds off things by casual communication about neutral things. (Mikuláščík, 2003, pp. 21–22)

According to many a theoretician of communication, most of our messages are told non-verbally, with a smile, grimace, shrugging, etc. The fact that non-verbal communication is often more powerful (more convincing) than verbal is important for museum presentation.



Fig. 11–12 Museum presentation and communication; top – a photo taken during an educational program in the Museum of Modern Art in Olomouc (CZ), bottom – the invitation to communicate in the exhibition of the Science Museum in London (UK); photo by Petra Šobánková, 2014, 2013

2.3 The Essence of Museum Presentation – Showing Things

There have been a large number of publications written on the topic of communication, often with this very word in its title. However, we must say that the majority deal with verbal communication, while including the issue of communication through objects in the general category of 'image symbols' or neglecting it altogether. Although, as Foret maintains, the subject of communication can be any product (human, natural, verbal and non-verbal, material and mental) introduced (presented) by one person or an institution and perceived by other party. (Foret, 1994, p. 18)

That means that the issue of communication through things (in our case through exhibits) is rather suppressed in the theory or absent completely. (Mikuláščík, 2003) And yet showing things, ostensis, is the very basis of human communication, as sufficiently proven by the Czech scientist Ivo Osolsobě (2002, 2007). We express ourselves through showing things, shapes, movements, colours, living creatures but also through ourselves. We try to say something about ourselves by the clothes we wear, or by our beard and hair style. Ostensis is thus a type of non-sign communication; it is the most typical form of presentation as it concerns showing things which are here and now, that is 'praesens' (present).

From the viewpoint of semiotics, we can confirm two types of fundamental ways of human communication and learning. These are:

1. **representation = non-presentation type:** communication through signs; communicating through representatives, models, that is, a type of communication that does not present the original but represents or pre-presents (pre-retrieves) it through a cognitive substitute,
2. **ostense = presentation type:** communication through objects themselves by showing them, a type of communication which shows (makes available) the original for others to learn. (Osolsobě, 2007, p. 96)

A museum exhibition belongs to both categories. There are exhibits on display (presentation type is applied) but these usually represent a whole class of similar things, thereby they are also representatives.

Naturally, by definition ostense is rather limited at least to what is present here and now and what is therefore possible to observe. As Osolsobě warns,

the language of ostense, its dictionary and grammar are very poor, not able to express negative, the future, the past, the super sensible or general. (Osolsobě, 2002, p. 36) In a grammatical term, it is the use of indicative mode only.

It was Plato who already dealt with the definition of showing (deixis). The first theorist of ostense is considered to be St Augustine (see *De magistro* – a dialogue between Augustine and his son Adeodatus). In his understanding, ostensis is in a sense an anti-semiotic system. Also the Czech philosopher and pedagogue, J. A. Comenius put a lot of emphasis on showing in terms of his didactics. The adjective *ostensive* was used by Francis Bacon, Gottfried Wilhelm Leibniz as well as Immanuel Kant. Søren Kierkegaard and Ludwig Wittgenstein went as far as to put ostensis above all verbal. (Osolsobě, 1997) A while ago, the Czech museologist Karel Boženek used a fitting example from Gulliver's travels by Jonathan Swift in which he describes a fictional land called Balnibarbi where speech was removed from communication (as words are only names of things) and everybody carried things and expressed their thoughts through (showing) these things. Ostensive definition introduced to logics by Ludwig Wittgenstein and Bernard Russel is in fact the most basic and primitive way by which to introduce the meaning of a term by showing the thing which the term refers to since it is a definition by the designatum itself. However, logics itself will not be enough to help us in the field of museum presentation. (Boženek, 1997)

Analysing the components of the oldest forms of a 'language' based on subject-visual and subject-acoustic aspects, the Russian museologist Svetlana V. Pshenichnaya comes to the conclusion that it is here where we are to look for the fundamental sources (istoki) of a 'museum language', in its first prehistoric forms. (Pshenichnaya, 2001)

However, museum communication is not based only on visualisation. As Stránský maintains, the mission of museums is not only to visualise the knowledge of certain phenomena and to show some objects, but to prove the truth of our knowledge and the evaluation of a museolised reality through their ontic authenticity. (Stránský, 2008a, p. 8)

2.4 Pre-understanding and Interpretation

The purpose of museums is not to show objects, or to provide their textual description but to interpret them. The British philosopher Beth Lord says: 'What every museum displays, in one form or other, is the difference inherent in interpretation. Interpretation is the relation between things and the words used to describe them, and this relation always involves a gap. Museums need not contain artefacts and need not contain text; sometimes interpretation is implicit and hidden. But without interpretation, without representing a relation between things and conceptual structures, an institution is not a museum, but a storehouse.' (Lord, 2006, p. 5)

A museum exhibition is surely a specific 'type of text' which is why its understanding and interpretation is so crucial. This leads us to hermeneutics, the theory of interpretation and understanding. It was the German philosopher Hans-Georg Gadamer (1994) who dealt with these issues in particular. According to him, experience and understanding are significantly different in social sciences than in other natural or technical sciences. The past and present influence each other. They are in a state of mutual mediation, and the process of understanding is an event in which we listen to a silent language of traditions which we belong to. This approach corresponds with van Mensch's approaches, that is, the context of constant interpretation (see the following passages).

According to Gadamer, a human being reaches understanding by firstly creating a preliminary concept or prejudice and then later is confronted with a text or object, and based on this comparison s/he improves their idea. They can never do without a preliminary idea, that is, *pre-understanding*. The fundamental point is that they verify their ideas and are willing to change it accordingly. This procedure is commonly repeated, which is why it is referred to as 'circular' process or a 'circle'. The key is not the result but the form of analysing.

The hermeneutic circle has at least three stages:

1. Pre-understanding – which the interpreter has in mind when approaching the phenomenon that is to be interpreted;
2. Hermeneutical experience – which does not correspond to the pre-understanding;
3. Change of understanding – with which we can return to the first stage.

These processes are not linear. Martin Fuchs (1999, p. 152) points out that: 'It is necessary to recognize more than one mode of hermeneutic appropriation.' 'The right to be different includes the option to reject hermeneutical understanding and the communication of certain aspects. (...). What I have been arguing for is a switch from an unidirectional, in the even monological, hermeneutics to a reciprocal and multidirectional one.' (Fuchs, 1999, p. 153) Lenka Hořínková-Kouřilová (2006) dealt with the application of hermeneutics to information science in her Ph.D. thesis. Gadamer's approaches were explained in terms of museology by the Argentinian museologists Olga Nazor (2006) and Norma Rusconi (2002), and in particular by the Croatian expert Ivo Maroevič (2002). As Gadamer maintains, to truly understand somethings means to create a project from one's own possibilities. Similar processes take place during the perception of museum exhibition.

2.5 Museum Presentation as a Message

From our everyday lives, we all know spoken and written communication as shown in this chapter. A type of communication is surely also museum presentation because there too can various models of communication be applied, including the classical Jakobson's model of language communication with six well-known constituents: a sender and receiver who by way of some channel (contact) exchange information (a message) that refers to a certain context. The success of the whole communication process is ensured by a shared code. (Jakobson, 1960, Gvoždiak, 2014)

As was already mentioned, Osolsobě (2007) approaches communication differently: he distinguishes between its two fundamental types and relates them to the issue of knowledge. Osolsobě makes the distinction between presentation-based communication (ostensive) during which the original is presented (is made available to the perceptive activities of others), and non-presentation based communication, representative, during which we communicate through 'representamin', 'models'. It is not the original that is presented during non-presentation communication but a certain piece of knowledge is re-presented or pre-presented (pre-visualised). Osolsobě (2007) points out that it is the exhibitions of unique objects, museum exhibitions, sightseeing but also various field-trips or non-museum exhibitions that represent typical examples of non-representative

types of communication, that is, examples of ostensive communication. This type of communication is characterised by a number of aspects (as opposed to the communication via language) which should be subjected to further studies. It is also necessary to keep in mind that a museum exhibition often combines various presentation-based communication (ostensive), non-presentation communication (representative) and language communication. The complexity of this issue is further increased by the fact that a museum exhibition itself creates a representation of a world; it's more or less a model, by using originals, non-original representations and language explications. Through presentative, or hybrid communication, a model, a representation, is thereby communicated. Museums show exhibits, musealia (which makes it a presentation-based type), but these often represent a whole class of similar things which puts them in the role of representatives.

The relation between ostensive communication and language communication is also interesting – both of which are frequently used in museum presentation. Communication through a museum exhibition and verbal communication are similar in some aspects while they significantly differ in others. The similarity between verbal and museum communication lies in the fact that an exhibition is developed on the basis of a text (see the terms *libretto* and *script*, commonly used in museum practice) which is also why a museum exhibition often contains spoken and written communicators. The difference is mainly in the application of tangible evidence of cultural and natural realities in the process of museum communication. This evidence is typically perceived by sight, less by other senses – it is therefore mostly visual communication, though rather specific, thanks to the tangible nature of musealia but still very different to common visual communication.

A communicator is often referred to as a particular language or non-language expression, utterance or a message. In the context of museum presentation, a communicator can be an exhibition in its entirety but also its partial segments, e.g. individual textual panels, curator's lecture on a video played near a group of exhibits, that is, language communicators, or individual exhibition entities based on the relationship between displayed objects and their referential and explicatory supplements. In this case, it is the application of non-language communicators or mixed communicators.

No matter what the medium or the channel of communication is, its partial elements are always organised, or arranged according to the purpose of

this communication. That is why it is particularly important for the exhibition designers or museum management as a whole to clearly formulate the objectives of their efforts – the mission of the exhibition. The medium itself also significantly informs the character of communication so that certain particularities come to the surface by using the medium. That is why a certain medium (including a museum exhibition) cannot be substituted by another medium, nor can it be supposed that reading a catalogue to the exhibition or a virtual visit of a museum adequately replaces a personal visit to an exhibition.

Communicators, in our case especially museum exhibitions, bear visible signs of their origins and its circumstances: not only do they show period context but also the intention of their designer and their way of thinking. Possible approaches to exhibition development will be discussed in greater detail and submitted to a thorough analysis further on in this monograph.

In general, communicators, that is, also museum exhibitions and other forms of museum presentation are adjusted to the expectations, abilities and other specifics of a user (here a visitor). Communicators are products of a given code, that is, a steady manner by which information is transformed into another representation for the purpose of their effective and functional transmission. In the context of museology, we talk about ‘a museum code’ or ‘a museum exhibition language’⁶ (Beneš, 1981, Dolák, 2013), the specifics of which is that the information is encoded into ‘the language of things’, that is, of tangible evidence of various cultural and natural phenomena. Let us mention another of Jakobson’s observations according to which the code of communication is a social institution just as a message itself, and both of these constitutive units of communication, a message and a code, are not always possible to distinguish.

6 It is more fitting to talk about a museum ‘language’ – though, in quotation marks, because the term language refers to a fully-fledged communication system with several basic attributes, some of which are applied in a museum ‘language’ (such as sign, historical dimension) and some are not (lexical and grammatical level, systematic character, double classification, productivity, distinctiveness). In our opinion, the term ‘a museum language’, or, ‘a museum speech’ is therefore necessary to perceive as a metaphorical reference to the fact that this code (just as a language) effectively describes and expresses certain realities, things, phenomena or abstract ideas. However, a language in a classical understanding stands always at the back as we visitors use it to grasp a presented content, and it was also a language which communicated the transformed knowledge of designers into museum presentation.

A code, just as a message, allows for the identification of a speaker and its specific characters.

Beneš (1981, p. 15) points out that museums show a theme and not the evidence, the musealias – these take the role of mediators in the process of museum communication. That means, that a museum code is not only isolated displayed objects but the whole complex of expressive devices including, apart from musealias and exhibits of other types, also additional elements and the overall ‘physical’ context of an exhibition (starting with the actual building, through artistic and architectonical solutions of an exhibition, lighting, sounds, etc.). Therefore, a museum code, ‘a language’, includes an entire array of individual elements in mutual relations and the system of the variety of their application and structure. Similar to a language, these elements – these fundamental language units are constituted by words. The channel of a given code, of ‘the language’ of a presentation is a museum exhibition through which a designer sends a certain message to a visitor.

Often, this message does not relate to the actual exhibits but to their wider context. Therefore, it is necessary to extend the testimony of the original by offering an interpretation of its relation to the original context and social meanings within which musealias can express themselves. Beneš defines three such additional elements: picture-based (visual evidence of the original reality), sign-based (interpretation, symbolic description of processes and phenomena), and text-based (textual information on phenomena and processes interpreting such a reality). Their purpose is to help visitors see behind the things and experience the life and work of people living in a certain environment and time. (Beneš, 1981, p. 44)

The basis of museum presentation are collections, and the essence of a permanent or temporal exhibition is showing objects, be they authentic collection objects, their substitutes, or exhibits of another kind but linked to the concept of the collection (didactic tools, textual and visual panels, reviving exhibition elements, etc.). Apart from displaying, or showing, presentation also includes a ‘story-telling’ element, a certain manner of a ‘narrative’ which is why authors such as Burcaw (1983) and others describe presentation not only in terms of displaying but also in terms of interpreting. As Waidacher stipulates, a museum exhibition is an interpreting presentation of certain situations using authentic pieces of evidence. (Waidacher, 1999, p. 149) In a similar sense, Beneš (1981, p. 13) talks about the legacy of an exhibition which is expressed by museum tools.

Communication in exhibitions should be supported by all possible ways because an exhibition is an illustrative way of communicating thoughts and should lead to adopting certain values. (ibid) A communication role of exhibitions is also pointed out by Waidacher (1999, p. 147) who perceives them as a specific 'legacy', 'message'. Also Dean (1994, p. 6) makes a link between exhibitions and testimonies and interpretations, and emphasises the role of an interpretation process which he understands as a process of explaining, clarifying, offering or presenting a certain understanding of a theme or a collection object.

The issue of interpretation is rather wide, and various approaches could be applied to a museum exhibition which have been formulated by many authors, including Eco, Derrida, Foucault, de Man, since the second half of the 20th century. Gadamer (1994) maintains that today's interpretation does not include only texts and the verbal tradition, but relates to all historical relics. According to him, we can talk about an interpretation of a certain historical event, about a spiritual and mimical interpretation; about an interpretation of a certain type of conduct, etc. As he goes on to point out, the essence of a certain given fact which presents itself in an interpretation but does not reveal itself without mediation, and in order to unveil the 'true' and hidden meaning, we need to look further, beyond the immediate purpose. (ibid, p. 2)

The need for interpretation is proven by the multi-layered meaning of a musealia and its dynamic variability. It is important to reflect on the relativity of any interpretation because every exhibition project can be seen as a message of a period-dependent knowledge and the affiliation of the exhibition designers to a certain opinion. The interpretation of a musealia is influenced by the erudition and quality of designers, their specialisation, religion, and personal attitudes. The interpretation of a musealia is an important issue in museology and museum education because it is the interpretation that makes the central quality of museum objects – the museality, clear and understandable. All socialising and mediating efforts lean heavily on interpretation. Interpretation procedures reveal the very essence and purpose of objects which are displayed in museums, and show their up-to-date meaning dependent on many aspects.

An exhibition is 'a significant and report-like medium', a legacy, also in terms of the social-constructivist theory of Berger and Luckmann (1999) which deals with the process of meaning making, the institutionalisation thereof, and the transfer from generation to generation by way of tradition and the process of socialisation. These authors perceive social constructivism as an entity

postulating meanings and a reality as unstable social constructs, similar to a reality created by a museum exhibition. Its purpose and legacy are dependent on permanently changeable, dynamic processes subjected to human thinking and behaviour as well as to human interaction and current understanding of the world.

The issue of the social construction of a reality (for further detail, see Berger and Luckmann, 1999) is often linked to the disturbing debate on media which is an increasingly mass and influential element constructing a social reality and normality in terms of publicly shared social life. Media naturally include museums (though they are not as influential as media such as television, newspaper and journals both printed and electronic, or social networks), but also they have their responsibility resulting from the impact they have on the establishing of social norms and models.

Let us reiterate that the requirement for the development of a museum exhibition is a secondary museum selection, that is, the process of selecting objects from an already thesaurised collection fund. Objects with a highly topical and informative value are selected in this way. (Waidacher, 1999, p. 148) The process of this secondary selection can be perceived as an interpretation act performed by curators just as anything they do with objects after and that leads to the creation of a new exhibition entity.⁷ Therefore, a public presentation is preceded by a thorough selection of objects and their application as media, as a communication too.

In this sense, Stránský talks about a mediation of a thesaurus. If an individual musealia is displayed, we assign to it the role of an exhibit whose appeal and information value are dependent on the exhibit and its ability to communicate a certain content. In exhibitions, musealias are commonly presented in a complex, in which their individual elements are built around individual relations of meaning. Thereby their effectivity grows and a sign system is constructed with a larger and more complex information ability. This process is referred to by Stránský as a mediation because it is a deliberate activity which leads to the composition of a communication medium. (Stránská, Stránský, 2000, p. 72)

7 The term *secondary selection* can be also used in another context: it can be perceived as a permanent evaluation of the content of a collection fund and its optimal extent. From time to time, collections should be evaluated to see if everything they contain actually belongs there, if some objects are not redundant or no longer sustainable (not all materials can be kept forever, despite advanced conservation technologies).

Primarily this medium speaks a visual language and its activity is based on a scientific explanation of themes which surround the given thesaurus. In fact, it is a presentation of knowledge the production and presentation of which requires the application of a number of scientific disciplines which are traditionally employed in museums. Stránský observes that the employment of these scientific disciplines (whose primary communication tool is a scientific text) without museological impact often lead to exhibitions resembling 'illustrated books', or specialised texts, even though there is a clear distinction between purely language (textual) and ostensive (visual) communication. (ibid, p. 73) The language used in an exhibition should employ its own specific tools which apart from objects include the space itself, architectonical solution of exhibition galleries, graphic design elements, texts, colours, sounds, lighting, smells, and movements.

In this sense, Beneš (1981) talks about 'museum exhibition speech' which we perceive as a system of expressive devices in certain sets and relationships. The objective of the speech is to communicate certain content; pass on a message as we already described at the beginning of this sub-chapter.

All elements of a museum exhibition are designed with only one purpose which is to appeal to the viewer and influence their view on things. In these terms, an exhibition can be perceived as an expression which plays an important role in the field of mass media. That is why Pearce (1987) refers to exhibitions as works of art and compares them to novels and drama plays which just as exhibitions also deal with a certain theme and their objective is to pass onto visitors (readers, viewers) an understandable message. In museums, this occurs on the basis of selected elements which are then composed in a way to form a system that would represent a certain idea. According to Pearce, their success depends on shared educational experience and a person's own nature, on inner integrity and the ability of the exhibition to create an impression. (Pearce, 1987, p. 182)

Museum presentation as a significant complex can be perceived through a prism of individual scientific disciplines (which is the task of this chapter), or we can approach it as an expressive activity. We can also see it from the viewpoint of semiotics which is particularly fitting because of the plurality of possible approaches to presented musealias. In terms of semiotics, musealias are signs which assume their meaning for a perceiver only when the same perceiver attaches such meaning to them. Equally, they assume their unique meaning for a society when the given society attaches such unique meaning to them.

The meaning of museum collection objects can be thus rather changeable, and it is necessary to submit it to continuous reinterpretation.

Semiotics approaches the museum and exhibition similarly as any other observable social-cultural phenomenon. It perceives these institutions and their activities as important systems, as hidden social logics which are formed and which forms involve elements. (for more details, see Umiker-Sebeok, 1991; Hooper-Greenhill, 1991)

Museum presentation is a 'message' in several layers of meaning: it refers to the presented theme and displayed realities, it an accessible authentic legacy which is immanently contained in collection objects but at the same time it is a message of the intentions and attitudes of the presentation designers as well as of the period discourse which prevails at the time of the development of a given exhibition or other presentation forms. Layers of meaning which museum presentations offer to visitors are social constructs and are unstable just as a model of a reality created by the museum exhibition is. While the layers of meaning presented by the museum often persist in a society longer than the duration of the exposition itself; also this presentation unit is subjected to interpretations and is dependent on current understandings of the world.

2.6 Interaction between an Exhibit and Visitor

If museum presentation communicates certain legacies, it must necessarily have its own addressee. It is usually a museum visitor who represents one of the links in the communication process that is initiated by a museum. We have already addressed the issue of communication, and from this point of view a visitor is a receiver of an encoded message which reaches them through a certain channel (an exhibition) and refers to a certain context. The success of the entire

>> Fig. 13–14 The application of ostensive, presentative communication within a museum presentation; the exhibited naturfacts in the image on the top play also the role of 'representamin', they represent a broader reality; bottom – an illustrative image referring to the fact that ostensive communication is as old as humanity itself and is connected to a cult and religion. *L'adoration du veau d'or*, The adoration of the golden calf, photo courtesy of the archive of Bibliothèque municipale de Lyon



communication process is ensured by a shared code – a fact that both participants of the communication are able to decode the message. The above applied Jakobson's model emphasizes the active involvement of both participants of communication, not only the activity of the sender but also of the receiver. In the process of communication, an addressee is always active to a certain extent because both verbal and non-verbal communication is necessarily a dialogical phenomenon.

According to Beneš (1981, p. 13), every exhibition is an illustrative communication of thoughts that should inspire a visitor to adopt certain values. Ideally, communication in museums is effective and informs human awareness. The selection of presentation tools and the manner in which a theme is presented are subordinated to this purpose.

A visitor in a museum exhibition acts not only as a participant to a two-way communication process but also as an executor of interpretation. Their interpretation follows their perception of a musealia and in the hierarchy of cognitive activities it is positioned at a higher level to which a stimulating exhibition is to lead. Based on the findings in neurophysiology of perception and seeing, Kesner (2000) sees an act of interpretation in the observation of exhibits itself. A fact is that only through interpretation does a musealia become understandable to visitors and therefore can become a subject of their emotional and intellectual reactions.

The term interpretation mentioned in the context of the perception of musealias correctly reflects the multi-layered meanings of musealias and their status as cultural facts. In this context, interpreting is a process during which a seemingly common thing becomes a musealia for a particular visitor; it becomes the bearer of specific cultural and social values. In general, a musealia represents a bottomless object of interpretation efforts. All thoughts on interpretation and its practical experiments are always based on the premise that a musealia is not just something in and of itself, but it also hides certain content which though it may be inaccessible, can be discovered and interpreted (according to Slavík, 2001). A musealia can come to life and acquire certain meaning only when a viewer uses it to engage in cognitive or, interpretative activities. (Waidacher, 1999)

Traditionally, in museums we employ primarily multi-sensory learning but mainly visual learning (provided touching exhibits is not allowed). Acquiring new knowledge takes place while using eyesight, or other senses, which is

the main advantage of learning in a museum – as opposed to learning in school where this is commonly done through verbal communication that often does not engage the imagination of pupils. Through their collections and additional activities, museums can enhance imagination, and clarify various cultural and natural realities. A museum facilitates a direct sensory experience whereby it undoubtedly overcomes the existing verbalism of education in school and other institutions. Consequently, a museum visitor may be faced with an opposite extreme: s/he encounters particular objects, but is often unable to grasp these sensory (visual) perceptions and include them into the existing system of their knowledge. This situation commonly occurs while on an individual museum visit when sensory learning in a museum is not accompanied by a sufficient rational component.

Let us imagine briefly a typical situation in a museum: a visitor comes and observes collection objects about which s/he has no prior knowledge. S/he does not even know the answer to the basic question ‘What is it?’ If s/he finds the object interesting, naturally they will try to find out what it is using their existing experience. They may ask if the object in the showcase is only a stone, a prehistoric axe or a sample of a local rock. Or whether the thing s/he sees in the corner of the gallery is an iron hoop left behind by servicemen, or, a valuable work from some contemporary author. And whether the pair of riding boots in front of them: belonged to the unknown, anonymous person, or, were used on daily basis by some important personality.

Just a few of these simple examples show that showing as emphasised by Stránský plays a very important role in the mission of museums to pass on knowledge, however, this knowledge itself is much greater. And it is this knowledge and not just a visual form of an object that is to be passed on by museums. Mere viewing of an object in a museum is basically the same thing as receiving any other visual information without further context. At this point, we are not going to expand on the fact that knowledge cannot be identified with ‘raw’ information, as Burke puts it metaphorically (2013, p. 16) when he talks about knowledge ‘being cooked’, processed on the basis of the information and its verification, critique, measuring, comparison, and systematisation.

Simple answers to a visitor’s basic question ‘What is it?’ which are usually found on a label near a displayed exhibit, are just mere entrance information, not knowledge, though a museum surely is one of the traditional and significant producers of knowledge. We are interested in the knowledge of visitors while

drawing the attention to the fact that the chances to acquire such knowledge are directly dependent on the manner of a museum presentation and employed approaches to the entire exhibition.

When talking about knowledge, we certainly do not refer to the fact that a museum owns and shows a prehistorical axe, a Beuys's multiple, or, a pair of shoes that belonged to the first president of Czechoslovakia, T. G. Masaryk. We refer to deeper knowledge about prehistoric era, human abilities of the time, a way of life of the people of the time, etc. Knowledge related to the shoes of T. G. Masaryk should not be based only on the information about him riding a horse, but should rather focus on the significance of this personality for the history of the Czech nation and Czechoslovakia as a whole. And the viewing of a Beuys's controversial piece of art should be at the beginning of a deeper knowledge on this author introducing his way of thinking and artmaking; about the trends in contemporary visual arts, but also arguments that such works trigger. There should also be a space allocated for the discussion between visitors.

Traditionally, museums devote a lot of attention to the information on museum objects, their history, material or structure. However, the acquisition of such information is not meaningful learning, or, knowledge. Contemporary pedagogy – that in many aspects enriches contemporary museum thinking – is well aware of the relationship between information and knowledge. The latter certainly contains information but it cannot be reduced to information only. As Skalková maintains, human learning requires theoretical structures to be able to attach meaning to information. (Skalková, 2007, p. 144) Information and facts hence need to be generalised through concepts and placed into relationships among them so that a visitor can gradually build their conceptual system in a certain area of knowledge. Isolated concepts and pieces of knowledge are in fact of no value to visitors. This is an essential element that explains the little effect 'ordinary' visits to museums have on visitors' knowledge, and shows the importance of museum teaching and of various teaching tools placed in the exhibition.

Simple visitors' experience during which knowledge is not and cannot possibly be mediated (except for the cases where a visitor is an expert on a certain type of museum object) to them by just viewing displayed musealia and reading information on labels is confirmed by contemporary knowledge from psychology about the way human thinking works, and about the mechanisms involved in acquiring new knowledge. Museologists-theorists and museum workers in practice are fully aware of this reality.

The answer to the question, why it is so, can be found in genetic epistemology and cognitive psychology (especially in the works of J. Piaget, 1997, 1999), which analyses the mechanisms and development of human cognitive abilities, and addresses the relationship between thinking and sensory perception. Knowledge (as a result of cognitive processes and learning processes), the mediation of which is pursued by museums, is dependent primarily on thinking (Průcha, Walterová, Mareš, 2003) and does not stem only from observing.

Piaget, the founder of genetic epistemology, whose thoughts form the basis of contemporary influential constructivist theories, found that mechanisms involved in perception and thinking are completely different. As he maintains, thinking may not be a translation, nor a simple continuation of a motor and sensory perception in our imagination. (Piaget, 1999, p. 116) It is by far a much more demanding and complex process during which thinking must first reconstruct everything on a new level. Only perception and motor activities will continue working in the same manner, though they will take on new meanings while integrating themselves into new meaningful systems. But before adding new information, structures of intelligence have to be completely rebuilt. (ibid)

Knowledge as a result of mere observing (and without relation to thinking) is therefore just an illusion. We do not accept information passively – be it visual or other, but we filter and process it actively on the basis of our existing knowledge and achieved level of thinking. (Grecmanová, Urbanovská, 2007) A situation in a museum exhibition is more complicated, because a museum during one ‘ordinary’ and non-facilitated visit offers to visitors almost exclusively only visual information and just a minimum of information in a form we usually understand them, that is, using conceptual systems.

This situation is evident particularly in art exhibitions where brief information on a label below an exhibit is often the only information provided – except for visual information. To acquire meaningful knowledge under such circumstances is therefore very difficult.

So, under what conditions can learning and meaningful acquisition of new knowledge occur in museums? When can visitors get knowledge ‘from musealias’ in the best way?

We believe that this happens ideally during education in the scope of which museum visitors may not only view displayed objects but they are also provided with knowledge about them in a didactic manner adjusted to the specifics

of visitors. The acquisition of new knowledge in museums can be also supported by taking into account visitors' learning needs when designing exhibitions, by both the overall conception of an exhibition and an adequate approach to musealia, and by placing special didactic elements and tools into the exhibition. These include didactic exhibits and other types of didactic tools (didactic pictures, textual panels, technical equipment with e-learning content, etc.).

In such a case we can talk about a formative role of a museum exhibition, and the beneficial interaction between a musealia and a visitor. Such a museum exhibition then really leads a visitor to discovering other parts of a meaning of a given object, and thereby to an emotional transformation of certain aspect of a visitor's personality: their interests, attitudes, or, values. (Lord & Lord, 2001, p. 18)

Museum exhibitions that remind us of past and recent events, phenomena and processes can transform visitors into autonomous, independent and responsible human beings who understand the essence of processes and see their role in the current processes. An exhibition can show visitors their place in a given culture which is thus by their contribution being dynamically developed. When interacting with musealia, a visitor becomes aware of themselves as a part of a human community, as a co-creator of cultural values, and also as a free individual who can contribute, by expressing their attitude and adopting a certain approach, to the continuation and development of the world around us.

2.7 Museum Presentation as an Educational Medium

We have demonstrated that the meaning of a musealia becomes real only when mutual interactions take place between a visitor and a museum object. That is why this interaction is given so much attention not only by contemporary museology but also by museum education which perceives it as an educational situation, and a museum exhibition as a specific educational medium.

>> Fig. 15–16 Interaction between visitors at the exhibition of Museum Ludwig Goes Pop in the Museum Ludwig in Cologne (Germany, top), and at the exhibition of the Museum of Modern Art in Olomouc (CZ, bottom), photo by Petra Šobáňová, 2014



In the context of education, an educational medium is constituted by a certain physical didactical tool, a school textbook or an educational tool based on new media. Consequently, we can perceive this term in a much broader context. A school or various after-school institutions, the latest one of which is e-learning, represent a traditional educational medium. Cultural and memory institutions including museums are being increasingly referred to as educational media. As Jůva maintains (2009, p. 282), a modern educational system is characterised by the plurality of *learning places with various specialisations*. During the 20th century, relatively new educational settings and media which significantly contributed to the processes of human learning grew in importance. In those Jůva includes not only museums but also various leisure-time institutions, mass media and cultural facilities (libraries, theatres, cinemas, zoological or botanical gardens, planetariums etc.).

In the past, museum collections were established for various reasons. One of them was certainly a pedagogical or didactic reason because teachers have always used a variety of demonstrative material or educational tools in the form of biological samples, mineralogical collections, sets of graphic sheets, etc. It was so not only in lessons of natural sciences but also in social sciences. Also presentations of collections which had initially been established for other than pedagogical reasons have been from the beginning considered to be educational, and declaring them as aiming for public enlightenment was an obligatory part of the foundation charter of public museums.

Museum exhibitions have been perceived as sources of knowledge and visiting them as a tool for acquiring knowledge about the real world that lies beyond the walls of a museum, too big and complicated to be able to understand it fully without an adequate help. That is why we go to museums to see an understandable model of a world, to feast our eyes on exemplary or rare objects, and to keep on convincing ourselves about the systematics of the order of the world. But we also go there to search for understanding of ourselves, our roots, human culture and nature.

The thought of using collections for educational purposes has been here for a very long time. It came before the first public museums were established. We talk about the tradition of Aristoteles' Lykeion, the Mouseion at Alexandria, or studiolo of Renaissance nobility. In these cases, collections were established for the purposes of study and were both tools for research as well as for education. Didactic thoughts can be read in the texts of Samuel Quiccheberg,

the author of the oldest museological text written in 1565. In the 17th century, John Amos Comenius contemplated on the purpose of a facility whose features resemble a museum. Pragmatism voiced by John Dewey appreciated museums as accumulated empiricism of humankind.

The efforts to use public museums for education appeared naturally in the 18th century with the establishment of a public museum itself. Burke (2013) shows that the foundation of museum exhibitions can be perceived as one of the fundamental manifestations of the pursuit to popularise science and make new finding accessible to the public. The beginning of these efforts can be dated to the period of the 18th and 19th century when museums cooperated with universities.

In this period, museum collections were used for studies by future artists, art historians or students of natural sciences. These groups were gradually joined by members of the wider professional public and working classes. Upon the impact of democratic processes and society-wide changes in Europe of the 19th century, attention was intentionally shifted to people, as national identity was formed. In this period, many significant museums defined education or public enlightenment as their objectives, especially in the United Kingdom, Germany, Austria, France, Vatican, and elsewhere.

There is not enough space here to analyse in depth the time-dependent changes in the understanding of museum's educational role. Using current pedagogical language, we can only point out the way we perceive museum presentation while emphasising the fact that a museum exhibition can fully comply with a classical pedagogical rule of being illustrative, which is also one of the main reasons why pedagogy is interested in this phenomenon which is otherwise the subject-matter of museology.

On the other hand, we consider the educational potential of presentations to be such an integral, immanent feature of museum presentation that we cannot leave it out of the museum presentation theory.

For a basic definition we can follow Průcha (2000, p. 14) who defines education as an activity that ensures the passing on of a spiritual property of a given society from generation to generation. It is the mediation of templates and norms of conduct, communicational rituals, personal hygiene, etc., which is carried out via family education for the youngest of children. In this context, education is in the pedagogical conception the main part of the process of socialisation which is studied by other sciences. As opposed to socialisation,

education is an intentional activity working on an individual with the purpose to achieve changes in various parts of their personality. (ibid) In the widest sense, education is the intentional forming and cultivating of a human personality. It includes all purposive activity exerted on a human being while cultivating them. (Grecmanová et al., 1997, p. 74)

This basic definition already determines a museum to be in its essence an educational institution. Statements that we find in the definition of education can be also found in the definition of the roles of museums – where the role of passing on and developing culture (the intentionality of this activity is obvious) is also included. Even if museums continued with their classical forms of presentations as one of the three basic activities (besides selection and thesaurisation), and even if they did not deal with the organisation of other educational activities related to exhibitions, museums will still be primarily educational institutions because they impact intentionally on their visitors and the wider society, as well as other institutions, they also engage in inter-generation transfer of spiritual values.

We perceive the wide educational purpose as a unifying agent of all basic museum activities which includes establishing collections, their preservation and scientific processing. It is the selection, thesaurisation and presentation which are certainly done with the aim of impacting on a society; cultivating it to achieve a certain effect in the mind of the people. This activity stands at the very core of these institutions. Collecting musealia and preserving them without thinking about their educational and culture-making impact is utterly purposeless. That is also why we include pedagogical context in the theory of presentation. According to museology, a presentation makes knowledge accessible (Stránský, 2000) and therefore cannot be based only on showing musealia but on imparting new knowledge and values that are connected with them. That is why a museum presentation must have an educational purpose. The development of human knowledge, the cultivation of individuals and a society as a whole – that is, education in the widest sense – is the basis of all museum efforts.

We can define education theoretically also in different ways. For example, we can refer to education as the process of influencing rational parts of our consciousness, that is, education in its narrower sense according to which we develop our ethical, aesthetical, physical and working abilities, interests and customs (Grecmanová et al., 1997, p. 65), and which is part of education in the

wider sense of the word together with learning (aimed at the development of our intellectual abilities according to the same concept).

This approach appeared already in antiquity, and according to this tradition, learning (*eruditio*) refers to the forming of human intellect whereas education (*educatio*) focuses on the development of ethics, discipline, and a level of civilization. (ibid) *Eruditio*, that is, learning, and *educatio*, education in a narrower sense of the word, are both part of the complex of educational process.

Perhaps, no one questions the educational role of a museum within the meaning of *educatio* which museums already fulfil by their very existence. Since the beginning, museums have been identified with the best that the given nation or a small community has to offer. They were the symbols of education, cultivation, high standards, even the ethics of a certain community – and that is also how visitors have always perceived them. Education within the meaning of *educatio* is therefore an inherent part of a museum (let us recall the ‘education’ of the first visitors who were learning to adopt adequate behaviour in this specific environment).

Similarly, learning within the meaning of *eruditio* (perceived in a narrower sense than education as in *educatio*), that is, the development of an intellectual, rational part of an educated individual, acquiring knowledge, skills, customs and abilities cannot be separated from the role of museum presentation.

However, the distinction between education and learning is in fact only academic. Even though, many theoreticians work with it, learning without educational impact is in practice unthinkable. For our context, it is useful to distinguish the general educational role of a museum from museum teaching during which a certain subject is learning and another subject (or technical device) facilitates this learning. (Průcha, 2000, p. 16) The subject that is learning is in our case a visitor and the subject facilitating learning is a museum, be it in a form of a specific museum presentation (short-term or long-term exhibition), or, facilitating through appointed museum workers.

Even though, it is important to bear in mind the option of a self-learning visitor in a ‘well’ prepared exhibition, we together with Hooper-Greenhill (1991) will consider museum teaching to be based on the processes that a museum prepares apart from the classical presentation of a collection, and that facilitate learning processes directly. We refer to intentional learning processes which are related to museum collections and for which a museum (or another agent) prepares adequate conditions which are organised and filled with

well-designed content, and designed around specific objectives, etc. In another part of the book, we will define educational museum programmes as a specific form of museum presentation.

It is the intentionality, the planned nature and practicality of learning processes which differentiate museum teaching from non-intentional museum impact on visitors who only view an exhibition and do not participate in an organised educational programme. For many good reasons, we consider intentional educational activities of museums to fulfil their educational role effectively and genuinely.

The main characteristics of museum teaching is its connection to museum collections which constitute the very heart of the institution, and to which visitors' attention is directed. A museum collection is a source of the content of museum teaching which has its organisational forms and employs the most appropriate methods and tools given the specific group of visitors. Museum teaching is constituted by a complex process of many components. (Šobánová, 2012b) In terms of museum teaching, we perceive musealia as media tools for all educational efforts. Museology teaches us that a collection object cannot be perceived solely as an object of interest of a specific field but as a representative or relict of a certain meta-reality. (Stránský, 2000) Striving to explain the museality of an object is something a museum educator should never fail to focus on when working with visitors. They should be given the chance to understand what lies at the core of the cultural uniqueness of objects that a museum keeps and protects. Their material 'description', categorisation or evaluation from the viewpoint of sciences engaged in a museum are necessary but not sufficient. It is their culture-making nature and social aspect that should be to the fore.

A musealia should be approached similarly to the way art education approaches an artwork: it is not enough to describe formal aspects of an object or to place it in a historical context; we need to establish a communication with it, to interpret it, and to try understanding its message. Museality as 'artistic aspect' needs to be searched for and identified. A musealia just as an artwork needs to be perceived in its versatile, dynamic nature. For museality is not inherent or attached to an object for once and for all based on its material, physical nature, but it is attributed to an object by a society, and it changes naturally together with the changing historical and social context.



Fig. 17–18 National Gallery in London (UK) or the Museum of Modern Art in Olomouc (CZ) – educational media well used; photo by Petra Šobáňová, 2013 (top), photo courtesy of the Olomouc Museum of Art, photo by Lumír Čuřík, 2014 (bottom)

2.8 Museum Presentation as an Agent of Cultural Continuity and Enculturation

Mainly because of the communicated content a museum presentation is also a manifestation of human knowledge and the efforts of people ‘to think’ about the world, and ‘to think’ about themselves (viz Foucault, 2007, s. 263), their history, success, loss, general society-wide processes, and laws. Museum collections and forms of their presentation are the manifestations of human activities which are beneficial for a society and have a culture-making aspect.

Gathering, protecting and mediating physical thesauri helps to develop human knowledge and pass on the basics of our culture to the next generation. Today, a museum can no longer be viewed only as depository of scientific material or as a primarily scientific institution, rather it is a bearer of social information; it is part of information memory and a significant element in the process of passing on traditions. (Zouhar, 2008, p. 9)

Museums take care of collections that are significant for natural, social and other sciences. However, they do not mediate only the knowledge of these fields of science; equally valuable are a museums’ efforts to help visitors understand the museum phenomenon itself as a specific manifestation of a human culture, a way of learning and acquiring reality (Stránský, 2008), and to display musealias as objects of individual perception, feelings, experiencing and as a tool for developing their creative abilities, cultivating their conduct, regulating their needs and developing their hierarchy of values, the most important of which is the protection of cultural values.

Collection objects stimulate visitors’ reflections and inform their understanding of culture. In this context, we can return to Santayana’s famous thesis: those who cannot remember the past are condemned to repeating it. (Santayana, 1998, p. 82) This familiar statement of an American philosopher and writer of Spanish origins reflects on the development of humanity as well. Santayana in his following texts explains that in order to develop a society, we need to learn from past experiences, to take lessons from the conduct of our ancestors and to avoid repeating past mistakes. In his view, we do not achieve a progress by some revolutionary turn but rather by a gradual process of adaptation to new conditions, by adopting and evaluating past experiences and using them in the future. He reminds us of the fact that a human culture is not based on isolated islands of knowledge but is created through a cumulative process that builds on

what was here before, on the understanding of the past and contemplating on new alternatives.

Let us recall the thoughts of Gadamer on a museum presentation of the past in the context of our understanding of reality. According to Gadamer, understanding is formed in a dialogue with history – historical relicts (objects or traditions) help us understand current cultural norms and by interacting with them we deepen the understanding of our current lives. Thanks to the dialogue with the past, our understanding of the world reaches a deeper level; today, historical knowledge is able to engage in a reflexive relationship with itself and with tradition; it understands itself through and despite its own history. Historical knowledge is a way to learn about oneself. (Gadamer, 1994, p. 5)

Giddens (1990, p. 50) appeals to us not to succumb to a simplifying view on this issue: we shall be careful because historicity may not be perceived simply as a tool to optimal forming of the present. According to Giddens, the knowledge of history is rather the tool and motivation to part with it. In any case, historicity directs us to the future which we more or less justly perceive as (essentially) opened and easily influenced by our activity.

In this context, museums play a very important role in a society: they form historical consciousness, they remind us of our past whereby they help us to create the present and search for the right ways for the future. Classical forms of a museum presentation and related educational processes thus contribute significantly to cultural continuity. (for more details, see Šobánková, 2011) They are focused on values because their basic tool, a musealia, is an irreplaceable carrier of cultural values. Within museum teaching, visitors are led to assume personal opinions towards these values and by participating in the process of interpreting musealias; they are led to express their personal views, experience and attitudes towards the phenomena and relationships in this multiform world of a museum.

In conclusion, we would like to add that also other social institutions, such as universities, schools, and cultural facilities play equally important roles in a society. They too are agents of the widely perceived cultural continuity and on the basis of a subject they too are the factors of enculturation, that is, the process of acquiring cultural traditions, language and skills which every individual goes through from birth and which helps them become a member of a given culture. (Jandourek, 2001, p. 73) Even though a museum and a school both partake in spreading knowledge, in passing on cultural continuity and in enculturation of individuals, each of these institutions is in this sense entirely

specific and an irreplaceable medium. They complement each other very well: thanks to their authentic collection objects. Museums have the potential to surpass the existing verbalism of school education, and conversely, schools offer to museums methods of didactic transformation of content verified by experience and research (pedagogy).

It is not important whether we refer to a museum as an educational medium or whether its educational potential stands in the background as its immanent and not its explicitly declared characteristic. However, there is no doubt about its immanency: museum collections not only provide an individual with the opportunity to acquire concrete knowledge and to develop various aspects of an inner life but they also help us understand the laws of human cultural development and therefore help integration into this culture. In the most general view, a museum presentation contributes to the enculturation of people and to the cultural continuity.



3 A Museum Exhibit as the Basis for a Museum Presentation

The basis of a museum presentation is certainly formed by collection objects, that is, musealias, museum objects. These are established in the process of musealisation behind which lies a strong belief that our universe was constructed from a set of material and non-material elements, and can be understood through a certain limited number of selected representatives of these elements. These elements are part of a museum collection, and museum objects that are selected by museum designers as the most suitable presentation tools and most illustrative carriers of the intended message become exhibits when placed in an exhibition.⁸

The following subchapters deal with various issues related to museum objects themselves but also to their application in a museum presentation. The first part of the chapter points out a series of key characteristics of museum objects, and it also offers a definition of some of their aspects that causes a lot of controversy (e.g. the issue of veracity, informational aspect of musealias, etc.).

Apart from the classification of museum exhibits, it is important to also consider the contemporary development of museum culture in which exhibits of non-museality value are being increasingly included often in the form of digital technology or a sophisticated didactic exhibit. These exhibits which were until recently considered to be only auxiliary are today often more significant as they extend the classical typology of museum exhibits.

3.1 A Museum Object and its Identity

Things have both a physical and a cultural aspect. The former is related to the material basis of things, the latter refers to the context of its application and use. The world comes to life through things and not the other way around.

8 It is fitting to emphasise right at the beginning that only a fraction of collection objects which museums preserve become exhibits. Only a certain carefully selected group of collection objects are exposed, that is, placed in an exhibition, and become part of a public presentation. These are selected on the basis of various aspects (apart from being related to the topic, the aspect of protection is also considered as well as their potential effect).

The importance of an object thus exists only in the interaction between a viewer and an object. No human product is exclusively utilitarian and no human product is exclusively non-utilitarian. Every decision made to collect and preserve things for other than utilitarian purpose is determined by an intention and is, in the broadest sense of the word, a subject-matter of museology. Therefore, exhibitions are never objective and neutral but they communicate a certain particular image of history. If in the past an object itself was considered a message, today it is perceived rather as a tool of visualisation.

Museums establish collections that contain primarily collection objects which are displayed and become museum exhibits provided they have been categorised as media. If it is an object (an exhibit) that stands at the centre of a museum presentation, we need to ask what a museum object (an exhibit) in fact is.

A museum object itself can be perceived from various points of view. Primarily, it is a document, a semiotic sign, and also a carrier and a source of information; as recently described by Žaneta Marešová (2011). With the growing variety of books, the need to process and organise new findings and experience arises (patents, legal documents, atlases, charts, diagrams, drawings, photographs). At the turn of the 19th and 20th century, two Belgian lawyers Paul Otlet and Henri La Fontaine started a new field of documentation science which deals with the systematic collection, organisation, searching and distribution of recorded information; today it is considered a part of information science.

Paul Otlet also includes 3D objects as a form of document. Being in agreement with Z. Z. Stránský, we do not believe this is very fitting and adequate. In our view, a document is a written, visual, audio or other form of recorded information. For example: the acceptance of the constitution of the Czech Republic can be recorded in a written form but also in a visual or audio record. We can carve the wording of the constitution into a rock; it can also exist as an electronic document in thousands of copies. What is at the core is a planned recording and spreading of something. On the other hand, nature that created a beetle did not record information just as a mediaeval potter producing pottery did not. The beetle or a piece of pottery itself is not a document about a reality, but it is a reality in itself. Only when it is selected and perceived as a representative of some natural or historical reality, is it a piece of evidence; a representative of a given reality, and we can say that we make evidence of, or, we document such a reality.

For both museology and documentation science the key moment is preservation. Human instinct for collecting leads us to preserve things that do not need to be primarily created or preserved as a document. While informatics focuses more on an object of information itself (in the sense of its content) and does not really care about the source of a message, the theory of communication deals rather with transmitting mechanisms. From the point of view of museology, the centre of attention is the carrier of information itself, that is, the value emanating from its material nature and a detectable context.

From the museological point of view, an object (a collection object) placed in an exhibition where it plays the role of an authentic witness of a previous reality is not identical with the same object taken from a different (previous) reality. A Polish museologist Jerzy Swiecimski (philosophically following the thoughts of Roman Ingarden, a pupil of Edmund Husserl) says: 'The actual physical and conceptual context creates features in the presented object which are novel to it, and have a purely phenomenal (and at the same time, ephemeral) character.' (van Mensch, 1992)

Martin Schärer, referring to his older works, says: 'The connection of individuals and society to the world of things occurs in three closely intertwined, constantly changing **realities** that are determined by place and time: the primary and real reality, the secondary and fictive reality and the tertiary and personal reality.' (Schärer, 2003, p. 24) Peter van Mensch explains Schärer's view as follows: 'The first dimension refers to the primary context, the second refers to the exhibition context in which the object is shown, and the third dimension refers to the museum visitor.'

In fact, this distinction boils down to the basic triad in communication: sender, message/medium, and receiver. In this interaction meaning is produced. Meaning is produced in the material practice of reasoning in the present, which is in no way identical with the past.' (van Mensch, 1992) Every exhibition is an interpretative, intellectual construct and an exhibition designer can never be entirely sure whether their message will be understood (received) by a visitor who is limited by their own personal reality.

In this sense, Peter van Mensch (1992) distinguishes between the actual identity of an object as an exhibit being closely dependent on the exhibition as a context. 'Meaning is produced in the material practice of reasoning in the present, which is, of course, in no way identical with the past.' (van Mensch, 1992) Edwina Taborsky (1990) and English professor emeritus Susan M. Pearce have

a different view on museum objects. According to them, we can place a museum object into three realities, a material, a group, and an individual one:

1. A material reality (for Pearce – *object*) is linked to objects and events; it is a system of signs forming a meaning.
2. A group reality (for Pearce – *a vehiculum*) is derived from a group of people who are connected by a place and time; every group has its own understanding of the world, its own signs.
3. An individual reality (for Pearce – *interpretans*) expresses an individual interpretation of signs while individuality is limited. A certain sign that is agreed upon by a consensus of a greater group of people can be perceived by an individual differently.

French museologist Marc Maure put it aptly when he said that an isolated object is a hypothetical construct. An object is never experienced in a vacuum but it always exists as a part of something. (Maure, 1995, p. 159) Isolating an object from any physical or social relations and asking what it means is as foolish as isolating a word in a sentence, or in a book or a lecture, and asking what it means. (Maure, 1995, p. 160)

Maure goes on to compare a museum exhibition to a theatre performance. It is no coincidence that in Baroque times the term *theatrum mundi* appeared occasionally as a name of a collection. A theatre often represents a comedy, humour or irony. But in a church, or, in a graveyard and other holy places, it is blasphemous to laugh or even to giggle. 'This seems to apply to museum as well.' (Maure, 1995, p. 168)

The issue of a museum exhibit was revisited several times by Polish museologist Jerzy Swiecimski (1987, 1996). His understanding of a museum exhibit is wider than the terminology used in this work, based rather on the approach of Zbyněk Z. Stránský. Swiecimski points out that it is not always possible to put an equal sign between a 'museum object' and a 'museum exhibit'. In many cases, we find exhibits in exhibitions that were created particularly for the purposes of the exhibition (see exhibits of non-museality value in the introduction of this chapter). These objects do not have their 'primary environment' and do not belong to museum collections either. However, this is not primary for our analysis at the moment; we will return to this issue when we will deal with the typology of exhibition elements.

Swiecinski is very precise, maybe even too radical when he deals with 'the truth' and 'untruth' in museum exhibitions (see Swiecinski, 1991). He distinguishes between exhibitions that present objects of artistic or scientific value (he sees similarity with museum laboratories or depositories in them), and those that transmit knowledge. It is evident that the latter are more prone to being 'untrue'. As we have seen throughout a museum culture, the truth cannot be considered a stable entity and an object – though an authentic one – is not automatically a carrier of some truthful, constant information about its time of existence. To imagine that there is some objective truth – be it in the mediaeval sense of eternal truth, absolute⁹, or in modern understanding of facts about reality which can be empirically derived from nature, is today almost unjustifiable.

A view into the history of museum culture and the way 'true' objects and 'the truths' linked to them have been presented is in this sense more than telling. It confirms that all truths are rather 'candidates' to the true (paraphrasing Kuhn, 2012, p. 135). American philosopher Rorty (2000) adds that opposed to a general view, a truth is not a matter of representation, 'reflecting' the world. While we need to strive to achieve the truth, we cannot perceive it as a reliable reflection of a reality: efforts to reach the truth are just a fallacy to eternalise the existing discourse. (Rorty, 2000, p. 9) A museum presentation – though it can be based on the same objects whose physical, material character is constant – must be therefore perceived only as an attempt to visualise existing discourse and not as a presentation of a constant 'truth'. If we view museum objects as the basis of a museum presentation, it is also important to add that a museum presentation is far from being the same thing as a neutral displaying of a set of objects, or a presentation of their context that is valid once and for all. In his book titled *Contingency, Irony and Solidarity* (1989, p. 5) Rorty says: 'Truth cannot be out there – cannot exist independently of the human mind – because sentences cannot so exist, or be out there. The world is out there, but descriptions of the world are not. Only descriptions of the world can be true or false. The world on its own – unaided by the describing activities of human beings – cannot.'

9 That is, in the sense of 'sicut erat in principio et nunc et semper et in saecula saeculorum' – both now and always, and unto the ages of ages.

Swiecimski's (1991) question of whether truth can be achieved in its 'purest form' (or even whether untruth can become truth under certain circumstances) thus seems to us ungrounded. Only with difficulties can we talk about truth in the case of a painting depicting obvious untruth, similarly to a painting which was only finished by the author or just signed by them. Also a restored object is still considered to be 'authentic' even though it is not exactly so.

The truth can be thus viewed from many angles and can be defined in a variety of ways. Every object has its own identity emanating from its unique and unmistakable existence (including its origin, duration and possibly extinction) in time and space, and from its attributes and specific characteristics. It is not essential whether we can distinguish this identity or not. A Rembrandt's painting remains a Rembrandt's painting whether we know it or not. In this sense, untruth is not actually possible at all because it does not exist. It can only occur in additional information to the object, in its description. This information does not have any relation to the object; it cannot impact its identity in any way.¹⁰

In other examples, the 'truth' (or better the information value) is considered to be a value independent of the authenticity of an object when an object is the carrier of a message directed to an audience. For example, Hammurabi stela in the Vorderasiatisches museum in Berlin is a patinated plaster cast. Even though it is just a substitute, it plays the role of a valuable exhibit offering the same information as the authentic object (shape, size, bas-relief). A satisfying harmony is in this case important for the 'truthfulness' of the exhibit. It also applies to numerous travelling exhibitions often successful and popular among visitors (e.g. Tutankhamun – his tomb and treasure, Bratislava, 2014).

Characteristics of an exhibit can be of heterogeneous origin which is typical for many archaeological reconstructions. For example, the Ishtar Gate in the Pergamon Museum in Berlin was in reality much larger. It was made smaller so it could be exhibited indoors. It is a different truth if we exhibit an

10 In art history, there are well described cases in which reinterpretation, confusion, or ideological use of particular artefacts have occurred (intentionally or even unknowingly). Their identity was sometimes even pushed to the background and the object continued to play a social or ideological role in a new identity. As an example, we can mention a bronze sculpture of Roman emperor Marc Aurelius from the 2nd century which had been worshiped for centuries and perceived as the depiction of the first Christian Caesar Constantine I. (for more examples, see Badalíková, 2016)

object as a representative of a certain reality. If we want to exhibit only, let's say Slavonic pottery, then individual characteristics of selected objects do not matter at all. Each piece of Slavonic pottery is a carrier of the same necessary amount of information.

The naming of an object can be right or wrong on several levels:

- a concept of a general object which is intended for presentation can be presented correctly or not,
- its classification can be correct or not.

For example, when presenting a geological sample as evidence of sedimentation, we in fact do not present anything about the actual object. It is shown on its own as an evidence of a certain process. Similarly, when making scenes for an exhibition, say about the origins of the Slavs, authentic (true) objects play the role of evidence, proof of concepts and hypotheses which can later turn out to be wrong.

Luckily only occasionally but still sometimes authentic objects can be used for the presentation of intentional falsifications of scientific truths, especially in historical sciences. This happens when museums are not the places of scientific veracity but of ideological indoctrination which is typical for museums in countries with authoritarian or even totalitarian regimes. In this case, the information, cultural and educational role of such exhibitions is rather destructive.

Sometimes the objective is to visualise scientific findings, for example, when an exhibitor does not aim to present individual fossil organisms but to present the species those organisms belonged to. The main subject of such a presentation is a general presentation of a species as well as the documentation material (fossil bones) which are then used only as material (padding) for such presentations. They are forced into skeletons, rightly or wrongly, according to the imagination of a conservator or preparator. Jerzy Swiecimski gives the example of a Palaeolithic reconstruction. (Swiecimski, 1991, p. 355) Veracity thus depends on the probability and non-probability of interpreted hypotheses.

Swiecimski gives an interesting example from the Naturmuseum Senckenberg in Frankfurt Am Main which in some cases intentionally ignores the colours of objects. Because we know almost nothing about the colour of the skin of Mesozoic lizards, some of them are depicted in this museum purely

intentionally in red, others in blue or orange colour. Our ignorance is thus shown by the statement that the colour of skin means nothing. And this too can be perceived as veracity though given by a certain author's licence.

Disinformation (untruth) can be sometimes shared through artworks which are 'too detailed', that means, that the degree of their realism is beyond the frame of a message which should be offered to a visitor. These can be very vivid, but they mislead. Jerzy Swiecinski includes into this category reconstructions (drawings) of Czech author Zdeněk Burian or the works of Jay Matterness from the Smithsonian Institution. We need to add that Burian's mammoth hunter carrying a pheasant does not in reality depict the truth nor does it depict probable reality.¹¹ However, we need to point out that paintings of Zdeněk Burian¹² or books by Eduard Štorch¹³ have done way more for introducing Czech people to prehistoric times than many museum exhibitions combined. Equally we can evaluate Spielberg's Jurassic Park which attracted much more interest in the Mesozoic era than mostly dull paleontological exhibitions ever did.

Exhibitions focused mainly on didactic aspects are based on the findings of current sciences. These findings are in some cases simplified or even made primitive which can lead to passing on untruths. This is of course not desired and a pedagogically motivated reduction of a message must be carried out most carefully so as to avoid such situations. Sometimes, heterogenous structure of an exhibition follows from the basis of exhibition design, e.g. when creating diorama. These so-called quasi-surrealistic scenes are used when, for example, a skeleton is located in a painted realistic landscape. We believe that the radical desire for 'truth' of the significant Polish museologist comes about due to certain limits given by information objectives of museums. Almost every exhibition is a heterogenous and realistic depiction (painting) of a landscape accompanying a skeleton of an animal. In majority of cases it is an 'added value' facilitating the understanding of our message. For example, an archaeological part of the Museum of History in Hong Kong was intentionally built in an adequately depicted diorama of the life of prehistoric fishermen and food gatherers.

11 A pheasant appears in the central Europe only since Middle ages.

12 A Czech painter and book illustrator whose work played a central role in the development of palaeontological reconstruction.

13 A Czech pedagogue, archaeologist and writer, known for novels set in prehistoric Bohemia during Stone and Bronze Age.

The transformation from a cognitive to aesthetic and emotional level occurs by transforming an everyday object (e.g. an ancient vessel) into being a part of a 'treasure' displayed in a showcase. This issue is linked to the phenomenon of reality in museum exhibitions. (Dolák, 2008) According to Brazilian professor of museology Tereza Scheiner, museology must identify ethical limits for the interpretation of reality. (Scheiner, 2002, p. 99) According to Scheiner, we should distinguish between an inner reality which includes intentions, protective masks and shadows of our desires as well as passions expressed in the entanglement of conscious and unconscious levels of our psyché, and outer reality which we use to perceive ourselves. (Scheiner, 2002, p. 94)

A significant accent on a museum object as a carrier of information was put by Croatian professor of museology Ivo Maroevič. As he postulates, a museum object included into a museum collection becomes an IN-DOC object (information/documentation object) because it contains and mediates information, it is its source and carrier, and at the same time, it documents the reality from which it was selected. (Maroevič, 2004, p. 194) Maroevič perceives a museum object as a carrier of information at three different levels; it is a tripartite model of an object based on a simple idea of an object as a carrier of information.

1. The first level is *an object as a document*. This level refers to the sum of data.
2. These data are carriers of a communication process. This is the level of *an object as a message*. This message can be updated under certain conditions in the process of communication. If the message comes from an interaction between an object as a document and a subject as a sender, an object can be a carrier of various messages.
3. *An object as information*. In other words, the importance of a message for a receiver. (van Mensch, 2000, p. 32)

According to Peter van Mensch (1992), an object can appear in three basic contexts, either a primary, museological or archaeological:

1. In the primary context, an object has a utility and an economic value (it is marketable, it is a commodity).
2. A museological context is a wider term than a museum context because apart from museum collections it also includes private collections and objects preserved *in situ* – palaces, residences, etc. In the museological context, after being selected, an object gains a documentary value. A museological context is therefore a conceptual context, a mental project. Objects are transferred

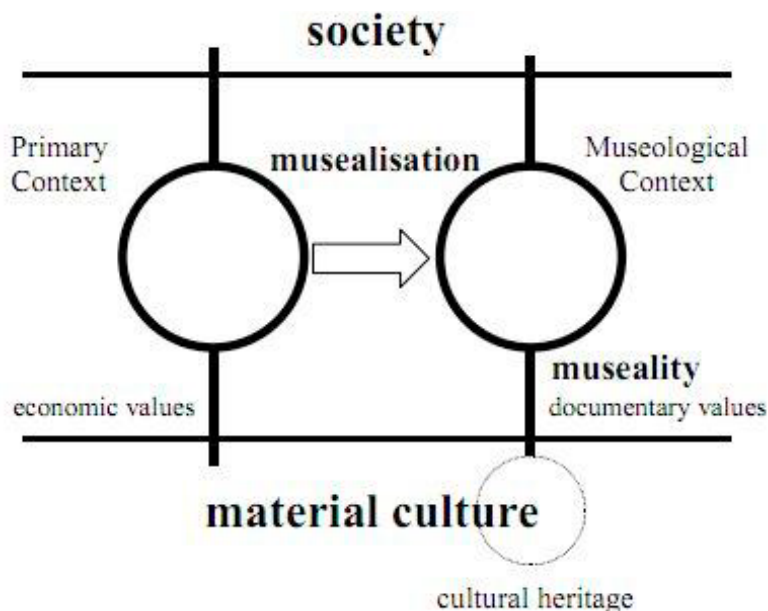


Fig. 19 The transfer from a primary to a museological context (according to Peter van Mensch).

conceptually and often also physically into a museological context using the process of musealisation. The transfer into a museological context creates a sector referred to as cultural heritage.

3. Things that are temporary or permanently out of use are placed in an archaeological context. An archaeological context is not just the activities of the field of archaeology but it also includes attics, cellars, and garages – all places where things are usually stored. (van Mensch, 1992)

Understanding a museum object only as a source of information was on several occasions refuted not only by Zbyněk Z. Stránský (according to Stránský, such a simplification would deprive an object of its right to existence) but also by other theoreticians, e.g. Austrian Fridrich Waidacher (1999, p. 100) or Japanese Soichiro Tsuruta (1984, p. 37). Soichiro Tsuruta sees the specificity of a collection object in its characteristics to be a source of primary information. We come across with secondary information in books among other sources, and tertiary information is collected, analysed and synthesized from primary and secondary

sources. A museum object is as a source of information unique just as a human character is. (Tsuruta, 1984, p. 38)

Canadian Duncan Cameron metaphorically compares collection artefacts to nouns. Images of things, that are the language of other media, are also used in a museum system but only as certain 'adjectives'. (Cameron, 1968, p. 34) For the phenomena that are demonstrated in a museum (Foucault's pendulum) Duncan Cameron employs the rarely used term *kinetifact*. (Cameron, 1968, p. 35)

Sometimes, we are met with somewhat convulsive attempts to divide a collection into an 'exhibition' and a 'reserve'. According to Germain Bazin, Goethe was the first one who defended this concept, (van Mensch, 1992) Josef Beneš was another. However, after the WWII we still see that an inner division of a museum and its collections followed the establishment of the system of sciences and remained in the confines of individual scientific disciplines and their taxonomies, or, typologies.

According to Peter van Mensch the most up-to-date attempt is to combine educational and systematic strategies in the division of museum collections into three parts: an exhibition, a depository, and a depository open to the public. (van Mensch, 1992) We believe there has never been such a rigid division-making of museum collections in the whole history of museum culture, and if there was, it happened only occasionally. The suggested 'three-part museum' would be a communication nonsense even from the organisational point of view (e.g. record keeping) or in the context of individual sciences that are being advanced in museums.

The development of modern technologies has raised a crucial question for museums; whether we are to perceive what is 'digital born' as museum collection objects or not.

It is not an essential issue considering the greater part of museum practical activities. Museums have never tried to seem 'ancient'. Early museum objects had been drawn, later photographed, and after the discovery of other recording technologies they were also video-recorded. Today, museums certainly use all that is 'digital born' to enhance their presentation, publishing and promotion activities. The issue can be thus reduced into two quite different areas:

- administrative – that is whether a digital photograph, as one example, is to be categorised as a collection object and entered into the main collection registry which is not possible according to the legislation of many countries;
- philosophical – that is whether digital images and other digital entities can be perceived or not as objects considering they do not have a physical form.

The basic guideline when resolving this issue is naturally whether the considered digital entity is in itself a reality that deserves to be included in the collection fund of a museum (and is thus a potential musealia) or whether it is only an explication or referential element related to other physical musealia.

When considering a musealia of a digital nature (and not just a documentation) we should have in mind a wide area of new media art (from computer graphics through to video-art, up to net-art); equally large is the area of film (not only animated), photography, computer games, digital databases, web pages, and the area of information and communication technologies (including the process of developing programs and products of this kind).

These digital entities are in fact non-material, we cannot think of them without the image of their physical media. Their content cannot be communicated without the technical base of the material's nature (monitor, computer, player, server, etc.). However, that does not change the fact that primarily it is not the media that is to be musealised – naturally, with the exception of original media or otherwise authentic pieces (as an example we can name an original DVD that was burnt by an artist and which was used to play the artist's video art in a gallery when presenting this work to the public).

In this sense a digital entity is a musealia even though it does not exist physically, and can be as a digital entity have infinitive copies without a change in quality (its identity is therefore of a different kind than in the case of classical objects, and also the aura of an object is not present here). Hardly anyone doubts that also this part of human culture needs to be musealised, and that it has its own history with significant and interesting peripeteias while not being particularly different from other areas which are traditionally musealised. They differ only in one key aspect, that is, the non-material nature of these potentially musealised elements. While this brings rather exciting theoretical problems into museology (the foundations of existing museological definitions built on the material nature of musealias are being shaken), the museum practice itself is not really greatly affected.

Firstly, entities of a non-material nature (activities and human cultural conduct, not only artefacts – arts and crafts, dance, singing, ritual practices, etc.) have always been musealised, and secondly, the musealisation of digital culture is

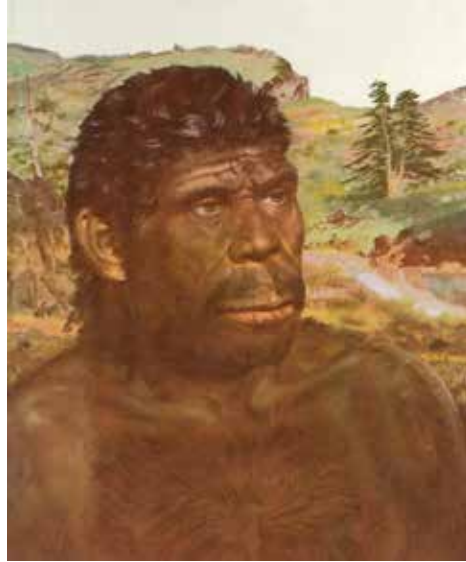


Fig. 20–21 Top – One of the illustrations by a Czech illustrator, painter and a populariser of prehistory, Zdeněk Burian, reproduced from the book: KLEIBL, Josef & Zdeněk BURIAN, *Dějiny psané kamenem*, Praha: Artia; bottom – Museum of History, Hong Kong (China); photo by Jan Dolák, 2008

already spontaneously under way and it even has its own institutionalised manifestations (see for example museums of computer games or art museums with collection funds of new media art).

3.2 The Typology of Exhibition Elements

Whatever attitude we assume toward the issue of the identity of musealias; museum presentation veracity, information aspects of museum objects and other issues and limits to presentations have to be considered as a rich complex of meanings that communicate individual and time-dependent views on behalf of presentation designers on a presented topic anchored in a social or natural science as well as in the overall period discussion.

It can be said that the key aspect of a museum presentation (which is at the background of the process of musealisation) is a belief that our universe formed by a set of material and non-material elements or realities that can be understood through a certain limited number of selected representatives of these elements. These elements are part of collections, and collection objects which are selected are the most adequate presentation tools and most illustrative carriers of a given message become exhibits when placed in an exhibition.

Exhibition designers create an image, a model of a reality using a limited number of various types of its representatives. These usually refer to one of the following types that were defined by Šobánková (2014):

- **exempla**, or exemplars, these are intentionally selected typical examples of certain realities¹⁴ (a stuffed animal),
- **relicts**, these refer to existing remains of a certain reality (usually we present all relicts as their number is limited; e.g. skeleton remains of a primate mammal from the Triassic period),
- **unique objects**, entirely unique exemplars (e.g. remains of a concrete somehow exceptional animal, that is, the only and thus significant thing of its kind),
- **rare objects**, whose originality helps clarify what is typical (e.g. skeleton of a mammal with a limb defect, or, a section of a platypus, a mammal, who does not give birth to living young but lays eggs).

14 From Latin *exemplum* has also been derived exemplary, or exemplar, that is, a sample representing a certain group of the same objects.

Šobánková (2014) notices that the above categories (the individual types of which can naturally overlap) do not leave much space for artefacts in the form of artworks – in other words, individual artworks can of course be categorised as a relict, or, an exemplum, as well as a unique object but it is not their essential aspect, and in terms of a museum presentation they are rarely presented as such.

Similarly with the example of texts which are also a special type of exhibit because they are primarily created as communicators, and they do not become communicators only by the process of musealisation. They do not primarily play the role of an authentic witness of a certain event, or, a representative of a certain reality (although they can be presented in a museum as such), and often they refer to themselves as a special symbol and a conglomerate of a sensory perceptible form and significance. Practice (as well as our research) supports their special role: it shows that artworks ‘demand’ a specific way of being presented, and their presentation does not follow the same criteria and procedures that apply to the presentation of other types of exhibits¹⁵.

For now, we can leave aside the typology of exhibits and return to the issue of making the model of a world using material representatives of cultural and natural realities. The above mentioned way was used to create collections from the modern age and their presentations, and also current alternative presentation forms are developed with the aim of offering a comprehensible image of the world or of individual events. It follows the premise that original pieces of evidence carry an authentic legacy about processes and phenomena in a particular environment of which they had been an integrated part before being transferred to a museum. This testimony is immanently present in an object and can be subjected to a scientific study, repeatedly verified and reinterpreted as well as communicated through a museum presentation. What applies there is a typically visual perception of external characteristics of a given object, and thanks to sensory perception and the accompanying explication, the content carried by the object is received in the mind of a visitor. (see Beneš, 1981, p. 43)

15 The so-called gallery presentations are typically non-contextual and rarely layman friendly; they are based on the fact that a displayed artwork is to ‘speak for itself’. That is of course rather illusionary of the presentation designers, and artworks as well as exhibits of other type require an interpretation and contextual approach. Therefore, it is only fitting to facilitate visitors’ perception and understanding of displayed works using various strategies.

In other words: during musealisation, original elements carrying original content are transformed into the role of witnesses of these cultural contents and values which is why musealias are considered certain universal representatives of these meanings and values able to give feedback about them. These representative elements, that is, musealias, are traditionally of a physical nature, or they are documented in some way and fixed – be it on a tangible medium or in a virtual space which has been used more recently.

Musealias are the evidence of the development of natural environment and human society. They are the direct testimonies about past and present events. These are pieces of evidence of exceptional information and cultural value which are to be searched for scientifically, as well as categorised and documented with all their relations to the original environment. Each musealia takes on its meaning especially when being part of a wider collection fund which adequately represents a selected section of a reality. (Stránský, 1972)

Musealias are authentic witnesses of a certain phenomenon while carrying its legacy. Stránský (2005, p. 123) defines the essence of musealias as follows:

- they are authentic pars pro toto representatives – as an ontic (that is, in compliance with existence, real) part representing a certain ontic whole;
 - they are iconic representatives – they have a concrete form that can be perceived through our senses;
 - they are information representatives – they facilitate learning of the above-mentioned phenomenon.
- (list amended).

Collection objects can be divided into:

- naturfacts,
- artefacts,
- mentefacts. (Stránská, Stránský, 2000, p. 62)

A naturfact is a product and evidence of nature and natural phenomena, its individual elements and their development. These include products of nature in their original state (e.g. minerals) or products of nature that have been altered, for example by conserving (taxidermy, alcohol preservation, etc.). An artefact is a human product, or, a material result of human work or art production. Artefacts are various human products and other concrete evidence of human activi-

ties, such as artworks, applied arts, crafts and industrial products, instruments and machines, etc.

Museums often present various phenomena and events. These can belong to both categories: e.g. a physical phenomenon is the evidence of natural processes, various chemical processes or technological procedures that have been initiated by the activity of a human being. A mentefact is any product of human spirit which includes not only dance and theatre but also politically and religiously motivated activities, sport, etc. By fixating a mentefact we create a document (often in a written form but also as a video recording, etc.). This follows the very essence of a museum, a facility which documents the development of nature and a society; though always in a selected form. From our point of view, museums should not dwell on rigidity of 'three-dimensional' or 'physical' paradigms. A great amount of phenomena both from the social and natural environment are good to make a record of by creating documents, or using digital technologies and devices.

Harris H. Shettel (1973) offers somewhat different categories of museum exhibits when dividing them into the three basic groups:

1. Exhibits that are intrinsically interesting – they have an important historic, social or psychological message embedded in them. They need nothing else but themselves to be, in most cases, a very effective exhibit, at least in their ability to attract people (e.g. a piece of moon rock, etc.). Encountering such an object is primarily a very emotional experience satisfying the need of people to be in the presence of wonderment that triggers excitement and sensation.
2. Exhibits which have primarily an aesthetic appeal – this includes art objects of all kinds, photographs and perhaps such things as mineral collections. Also these exhibits create very emotional experience that is deeper than that and has something to do with the concept that philosophers have struggled to define for so many years: aesthetics. Encountering such an exhibit satisfies the need of people to be in the presence of beauty, to have our senses refreshed and our vision expanded.
3. Exhibits which have an instructional or educational role to play – these exhibits tell a story, explain a process, define a scientific principle, etc. They satisfy the need to learn, to understand things that we did not understand before; to make sense out of confusion and complexity, order out of chaos.

We can leave aside the fact that the first two categories can also play an educational role, and let us focus on another related issue. Shettel (1973) also mentions another two objects which do not belong to any of the three categories defined above. He refers to objects (he calls non-exhibits) that fill the space of an exhibition and serve to divert visitors or to stimulate them to play, or to rest from concentrating on actual exhibits (this suggests that Shettel perceives the concepts of exhibits and musealias as synonymous). According to him, defined categories overlap in many objects. Beneš (1961, p. 66) refers to such objects as auxiliary presentation tools and divides them into the following categories:

- substituting elements,
- referential elements,
- explicating elements.

We will talk about these tools in a greater detail as they play a rather important role and are increasingly implemented in exhibitions. The first group of substituting elements, or, substitutes, can be categorised into the following groups (Waidacher, 1999, pp. 114–115):

- copy – a copy of an original using the same technique and same material but having a different author – most frequent copies are of paintings and sculptures;
- facsimile – a technically produced copy, entirely true to the original and simulating also the external appearance of the original (including the material used) – most commonly it is a facsimile of a book that can be browsed through which is unacceptable in the case of rare originals;
- reproduction – today done mostly as a photograph – they can be both two-dimensional but also three-dimensional in the same or of a different scale;
- cast – the first cast is done directly from the original by imprinting the surface into a soft material and casting it with the help of a blind form (traditionally using clay and plaster); it is true to the original but it is not made from the same material often lacking the same surface finish or the appearance of the original object (polychrome, colour quality of the original material, e.g. marble);
- imitation – an imitation of the external appearance of an object, though without considering the original production or craftsmanship procedure;
- reconstruction – an imitation of an authentic object which does not exist anymore or only in part. The object is reconstructed based on the existing

- secondary sources about its appearance, or, fragments (commonly archaeological reconstructions);
- model – is often a smaller version of three-dimensional objects – often made from the same material, in the same form, with the same structure, serving the same purpose, etc.;
 - maquette – an external imitation of an object done on a different scale.

For obvious reasons, there are no **digital substitutes** in Waidacher's classification, such as various digital representations of museal objects which are presented to visitors using various media and increasingly more frequently via special projections (holographs, interactive projections, etc.).

Regarding substitutes, Waidacher (*ibid*) also points out (referring to W. Gluzinski) that in comparison to the riches of an original, they offer only a very poor repertory of values, and thus cannot significantly impact visitors' feelings as authentic objects can.¹⁶ However, substitutes are very useful for educational purposes, especially because the 'hands-on' principle, that is, the ability to touch exhibits is rarely used in museums for obvious reasons.

Apart from substitution elements, frequent presentation tools include also referential elements, that is, illustrative materials of various types, such as illustrations, drawings, documents, schemes, photo-documentation of the places of archaeological finds, etc. (in both printed and digital versions).

Also explicating elements are often used and their purpose is to offer an explanation to displayed objects, to clarify their content. This is an explanation using verbal tools. This category includes the title of an exhibition, subtitles, introduction, accompanying texts to the groups of exhibits, labels of objects and various distribution materials in either printed or digital versions. Explicating elements are often combined with referential elements – see panels with texts and images, information boards, information kiosks, or tablets with touch displays, etc.

16 Even though, the role of original exhibits is undoubtable, it is fitting to point out some difficulties with Waidacher's approach. As recently shown by Taiwan museologist Wan Chen Chang, the most attractive exhibit in a prehistoric exhibition in Taichung City is a mobile and sound-emitting model of a female tyrannosaurus with a young one. It is certainly affecting the feelings (and mind) of visitors more than rather visually poor original skeletons. And this is by far not a unique example.



<< Fig. 22–23 Top – an exemplum in the exhibition of the Militärhistorisches Museum der Bundeswehr in Dresden (Germany, photo by Tereza Hrubá, 2012), bottom – an example of relicts – fragments of a marble vessel from 2800–2300 BC, Keros (photo courtesy of Science Museum, London, UK)

Beneš's classification lacks **didactic exhibits**, so popular and often used today. These are audio, visual, image-based, and technical tools in the form of various simulators, scientific toys, brain teasers, interactive stations but also kiosks with digital content, such as electronic games, animations, quizzes, databases. These can also include drawers or tables with 'hands-on' exhibits, didactic toys and tools, various projections and soundtracks, audio-visual effects, etc.

In his classification, Beneš does not include **entertaining elements** which are frequently used in modern times. This category embraces play and rest zones, tables with toys, playrooms, elements offering humorous actualisation of a topic, children's textual and visual panels, 'hands-on' play elements, etc.

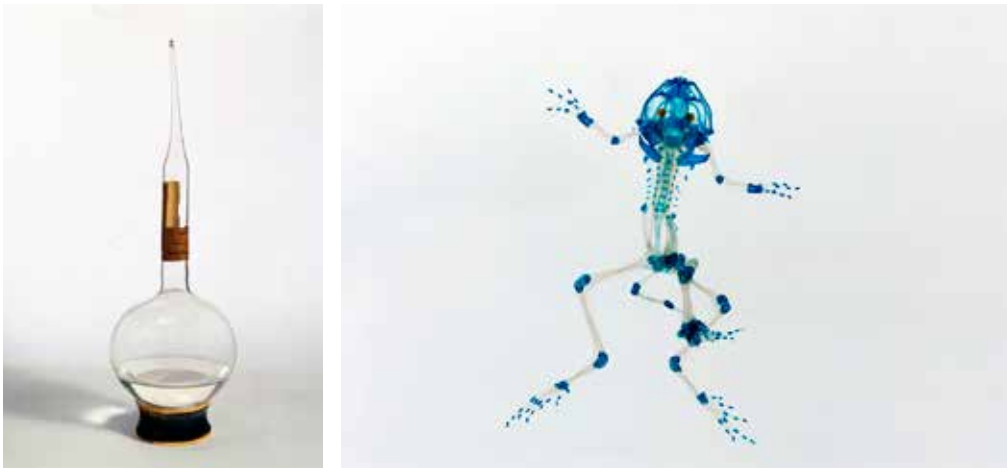


Fig. 24–25 Left – an example of a unique objects – a flask of a French chemist Louis Pasteur (1822–1895), photo courtesy of Science Museum in London (UK), 2013; right – an example of a rare object – a skeleton of a European tree frog with an extra limb, photo courtesy of Science Museum in London (UK), 2010



<< Fig. 26 An example of an artwork – the famous Nike of Samothrace in the exhibition in Louvre (France), photo by Marie-Lan Nguyen, 2007



Fig. 27 An example of exhibits with primarily aesthetic as well as historical value; in the exhibition of Greek sculpture in the British Museum in London (UK), photo by Stuart Smith, 2013

Increasingly more often we encounter in museums exhibits which are not musealias. Also the ratio of authentic collection objects and substituting, referential and explicating elements is changing in favour of 'auxiliary' elements. This can be perceived as an attempt to support the communicativeness of exhibits and the reaction to the weaknesses of classical museum presentation based on non-contextual, formalistic exhibition of collections.

Going back to didactic exhibits, we need to emphasise the fact that these exhibition elements do not only play a substitution role but conversely become full-size representatives of a certain reality – similarly to musealias. While lacking the authenticity, uniqueness and cultural value of collection objects, their information value can still be very high, even higher than of musealias.

Didactic exhibits may include didactic toys, demonstrations or various elements of play which can be categorised as didactic tools, or, didactic exhibits. Not all didactic tools, which according to Malach (1993) also include learning tools, technical teaching tools, organisational and reprographic technology, learning spaces and their equipment as well as the equipment of a teacher and student, can be referred to as exhibits. They are often just auxiliary materials. Other times, their role is rather primary as shown above. A didactic exhibit is a fixed part of an exhibition and its purpose is to facilitate understanding of presented realities, and to support visitor's learning as well as the acquisition of new knowledge in a museum.

Innovated Typology of Exhibition Elements

The following is an innovated typology of museum exhibits reflecting the current state of museum culture:

1. exhibits-musealias,
2. exhibits of non-museality value:
 - a. substitutes,
 - b. didactic exhibits,
 - c. entertaining exhibits.

The effectivity of exhibits is supported by various auxiliary exhibition elements (not having the form of objects) of the following types:

- substituting elements,
- referential elements,
- explicating elements,
- combined elements.



Fig. 28–29 An example of an original object (the skeleton of a tyrannosaurus) and its substitute, photo courtesy of Pixabay, 2014

We use the term exhibit only in cases where a given exhibition element of non-museality value has its own meaning, i.e. it is not a mere explication or reference that would not stand on its own but it forms a part of a displayed musealia or exhibit of non-museality value.

Also an exhibit in the form of a didactic toy naturally needs an explication. An exhibit is often of a spatial character (it is an object), even though the possibilities of new media and today's omnipresent intermediality make a stable definition almost impossible.

In exhibitions, we often encounter parts of accompanying art installations with exhibition elements that are on the border of movables and exhibits. It is clear we are rather departing from the classical definition of Josef Beneš (1981) but we have our reasons supported by the research¹⁷. Practice shows that the classical definition of an exhibit needs to be amended because for example in many exhibitions didactic exhibits form the bulk of an exhibit; they are no longer an auxiliary part. This is because their role in a presentation of a certain meta-reality is primary and not secondary.

Also various technical tools find increasingly firmer grounding in an exhibition. Many of these have the form of an exhibit; they are not just referential or explicating auxiliaries to musealias. These include audio, visual and audio-visual technology which allows for various projections; be it on a projection surface or in a specially designed space. Most popular are photo frames, tables, interactive boards and information kiosks containing data, broadening information of textual, visual, audio or audio-visual character, educational and entertaining computer programs, simulators or e-learning applications.

Since these technical elements have become an established part of exhibitions, they too play the role of a museum exhibit. Therefore, they are a subject of interest of exhibition architects and designers, and we can thus encounter many interesting forms of these technical elements in practice.

Regarding all 'substituting elements' Beneš (1981) adds that we cannot perceive them as equals to originals and that a museum should not present

17 Two individual research studies on contemporary museum presentation carried out by the authors of this book were published in the Czech language: see the works of Šobánková entitled *Muzejní expozice jako edukační médium* [A Museum Exhibition as an Educational Medium] (2014a, b), and Dolák's work entitled *Muzeum a prezentace* [Museum and Presentation] (2015).



Fig. 30–31 Examples of referential and explicating elements in Techmania Science Center (CZ; top) and in iQLANDIA Liberec (CZ; bottom), photo by Petra Šobáňová, 2014

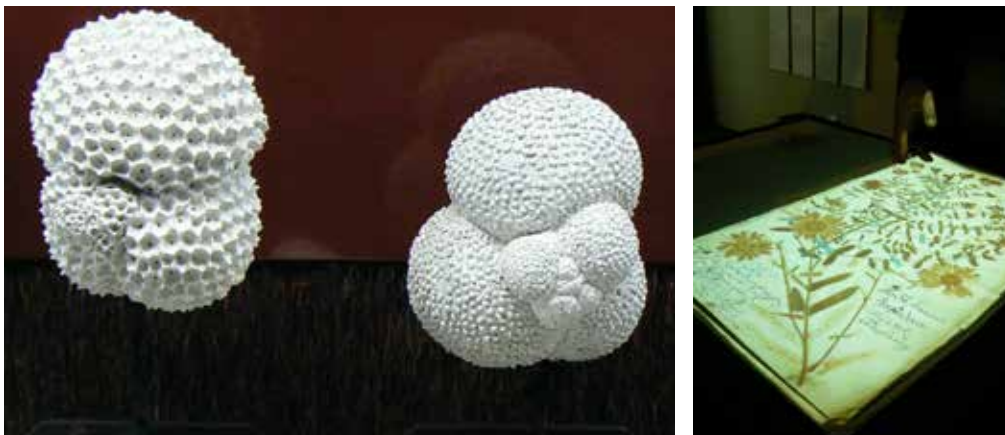


Fig. 32–33 Examples of substitutes in the exhibition of the Slovak National Museum in Bratislava (SR; a classical substitute in the form of an enlarged model of a naturfact on the left, a substitute of a digital nature on the right – a digital herbárium), photo by Petra Šobáňová, 2012

exhibits in which there are no original pieces of evidence in the form of collection objects – according to him, such a presentation cannot be referred to as a museum presentation. The specificity of museum exhibitions is the primary and irreplaceable expressive tool in the form of an original product as an authentic testimony of a presented reality. (see Beneš, 1981, p. 45)

Even though musealias have principal position in a museum presentation, we cannot forget about the fact that the opinions questioning the primary position of authentic objects are being voiced more frequently; arguing that the real value of a museum does not lie in the preservation of objects but in the preservation of information that are related to them. (see e.g. McDonald & Alsford, 1991)

This is closely linked to what has already been said; that a thesaurus in the form of a collection does not itself explain its own meaning – it becomes the carrier of information and a scientific explication of a certain phenomenon only

>> Fig. 34–35 A didactic exhibit in Techmania Science Center in Plzeň (CZ; top – a radio transmitter), bottom – view to the currently rebuilt exhibition of the same center with a playzone, photo by Petra Šobáňová, 2012



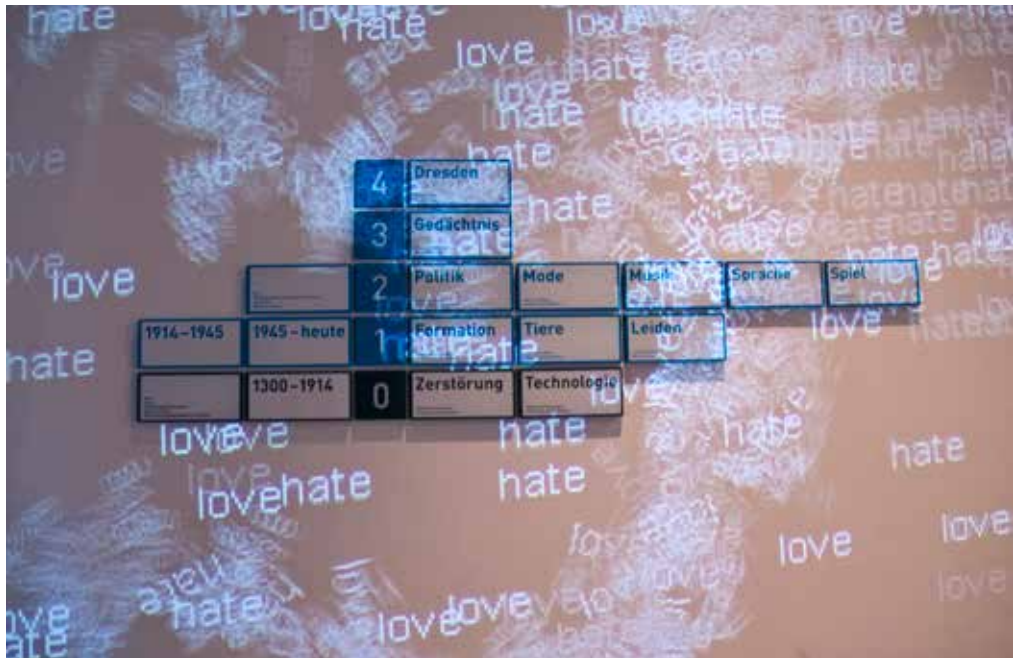
after being subjected to human research activity which turns a thesaurus into an information medium (see Stránský and Stránská, 2000). While the knowledge about a reality comes from collections and other sources, it is formed by a creative processing of information, as well as their verifying, sorting, comparing, systematising, etc.

That is why some museums prefer to display also other carriers of information even though they are not musealias. There are even some museum exhibitions where this type of exhibit predominates; this is not a new trend in museum culture – let us recall Neurath's museum from 1924, or science centres that have been established since the mid-20th century in the USA and Europe. Increasingly more frequent is the application of new media that allows the creation of multimedia exhibitions which consist of less and less material exhibits, and increasingly have more digital representations and multimedia projections of digital content.

This tendency also relates to the fact that museums are today more and more subjected to difficult decision-making in regard to the extent of collection funds. Financial sources are limited and depositories often use up all their capacity. Furthermore, in some cases the documentation role of musealias can be played even better by digital representation of original objects than by their extinction-prone samples. Certainly, museums will not stop collecting and preserving physical objects and only focus on collection information in the near future, however, the discussion on the extent, character and necessity of collections will be important.

Collection objects still are and will remain the most valuable specificity of museum exhibitions, and in museum culture they play together with various necessary auxiliaries the role of a primary communication medium. However, it is not necessarily always so, and some presentations of museum collections can certainly do without displaying physical objects. According to Dean (1994), such presentations are purely informative and often there are well-grounded reasons for using this type of presentation. Nevertheless, the uniqueness of museums exhibitions lies in the fact that they work with real, authentic objects.

>> Fig. 36–37 An art installation in Militärhistorisches Museum der Bundeswehr in Dresden (Germany) in the form of a projection of Charles Sandison titled *Love and Hate*, photo by Tereza Hrubá, 2012



In the conclusion of this subchapter, we would like to point to an interesting fact which is occurring in museums increasingly more often. An exhibit can constitute the exhibition space itself. This happens when the space is approached as an art installation, or when an aesthetic and architectonic quality of a space complements or even overshadows the exhibits and additional exhibition elements themselves. This relates also to traditional monuments or exceptional architectonical works where visitors come to admire the artistic value of the exterior or interior – from this point of view, the space is the main ‘exhibit’. Given the exceptionality of this phenomenon, we will return to this topic in the chapter focused on contemporary innovative approaches to museum presentations.

3.3 The Presentation of Exhibits versus The Presentation of Topics

While it is exhibits that enjoy principal position in a museum exhibition, and they form the content of an exhibition together with additional elements and exhibition funds; it is a certain topic or a theme that is actually presented in a museum exhibition. A topic refers to a wide complex of meanings gathered into a comprehensive thematic area for the mediation of which we can use anything we find in an exhibition: original, didactic or substituting objects and other auxiliary referential and explicating elements. The objective of an exhibition is certainly not only the viewing of displayed objects and their identification but facilitating the understanding of the wider implications of these objects and their connection to the contextual presentation; to the topic.

The topic is the starting point of a presentation; it is the concept that is ‘behind an exhibition’. It should be a multi-layered and vivid, contextual base of a museum presentation and the integrating factor of exhibitions. From the thematic point of view, exhibitions can present only an isolated phenomenon, or mutually interlinked phenomena, or phenomena studied by various fields. A topic can be perceived from its social topicality and in relation to the lives of visitors, or lacking topics can be identified. In this sense, there is often criticism that museums act exclusively as conservative institutions presenting well established and non-conflicting topics (see Šuleř, 1997, and the findings of the authors of this book, for more details see Šobánová, 2014, and Dolák, 2015).

The specialisation and the purpose of a museum exhibition, as well as its topic are determined by the author of the exhibition. Exhibitions therefore differ, and Dean (1994, p. 4) believes they can be placed on an imaginary line going from one pole of exhibitions focused on collection objects to another pole where there are exhibitions 'focused on the concept'. According to this author, this means, that what dominates exhibitions are either objects themselves, or a leading idea, a concept or a thought. In other words, the author of an exhibition either focuses on a collection object itself, or, on information that the object carries, or, the knowledge of a certain field of study the object relates to. In our opinion, Dean's dichotomy is related to the issue of the exhibition topic.

At one end of the imaginary line, Dean (1994, p. 4) places a presentation of collection objects which is, as he says, a presentation purely based on the object itself (and we add that it is a non-topic presentation). Such a presentation is not accompanied by any interpretation information, and Dean compares it to a presentation of objects on a shelf in a living room. The only objective of the author of such a presentation is to arrange objects in the most attractive way and rely on, in terms of saying anything, their appearance or by their mere existence. Such a type of presentation is typical for gallery exhibitions but exhibitions of artworks are not the only ones. We can also see this approach in ethnological, natural and other exhibitions.

According to Dean (*ibid*), another extreme is a presentation of information only (or of topic only) without the presence of any authentic collection objects or they play only a marginal role. In such exhibitions, information is given to visitors exclusively through texts and graphic elements similar to school textbooks or didactic images. The purpose of such exhibitions, which are often based on exhibition panels with textual and visual content, is to pass on to visitors a thought or a set of ideas as effectively as possible which the author of the presentation finds most significant and necessary for visitors.

In terms of given classification, it is not clear where to place exhibitions which present exhibits (spatial objects) but these are exhibits of didactic character and not musealia. Such exhibits typical for children's museums or science centres (e.g. a simulators of animal vision, a model of a human body, a simulator of an earthquake, a model of a water dam, etc.) are carriers of information demonstrating a certain finding or simulating a certain phenomenon. In similar exhibitions, these exhibits play a primary role; their task is to impart information and concepts in an illustrative and informative manner. Looking away

from this type of exhibition which is not reflected in Dean's classification, we can conclude that the majority of museum exhibitions are located between the two ends of the imaginary line coming between an object and information, or a topic. An extreme happens only occasionally. However, it is the dominance of one aspect over another that determines whether an exhibition is object-oriented or concept-oriented, or, whether it is a compromise between the two extremes.

According to Dean (1994, pp. 4–5), the most frequent combinations are as follows:

- exhibitions focused on objects where the key features are collections; educational information is limited, relations, values, and hidden or indirectly expressed meanings are not particularly developed. The author of such exhibitions uses a direct aesthetical or classifying approach to the presentation – this approach is usually used for the presentation of art, as already mentioned above;
- exhibitions focused solely on a concept (a topic) – the attention is drawn to information and the effective transfer of it (mediation of a topic), and not on collection objects;
- somewhere in the middle of the line are exhibitions whose authors are aware of the double mission of a museum: that is to establish collections and to use them in the process of educating visitors;
- thematic exhibitions – conceptually closer to exhibitions focused on an object – collections are organised around certain topics, and an exhibition contains also some fundamental information on the objects (e.g. title, identification and a brief caption). It is typical for authors of such exhibitions to prepare additional sources of information; a catalogue which offers necessary interpretations that are absent at the exhibitions;
- conversely closer to exhibitions focused on a concept are the so-called educational exhibitions, which according to Dean (1994) are comprised of approx. 60 % information and 40 % of objects. A great emphasis is put on additional texts because of the optimal transfer of information.

It is evident that there is no clear demarcation line between the presented approaches and the fact that authors of exhibitions randomly 'mix' the ratio of information and objects. Nor can we say that one of the poles is always more adequate than the other – even though the current findings on the cognitive processes clearly show that a 'conceptual' approach is more fitting. Every type



Fig. 38–39 Left – an example of a combination of original objects, substitutes and information in the exhibition of the Slovak National Museum in Bratislava (SR); right – an example of an information panel in the exhibition of Ars Electronica Linz (Austria), photo by Petra Šobášňová, 2014

of musealia and each topic of an exhibition demands an individual approach. Dean (1994) believes that the decisive factor when selecting the type of exhibition is firstly the type of information that is to be transferred, and secondly the due consideration undertaken of the most adequate combination of objects and information that would support the entire communication processes the most. This decision should always be intentional and not accidental, non-reflected. It should follow the well-thought libretto and narrative of the exhibition, as well as correspond with the objectives and the mission of the institution, and be based on the knowledge of the specifics of the target visitors. No matter what approach authors decide for, they should always be aware of the consequences that the given concept entails. Exhibitions, whose authors claim to have an educational role, but in reality, they are not different from the above-mentioned living room shelves with objects, cause embarrassment.

Dean's classification is valuable particularly because it shows the poles of museological thinking about optimal presentation based either on collections (a museum has collections and seeks shared topics when presenting them), or on a topic (or a concept) for the illustration and delivery of which authors search



Fig. 40–41 View of the exhibition titled *Museum Ludwig Goes Pop* in the Museum Ludwig in Cologne (Germany); in the exhibition gallery itself there is no information other than identification captions – however, the information is offered by way of many accompanying materials; photo by Petra Šobáňová, 2014

for collection objects and other expressive tools. Dean also fittingly points out that though authentic objects are given priority in museum exhibitions, a belief that it is enough to just display them and let them speak for themselves is surpassed and unfounded. Exhibitions with minimal interpretation of objects are referred to by Dean (ibid) as ‘opened storehouses’ who considers them to be the expressions of obsolete exhibition methodology that can be justified only in exceptional cases.

Typically, the first pole is represented by gallery exhibitions or exhibitions of unique objects, the example of another extreme are the experiments of Neurath and his followers (these are basically graphic visualisations), or some exhibitions in science centres and children’s museums. They use this type of presentation particularly because it complies with the principle of ‘hands-on’, interactivity and learning through activity, or because the illustration of some topics is in some cases almost impossible.



4 Contemporary Approaches to Museum Presentation Development and their Classification

The following chapter offers an overview of different approaches to museum presentation development and of the typology of museum exhibitions. Even though, we can identify various presentation approaches also in other forms of presentations (e.g. presentations based on digital technologies), this chapter as well as the whole book deals primarily with classical museum presentations, that is, museum exhibitions.

Museum exhibitions are certainly not just randomly grouped objects together with other elements displayed in an opulent museum gallery. As visitors, we expect a museum presentation in the form of an exhibition to truly represent a certain non-museum reality, be it in the form of a historical period or a particular natural, social or artistic event. As we have already said above: we consider displayed collections to be sources of knowledge and by visiting a museum exhibition we acquire new knowledge about the world.

In museums, we look for a comprehensible model of our complicated world; we want to see extraordinary but also everyday objects in a rational context that will assure our notion of the order and meaningfulness of the world. We look for our roots, verify our identity; we try to understand ourselves and others, our past, human culture as a whole and the natural environment which is inherently related to our lives. A museum exhibition builds a barrier against entropy while offering an explication and commentaries on our world.

No matter what the main topic of the exhibition is, it can be presented in many ways. It is these ways which we will deal with in the following text which will focus on exhibition 'language', on the classification of museum exhibitions, and possible approaches to the development process.

4.1 Exhibition Language

When discussing various approaches to museum presentation, the term exhibition language is sometimes employed in a museum presentation to refer to the fact that information is encoded into a 'language' of things, or, of the material evidence of various cultural and natural phenomena. As we have already

mentioned on several occasions, the base of an informative presentation is not just things themselves but their explication, as well as other additional tools and exhibition strategies. All these elements constituting an integral unit can be perceived as a code; a 'language' for their ability to describe effectively and to express selected realities, things, phenomena or abstract ideas.

The term *exhibition language*¹⁸ is therefore important but it has its limits or it even poses risks, especially when considering linguistic terminology. The basic difference between an exhibition as a 'text' and a language as a 'text' is that exhibitions are organised structurally but a language is linear. While a language is a complex communication tool, a museum presentation is in fact more of a message. (Some museologists even talk about language-oriented and language non-oriented aspects of a museum exhibition.)

There is also a difference between an exhibition and a language in terms of the process of identification and understanding. While exhibitions are associative and based on the context of things, a language understands and identifies things through discursive processes. A museum therefore does not make scenarios, nor does it make images, but it is an image and a scene in itself. (Schärer, 2003, p. 115)

While a language follows rather strict rules, the 'rules of exhibitions' are significantly less rigid; in many cases, we simply cannot apply a term in a 'correct' or 'incorrect' way. While labels and texts in exhibitions play rather a rational role, objects play a relatively greater emotional role. Poetically written texts are an exception (e.g. in literary museums). Sometimes, objects and texts are in undesirable competition, for example when labels explain a trivial reality which a visitor can see for themselves and thereby they limit the overall message of an exhibition.

An exhibition, just like a language, can be divided into three basic levels: a system, norms, and a language.

Martin R. Schärer writes about four most important exhibition 'languages': aesthetic, didactic, drama, and associative 'languages'. Considering

18 There are also terms 'museum code' or 'museum exhibition language'. As already said in chapter *Museum Presentation as a Message*, it is more precise to talk about museum 'language' – but in quotation marks and metaphorically because a museum language cannot be considered a full-size communication system with all typical attributes related to a language itself.

that interactivity is most likely present in all these 'languages', there is no need to create a special category for an 'interactive exhibition language'. In fact, we never find these 'languages' in their crystal clear state but as a combination. (Schärer, 2003, p. 118) Other authors define up to eight exhibition 'languages', or offer different categorisations altogether. (Schärer, 2003, pp. 120–121) Hence, there is no consensus, and some museologists' definitions tend to incline to some kind of scholasticism. The process of exhibition development must continue to be a very creative activity; there is no need to force ourselves to commit to one form of 'language'. Every extension of a given 'language', that is, every originality, is welcome. However, we believe that as a starting point we can use the following classification proposed by Schärer:

1. Aesthetic exhibition language – focuses on the use of objects and makes the pleasure from art easier to come by. Very popular with gallery exhibitions.
2. Didactic exhibition language – emphasises the importance of objects and the transfer of knowledge. The aura of objects is not so important in this case as it is in aesthetic language; an exhibition contains a large number of maps, illustrations, comprehensible visualisations, copies, etc. This language seems to be the most frequent in museum exhibition development.
3. Drama (theatre) exhibition language – creates scenes as if from life and supports emotional participation. Often used with dioramas; museum staff can engage in drama role playing.
4. Associative exhibition language – combines objects with objectives of intended processes. Objects are staged in unusual positions or ways so that they trigger new processes of thought; these exhibitions have the biggest potential precisely because of creativity, and can also be quite manipulative. A visitor is expected to actively engage in decoding the exhibition by identifying hidden connotations. As an example we can mention a part of the mostly archaeological exhibition on the History of Sweden in Swedish History Museum in Stockholm.

While Schärer's classification is factually correct, the terminology employed deserves a deeper analysis. We believe the above classification is rather the description of the accents on the individual effects on visitors rather than some special 'languages'. In our opinion, there is only one exhibition 'language'. Just as combining words in a sentence can lead to very different even opposite results, also using exhibition 'language' can lead to differing findings and results.

A 'language' is one but it is not without boundaries and limits. Combining its elements in various ways can help create valuable but also worthless works. It is similar to an exhibition 'language'. Therefore, we use the term exhibition 'language' as a well-established designate, even though it is rather a metaphor and the term should be used in quotation marks.

In the conclusion of this subchapter, can we actually define what is a good exhibition 'language'? It requires a certain optimal combination of knowledge on the given issue, exhibition and museological knowledge, and knowledge of needs, and receptive and cognitive abilities of visitors. A museum presentation language has its own 'vocabulary' – space, objects, texts, graphs, colours, sounds, lights, movements.

When talking about metaphors, we can say that the product of an exhibition language is not a prose but rather a disconnected staccato text, an essay or a piece of fragmented poetry. As in any other text, it comprises paragraphs, and the book as a whole is divided into chapters – all of that is there for the better understanding on the part of a reader. Also, the 'discourse' of an exhibition must be divided into meaningful units, rooms, panels and showcases¹⁹. Structuring of a presentation has its purpose, be it an adequate structuring of the very content of a museum 'discourse', or the structuring of a space and exhibition fund.

4.2 The Classification of Exhibitions according to their Duration and the Extent of Concept Application

If we leave aside more complex issues related to an 'exhibition language', a museum exhibition as a fundamental form of a museum presentation can be simply classified in terms of its duration and its concept as proposed by

19 We believe that the lack of non-connectivity was the main reason for the failure of previously popular long showcases. (The most typical example was a 120m long showcase of architect Zdeněk Rossman in the archaeological exhibition of Prehistoric Bohemia, Moravia and Slovakia in the National Museum in Prague which ran through six rooms. The exhibition was opened in 1958 and closed in 2011.) By failure we mean primarily difficult comprehensibility, tiring effects and the lack of drama in such a museum discourse. (Šuleř, 1997, p. 6)

Waidacher (1999, p. 153) who distinguishes between four basic types of museum exhibitions:

- permanent exhibition,
- temporary exhibition,
- marginal exhibition,
- public study collection.

We would like to emphasise the fact that these differ in content, in the approach to a topic, methods used, and in duration. A permanent exhibition is characterised primarily by the fact that it is permanently open to the public, and that it mediates the main content of the museum thesaurus. A permanent exhibition gives us the necessary information about the collection, research, documentation, and communication objectives of a given museum. It is a 'shop window' of the museum which shows us the basic line of its collection development, thesaurus-related, and presentation activities. More than other types of museum presentations, a permanent exhibition should be dedicated to the widest group of visitors. Therefore, it should consider the differences in the needs of these groups and at least in some way try to accommodate each of them. Even though, it is a permanent type of presentation, it does not need to contain the same exhibits all the time, partial alterations can be implemented.

In culturally and historically prominent localities, an exhibition often includes some immobile object, or a whole building and its exterior parts which are objects of monument protection or natural protection. These objects can be part of an exhibition or the exhibition can be placed inside such an object. Where the presentation effect is shared with historically and culturally significant exhibition spaces, it forms interesting entities. An exhibition in a protected monument or an historical object brings some advantages (attractivity for visitors, interest of tourists) but also the monument poses some limits for the author of the exhibition (e.g. unable to make major construction alterations, spatial limits of exhibition spaces, limits of lighting systems, etc.).

A permanent exhibition is conceptual as the second type of museum presentation, that is, a temporary exhibition. In this type of exhibition, Waidacher (1999, p. 153) emphasises the dynamic nature of museum communication. Temporary exhibitions complement permanent ones by introducing a certain partial topic or by presenting an issue only from a certain point of view. Temporary exhibitions inform us about the up-to-date museum work, and

to current events they can react operatively better than permanent ones. A temporary exhibition is time limited often as a visiting exhibition in a cooperating institution; it can also be a travelling or mobile exhibition.

Using a temporary exhibition, a museum can react to current topics in a society. The so-called marginal exhibition, that complements a permanent exhibition as well as a temporary exhibition, can be used to react quickly to an especially topical issue. These are commonly in the form of an informative announcement without using sophisticated presentation strategies. Often they are carried out as a simple poster presentation which is time-limited, and typically without the presence of collection objects. We must say that this type of exhibition is rather common also outside museum setting – at universities, administration buildings, libraries, etc.

In reality, we can be met with two extremes: the first one is an exhibition prepared rapidly, lasting as little as two or three weeks; poorly promoted, and thereby having a minimal effect on the public. The other extreme is an 'eternal' exhibition created many tens of years ago surviving with no or very little innovations until today. Today, such a form of presentation cannot offer satisfaction in terms of an expert approach; of museology, or museum artist or educator, etc. We believe that the progressive trend of museum exhibition culture should be the attempt to lessen the differences between the duration of a short-term and long-term exhibition. An exhibition should be carefully designed considering all aspects which demand time and also financial resources. It must be well promoted both before opening but also throughout. That means that the optimal length of an exhibition is in the order of months. On the other hand, an exhibition whose duration exceeds 15–20 years shows little interest in the quality of the presentation on the part of the museum management and often on the part of the particular curator. Minor innovations can be in majority of cases carried out on an annual basis.

So far no one has dealt with the seemingly scholastic question of what is a minimal physical size of a presentation. We believe that an exhibition is up to a certain extent a closed homogenous form in many cases covering at least one (no matter how small) room. That is why we hesitate to perceive one showcase referred to as a permanent exhibition (see e.g. Slavic ancient fortified settlements in Pošembeří in the museum of Český Brod, Czech Republic) as an exhibition at all.

The research work in the field also brings many findings and partial sets which are important, even though they are not always very numerous. Zbyněk

Z. Stránský fittingly points out on several occasions that no thesaurus is complete – it is an open system. A thesaurus itself is not created as an information medium but as a documentation system; a thesaurus is not an explication of a reality but its evidence – and from that it follows that it often cannot be ‘optimised’ in terms of numbers and extent. This brings the need to present also these partial extensions of our knowledge, though they may seem rather marginal. And that is where Stránský (1984, p. 105) sees the main purpose of museum exhibitions. We need to add that only some museums have enough capacity, especially space-wise, to create an exhibition of everything what the given museum in terms of its documentation work focuses on. The majority, often an overwhelming majority of a collection fund remains permanently hidden to visitors.

A museum exhibition is to be perceived as an ideal form of presentation also of these ‘hidden’ collections even those where further extension is not planned. A short-term exhibition is certainly more dynamic than a long-term one, at least in the following two aspects:

1. Its development usually takes a shorter time, therefore it requires less time, less financial sources, etc. A short-term exhibition is thus more flexible in reacting to the needs of the public.
2. While a long-term exhibition is in essence ‘anchored’ in given spaces, a short-term exhibition can be mobile and can attract visitors from other cities and countries – it can have a travelling nature. A travelling exhibition must have a special design (for the purpose of being used in a variety of spaces), and must comply with special legal, conservation and safety requirements. Apart from the transport of delicate objects, another great issue is that these are commonly installed under different conditions which can significantly disrupt the basic ideas of the exhibition authors. On the other hand, when presenting the exhibition in another place, it can be extended by adding new objects or information related to the region or the specialisation of the borrower. Thereby an exhibition takes on a new dimension, a new ‘added value’. It is a pity, that in the Czech Republic there are only a few travelling exhibitions.

As opposed to the beginnings of museum culture when a museum used to display the entire collection, in today’s exhibitions visitors see only a fraction of the whole collection fund. Many of the collection objects are never even displayed because these are seen as documented material that has more value for researchers.

It is for them that a public study collection exists. It cannot be considered a medium of an active museum presentation, it focuses on objects and is often organised only in terms of scientific or material systems, not in terms of a concept or artistic arrangement.

4.3 The Classification of Exhibitions in terms of their Approach to Musealias

A museum exhibition can be classified also according to different aspects and not just according to their duration, the extent of topicality, and according to whether they apply a conceptual approach or not.

Josef Beneš (1981, pp. 82–86) offers the following classification of presentations in terms of the approach employed:

- monument-related – employing a set of objects in their original order with maximum connection to their original environment; authenticity is imperative, displaying in situ either with minimum of texts and other additional information or completely without them.
- museum-related – authentic testimony of the original object is imperative but placed in an artificial environment of a museum; it is an adequately composed interpretation of the relationships of a historical process.
- gallery-related – the presentation of individual works of high quality as absolutized values outside the space and time, without the interpretation of its relations to the original environment or of its original function, without additional material, the quality of the displayed works is imperative primarily in aesthetic terms.

J. M. Ettema (1987) aptly denominates two mutually different ways of presenting musealias: formalistic versus analytical.

A formalistic approach means that we aim to mediate primarily a particular reality related to the object; to identify objects according to the dating, producer, functions, place of origin, style affinity or technique employed. We focus our attention mainly on the object itself, which is our main interest. This type of work with an object shows us the development which was important in some periods of museum cultural development, especially at the end of the 19th century when collections and exhibitions were structured in terms of the

ideal of the strict scientific taxonomy and classification, and the departure from such a concept was perceived as non-scientific and unacceptable. (Smith, 1989) An object refers rather to itself and to its external form, the meaning of the object is not important. This approach is based on the premise that an object speaks for itself.

On the other hand, an analytical approach (we could also say a contextual approach) helps us make accessible not only the information of certain realities (the fact that they happened, existed) but also the information of additional secondary circumstances, a context (how and why such a thing happened). Objects are put into mutual relations with ideas, values and other social and historical circumstances of the time. An object should not give information just about itself but pose questions. It should not refer only to itself but place itself in the wider context, and stimulate a deeper level of thinking about the past or history. Exhibits are thus perceived as symbols that refer to certain contents. Objects presented in such a way cannot be found in formalistic complexes organised in terms of a certain artificial system (e.g. in terms of the material or its functions) but in contextual exhibition entities, especially in thematic dioramas.

The first approach does not offer the meaning of displayed objects and presents them only formalistically. However, people have a natural tendency to attach meanings to things spontaneously. Even a formalistically designed exhibition (exemplary scientifically correct and systematic) can encounter conceptions²⁰ and misconceptions of visitors. That is why analytical or contextual exhibitions are, according to the current opinions, more adequate as they help correct visitors' misconceptions²¹. Their disadvantage is; overwhelming visitors with an excess of textual information which help to interpret objects. It is recommended to combine both approaches which is also in compliance with the basic museological concept according to which musealia are authentic documents of certain realities as well as representatives of social and cultural values.

20 This is a personal opinion about a certain thing, a subjective conception or theory based on intuition rather than knowledge, which often significantly differs from scientifically established facts.

21 These refer to erroneous or inaccurate understanding of a subject (e.g. related to the meaning or a function of an exhibit), incorrect personal preconceptions, hypotheses and theories which are commonly very resistant to any changes.

Musealias are attractive, they trigger interest, curiosity and fascination, but still their information value has its limits. That is why, various additional elements are increasingly more often being implemented in exhibitions; be it in the traditional form of copies, models, textual panels, visual information (drawings, illustrations, photographs, reproductions related to the period artefacts), or in a less traditional form of specially constructed didactic or entertaining elements. These can complement, clarify and mediate such realities (objects or broader phenomena that given objects document), or their role is primarily to help visitors relax. Mostly they are designed for children but they are also popular among parents because they fulfil the visitors' need for social interaction and for rest. In this in mind, exhibitions can be divided as follows:

- exhibitions with musealias as a dominant aspect,
- combined exhibitions,
- exhibitions with objects of a non-museality nature as a dominant aspect.

Waidacher and Gräf (1987) propose other categories of museum exhibitions based on the following opposite approaches:

- functional-ecological or systematic exhibitions,
- thematic or integral exhibitions,
- geographic or chronological exhibitions.

An ecological approach refers to the fact that musealias are presented as elements of a system in which certain determining relations and conditions apply. An exhibition portrays the relationships of elements and the environment in which they originated or in which they exist, as well as the relationships of these elements among themselves. The topic is presented in such a way that it is evident what factors influenced the establishment, development and the state of a certain system, be it the population of plants or animals, or a human being and their environment.

On the other hand, a systematic exhibition organises elements into a certain frame, presenting a system of these elements on the basis of a classification

>> Fig. 42–43 Top – an example of an approach that employs systematisation in the Slovak National Museum in Bratislava (SR), bottom – an attempt to offer a context in the Regional Museum in Olomouc (CZ), photo by Petra Šobáňová, 2012 and 2014





established in a given field of study. Systematics classifies elements into taxonomy (most commonly organisms of animals or plants, but also elements of inanimate nature, e.g. minerals, and even objects of social sciences) e.g. on the basis of morphology, anatomy, physiology, composition, material, etc...

This approach to exhibitions is subject to much criticism today. The problem is that in such exhibitions, we often see the presentation of the development of a science (e.g. archaeology), which means that it is a meta-scientific presentation, and not a presentation of a given natural or social phenomenon. In this context Dolák (2010, p. 6) adds critically that we castrate the topic of guilds into a show of guild coffers, the topic of music we simplify to the show of musical instruments. The topic of life in Neolithic is far from being the same as the show of the archaeological discoveries from this period. He considers neglecting the relationships between phenomena in their original environment, or, non-contextuality as one of the fundamental errors of contemporary museum exhibitions. (ibid)

A thematic exhibition according to Waidacher and Gräf (1987) depicts a phenomenon as an isolated entity (or just from one point of view) and focuses on the phenomenon itself. On the other hand, an integral exhibition has a summary character depicting a theme in its entirety and complexity. What is rather clumsy about this dichotomy is the fact that a theme is present in every exhibition so that every exhibition (at least today) is always thematic. One of the meanings of the word *theme* is that it is a broad complex of meanings gathered into an omnibus thematic area. A theme is always a concept or it can offer various related concepts – and if it is to be a real theme, it must be entire and complex, even though presentations are not always so. Still, we can consider the collocation of a *thematic exhibition* as an antonym of an *integral exhibition*. A theme should be multi-layered and vivid; it is the contextual base of presentations which is why it is an integrating factor of exhibitions: the term thematic exhibition connotes the meaning of the collocation integral exhibition and that is not desirable. Perhaps, the following classification of exhibitions would be more fitting:

- with narrow specialisation (presenting an isolated phenomenon),
- integral (presenting mutually interconnected phenomena in a complex manner).

<< Fig. 44–45 An attempt to use an ecological approach in the Slovak National Museum in Bratislava (SR); photo by Petra Šobáňová, 2012



<< Fig. 46–47 View of the presentation in the Vřestary archeopark (CZ), an example of presentation of phenomena in the context; top – the presentation of objects with plentiful accompanying explicating and referential elements, bottom – the reconstruction of a prehistoric dwelling; photo by Petra Šobáňová, 2017

On the other hand, referring to exhibitions as either geographic or chronologic is quite accurate. In geographic exhibitions, the main determiner is a geographical occurrence of some element or a phenomenon, and in chronological exhibitions it is the aspect of time: the course of time of a phenomenon is presented, or the development of some element in time. Both types of presentation are equally frequent and in terms of adequacy, or their positive or negative impact on visitor's experience and understanding of an exhibition, they are both perceived as neutral. They are the criterion for selecting exhibits, and they reduce a practically infinite set of representatives of a certain reality into those that relate to some selected time period or place.

Based on the above-mentioned classifications and her own research, Šobáňová (2014a) proposes her own classification of exhibitions which aims to reflect the aspects of **contextuality** and **narrativity**.

A context means connections, circumstances of the establishment of an artefact or naturfact, and their original social relations. Contextuality, that is, the efforts made to move from a formalistic approach by introducing not only musealia but also a set of other links and relations²², is the current determining trend in a museum presentation especially in museums which present natural and social phenomena – except for artistic phenomena. Contextuality, presenting relations occurs in exhibitions of visual art and visual culture still very rarely.

While Kesner (2000) appeals to art museums to depart from the present purist and elite way of presenting visual art, and perceives it as a manifestation of the conservatism and elitism of Czech art history and museum culture (ibid, p. 82), Dolák (2010) he maintains that there is a difference between an artistic exhibit (that is, the object that results from a creative process as a way of communicating and with the purpose of being exhibited) and an exhibit as evidence of some natural reality where the loss of original context is far more significant.

22 At this point, we cannot distinguish with absolute precision the approach of contextuality from the functional-ecological approach – both approaches blend together.

However, Šobáňová (2014a) argues that context is necessary for all types of exhibits (even though, the absence of original context e.g. in natural phenomena is at times almost comical but in art exhibits rather expected; a beast of prey mounted in a position as if to jump through the glass showcase and to attack a crystal chandelier) – but both of these types of exhibits provide for contextuality, and the implementation of context would be beneficial for their informative value.

Various types of collection objects have naturally very different communication abilities: while a non-contextual mounted lion or wolf can be understood also by a child, art artefacts presented in a way so that they ‘speak for themselves’ remain for the majority of visitors ‘hopelessly silent’. (Kesner, 2000, p. 82) Whether we talk about art or other types of exhibits, presenting isolated objects is never suitable because it does not permit or it makes it more difficult for visitors to have a deep experience. (ibid)

Let us not forget that efforts to make natural or period environments accessible in museums have been made before. These originated in the setting of natural museums (often mentioned is the Museum of Natural History in London which tried to make dioramas as early as in the 19th century), and from there they spread to museums of history. A natural context of a naturfact or a historical frame of an artefact can be created by reconstructing the original context (see well-known dioramas and various scenes), or by loose metaphors of the original environment. As Kesner (2000) explains, in this case it is not an imitation of the original environment (the veracity of which is always doubtful), but it is a contemporary pendant of this context, a variant which corresponds to the original environment only in certain aspects. This gives rise to more loose analogies; the contemporary or natural atmosphere is only being completed with the use of various tools. The context can be evoked by various scenic and artistic tools and of course by multimedia technology (see various special projections).

According to Kesner (Kesner, 2000, p. 226), the objective is to create a space in which the potential for personal interchangeable experience can always be maximised. The task is to stimulate viewer’s active and constructive seeing of a given artefact, to strengthen the relation between seeing and knowing. (ibid)

Even though, the implementation of contextuality is generally perceived as desirable today (and the reconstruction of the context is, thanks to various

tools and technologies, easier than ever before), and it is in no way a novelty, we are still met in many museums with infinite rows of prehistoric vessels, representatives of various animal species and subspecies, weapons, agricultural tools, etc., with minimal or no efforts made to place these objects in some kind of a context understandable to a visitor. (Dolák, 2010, p. 5)

Another approach is also related to contextuality, Šobáňová (2014a) refers to it as **narrativity**. These are not opposite approaches, they rather complement each other. The implementation of narrativity can help create the context for the displayed objects, and the presence of contextuality can lead to the implementation of narrativity. It is more fitting to say that contextuality and narrativity are in opposition to formalism explained in the introductory part of this subchapter.

So what does Šobáňová (2014a) have in mind when referring to narrativity? What exhibitions are narrative?

The base of a narrative approach is a narrative and a chronologic principle. Rimmon-Kenan (2001, p. 11) defines a narrative as the recounting of events which are chronologically ordered, where a narrative naturally also involves participants of these events.

When applying narrativity, museum exhibitions²³ are perceived as the 'discourse' that tells us about certain events. This recounting does not have to be strictly chronological, and individual units of the narrative content can be composed in a variety of ways. The exhibition creative team, that is, a curator and his colleagues, are responsible for the production of a narrative and its communication which is of course dependent on particular presentation media. During a communication, a narrative is transferred from a 'storyteller' (the author of the exhibition) to an addressee, to a visitor. It can be said that a narrative is at the background of an exhibition, and is accessible to visitors only in the form of a presentation. Of course, sometimes a narrative may not be legible or is legible only to a minority of visitors – we can compare a narrative to a certain type of a magic wand which automatically increases the legibility of an exhibition. Creating a narrative is 'art'.

Šobáňová (2014a) maintains that a narrative is connected to a story and to the chronology of events, and its opposite can be the organisation of content on the

23 Or a literary text – a novel and other literary genres work exemplary with a narrative. In particular, Šobáňová (2014a) draws on literary sciences in the scope of which narratology is a carefully maintained subdiscipline.

basis of a description, logics, or an interpretation of a phenomenon. In other words, descriptive or explicatory approach is not a narrative (compare Rimmon-Kenan, 2001). On the other hand, we should not forget that non-narrative elements can be commonly found in narrative texts (if we stay in the realms of literature) or other communication just as we can find narrative elements in non-narrative communication. The same can be observed in museum culture – most commonly we see the combination of narrative and non-narrative elements typically of a descriptive or explicatory nature which are used to introduce the plot of the narrative in an abstract world of concepts of the given scientific disciplines. A narrative – the chronological sequence of some events is thus connected to the description of events or with the placing of the event into a wider context.

Similarly, with contextuality also, narrativity is not a new approach in museum exhibition development. For a complete overview of recent exhibitions which included the word story in them, we would need more than several pages. Does it mean that narrativity is a common approach employed by museums? We are not able to answer this question without a thorough analysis of these exhibitions, however, it seems as though the word story is overused, and not all possibilities of a narrative approach are well understood. Museums often talk about a story but what they really mean is a *history* – also here, events are organised chronologically but these events are viewed from the impersonal point of view of some unconcerned viewer, in a better scenario they are delivered as the story of an elite or, as Jerome Bruner (2004) puts it, through a canonical life story of heroes, martyrs, swindlers, and others.

A narrative exhibition can present a chronological sequence of some events also through the lives of other more ordinary people and not just emperors, military leaders, or celebrities. The most effective are stories of common people (those that did not initiate historical events), and the recounting of how they experienced certain historical peripeteias and what they felt. A story that is told personally and subjectively has perhaps the highest informative value as it can stimulate the emotions of visitors and lead them to connecting the presented events with their own lives: they imagine how they would feel and experience their lives if they had been in the places of the people mentioned in the exhibition.

The recounting of stories thus clearly relies on the ability for empathy and the imagination of visitors. A great advantage of narrativity is that through

a story we can explain also complex abstract realities. A story encourages visitors to imagine themselves in an unknown world of the past, or of a different culture, and through a story, narrative exhibitions can offer various perspectives which suggest certain historical phenomenon and thereby a topicality of many of our solutions.

Roppola (2012) perceives a story as one of two central models which help us think, and therefore help present some topic in a museum exhibition. The second model of thinking which helps us organise reality and our experience, is logic; that is, an intellectual path of thought that leads to the drawing of conclusions. As opposed to other approaches the use of which museums have exhausted, the advantage of learning through stories is of course their accessibility because visitors can easily identify themselves with the fate of others. Stories are in many aspects more convincing and credible a presentation approach, and allow for presenting not only facts but also human intentions leading to various events. At the same time, they depict a subjective and generally historical human experience that has its origins in events in a particular place and time. Apart from Roppola (Roppola, 2012) Bruner (1986, 2004) has also published many interesting insights on the topic of narrative and the use of a story – the works of both are highly recommended for those who are interested in this issue.

Let us mention at least some of the successful narrative exhibitions which have used a story in several different ways. Primarily, an exhibition of the National Maritime Museum (NMM) in Greenwich which shows the way the sea and the developing maritime transportation changed lives of people. Using various scenic and symbolic media (with full use of multimedia technologies) the exhibition designers have created a metaphorical reconstruction of a rough sea, and into this context they placed showcases with a few portraits and various personal things of particular people. The accompanying text leads visitors into the theme:

Love...

A deep affection between families and the passion of lovers divided by the sea imprinted in keepsakes and personal letters sent on the waves.

After that a visitor can read about the stories of particular people, e.g. a certain Jane Franklin (1792–1875) whose beloved John departed on a maritime expedition and with whom she lost any kind of contact. Jane writes to her husband: ‘You must know and forever feel that I will never rest until I receive any kind of news of you. My dear husband, I only live for you...’ Apart from di-

rect testimonies given by the letter, the fate of these two people is told by a brief additional text: Jane never lost her hope of finding her missing husband who together with the entire ship disappeared somewhere in ice floes in the North West. She fought tirelessly for the searching and saving of the members of the expedition refusing to believe that John was dead. The story has a sad end when other British yachts brought the remains of the members of the expedition and the ship's logbook with John's death recorded in it. Apart from the letter and an explicatory text, there is also a few telling objects in the showcase: a tin spoon for soup found somewhere in the Arctic zone, a ship's bell, a knife made by Inuits from the material unsuccessful sailors left behind, a flag that Jane embroidered for the sledge of the rescue expedition.

Thanks to this concrete story full of emotions, a visitor is also made aware of the period background to such events which was the search for a northern shortcut for maritime routes from Europe to Asia, and also the broader context of acquiring geographical knowledge about the western hemisphere, North America and the Arctic zone. This knowledge grew only thanks to the activity of particular people and maritime and land expeditions who often faced similar unfortunate fates.

Narrativity was employed by the National Maritime Museum in Greenwich also in different ways – still in this part of the museum, it is worth to mention that stories of the 19th century were linked to the current times and updated with the help of undated people's testimonies whose lives are still somehow affected by sea. For this purpose, narrow minimalistic columns were placed in the exhibition in which small monitors with projections were integrated. Various people of various ages, gender and professions talk through the monitors and their testimonies are symbolically framed by captions such as *inspiration*, *identity*, *memory*, etc. Another narrative element used in the museum that would deserve a separate analysis are kiosks that are placed throughout the large museum and its many exhibitions. Their role is to activate and motivate visitors – these are machines into which visitors place a card with a bar code and gradually collect blind blocking prints symbolising individual stories; the complete collection of stories can be then activated through web interface

>> Fig. 48–49 The monument of Great Moravia in Staré Město (CZ), bottom – Museum of Recent History in Celje (Slovenia), Maria's diary, photo by Jan Dolák, 2011, 2007



where these personal stories (some are related to the given part of the exhibition) are developed in detail.

Another example is the monument of Great Moravia in Staré Město u Uherského Hradiště (CZ). The exhibition is based on the life story of a fictional person named Mojslav, a member of a higher social class. The exhibition functions as a guide through his life from childhood to his death, and using his life the main events of Moravia in the 9th century are told (e.g. the spreading of Christianity) but also stories from an everyday life at the time. There is no any other text in the whole exhibition. A visitor receives a light-weight portable electronic guide to select a recorded story for each diorama. It always starts with a short musical tune, and the description of the political and economic situation in Europe (London, Rom, Kievan Rus, Balkan) and then the accompanying speech of Mojslav. The visit concludes with the death of Mojslav, and by descending to the relicts of a Roman church.

Interesting elements of narrativity connected to oral history can be also found in the National Museum in Copenhagen (e.g. the perception of Danish reality from the immigrants' point of view), or in the Museum of Recent History in Celje (e.g. a girl's 'diary' from the beginning of the 20th century), and many other museums.

Narratives are of course commonly used in various types of media, not only in museum exhibitions, and are today very popular. Šobáňová (2014a) distinguishes **fictional narratives** (based on a fiction, a fabrication; a novel can be an example of this), and **non-fictional narratives**, e.g. testimonies of direct participants of some event recorded by a video camera, autobiography, history books. We mention these categories of narratives because it is important for the context of museum culture – as opposed to literature, film or theatre where the issue of 'veracity' is not as crucial.

Museums are quite sensitive to implementing fictional narratives; these are often opposed also in terms of museum teaching (see the discussion on the legitimacy of using fictional stories in order to bring prehistory closer to children – a time from which no recorded stories exist). It is also good to keep in mind that also non-fictional narratives (chronicles, autobiographies of exceptional people, period records of events or their follow-up recounting by historians) are often in reality 'fictional' depicting the truth in a one-sided, misrepresented manner. These are social constructs such as the meanings offered to visitors



Fig. 50–52 Top – Jane Franklin (1792–1875) and John Franklin (1786–1847), bottom – view of the exhibition in the National Maritime Museum in Greenwich (UK), photo by Petra Šobáňová, 2014



Fig. 53–55 From the exhibition in the National Maritime Museum in Greenwich (UK), photo by Petra Šobánová, 2014

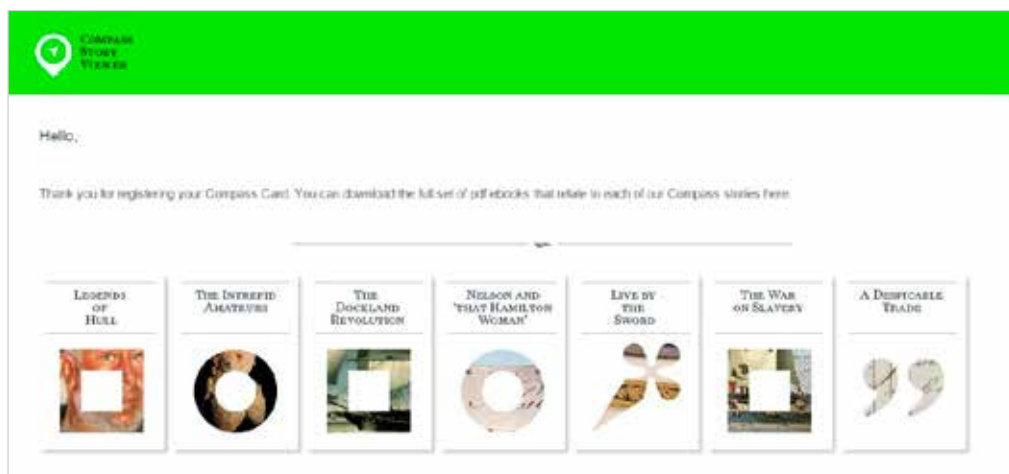


Fig. 56–57 Top – View of the exhibition area in the National Maritime Museum in Greenwich (UK) with computer kiosks helping visitors to register their Compass cards and gradually collect symbols with individual stories onto them (photo by Petra Šobáňová, 2014); bottom – web interface where visitors can download e-books with said stories.

by a museum exhibition. An interesting solution to this issue is offered by the theory of literature: Wellek and Warren (1996) tell us that there is ‘factual truth’, the truth about particular details of time and place – the truth of history in a narrower sense. According to them, there is also philosophical truth: conceptual, ‘the truth of judgements, general truth’.

This understanding of ‘history’ and philosophy makes an imaginative narrative a ‘fiction’, a lie, but it is well known from art that fiction is sometimes less strange than the truth, and can often act as a better representative and be truer to the reality. A narrative fiction can represent something typical and universal very well and to the point. (see Wellek and Warren, 1996, pp. 302–303) A fictional narrative can play the role of an illustration or an example of some general, abstract phenomenon, be it a model, or a *syndrome*, as mentioned by Wellek and Warren (ibid) to voice their belief that a fictional narrative can contain a characteristic, model group of some typical symptoms of the represented phenomenon. The extent to which such a narrative is true to ‘reality’ cannot be in this case evaluated on the basis of factual accuracy of a narrative but according to the fact whether it contains all the elements that are necessary to create ‘a general view’ and whether the author has selected elements that are ‘deep and principled’. (Wellek and Warren, 1996, p. 305)

This view is perhaps in conflict with the opinion of a majority of curators, and with the very essence of museum presentation which strives to show reality exclusively using authentic, original objects, and which perceives science and veracity of the findings as alpha and omega. This does not change the fact that a museum presentation often fails and is not as apt and communicative and as ‘true’ as a fiction can be – be it an artistic or didactic one.

Of course, we do not appeal for mass implementation of fictional presentations, and we considered it important to acknowledge openly every reconstruction ‘from nothing’ and every fictional narrative. We see the application of a fictional narrative as justifiable only in the case when it complies with the above mentioned: it completes the general model that corresponds with the verified findings, and contains deep and principal aspects of the presented phenomenon.

It can be easily proved that not even a model of a reality that is strictly declared and scientifically *true* is always a reality in a museum – often it is just a desire, an ambition, and many examples from history show the limits of veracity in museums. On the other hand, various reconstructions of stories, e.g. the

story of the famous female hominin Lucy²⁴, are imperatively fictitious but they give evidence about general laws, in this case, about the phylogenetic development of the human species and about our knowledge of this reality. Therefore, it is not always crucial whether these correspond with the truth even in less important details or not.

Jane, John, Lucy, Mojslav – in our opinion, their stories, no matter how fictional they may be, give evidence about the reality far better than a formalistic showcase with bones and archival records.

To conclude, we can summarise the proposed classification of exhibitions as follows:

- **contextual exhibition** – offers non-narrative description and explication of some phenomenon in context. Presented exhibits are related to one another and together with many additional elements form a complex image of the presented natural or cultural reality; using various classical and contemporary tools (diorama, multimedia scenes) the authors aim to create a period or natural atmosphere, displayed objects refer to broader phenomenon and context.
- **narrative exhibition** – presents a reality through stories and chronology. If it is a ‘story’ of things or inanimate entities, then often with the use of anthropomorphising. If it is a ‘story’ of people, then it presents their personal experience of the event; a story plays the role of a model of some general phenomenon and displayed objects are illustrations, evidence of the story.
- **formalistic exhibition** – does not implement either of the above-mentioned approaches, it is non-contextual and non-narrative. It focuses on the object itself and displays it without increasing its informative value; an object is accompanied only by identifying description, impersonal texts and illustrations are used to the maximum.

Considering the needs of visitors, it is clear what type of approach we prefer: it is unequivocally analytical, functional-ecologic, with a contextual or narrative approach. The visitors’ understanding of the presentation content is also supported by exhibitions which beside museal also present various additional elements and exhibits of non-museality value. Such exhibitions also

24 The BBC documentary *The Incredible Human Journey* presents one of the possible reconstructions in which Lucy is portrayed as an able mother and the subject of desire among the males of the clan. Her death is told as the backdrop of a drama around the fight of competing clans and around the rescue of her young one.



<< Fig. 58–59 Top – view of a classical presentation of arms (Regional Armoury Plzeň in the West Bohemian Museum in Plzeň, CZ), bottom – an image from the exhibition of the Militärhistorisches Museum der Bundeswehr in Dresden (Germany) showing the work by James Nachtwey depicting the way a war changes the life of people; photo by Petra Šobáňová, 2014 and 2012

implement didactic exhibits and consider the cognitive and receptive capacities of visitors. These exhibitions are not only more didactic but also more interesting and attractive for visitors.

4.4 The Classification of Exhibitions in terms of the Effect They Have on Visitors

Based on the above-mentioned Shettel's (1973, p. 33) definition of three different types of exhibits, we can derive a typology according to the prevailing objects in exhibitions and the needs of visitors that are being fulfilled. Exhibitions in terms of displayed exhibits based on Shettel's categories are as follows:

- exhibitions that built on rare objects which are interesting in themselves,
- exhibitions with prevailing art objects (or gallery type of exhibitions),
- educational and informative exhibitions.

The first type of exhibition are those which display rare or interesting, attractive objects of extraordinary value. Such exhibitions are interesting in themselves and visitors seek in them an important historical, social or psychological message or a satisfaction of their desire to have an extraordinary experience. Here, no special museological or exhibition approaches are needed – in fact; they need nothing more but an exhibit to attract people. Shettel gives the following example of such an exhibit: a piece of moon rock, or, an inauguration dress of J. F. Kennedy's wife. These exhibits need not much in the way of additional descriptive material which is why they are rarely used in such exhibitions. People come because of their personal interest, curiosity; a desire to see something extraordinary, a rare object. This type of exhibition reacts to the needs of people to be in the presence of new stimuli, to marvel, to be amazed. Therefore, these exhibitions afford visitors an especially emotional experience.

The second Shettel's (1973) category includes exhibitions which are attractive especially for their aesthetic value. These are typically exhibitions of art objects of all kinds including photographs (referred to earlier as gallery-like exhibitions, or, gallery exhibitions). However, we can also include exhibitions of naturfacts in this category, which also have aesthetic value and attractive force (e.g. collections of minerals). This type of exhibition satisfies the need of people to be in the presence of beautiful objects, to revel in perceptive delight, and to broaden their vision. Also these exhibitions offer an emotional experience, though somewhat deeper than the first category because people are in contact with artworks which are spiritual and reflexive artefacts.

The last category embraces informative exhibitions, or, educational exhibitions or exhibitions that have an educational role. Exhibitions of this type tell a story, explain certain social or natural processes, define and document certain scientific principles, etc. This category satisfies the need of people to learn, to understand things and phenomena around them; to find purpose and order in a chaotic and complex world.

A similar, though still more complex classification based on the type of experience they trigger, can be found in the evaluation documents of the British Museums. (Morris Hargreaves McIntyre, 2012) This world-renowned institution perceives the evaluation of their exhibitions as research, so that it uses a detailed and carefully designed questionnaire which helps analyse several aspects of the exhibition at once (for more details, see further). One of the aspects is the question of what motivates visitors to visit the museum, or which visitors' motivations are satisfied by the analysed exhibition. Authors of the evaluative criteria of the British Museum have identified four sets of reasons that bring visitors to the museum. An exhibition can thus be focused on satisfying their:

- **spiritual needs** – an exhibition encourages visitors to think, to contemplate and to meditate, it touches their spiritual life and spirituality. A visitor has the opportunity to 'verticalize' their personality and to focus on the extension of a common life, such exhibitions stimulate their contemplativeness, creativity, and help them temporarily escape stereotypes, 'it charges their batteries'.
- **emotional needs** – an exhibition stimulates visitors experience, it triggers deep emotions. Visitors are moved, touched or excited; an exhibition affects their feelings, their mood, and brings them into a state of excitement.
- **intellectual needs** – an exhibition stimulates visitors' active mental activity, it encourages their theoretical and abstract thinking about new knowledge.



Fig. 60–61 View of Museum moderner Kunst Stiftung Ludwig Wien (Austria), photo by Petra Šobáňová, 2012

It stimulates their learning of new things, it is based on a visitors' ability to think and learn in a rational manner; thanks to the exhibition, visitors improve their knowledge, understanding of a topic. An exhibition offers a dominance of cognitive stimuli; it satisfies the personal, academic and professional interests of visitors.

- **needs for social interaction and relaxation** – an exhibition is a place for social adaptation, it encourages understanding of oneself and of others, it contributes to accepting a person in certain social groups; a visitor learns to understand the norms, values, customs and requirements of a society. By visiting a museum, a visitor gains in social acceptance, recognition and appreciation of their personality; an exhibition helps create visitors' system of values related to the objectives of a social group. Visiting a museum helps optimise social communication and improve social adaptation, the phenomenon of the so-called social desirability is at play here; when people act in a way they believe is expected of them by the group, they adjust their behaviour to what a given society approves of and promotes and what is in the museum represented by the exhibition. An exhibition is a place of communication, a dialogue, a relaxation of psychological and physical tension, a pleasant place to spend quality time with a family or friends; it also includes the increasing trend when a visitor comes only to visit a certain part of a museum, e.g. a museum shop, library, a café, a toilet, a restaurant, etc.

In specialised literature, we can find an abundance of similar attempts to develop a typology, the key is the attention devoted to the expectations and needs of visitors as well as the efforts made to analyse the effects and overall impression of an exhibition.

4.5 The Classification of Exhibitions in terms of Visitor Groups

Similarly, we can propose a typology of exhibitions in terms of visitor groups for which an exhibition is designed primarily, bearing in mind that the needs of various visitor groups may often be in opposition. According to Falk and Dierking (2000, pp. 92–105) the main visitor groups include families, school groups, and adults. And in the majority of exhibitions we can in fact determine which one of these groups was the target one for the exhibition designers.

Families are one of the largest museum visitor groups and what characterises them is that members of a family actively communicate with each other, share their experience and new knowledge. Parents encourage their children to learn and actively participate while connecting displayed exhibits with everyday objects. They usually do not spend much time reading labels and text panels, but they appreciate relaxation zones, didactic and playful elements in exhibitions, plenty of space and understanding towards typical children's behaviour. In an exhibition, a family either stay together and do all activities jointly, or they separate and participate in museum activities individually. (Falk & Dierking, 2011)

School groups come to museums during school time which is why it is important to them that the theme and content of an exhibition corresponds with their curriculum. At the same time, an exhibition should offer an environment that is more attractive and different to a classroom. There should be enough space for a group to stay together and for educational activities of students in all exhibitions that allow for school groups. An exhibition should also supply additional educational materials. Also here, interaction and participation play significant roles; pupils appreciate new stimuli in the form of collection objects, and enjoy the possibility to share their experience with their peers. A museum should also consider some necessary facilities, such as a room or a designated zone where pupils can rest, have a snack, listen to the instructions of their teacher, or leave their belongings.

Regarding a visitor group of adults, it is also important for them to share their experience and new knowledge with others. Their interests are often different. They might be experts, laymen, university educated people, and also people without education. Falk and Dierking (2000, p. 102) proposed the following four groups of adult visitors:

1. learning lovers who see the museum as a place to satisfy their learning needs;
2. museum groupies who enjoy spending time at museums;
3. skill builders who participate in certain programs to learn specific skills;
4. who are using the experience as a way of meeting people.

Interestingly, this classification partly corresponds with the one we quoted from the evaluation materials of the British Museum.

We also need to add visitors with special needs to the categories of visitor groups, especially visitors with a certain disability or health issue including

seniors. Particularly visitors with movement disorders and visual impairment can be easily provided for within an exhibition using an adequate strategy. Such exhibitions are wheelchair accessible and contain haptic exhibits, labels in Braille, guide elements and other measures so that the visit to a museum is as beneficial as possible to also people with movement or visual disabilities.

The following is the classification of exhibitions based on the above groups of visitors:

- exhibitions for families,
- exhibitions for school groups,
- exhibitions for adult visitors,
- exhibitions for visitors with movement disorders,
- exhibitions for visitors with visual impairment.

It is plausible that in practice, we will find only a few exhibitions that would be especially designed only for one of the visitor groups. Commonly, a given visitor group (sometimes several of them at the same time) are taken into account. Visitors with special needs also belong to one of the first three groups, and in this sense, they have the same requirements. It was also found that elements primarily designed for children are equally popular among adults. Nevertheless, these categories have a purpose as has been proven also by our research into the contemporary Czech and foreign exhibitions. Exhibition designers consider these categories in practice.

An interesting classification of visitors is offered by American educational theorist David A. Kolb. He defines four basic individual types of visitors according to their learning styles:

1. dreamer – has a rich imagination, learns best through investigation and interaction, searches for and combines different ideas and suggestions;
2. deliberator – searches for the necessary facts and information for conceptual understanding of the exhibit, focuses on logical links;
3. decider – tends to proceed from theory to discovery, searches for the way things work. Their basic question is: How does it work? They concentrate on practical things and enjoy testing different methods;
4. doer – a man or woman of action, they enjoy doing things their way. The basic issue for them is: What could happen if...? They want to be actively engaged, look for action, and dare to take a risk. They like excitement, crisis, competition and change. (Kolb, 1984, Stuchlíková, 2012)

We believe Kolb's classification is basically correct and applicable to museum conditions. According to given types of visitors, we could create exhibitions that would fulfil their needs and expectations. A certain issue is that not every visitor comes to the museum for learning, be it in an informal way. There are more reasons to visit a museum and new knowledge is not the only benefit of it. Visitors also seek entertainment (the interaction between a museum and a visitor is often talked about in the context of edutainment, that is, education and entertainment), interesting activity for their leisure time; a museum is also a tourist destination for a trip with a family, etc. We also believe that individual types of visitors never fall into just one category, far more frequently each person is a mix of more types. During a museum visit, any visitor can go through all four Kolb's types, e.g. s/he comes to seek logical connection and leaves as a dreamer. It follows from Kolb's theory that every exhibition should (at least in some of its parts) provide information for better understanding of objects, a space for trying out 'how it works', and also a space for imagination, interaction, combination, and competition.

Even though some of the listed needs of visitors may seem contradictory, many exhibitions are able to satisfy more than just one need, or they can stimulate other experiences and meet a different requirement in every visitor. Similar definitions show in what range exhibitions as complexes of spaces and meanings can be. They also tell us about a certain development towards greater consideration for the visitors' need for social interaction and relaxation which happened due to the transformation the museum culture has been going through. We will talk about these in the following chapter.

4.6 The Classification of Exhibitions in terms of the Basal Conception of a Museum

In one of our previous research studies (Šobánková, 2012a), we arrived at a certain finding related to the character and specialisation of museum exhibitions which can form the basis for another classification of museum exhibitions. When analysing pedagogues' opinions and their requirements for museums we have found that teachers (and pupils certainly too) give preference to a museum that is an open, vivid social centre and not a museum in a contemplative and silent form. Teachers would like to talk to their pupils in a museum, or engage



<< Fig. 62–63 People seek to visit a museum for most various reasons: they want to learn something new, to experience something unusual, to meet other people – or to tick off an item on their list of ‘must see’ which is an indispensable part of tourism; top – an image of the exhibition in the Belvedere Museum Vienna (Austria), bottom – an exhibition in the Louvre Museum (France); photo by Petra Šobánková, 2018

in creative activity – they do not want to only watch. Such a basal conception of a museum and its exhibitions is a problem which can be reduced to the question of whether a museum should be rather a *templum* or a *forum*, that is, a temple or a public communication centre.

The basal conception leads to another typology of museums and their exhibitions which we, inspired by Žalman (2004), have named a *museum contemplativum*, or *museum activum*. The first type perceives the space of a museum as ‘the temple of Muses’ while the other as a vivid, constantly changing ‘institution for people’. In a museum ‘shrine’ we remain in a deep and quiet contemplation while in an ‘active’ museum we can manipulate, create, or produce something – we are active and the exhibition activates us.

A traditional type is a *museum contemplativum*, after all a museum derives its name from a shrine, an ancient temple of the goddesses Muses. Also the handling of collection objects often resembles religious behaviour; sometimes we approach musealias with a sacred reverence. (see Duncan, 1995, Kapusta, 2011, and others) All sacred things are protected by a society using a sophisticated system of prohibitions and are typically isolated from the profane (Montoussé, Renouard, 2005) – this is also so of musealias. When in a museum, we can also certainly reach a religious level, and touch upon spiritual aspects of a human life. A museum can be a unique place for meditating and for an aesthetic or religious experience.

Still, ‘elevating’ silent exhibits and appealing for quiet ‘adoration’, i.e. the aspects of a classical museum presentation, is not the approach that satisfies everybody especially not the youngest museum visitors. More than any other, this approach to a presentation presumes that visitors themselves strive to meditate and are only able to do so after stepping out of the everyday life into a museum-temple. It also presumes that visitors can communicate with a musealia by themselves, that is, that they are well informed, equipped with certain skills and experience, and that they seek this kind of learning in particular.

Based on their research focused on children in a museum, authors Slavík and Fulková also conclude that up until recently many museum collections were designed as a more or less 'passive' offer of information for experts or at least for those who are seriously interested. The 'silence' of exhibits followed the presumption that a visitor is well informed and seeks particular knowledge. For children, such an approach is of very little effect. Because of their lack of cultural experience and knowledge, children cannot actively integrate new knowledge into known contexts if it is not very attractive for them. That is why, also the conception of museum collections has changed significantly in the past decade in the direction to motivate young but also adult visitors. (Slavík, Fulková, 1999, p. 61)

The change in the traditional conception in favour of *museum activum* is brought by the modern trend of democratisation of museums which gradually brought about more public and broadly accessible institutions, more in fact like a social centre. When visiting many progressive museums, we are immediately amazed by the fact that they are very busy with lively activity going on and energetic children around who are not being scolded or who are not in the way.

In some countries or regions, there is still in place the basic conception of a museum as a temple preserving the treasures and sacred and untouchable heritage. (Slavík, Fulková, 1999, p. 15) We must, however, emphasise that both of these approaches are legit and both have their advantages and shortcomings.

We can still be met with entirely intentional sacralisation of museums and their buildings. For example, the Maori term for the National Museum in Wellington is Te Papa Tongarewa (36,000 square meters of space) means Our Place. To build a new museum, an existing hotel had to be moved away by several hundred meters using technically complex means. The museum has large rooms designed for religious purposes for most of the year. These rooms are completely separated from exhibitions in terms of communication. Another type of 'museum shrines' are the National Sun Yat-sen Memorial Hall (guarded by military) and the National Chiang Kai-shek Memorial Hall in Taipei.

>> Fig. 64–65 Te Papa Tongarewa, Wellington, an area for spiritual purposes, The National Sun Yat-sen Memorial Hall in Taipei, photo by Jan Dolák 2006, 2009





Fig. 66–67 The National Chiang Kai-shek Memorial Hall in Taipei; bottom – The National Sun Yat-sen Memorial Hall in Taipei; photo by Jan Dolák, 2009



Fig. 68–69 Top – the bustle in the Palace of Versailles; bottom – an image of an educational program in the Kampa Museum in Prague; photo by Petra Šobáňová, 2018

Another classification based on similar aspects defines *introvert* and *extrovert* museums. This classification was proposed by Lord & Lord (2001) who perceive the oscillation between the two poles as one of the main tasks of museums. The discussion between these two conceptions addresses the issue of how to achieve the balance between inner requirements of curatorship, the protection of collection objects, and the satisfaction of the needs of the public. Both authors have repeatedly pointed out that a museum without visitors is just a collection of objects without purpose. The protection of collection objects for the (presumed) future has no meaning; it is an end in itself. At the same time, museums are responsible for the state of their collections, and it is necessary to use any means possible in order to prevent their demise or damage.

Lord and Lord perceive introvert museums to be those institutions that focus primarily on collections and give preference to the needs of collection objects over the needs of visitors. The self-fulfilment of such museums and the criterion for success is their research activities, well-kept depositaries and high quality catalogues.

On the other hand, extrovert museums are oriented towards people, in the centre of their activities lies the desire to satisfy the needs of the public, to find the most effective way to connect those needs with collection objects and their meanings. The criterion of success of an extrovert museum is effective mediation of collections and a positive feedback from visitors even from those that have none or very little knowledge about the given theme. An extrovert exhibition triggers excitement and enthusiasm. (Lord & Lord, 2001)

Reflection of the basal conception of museums and the corresponding approach to exhibitions should be included into the overall planning of the institution which involves not only particular exhibition projects but also the overall mission and vision of every museum. Both concepts, that is, a museum-temple and a museum as a busy communication centre have their strengths and weaknesses, and the inclination to one of them should always be justified and conceptualised.

4.7 The Application of Illusiveness

Museum exhibitions are in their essence products of visual character. Even though, elements perceivable by other senses have been implemented in exhibitions lately, it is visual stimuli that are in dominance. In terms of education, this is a positive fact because as we know, most information is perceived by sight (up to 87 %), and only 9 % by hearing and 4 % by other senses. (Maňák, 2004) As opposed to other educational media, where the acquisition of new knowledge is based on the reception of written text or listening to an explanation, in a museum exhibition a visitor finds the majority of information being visual the effectivity of which is naturally stimulated by involving other senses.

Hadwig Kräutler (1995) refers to an exhibition as a composite communication medium and emphasises the fact that to display means to show something and thereby to present it attractively. Elements of exhibitions can stimulate spatial, optical, acoustic, haptic, and olfactive experiences, and lead a visitor to a specific message. We can use not only sensory stimulation but also the perception of time and place. Kräutler (ibid) goes on to reiterate that an exhibition is used as a communication medium not only in science but also in art, religion, politics, and equally in areas related to commerce. Whatever context we talk about, an exhibition is always a kind of 'experience environment' and all its elements are designed with one objective which is to inform a viewer. This can be carried out either by pretend play the illusion of the world but also by other means that will be discussed further. In any case, the objective of an exhibition is to communicate a given content which is why we can perceive an exhibition as an expressive artistic product which plays its role as a part of a broad area of mass media.

Exhibition designers always strive to create an image, a model of a reality using limited number of representatives of this reality. These can be 'exempla', that is, best examples of certain realities, or relicts (existing objects) and rare objects whose uniqueness helps clarify what is typical. Musealias, especially in the role of exhibits, are exemplary which means that they represent, exemplify a certain reality the explication of which is the objective of the museum exhibition. The representation of the world is the basic museological conception.

It has been said that communication happens in museums through ostensis (Osolsobě, 1967, 2007), that is through showing, or mental sharing based on observing selected objects. Using these objects, a museum strives to create a more

or less accurate model of the world which is similar to a museum exhibition (or a museum collection) a complex of material and non-material elements and phenomena. The nature of these elements and the approach to presenting them contribute to whether such a model of the world is fitting and convincing. Many designers try to design such a museum exhibition that will give the impression of a reality that would be perfectly or at least as much as possible, illusive. Discovering new meanings in museums is determined by whether or not a visitor is convinced of the veracity and credibility of displayed objects (Lord & Lord, 2001, p. 18), and their illusive presentation can significantly strengthen this credibility.

The notion of reality can be provoked in visitors using various means, and in this sense, illusion does not necessarily mean only a perfect imitation of a phenomenon but rather expressive and maximally convincing presentation which for a brief moment makes the barrier between a visitor and a given reality disappear, pulling visitors into its world. An illusion-based museum exhibition transfers a visitor into a fictional reality using various media all the while cancelling temporarily the real world in which a visitor physically exists.

The most expressive, illustrative and convincing experience is of course the encounter with a living reality; but this cannot be always happening (it is not possible, for example, to really go back to the past, or to place a live prehistoric animal into an exhibition). In other cases it is possible: for example, when presenting traditional crafts, we can engage a person who will perform a given craft. When presenting the world of insects, we can place into an exhibition also live butterflies not only dead exemplars (see the Butterfly Pavilion in the Natural History Museum in London) or live bees (see a live beehive in the exhibition entitled the Nature of the Olomouc Region in the Regional Museum in Olomouc). Musealia are of course real existing and authentic elements and a visitor thus always experiences a reality in a museum. That is also why a museum exhibition is a perfect educational medium; the problem is that a musealia isolated from its original context can lose its illustrative and informative value. Surely, visitors experience only fragments of realities in a museum, but in a de-contextualized form these isolated elements lose their original meaning, and form their own, different reality, which is the reality of a collection that somebody created, takes care of and displays.

A bone from a prehistoric animal in the exhibition of a regional museum is far from being a living prehistoric creature which runs wildly through the plains, instead, it is just a piece of bone, a sample of a collection. A piece of jew-

ellery that belonged to a Great Moravian nobleman remains beautiful for centuries but on its own it tells us nothing about its long-deceased owner or about the way he used to dress, what was his role in the then society and what was the way of life at that time. A working tool which was commonly used by shoemakers displayed in a showcase does not tell visitors anything about a particular craftsman or about the way shoes were made or in what conditions people lived at that time. A coffee set, in the context of the unsettled history of Jewish nation, can be an emotionally strong example of a persecuted person who tried to raise money to help to escape from Nazism by selling this possession, however, when presented as decontextualized it is just a piece of evidence of the period's interior culture and design of the first half of the 20th century.

We can see that musealias are often multi-layered and there are many realities they can refer to. When selecting only one for a presentation, we neglect another. And even when our selection is intentional and justified, encountering reality in a museum exhibition always has its limits. It can be successful, average or just badly done and it is dependent on the time of the inception, its customs and technological possibilities. While visitors of first cinematographs were scared by a moving locomotive in a black and white, grainy and silent movie, today such a notion amuses us. But we do not have to go too far for an example: today we perceive as illusive something completely different than our parents or grandparents did. Today, we try to touch 3D effects and various holograms with fascination (see popular 3D planetariums and holograms of exhibits), and it is just as possible that this will be amusing for our descendants.

We have mentioned cinematographs intentionally: in our view, it is imperative to perceive the efforts of museums for illusion in the context of the film and entertainment industry which thanks to demanding digital technologies often offer rather true and attractive versions of a reality. Museums can find it frustrating that, for example, any BBC documentary is in many aspects more convincing than authentic but in this context, offers little in the way of attractive exhibition objects. Skeletal finds displayed in a showcase or stiff figures in shabby exhibition pavilions cannot be even partly as attractive as a film projection with digital effects²⁵, though these are unique and irreplaceable samples.

25 For example, see the above-mentioned BBC series titled *The Incredible Human Journey* which is based not only on fascinating digital effects but also on a narrative which is fictitious but based on excavations.

We believe that despite the financial limits of many museums, current technological possibilities offer completely new media to create grand even perfect illusion in an exhibition. The practice shows that museums can use these tools; exemplified in already mentioned 3D projections in planetariums and other special effects.

To make the best from displayed objects, to uncover and to mediate immanent though hidden meanings of displayed evidence can be done also by other ways and not only by using new technologies. Very credible are also relatively simple demonstrations of phenomena, simulations and images of realities in the form of photographs and more or less illusive drawings. Museums have a long-term experience with attempting to reconstruct a reality or simulate it by traditional exhibition media. In this context, Beneš (1981, p. 54) talks about 'natural sets of things' and refers to them as a special category of expressive museum media. Their advantage is higher effectivity because they synthesize and place in functional relations originally isolated parts of a collection fund. In some cases, these entities were brought to a museum from the field (e.g. from archaeological site or an authentic environment) but they can also be designed by museums or reconstructed for the purposes of presentation. (ibid)

Beneš (1981) defines three types of these authentic or artificially reconstructed sets:

- dioramas,
- interior complexes,
- buildings.

Beneš (ibid, p. 54) defines a diorama as an exhibition medium of a higher order (as opposed to isolated exhibits) that show a certain part of a natural reality with the selected individuals in their original form and with the indication of original environment so that the relations and ties in the ecological conception are visually evident. A diorama is today the most common medium of illusion and also our research shows that they are used in a majority of museums except for art museums. A diorama can depict a natural scene (animals in forest, habitats of animals or whole biotopes) or images from prehistory and history (a group of prehistoric hunters in a cave, the meeting of historical figures, ethnographic depictions).

In museums, we can also see interior complexes of residential and working environment. (Beneš, 1981) These can be entirely authentic complexes (e.g. in a monument commemorating a significant personality and presenting their



Fig. 70–71 The attraction of authentic places: left – the permanent queue at the Anne Frank House in Amsterdam (The Netherlands); photo by Petra Šobáňová, 2017; right – the library concealing the hiding place of Anne Frank; photo by Lauren F. Friedman, 2008

home and office) or artificial depictions of period residential interiors, workshops, period industrial production, etc. (see popular little streets in the Technical Museum in Brno or in the Museum of Recent History in Cejle and many examples listed in individual case studies of our research).

Buildings, that is, not only interiors but also exteriors are perceived by Beneš (ibid) as most effective in terms of exhibition sets. These are often entirely authentic objects which were later turned into a museum or moved into a museum from their original environment. We find these typically in open-air museums, but they are not always part of a folk museum, that is, an ethnographic museum but also industry and military objects, monuments in the place of a tragic event or an object evidencing an unsettled fate of a group of people (see a museum exhibition in the monastery in Hora Matky Boží [the Mother of God Mount] where catholic clergy were interned and tortured by the communist regime, or the House of Anna Frank, a museum in Amsterdam made from a house where she and her family hid from the Nazi).

Illusion and strong effect on visitors can also be achieved by other means, often using a minimalist and symbolic approach. A hyper realistic multimedia



Fig. 72–73 Between a diorama and a showcase; a long showcase with explicating and referential elements in the Věstary archeopark (CZ) which accompanies a part based mainly on substitutes, dioramas and reconstructions; photo by Petra Šobáňová, 2017

simulation of a reality, dioramas or authentic interiors may not need to be the only way and their implementation is not always possible, adequate or desirable. The fact that less is sometime more applies also here. Effectivity can be achieved using other elements and the selection of given tools (and its creative discovering) is entirely in the hands of the exhibition designers and depends on their experience and inventiveness. Reconstruction doesn't always appeal to human emotions – even this approach has its limits and can often come across as artificial and stiff (see some of the well-intended but unsuccessful dioramas with stiff figures or mounted animals 'in jump' when an illusive 'natural' world is presented by a stripe of mulching bark on the marble flooring of a museum hall). A fact that emotions are affected also by other things other than just illusive tools is well known from the context of visual art: also here a realistic nature or even hyper realistic nature does not automatically ensure greater effect, precision, or give a strong expression of a given work.

Therefore, the objective is not to be illusive in the sense of optical reality with greater similarity. Also, there is no need to try to hide the fact that it is a museum presentation. When recalling the example with a coffee set of a desperate Jewish family, this set is displayed entirely museologically in the exhibition of the Jewish Museum in Berlin, that is, with a round window of a long showcase placed in a long hall with two explicatory texts. But it is placed in the tragic 'axis of holocaust' in a concrete tunnel which relentlessly brings visitors to the Tower of Holocaust as the author of the architectonical plan of the museum, Daniel Libeskind, titled the exhibition area in the form of a dark, empty and high tower. This 'exhibition' is completely empty (only day light enters it through a narrow slot at the top); still, it successfully breaks down the barrier between a visitor and the given reality and offers a great impression of a reality. Together with other extraordinary yet often simple architectonic and exhibition elements which can be seen in the Jewish Museum in Berlin, the Tower of Holocaust is an example of a minimalist but highly illusive and convincing 'exhibition'.

We can also see that presentations through various symbolic, stylistic and schematic depictions are greatly effective. Many of these are of an artistic nature, whether it is an architectonic and artistic planning of an exhibition or an art installation itself. Also these tools can give perfectly telling and credible images of a presented reality and facilitate for a strong and convincing experience. The effectivity of an exhibition is enhanced not only by visual stimuli and

>> Fig. 74–75 View of the Laboratory of Silence in the National Agricultural Museum in Prague (CZ), an example of an unusual application of the principle of illusiveness. It presents a live forest planted into a futuristic laboratory; thanks to new technologies the forest biotope is also presented on a cell level. The presentation contains audiovisual installation which was brought from the Czech pavilion at the World Exhibition EXPO 2015. Apart from live plants and futuristic flowerpots, the installation also contains interactive cameras, projection areas, microphones, automatized systems for irrigation and climatization. Photo by Petra Šobáňová, 2017

acoustic, haptic, olfactory or taste elements but also by elements that build on the perception of space²⁶.

As a way of a conclusion, we can summarise that museums in an effort to reach maximum degrees of expressiveness and illusiveness oscillate on the scale between an objective reality, through a realistic image (the demonstration of phenomena, various simulations and images of reality in the form of projections, photographs, or illusive drawings) and representation using symbolic and artistic means. The trend is to improve visual stimuli in an exhibition as well as to also employ other aspects other than visual elements. A pressing issue is whether it is possible to withstand the competition of modern digital technology, often used by the film and entertainment industries, and whether museums should strive to do so, or should they rather choose the path of implementing artistic and symbolic elements. In any case, in practice there is plenty of very successful and highly illusive exhibitions which are not overly expensive and which sustain their otherness, exclusivity – simply, they do not need to imitate popular culture. If a creative museum team employs invention and ideas, the informative ability of an exhibition can be high even without costly technical solutions, and a museum can be successful in their efforts to depict the world in such a way that it creates an illusion of a real existence and a visitor is at least for a little while tele transported to another world.

26 Recently, it was Jennifer Harris (Harris, 2016) who dealt with the issue of affective museums.



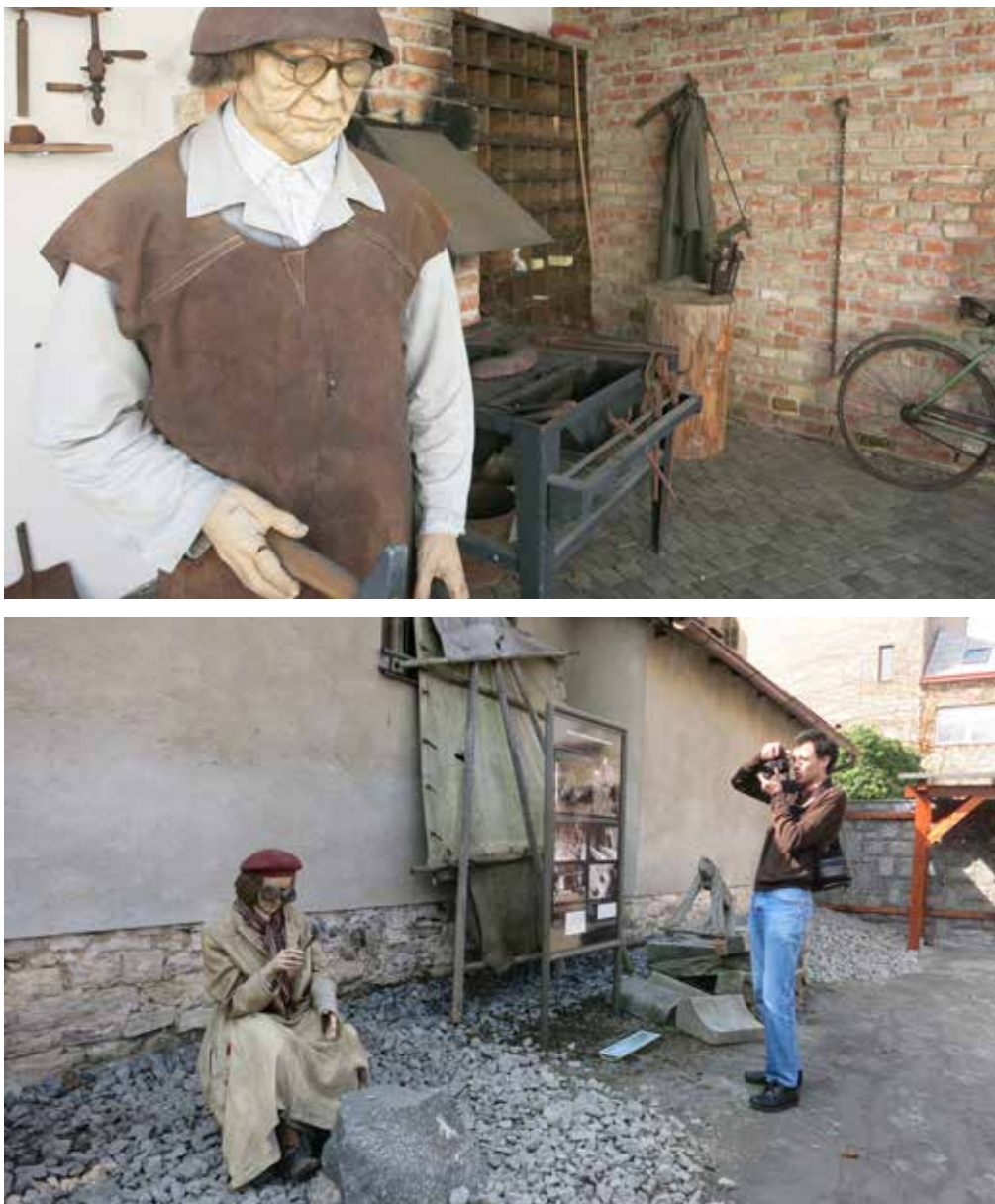


Fig. 76–77 View of the outdoor exhibition of stonemasonry in the Municipal Museum in Skuteč (CZ) using illusiveness – e.g. illusion is created by realistic figures-stonemasons and their placing in their working environment; photo by Petra Šobáňová, 2014

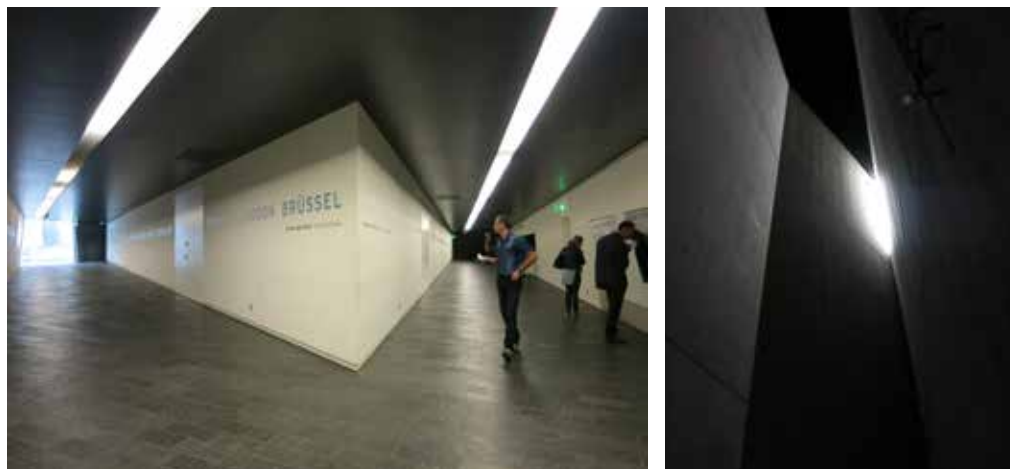


Fig. 78–79 Illusion can be created also by other than just explicit depictions of some phenomena: view of the Jewish Museum in Berlin (Germany), left – the crossroads of two visitors routes and axes of possible fate of the jewish citizens of Berlin at that time – the axis of exile and the axis of holocaust, right – the interior of the Tower of Holocaust; photo by Petra Šobáňová, 2014

4.8 ‘Visitor friendly’ Museums or How to Satisfy Visitors

Exhibition designers do not always have to choose the path of illusion because an exhibition can stimulate a viewer in other ways, such as by creating a welcoming and stimulating environment, in which a visitor has a positive response. Such a museum is kind to visitors, courts the favour of visitors, appreciates them and seeks new ways in which to satisfy their changing needs. In this subchapter, we will briefly talk about the approaches, or concepts, which were developed especially with the purpose of satisfying visitors and to prepare stimulating and satisfying experiences which do not always build on the content of museum exhibitions.

These concepts are based on the needs of visitors which are especially abroad studied thoroughly. As an example, we can point to the book by editor Roxana Adams (2001) titled *Museum Visitor Services Manual* which covers the field of visitors’ needs, or expectations which are still underestimated in many places. Based on her research of museum visitors, monuments, archaeological parks and other institutions, the author of the research, Judy Rand (2001, pp. 13–14), specified the following expectations and needs:



- comfort (Visitors need fast, easy, obvious access to clean, safe, barrier-free restrooms, fountains, food, baby changing tables and plenty of seating. They also need full access to exhibits.),
- orientation (Visitors need to make sense of their surroundings. Clear signs and well-planned spaces help them know what to expect, where to go, how to get there and what it's about.),
- welcome/belonging (Friendly, helpful staff ease visitors' anxieties.),
- enjoyment (Visitors want to have a good time. Fun activities should not involve only entertaining accompanying activities and tasks.),
- socializing (Visitors come for a social outing with family or friends, or to connect with society at large. They expect to talk, interact and share the experience; exhibits can set the stage for this.),
- respect (regardless their nationality, education, social status, etc.),
- communication (Visitors need accuracy, honesty and clear communication from labels, programs and documents. They want to ask questions, and hear and express differing points of view.),
- learning (Visitors come – and bring the kids – ‘to learn something new,’ but they learn in different ways. It's important to know how visitors learn, and assess their knowledge and interests.),
- choice and control (Visitors need some autonomy: freedom to choose, and exert some control; touching and getting close to whatever they can. They need to use their bodies and to be able to move around freely.),
- challenge and confidence (Visitors want to be stimulated, challenged to accomplish a certain task, to prove their skills. They also want to test their skills, to try something new, and to achieve a new beneficial objective.),
- revitalisation (When visitors are focused, fully engaged, and enjoying themselves, time stands still and they feel refreshed: a ‘flow’ experience that exhibits should aim to create. Visitors seek the opportunity ‘to recharge their batteries’, and to refresh their minds. They can achieve this not only by having a nice experience but also by acquiring new experiences and by actively participating in the learning process.). (Rand, 2001, adjusted)

<< Fig. 80 A place in which extreme anxiety from an approaching army can be felt – a traditional element using illusiveness; from the exhibition of the Militärhistorisches Museum der Bundeswehr in Dresden (Germany); photo by Petra Šobánková, 2012

Hein (1999) reminds us that when visiting a museum, a visitor is exposed to many factors including those which are seemingly less important, marginal. They do not necessarily relate to the theme of the exhibition; to the exclusivity of displayed objects and concur with the originality of an artistic layout of the exhibition to which designers have devoted extra attention. A museum visitor makes a connection and evaluation of the visit immediately when entering a museum; at the ticket office and cloakroom, on the way to the exhibition, walking through it and interacting with exhibition guards. In efforts to make popular and successful exhibitions, museums should analyse also the impressions the museum architecture and a museum as a whole leaves on visitors, as well as the behaviour of their staff, the quality of the visual style of a museum and the appearance of the web profile.

A visitor needs to have the space for free movement in an exhibition, a pleasant environment and having some control over it. Visitors must feel safe so that they can visually contain the space around them, navigate through the segments of space, and know where the exit route is and the way out of the museum. An important principle is to select an adequate amount of information—that again reflects the abilities of a particular visitor and have an analysis of how much information a person can take in.

Just as in many other fields, also in museum studies we now talk about the ‘user friendly’ trend, that is, about a user-friendly product of various types. This fitting term was first used in the context of new technologies denoting an operation system or software adjusted to the intuitive understanding of a user. Attention devoted to satisfying customers is one of the characteristics of our consumerist society because today’s person is overwhelmed by various competing options, and is used to getting perfect services. This is also entirely true about the cultural sector including museums. If a product is to attract a customer, it must be of a high quality, functional, with interesting design and above all, it must be ‘user’ or ‘visitor friendly’ as much as possible.

The publication *Edukační potenciál muzea* [The Educational Potential of a Museum] (Šobánková, 2012a) deals with the impact of the general social climate of a museum and its impact on the satisfaction of visitors and the educational effects. In this book, the author also formulated a conception of a friendly museum, which is in many aspects related to the idea of user-friendliness. According to Šobánková (2012a), a friendly museum is a welcoming institution with an amiable social climate; natural kindness of staff, and a low-threshold

approach to all different social groups. It is tolerant toward more energetic children, and provides a high-quality visitor service, etc.

Some theses on a 'friendly museum' proposed by Šobánková (ibid) reflect the issue of exhibition development: a friendly museum provides exhibitions that are inventive, interesting, and interactive; providing the opportunity 'to touch' and apart from sight they also involve other senses. A friendly museum is well aware of its educational potential which it strives to fulfil by various forms including didactic elements placed in the exhibition. Such a museum provides well prepared and professional educational programmes; apart from exhibitions it offers additional events the aim of which is to motivate visitors by practical and creative activities, with the opportunity to touch exhibits or at least the models and replicas. Visitors are also offered the chance to meet with artists or exhibition designers.

A friendly museum is as a whole focused on visitors; creating amiable social climates. Exhibitions are designed with cooperation with schools in mind and with the aim to be connected to their curriculum. Exhibitions of friendly museums at least partly consider the youngest visitors, taking into account their peculiarities and needs. Children and children's culture are given special attention. An exhibition supports interaction between a visitor and museal as by implementing new technologies. Generally, it fulfils the concept of 'museum activa' rather than 'museum contemplativa' which means that such a friendly museum strives to activate visitors, to facilitate their experience, and to enable their lively and vivid reaction to viewed exhibits (regarding these basal categories of exhibitions, see one of the preceding subchapters).

In the scope of museological discourse, recently the concept of a happy museum has been developed. (see *The Happy Museum*, 2014) It does not relate only to the trend of user-friendliness and the aim of satisfying visitors-clients but also with the concept of permanent sustainability – so often discussed today. The concept of a happy museum is the result of a British project bearing the same title which was formulated by a manifesto that strives to create a new contemporary view of the importance of museum institutions. The authors of the project reflect upon the way in which these institutions could contribute to the process of creating harmonious relations in a society or on how to participate in promoting healthy and permanently sustainable life-styles. They discussed the requirements for the mental well-being of people as well as the relationships between the satisfaction of individuals and environmental sustainability.

>> Fig. 81–82 Examples of of ‘visitor friendly’ museums: top – iQLANDIA Liberec (CZ), bottom – Verkehrsmuseum Dresden (Germany), photo by Petra Šobánková, 2014, 2013

The idea of a happy museum is based on the manifesto of the foundation entitled *The New Economics Foundation* and their famous Happy Planet Index (see Happy Planet Index, 2014) which expresses the success of a nation or a state not according to GDP but according to the number of happy and healthy individuals. In this index, the mental well-being of citizens of a given country is compared with their consumption of energy and other resources; the concept is similar to the one on sustainable development of inner well-being of individuals. Based on the fact that no happy museum can exist without happy visitors, the given concept became the subject matter of museum practitioners and theorists who strive to apply it to museum culture.

A happy museum observes whether it has an impact on creating a happier society. Advocates of the concept appeal to museums to take a new view on the key aspects of their mission and to concentrate on the transformation of their own institution and local communities. A Happy Museum supports learning (especially of the same age categories, that is, peer-learning) and innovative thinking in groups. For this purpose, museums organise various meetings, workshops and instructional courses. They design new tools and develop innovative guiding practices. They take part in realising various projects in the field of science and technology, industrial heritage, natural sciences and art collections, but they also support manual works and arts & crafts. Happy museums focus on inner well-being and prevention rather than clinical counselling, and aim to create a more attractive form of contemporary museums which are to contribute to the mental well-being of their users.

Even though, many of the above listed aspects are seemingly not related to the primary functions of a museum (and it also points to the current transformation of the role of a museum) at this moment, we are interested in the objective of museums which is to analyse and further progress their role in the life of individuals so that it becomes truly a positive factor. In other words, a positive social element is such a museum in which visitors at the end of the visit feel better than at the beginning. (Negri, 2013, p. 37) A museum thus has a socialising and therapeutic effect on visitors with the emphasis on its role as a stimulator of social communication.





<< Fig. 83–84 Examples of of ‘visitor friendly’ museums: top – National Maritime Museum in Greenwich (UK), bottom – Explora Children’s Museum, Museo dei Bambini in Rome (Italy), photo by Petra Šobánková, 2013, 2014

The concept of a happy museum thus follows the general belief that it is imperative to emphasise the role of a museum as a place for meeting people as much as its educational role which goes hand in hand with its social role. A happy museum thus focuses on providing not only educational programmes but also a beneficial social life, happy moments and relaxation. It is a place for communication with people of various interests and education, various age categories but also a place for contemplation in a quiet and relatively private environment. It is a museum where people can eat healthily, use clean toilets with facilities for children; a place where visitors can go just for a coffee or tea or buy a nice present in a museum shop, a place where people can celebrate birthdays or weddings.

The cumulating of museum functions also relates to the contemporary trend, multitasking – the performance of many activities at the same time. In the context of museum culture, this means the multiplication of museum roles and also the fact that visitors themselves can be interested in engaging in more than just one activity in a museum. Apart from viewing exhibits, they can listen to audio guides; complete tasks offered by a work sheet or meet with friends, communicate with them and together visit a museum restaurant.

Also the authors of *New trends in museums of the 21st century* (Nicholls, Pereira & Sani, 2013) point out the phenomenon of multitasking, recommending to museums to prepare for the fact that a new type of visitor oriented to multitasking is coming to the fore. These are visitors who seek various experiences and diversity. These visitors have a flexible attitude to learning and intellectual stimulation which requires new approaches to creating museum exhibitions and to the overall conception of a museum, changes in museum planning and stimuli for museum management. (Negri, 2013)

The concept of friendly museums is one of the current influential trends and it seems that this will continue to qualitatively change the way museums operate, and affect the form that their exhibitions will take in the future.

As is customary, certain strong tendencies give rise to opposing reactions. A warning against such forced effects on museums to attract visitors is

given by Josie Appleton. (Appleton, 2011) According to her, Great Britain is influenced by ideologies of economic diligence on one hand and the ideology of cultural leftism on the other. Cultural leftism manifested itself (approx. from 1960) in many forms out of post-colonial and feminist theories; in postmodern theories in which collecting, categorising and interpreting objects began to be viewed not as an unbiased pursuit of knowledge but as a pursuit of power of the western elites. Especially, the act of establishing collections was perceived as a confirmation of western racism and imperialism. According to Appleton, the result was the loss of the shackles which bounded curators (and not only them) to their objects. The consequences of cultural nihilism were multiplied by effects of the economic right-wing policies of, noticeably Margaret Thatcher, when, according to Appleton, museums strived to prove their right exist by earning money under the mottos 'A client always comes first' or 'Will the customer like it?'.

According to Appleton, museums in the end produce such exhibitions which have no scientific or intellectual content but which rather forcingly try to attract visitors. As an example, she gives the exhibition at the entrance (Welcoming Wing) to the Science Museum in London where at the time of broadcasting the programme Big Brother, visitors were asked whether they would like to be a guinea pig in the house of 'Big Brother'.

Exhibitions change quickly according to how curators feel about the current needs of the public, so that many interactive stations ask visitors what is their opinion on the potency pills, or on foot-and-mouth disease, or the use of drugs for treating depression. A museum anxiously ensures visitors their opinion is important and will be subjected to analysis by scientists even though it is not exactly clear what happens to all the 'Yes' 'No' and 'Don't know' answers. According to Appleton, museums love the public so much that they have strayed from the very reasons for which they were established.

Naturally, we can argue with the ideas of Josie Appleton, and we can agree or disagree with her depending on the context. There are still museums with curators who do not care about the public and who find the desired alibis in the approach of Josie Appleton. On the other hand, for museums which go too far in their pursuit of visitors' needs these ideas can be taken on board and lead to necessary reflection on the boundaries between a healthy respect for visitors and ingratiation. In every field – not only in museum presentation making – the rule of healthy amount should apply which is established by discussions



Fig. 85–86 Examples of ‘visitor friendly’ elements: top – view of Deutsches Hygiene-Museum in Dresden (Germany), bottom – a relaxation zone on the roof of the building at the occasion of the Ars Electronica Linz festival (Austria), photo by foto Petra Šobáňová, 2012, 2013

and reflective working procedures. The criticism of museum presentation (see the appendix to this chapter) certainly contributes to the process of establishing a desirable, healthy state of museum culture.

Christian Müller-Straten (Müller-Straten, 2006) compares the importance of a visitor to the roof of a house adding that no house can be built without a roof. He fittingly maintains that museology also cannot be built from the top (the visitor) towards its base but the other way around. Whatever point of view we use to evaluate the ideas of Josie Appleton, it is evident that despite their accent on the needs of visitors, museums cannot be built solely for the purposes of entertainment, small talks and superficial experiences as it would lose the purpose of its existence.

4.9 The Criticism of a Museum Presentation

This entire chapter has been dedicated to the overview of the current approaches to museum presentation making and the typologies of museum exhibitions. Certainly, not all possible approaches or all types of museum presentations have been mentioned but it has been established that the choice of a certain approach significantly influences the presentation and its quality. We cannot as a priori say that a certain approach is always and under all circumstances better than others and that its application automatically ensures a higher quality of the presentation. What is important is a well-prepared content after which we select ways in which to approach it most adequately. Even though, most of the approaches to exhibition making can be recommended and are preferred by the authors (e.g. contextuality as opposed to formalism), we are aware of the fact that every exhibition, its spatial layout, theme and a type of collections requires individual evaluation and it is not possible to make absolute judgement on the suitability and non-suitability of certain approaches to museum presentation. Many approaches can be applied in practice and the same principle can be in a particular context perceived as not adequate and other times as perfectly fitting. For example, the application of entertainment elements in exhibitions presenting religious motifs of mediaeval art or the fate of a communist regime's victims could be perceived as vulgar while an exhibition designed for children on the theme of physical laws can very adequately use entertainment elements with the purpose to popularise natural phenomena, and to attract children and the youth to otherwise distant themes.

So what decides whether an exhibition is good or not? According to what criteria can we evaluate them?

This question which is not easily answered is related to the so-called museum exhibitions criticism. The making of exhibitions and evaluating their quality is complicated by the fact that the expert exhibition criticism has not been developed enough anywhere yet as was already pointed out on several occasions, in the most complex way by Dana Veselská (2006). Furthermore, criticism is often a priori refused on the basis of these arguments:

1. Criticism is not necessary because it points to the shortcomings exhibition designers already know about but for various (subjective or objective) reasons cannot change.
2. Criticism is potentially dangerous because it points out shortcomings of the exhibition, and draws the attention of not only museum staff but also of the public including authorities and providers of financial grants to them.

A synonym of the word criticism is actually *judgement* which is derived from the Greek word *krinein* – to judge. A critic should evaluate the topicality of scientific realities presented to the visitors, the degree of success of model processes, the interpretation and management (at least partially) of associative processes in the minds of visitors. They should focus on the analysis of employed presentation approaches (e.g. in terms of their appropriateness and timeliness), and whether the presentation as a whole works as a message, i.e. whether it actually works as a communiqué, which the public understands. Criticism of the museum exhibition development is the expert assessment (evaluation) of the content and presentation forms of concrete (museum) exhibitions. (Veselská, 2006, p. 5)

The basic forms of criticism of museum exhibitions include:

1. annotation – it is a short informative text published in the public media, rarely in professional journals. It is often full of words such as ‘most valuable’, the ‘oldest’;
2. review – providing current information; contains certain elements of evaluation; in practice it is often an annotation with one or two evaluation points added at the end;
3. critique – this text, well developed in other fields (music, film, theater, literature), that has a literary structure should describe an exhibition project, compare it with another one, and evaluate it in the context of a certain time delay. (Veselská, 2006, pp. 5–6) In the museum culture, real critiques are extremely rare.

According to other authors, criticism may have various genres, which in practice sometimes overlap. The main one is certainly a review (particularly an informative one), but also a critical essay or an interview with the author of the exhibition.

But there are also in-depth approaches to the analysis of museum presentation based on a research methodology. These can cross from criticism towards research. Should museology continue to develop as a scientific discipline, it should pay more attention to the research of museum presentations in the future.

Research studies, especially the so-called evaluation case studies, are very similar to critiques. They are different in the applied methodology and clearly articulated rules, such as the pursuit of objectivity (or in qualitative investigation conferred on bases that may affect the objectivity), validity and reliability, as well as the explicit formulation of hypotheses or research questions.

Research similar to a critique focuses on the study of:

- the themes presented by contemporary exhibitions and what they contain,
- the type of objects presented in exhibitions,
- whether an exhibition contains texts and how they are designed,
- to what extent an exhibition is accompanied by illustrative and informative material (maps, schemes, illustrations, photographs, projects, etc.),
- to what extent and to what effect the exhibition makes use of projection and digital media in general,
- the needs of visitors the exhibition is focused on (rather on intellectual, or spiritual, emotional, or social needs, and the need to relax),
- the external image and the design of exhibitions (traditional or innovative, high-quality or artistic and architectonic layout),
- the principles and strategies employed in exhibitions,
- the target group of visitors that was primarily for the exhibition designers, if and how exhibitions are adjusted to visitors with special needs,
- whether exhibitions employ innovative elements such as the principle of interactivity, the principle of 'hands-on', the application of digital media and didactic and entertainment elements, or non-traditional art solutions,
- whether and how an exhibition works as an education medium and what educational approach was employed, etc. (according to Šobánová, 2014b)

In addition to the museological and other aspects it is of course possible and desirable to focus the criticism or regular research surveys on the prospect of players, just as it is typical for social sciences and humanities. Usually, the purpose

is not to formulate an objective description, or an analysis of some phenomenon (e.g. a museum presentation), but to describe how a phenomenon (a museum exhibition) is experienced and interpreted by interested individuals – in the case of museum culture these may be visitors or the public as such (also non-visitors) but also the authors of exhibitions. The basis for similar analyses are then obviously the participants' testimonies.

Whether you prefer common criticism or research, we can certainly agree on the necessity of a critical grasp on presentation activities of museums, especially with a view to improving their quality.

Josef Beneš correctly pointed out that from about 3000 exhibitions that are annually made available in the Czech museums, only a few of them are mentioned in the press. This is despite the fact that the attendance of museums might exceed the attendance of theaters whose activities are presented in the news more often (Beneš, 1997, p. 9), not to mention the activities of other departments and their products, the criticism of which is not only a natural part of the field, but of a true public discourse (e.g. literature, television, film and gaming industry).

This clearly shows the lack of professional training in criticism of museum exhibitions, which comes about through the lack of attention given to this subject in the context of museology education or of the departments educating future museum workers. A manifestation of this condition is that the 'critique' is often written as an expression of the personal relationship between the critic and the author of the exhibition (i.e. undisguised praise on one side and 'settling of accounts' on the other). The public (including the functionaries) then understands positively written critique as criticism 'ordered' (and de facto worthless) or as a 'personal vendetta' (in fact, also worthless). Our field also lacks the theory of museum exhibitions criticism. In other fields, e.g. in literary criticism in cinema or theater criticism, the situation is markedly better, which has been often pointed out. (Filla, 2006) And if a critique appears in the press, it usually refers to the description of the displayed theme or a period (Neolithic, the first World War, etc.). Proper criticism, such as the one found in the field of theater, is only minimally concerned with the content of the work, i.e. what the story of Brecht's *Mother* is about. The main attention is paid to the performing concept, costumes, lighting, and originality or to the approach to work in terms of a screenwriter and director.

This kind of criticism of the museum is absent. Criticism is to show (or should show) to experts what progressive or, conversely, negative elements

an exhibition presents. Criticism, however, serves also for laymen – the public, who could (should) follow criticism and therefore create their distinctive pre-understanding. Criticism is also important for founders or potential sponsors.

If some opinions on exhibitions do appear, they are usually focused only on the scientific validity in terms of the given scientific discipline. This is due to the ignorance of the authors (not knowing how to formulate in museological terms ‘how-to-do-it’) and to the indifference (of both museum workers and museologists), as well as by the pseudo-solidarity present within the field. Hypersensitivity of many museum workers to the slightest hint of anything that is not absolutely laudatory is also part of the problem. While we can have a vivid discussion over scientific texts published in geology and ethnology, exhibitions are almost never discussed at all. And yet the museum exhibition development is equivalent to any other form of scientific work. (Matoušek, 2000, p. 454)

If we are to enrich the reflection and the necessity of criticism by a fairly successful example from the practice, we can cite the activity of the Association of Museums and Galleries of the Czech Republic, which holds a respected national competition *Gloria Musaealis*. For the assessment of exhibitions in this competition the following evaluation criteria were adopted:

1. the choice of a theme for a short-term or long-term exhibition considering the timelessness or topicality of the knowledge about the nature or society the exhibition presents;
2. the interpreting approach to the findings about the nature or society in terms of being attractive for the public or the group of visitors the exhibition is designed for;
3. the extent and the application of authentic objects (collection objects);
4. the extent and the application of iconographical elements, texts and other exhibition tools to facilitate the interpretation of the findings about nature and society;
5. the level of artistic, scenographic, architectonic and graphic design;
6. the extent and length of the exhibition being open to public;
7. the way the exhibition is being promoted;
8. the existence and the level of additional programmes and services related to the exhibition;
9. the quality of the environment within the building in which the exhibition is installed, the quality of services for visitors provided by the museum in general.

Also, these and many other criteria can become the basis for an informed criticism of a museum presentation. Beneš (1997, p. 12) aptly states that a systematic and erudite critique could help overcome the 'routine and convenient access to the museum exhibitions' and help in finding new ways of presenting. In practice, exhibition designers perform difficult work often in very difficult conditions; a work the results of which have been significantly influencing the public for many years. Therefore, we believe that the results of their work should be paid adequate attention, and it should therefore deserve constructive criticism, similarly to emerging literary works or theatre performances, that is, works which are traditionally subject to criticism. Defining and comparing employed approaches may be the necessary feedback, which also impacts upon future exhibition projects.



5 Innovative Elements in Contemporary Museum Presentation

Contemporary museum presentation implements many innovative elements mainly due to technological development, the contemporary changes in the society and of course also due to the overall shift in museum practice; focusing more on the visitor and their needs. Today, visitors are not perceived as a homogenous group, they are differentiated according to various criteria and the specific needs each group of visitors has are reflected in different programmes museums have to offer to different groups of visitors. Close attention is now paid to children as visitors with specific needs; the emancipation of this group is proven not only by the establishment of specialised museums (children's museums) but also by implementing 'children's' interactive, didactic or entertaining elements into regular exhibitions. Exhibitions are being adjusted also to the needs of visitors with disabilities, or special exhibitions are created for them (especially for visitors with visual impairment). The emphasis on the educational role of museums also has an impact on the contemporary form of exhibitions. The result of this impact is many innovative elements are now present in exhibitions, or the application of exhibition principles which makes them almost perfect educational medium. These also include didactic and entertainment elements often of an interactive character and based on new media. The following text will reflect on at least some of the most significant innovations that are typical of contemporary museum culture.

5.1 Exhibition Elements that Consider Children in the Museum

Childhood is the initial period of the life of every individual, and is characterised by intensive physical, intellectual, verbal, emotional, and social development. It starts with the birth of a child and ends when the child changes into adolescence, that is, approximately at the age of 14–15. This developmental stage is of utmost importance for the ensuing life because during this period the decisive characteristics of human personality are formed. (Průcha, Walterová, Mareš, 2013, p. 49) That is also why many fields of study deal with childhood as they perceive it as a specific developmental period as well as a specific subculture

within the majority culture of adults. In the approach to childhood, we consider the biological facts (childhood as a biological immaturity of a human being, a period of growing and developing), and we perceive it as a social phenomenon. This approach is well justified because not only are children excluded from the specialised adult aspects of society and the nature of the world in which we live (Kolláriková, Pupala et al., 2001), but still today they are ignored by many social institutions including the museum. A society is automatically defined as a community of adults and is identified with the term adulthood. Social discourses are mainly adult-based (i.e. they are lead from the viewpoint of adults) – there is no place for an immature child as the non-co-creator of reality in adult dictates about the nature of the world. (Kolláriková, Pupala et al., 2001, p. 29)

An example of an adult-based understanding of society and its institutions is the classical museum which did not and sometimes still does not perceive children as fully-fledged visitors – arguing that they are not adults, they are not mature. In the past, the process of exhibition making did not take into consideration these non-complete individuals; to present rare museum collections to children was viewed as unnecessary luxury. Children were simply not perceived as an adequate group of visitors. In many places still they are considered unequal, and perceived as a group of individuals who are in the process of preparing themselves to enter society and museums. And if they are to enter museums then only accompanied by adults and under their close supervision.

But children need to be perceived differently: already today they are somebody, they have their own life, needs, desires, their own perception of the world. (Kolláriková, Pupala et al., 2001) This change in understanding childhood is connected to the pedocentric tendencies of the 20th century which literally ‘discovered’ childhood, and stirred up interest not only in the psychology of children but also in the impact family and wider society have on the human personality in this early stage. The result of such interest was also the establishment of new institutions which are primarily focused on children and which try to positively influence and form their personality, and to offer elements of culture adequate to their age and needs. Such an institution is a children’s museum, a cultural institution with wide educational, social, and recreational possibilities (Jüva, 2004), and which aims to meet children’s needs and developmental requirements.

The pioneer among children’s museums – which may not always be a special institution, often it is a designated area in a regular museum presentation – was Brooklyn Children’s Museum which was established in 1899.

Brooklyn Children's Museum was the very first museum in the world to be designed only for children. Its success initiated the gradual establishment of several hundred children's museums all over the world, even though the majority of these museums are only in the United States of America. Since the beginning, this particular museum (which also stood for a model to others) was characterised by the application of hands-on exhibits and innovative presentation of their collections. It was particularly designed for preschool and primary school children which at that time were the most ignored group of visitors. From its opening, the objective of the museum was to prepare educational and entertaining opportunities as well as to stimulate children. The Brooklyn Museum and its followers have brought into museum presentation many innovative ideas and they have achieved great results in the efficiency of their exhibitions.

In general, we can say that museum presentations designed primarily for children are characterised by certain ways of presentation, and certain themes delivered in a certain manner. The presentation is of course influenced by the mission of children's museums which typically includes a broad understanding of acculturation and to stimulate children to take an active role in learning about the world. Children's museums have a significant effect on socialisation. They aim to develop children's communication skills, their abilities to exist within a society of other children and adults, and to teach them to respect others. They motivate children to learn about culture, art, science and environment through play and activity.

It is understandable that one of the characteristics of the exhibitions in children's museums is the strict application of the principle of illustrative practices. Whatever the theme of an exhibition (animal life, visual culture, the human body and senses, professions, etc.) the main principle is learning through play and active manipulation with didactic hands-on exhibits.

The designers of exhibitions in children's museums always consider the natural needs of children which include biological, psychological and social needs. Biological needs refer to the necessity of food, warmth, cleanliness, protection against negative environmental impact, the need for adequate stimulation, optimal care, or the need for healthy development and adequate rest (adjusted according to Dunovský et al, 1999, pp. 49–53). A classical museum collides most frequently with the children's need to eat, drink and rest according to their individual needs. Abroad, we can see that this issue is commonly resolved by a sufficient number of visitor-friendly elements, such as rest zones, sitting areas,



<< Fig. 87–88 An example of exhibitions that are children-friendly: top – Explora Children's Museum, Museo dei Bambini in Rome (Italy), bottom – VIDA! science centre in Brno (CZ); photo by Petra Šobánková, 2014, 2016

restaurants with children's food on offer or a microwave oven to heat up children's food, a nook for breastfeeding, changing table in the toilets, museum prams for easier movement in an exhibition with the smallest children, etc.

Then there are psychological needs which include the need for stimulating an environment and comprehensive world which is best fulfilled by a stable and positive family environment. It is in a family where a desired behaviour is strengthened and the need for security is fulfilled by an emotional relationship of a child with a mother and other adult; the need of the sense of one's own identity which is influenced by the acceptance of a child by other adults and peers. Another psychological need is the need for an open future, or life perspective. (Dunovský et al, 1999) Surely under certain circumstances, museums can adequately fulfil the need for a stimulating environment and a comprehensive world, and being away from home can positively contribute to the development of the desired social behaviour of children. The image of human culture which is presented in a museum, can show interesting life possibilities and help form children's own identity. On the other hand, classical museums can disrupt the feeling of security, and an unknown environment can trigger the feelings of worry and fear. Negative reactions to children's natural expressions (usually given by custodians) which include increased loudness and movement can forever 'bury' the museum visit because the word *museum* will be now in children's minds be connected to disapproval, unpleasant feelings and insecurity.

And lastly, presentations designed for children should also consider their social needs. These include the need for love and safety, the need for unconditional acceptance of a child, the need to identify with a person or a role model, the need to develop their potential, and the need to get enough opportunities for their training in overcoming obstacles. This group of needs also includes the need for a healthy lifestyle which is learned by adopting habits in early childhood. (Dunovský et al, 1999) It is evident that many of these needs can be fulfilled in the family; others can be fulfilled only in a wider social context – ideally, in a safe, friendly and stimulating environment. Such an environment can be offered by a museum that is well designed and whose exhibitions and educational programmes can

>> Fig. 89–90 Interactive elements and haptic exhibits in the Children's Museum in the Deutsches Hygiene-Museum in Dresden (Germany), photo by Petra Šobánková, 2012

satisfy the need for stimulation and identification. A museum exhibition presents a comprehensive world, an understandable image of our own culture and thereby it helps fulfil the need for one's own personal and cultural identity. A museum visit can help children integrate into a culture as well as into the 'big' society of adults. It can show children the way to influence their own future and that of others.

Apart from the needs the majority of which are typical also for adults, childhood is also characterised by certain expressions which are in many ways not compatible with the way a classical museum exhibition works. In such an exhibition, we can see people walking quietly, observing exhibits in showcases, reading labels and other additional texts. Leaving aside the initial period in which a child is completely dependent on adults, and moving onto the preschool and primary school period (the focus of the majority of children's presentations) we find that classical museum exhibitions can be in fact be a completely inadequate environment for children. If it is still so in the case of particular museums, our responsibility is to draw attention to this objectionable situation, and try to find more suitable ways and interventions to motivate museums to become more open. After all, these are public institutions which are intended for all, including children.

Considering the specifics of children's psyche and their natural needs and behaviour, museums trying to meet children's needs can in fact take two directions. They can either partly adjust their existing exhibitions to focus more on children (e.g. by creating a children's route with specific exhibits and other elements), or create special exhibitions designed only or primarily for children. Such exhibitions should tolerate children's behaviour and they take into consideration their developmental stages and try to meet their developmental objectives for a given period. At such an age, children long for being with other children which is why it is a good idea to design an exhibition not only as the presentation of a certain theme but also as a space for meeting other children, and engaging in joint activities. The importance of this socialising aspect is confirmed by many specialists, including Matějček (2000, p. 48) who aptly defines the preschool period as the desire for cooperation and the development of many pro-social characteristics (companionship, solidarity, selflessness,



tolerance, compassion, sympathy, etc.). It is a period of creating friendships and therefore it is important and necessary to create opportunities for children to socialise, to delight in, to play and to have fun. (ibid) Such an atmosphere of happiness and active learning can be noted in many children's museums, and this undeniable socialising effect is one of the strong arguments for supporting these institutions.

Institutions specialising in preschool and primary school children do so based on the premise that spontaneous play or play motivated by an adult is the fundamental activity of children. That is why, there are mainly didactic toys, or didactic exhibits, and various activity zones in children's presentations. Museum exhibitions designed for children stimulate not only the development of their social skills but also their intellectual, emotional, and verbal development, as well as the development of their volitive and personality characteristics.

Exhibition elements are often focused on basic knowledge about the world of people, culture, nature and technology, such as the recognition of shapes and colours, the perception of the space (distance, depth, height, width, dimensions) and time; learning about the human body, the representatives of the animate and inanimate nature, etc.

It is clear, that the strict application of all of the above-mentioned theses can lead to entirely new types of museum presentations which are significantly different from the presentations designed for adults. Children's exhibitions are often so different that some specialists doubt these still belong to the category of museum institutions. Instead they believe these are children's playrooms, or nursery centres. It is not our task to give definite answers to all questions, but there is an agreement that the general, basic role of museums is to provide people with comprehensible images of the world in which we live. A similar role is also played by children's museums, whatever the role of the musealias in their exhibition is. And nobody says that all museums should follow the implement all of the principles which are typical for children's museums. As we said earlier, child visitors can be welcomed by partially adjusting regular exhibitions, creating children's routes with special exhibits and other elements, and by introducing activity zones and playrooms in a museum.

Contemporary museum culture offers many inspiring examples of working with child visitors, and there are clear examples of children being taken into consideration in regular exhibitions. The children's aspect of an exhibition is becoming a standard, especially in regional museums. The concept of children's

museums and the favourable approaches taken by classical museum towards child visitors are expressions of new museological thinking and of the reaction to social impulses. Even for the smallest children, a museum can become a place where they can acquire a snap shot image of the world and its diversity. A place to ask questions and seek answers, and it is also a place in which they can express themselves in a natural way.

5.2 Exhibition Elements that Consider Visitors with Disabilities

In the previous chapter, we already mentioned the fact that a society used to traditionally exclude certain groups of individuals which were not considered equal to the rest of the society and whose needs were not reflected on in public life or in institutions. Amongst those groups was also a group of people with disabilities who were in terms of the traditional industrial society, dividing individual social groups into 'producing' (or productive) and the others, perceived in many aspects in the same way as children and elderly people. (Kolláriková, Pupala et al., 2001, p. 30) They were not considered equal and their rights were not overly recognised. The gradual democratisation of society and of public institutions including museums together with new findings and the cultivation of public space has brought about the positive trend of considering these previously ignored groups. In museum culture, this shift materialised in children's museums and children's aspects in regular exhibitions, in the development of special educational programmes designed for seniors, and in creating exhibitions adjusted to visitors with disabilities. This is based in the rights of people with disabilities and otherwise marginalised groups of visitors to access exhibitions – rights which are equal for all visitors.

A disability means that an individual is due to their disability (physical, mental, sensory) or their affiliation to a certain group (e.g. ethnic minority)²⁷ disadvantaged. It affects not only the educational background of an individual with disabilities but also their social relationships. The important thing is that the extent of a disability is not given by the disability itself but by the

27 Let us mention at least by way of a footnote minorities in terms of religion or sexual orientation. Some foreign museums focus their collection-making or educational activities on the needs of homosexuals, or LGBT+.

surrounding conditions which can make the disability greater or lesser. Depending on the type and the extent, a disability can impact upon the life of a disabled person with serious consequences or just minor limitations. What is important is that the consequences of a disability can be reduced by suitable adjustments to the environment; this is true also in how museum exhibitions operate. Let's take the example of people in a wheelchair. In many developed metropolises, such people do not have a problem moving around, but elsewhere the restrictions this disability has on a person are increased as the ability to move around is obstructed by wheelchair inaccessibility. A similar situation is when visiting cultural and memorial institutions: a visit to a museum located in a wheelchair inaccessible historical building is for a wheelchair user either completely out of the question, or achieved with much hardship – not only on the account of architectonical barriers but also because of the lack of parking or unsuitable toilet facilities. Fortunately today, the situation is different in many museums, and thanks to growing wheelchair accessibility, people with physical disabilities can easily find employment as well as a place for their activities, interests and education.

The authors of the methodological book entitled *Overcoming the Barriers* (2002) define a person with disability as an individual suffering from a physical or mental disorder that has a serious and long-term adverse effect on their ability to perform every day activities. According to the authors, disabled people may be those who:

- use a wheelchair,
- are blind or partially sighted,
- are deaf or hearing-impaired,
- are affected by arthritis,
- have a long-term illness,
- have learning disabilities,
- have hidden impairments. (*Overcoming the Barriers*, 2002, p. 9)

One of the signs of developed societies is their ability to create the most beneficial conditions so that people with disabilities can according to their skills and interests engage in a common style of life, education and culture. In this aspect, museums play an eager role; adjusting their exhibitions to the needs of people with disabilities in a variety of ways. On one hand, they create special exhibitions designed primarily for various groups of people with disabilities, e.g.

the blind, and on the other, they integrate special exhibition elements or principles into regular exhibitions. A particular expression of the attention people with disabilities are given within museums is the collection, thesaurisation and presentation of collections documenting the culture of these groups and other themes related to the given disability. Therefore, there are museums documenting the history of the deaf, and the blind.

The issue of adjusting exhibitions to people with various disabilities has already been extensively addressed by a number of authors. We can mention authors of general museological works who integrate the issue of museum visitors with disabilities into museum theory and practice (e.g. Hooper-Greenhill, 1994, Dean, 1996, Lord and Lord, 2001, Black, 2005, Tallon & Walker, 2008, and others), and authors who deal primarily with the issue of a disability and the accessibility of exhibitions to people with various disabilities (Majewski & Bunch, 1998, Barker & Fraser, 2000, Bright, 2004, Rayner, 2005, Cave, 2007, Moussouri, 2007, Sandell, Dodd & Garland-Thomson, 2010, Ginley, 2013, Bernard & Fabre, 2003, and others). Inspiring are also methodological materials of organisations specialising in working with people with disabilities in a museum setting, or materials issued by governmental institutions (see e.g. the publications of *Art Beyond Sight*, the website of *Accessibilite-patrimoine*, 2014, *Citizens Information Board*, 2009, *Commission for Architecture and the Built Environment*, 2006, *Countryside Agency*, 2005, *National Disability Authority*, 2011, and many others).

We can also list many examples of good practice that show us what such exhibitions look like and what is necessary to keep in mind when designing them. Let us first focus on the blind and visually impaired. One of the museums that focuses on blind visitors and other disabilities is the well-known Victoria & Albert Museum in London. This museum is very active in this field and it has even employed a specialist whose task is to adjust exhibitions specifically for people with disabilities and to organise special events. The Victoria & Albert Museum in London incorporates into their exhibitions touchable objects; both replicas and originals. These tactile exhibits are accompanied by a panel with a text written in Braille letters the positioning of which is also well considered in terms of the height and distance from the object. Under the supervision of Barry Ginley, who has personal experience with visual impairment, the museum employs a number of key principles: labels in Braille letters should contain the same amount of text as regular labels, they are always placed near the object

but not on the walls (where it is difficult to read them), and these special text panels are thoroughly proofread in terms of correctness and clarity.

Exhibitions of this museum also implement audio records with the description of the exhibits, and other new technology for people with this kind of disability. For example, audio content can be downloaded by visually impaired visitors through their own smart phones which is less costly than providing each exhibit with a label in Braille letters. Victoria & Albert Museum also designs special, very successful books for the blind which can be a good example of methodological approaches to other museums. More complex images of exhibits are adequately reduced to the fundamental elements. Images which are selected should be thought-provoking, informative and should provide tactilely significant textures. Labels of exhibits (be it in the book or in the exhibition) must be comprehensible and apt, they should contain introductory information about the overall length of the text, and they should not mention information which cannot be found in the book or other guides unless it is relevant to the understanding of the exhibit. (Ginley, 2013)

The important thing is – just as in any other groups of visitors – to initiate the process of understanding and interest in exhibits and the content of the exhibition. To this end, the museum organises for the blind the so-called *V & A Touch Tour*, that is tactile tours with the curator's or educator's commentary. For these events to be successful, it is important to train museum staff so that they are all aware of how to approach and deal with visitors with specific needs. (ibid)

Also other classical museums create exhibits for the blind or visually impaired. For example, in the Museums of the Vatican, the blind can use plastic reproductions and additional audio recordings (a person reading a text with music in the background) to perceive some of the most famous works of Caravaggio and many others. Another example is Museo Tattile Statale Omero which is located in the complex of Mole Vanvitelliana (former military leper hospital) on an artificial island in the harbour near Ancona in Italy. This museum which was established by the Italian organisation of the blind focuses on the collection, production and presentation of tactile exhibits. These are mostly replicas of works of art made of plaster or artificial resin; architectonical models and copies of archaeological finds. The themes of the collections are classical art (Antient, Romanesque, Gothic, Renaissance, Baroque and Neo-classical works) as well as modern art. Visitors can avail of hundreds of tactile exhibits which make art (mostly visual artefacts) accessible to people who cannot use



Fig. 91–92 Unique period photographs in which a group of blind children ‘are viewing’ a stuffed walrus and other objects using their touch in the Sunderland Museum, photo courtesy of Tyne & Wear Archives & Museums, 1913

sight to perceive them. Apart from exhibits, the exhibitions in Museo Tattile Statale Omero contain labels in Braille letters and special black print for the visually impaired. Also movable ladders are used as many of the exhibits are of large format. (*Museo Omero*, 2014)

Museum practice gives us many other positive examples, such as the National Gallery in Prague (CZ) which in the past prepared many exhibitions and programmes for visually impaired visitors – tactile exhibitions in the Kinský palace titled *Korejská keramika a Japonská skulptura* [Korean Ceramics and Japanese Sculpture] for example. Exhibitions contained ten exhibits and were self-service which required strict application of all necessary principles. Apart from a reduced number of special exhibits (mainly because tactile exhibitions require a lot of time and the full attention of visitors), exhibitions also contained a relief navigational line on the floor that led to tactile objects. The Gallery allowed assistance dogs to enter the exhibitions while offering a guide with commentary. In cooperation with the citizens’ association Vide Manibus, the Gallery of Central Bohemian Region (CZ) transforms selected significant paintings into a haptic relief form. Haptic reliefs are placed in the permanent exhibition of the gallery. In cooperation with Tyflokabinet České Budějovice, o. p. s., the Museum of South Bohemia in České Budějovice prepared educational interactive programme titled *Hlasy ptáků* [The Voices of Birds] which was focused on the birds of South Bohemia.



<< Fig. 93–94 Top – an explicating element for the blind in Cité des sciences & de l’industrie (France), photo courtesy of Playing Futures, 2008; bottom – a photograph from the tour of the blind in Minneapolis Institute of Arts (USA), photo courtesy of the archive of Minneapolis Institute of Arts, 2009

Some cities organise tours for visually impaired citizens, or initiate the establishment of special exhibitions with models of significant buildings. An example of this is the Prague tour within the project titled *Praha na dotek* [Prague at the touch] that gives people the opportunity to have tactile experience with some of the historical sights. It also offers a special book-guide with plastic depictions. Another example is *Neviditelná Olomouc* [Invisible Olomouc], an exhibition of haptic models of significant buildings in Olomouc. The Archdiocesan Museum in Olomouc has also organised an exhibition titled *Doteky Olomouckého hradu* [Touching the Olomouc Castle] the objective of which was to tell the blind and the healthy visitors the story of the ancient seat of the Moravian Přemyslid dynasty and the adjacent buildings of the Church. A permanent exhibition titled *Hmatové sochařství* [Touch sculpture] was opened in 2008 in the gallery of *Oblastní galerie Vysočiny* in Jihlava, and it presents works of sculpture by the blind. The exhibition considers also visually impaired visitors which is why it contains a number of relevant elements: apart from exhibits being adequately organised, there are also leading strips on the floor, and labels in Braille letters.

Many of such events are not primarily designed for the blind or visitors with disabilities but their objective is to give non-disabled people the opportunity to learn about the world of the people with disabilities. One example of which is the *Neviditelná výstava* [Invisible Exhibition] in Novoměstská radnice in Prague, an exhibition titled *Jak se žije s handicapem* [Life with a disability] organised by the Children’s Museum. Another example was at the Moravian Museum in Brno – a successful exhibition of the charitable trust Sirius titled *Naše cesta* [Our Path].

The majority of the above-mentioned examples took into consideration mainly the blind who were within a museum setting that was primarily based on visual stimuli, most limiting. The blind and visually impaired visitors are not the only group of visitors who need to be taken into consideration when designing an exhibition.

>> Fig. 95–96 Top – an exhibition of the Museum of Modern Art in New York (USA) with Olafur Eliasson's light installation titled *I only see things when they move* (2004), photo by Dominik Dada, 2008; bottom – an exhibition of Fridericianum in Kassel (Germany), photo by Petra Šobánková, 2007

Another large group consists of visitors with physical disabilities, that is people with various physical or central nervous system disabilities. Such disabilities mean that a person has a partial or complete inability to move which can be partially compensated by special tools such as a wheelchair, proteases, crutches, etc.

Visitors with physical disabilities need primarily wheelchair access into museum buildings, but that is not all. Equally important is their ability to park near the vicinity of the museum, wheelchair accessible entrance and the foyer, a lift to all floors in the building, adequately adjusted toilets, wheelchair accessible exhibitions and rooms for educational activities, as well as wheelchair accessible exit routes.

Wheelchair accessible solutions to museum buildings (achieved by a reconstruction of the existing building, or by building a new one) enables people with physical disabilities to visit places which were inaccessible to them before – stairs, the unevenness of the surface and other barriers were and in some places still are very common. From the architectonical and construction point of view, wheelchair access requires the application of a number of particular measures. For the limited space we cannot list them all. It is, however, important to point out that wheelchair access is nowadays required for all new public buildings and for most reconstructed buildings (unless otherwise instructed by the National Heritage Board). Where the wheelchair access cannot be placed by implementing a relevant construction element, it is provided by access ramps or lifting platforms installed permanently or temporarily.

The principles of wheelchair access must be observed also in the exhibition itself where the key aspects are standard manipulation space for a wheelchair which is a circle of 150 cm in diameter (a circle of 120 cm in diameter is enough for a person with a mechanical wheelchair, a larger space is always ensured in public building for people in electrical wheelchair). (Filipiová, 2002) Another key element includes an adequately adjusted door which must be at least 90 cm wide. In front of the door and behind it, there must be enough space for manipulation with a wheelchair. It is advisable to place a horizontal bar on



the inside of the door, or a photocell-controlled automatic opening of the door. Access ramps placed before the door should have a horizontal plane of at least 150 cm long, or 200 cm depending on the direction of the door opening. As for the floor, it should have an anti-slip surface. (Ministerstvo vnitra [Ministry of the Interior of the CZ], 2003) The dimensions of all spaces and the height of objects should follow from the dimensions of a wheelchair, or the height of a person sitting in a wheelchair, that means that all control elements and viewing parts of exhibitions (showcases, text panels, labels) should be placed at a height of 60–120 cm (sometimes even less) so that they are easily accessible for people in wheelchairs. This group of visitors should also be considered when designing active zones and when furnishing educational rooms – e.g. tables should have enough room for the manipulation with a wheelchair.

It is evident that many museums and historical buildings do not comply with the listed rules and cannot fulfil them in the near future either (especially protected buildings, or small and financially limited museums). However, a number of successful architectonical solutions were applied also to historical buildings; many of which are introduced in the book titled *Overcoming the Barriers: providing physical access to historic buildings* (2002).

The purpose of such architectonical and exhibition adjustments to public spaces of cultural institutions is to enable people with physical disabilities to use them independently and without needing the help of others. Considering the large amount of people with physical disabilities including seniors (wheelchair accessibility is equally appreciated by parents with prams and small children), it is a very useful investment.

Another group of visitors with disabilities are the deaf, or deaf-blind people. Deaf people are defined as people who have not heard from birth or who have lost their hearing before developing their speech, or those with complete or practical deafness who have lost hearing after the development of speech, and those with severe hearing impairment, the extent and nature of their hearing impairment does not allow for a full understanding of speech by hearing. (*Act on communication systems of deaf and deaf-blind people*, CZ, 1998) Deaf-blind people are those with concurrent hearing and visual impairment of varying degrees, types and times of origin where the extent and nature of concurrent hearing and visual impairment does not allow the full development of speech or full communication using speech. (ibid)

Regarding deaf people, we must emphasise that while people with such disabilities can perceive all visual museum stimuli without any limits, the perception of the majority of texts in exhibitions is very demanding due to the fact that their primary communication system is sign language and not a regular language used by the general population.

Communication systems for deaf people include national sign language together with communication systems based on a regular language. A particular national sign language is a natural and full-fledged communication system based on specific visual and manual elements, including shapes of hands, their position and movement, facial expressions, the position of head and the upper parts of body. A sign language has the fundamental attributes of a language, that is, signs and their meaning, a systematic character, etc. It has both lexical and grammatical apparatus, it is used to produce culturally valuable works, and it has all aspects of an independent language. (*Act on communication systems of deaf and deaf-blind people*, CZ, 1998) A common language is also the reason why deaf people form an independent group as opposed to people with other disabilities. That is also why the Deaf (written with a capital letter as other national groups) define themselves as a specific group of people, a cultural minority which shares a natural sense of belonging and their own independent culture (history, joint cultural and sport events, art and other expressions of culture).

Deaf people have the right to equal engagement in all areas of social life including the right to adequate adjustment of museum exhibitions and cultural heritage. Sign language as a fundamental communication system of deaf people should therefore be employed in museums as much as possible, so that deaf people can understand the content of exhibitions and the context of presented exhibits without many limitations. To this end, museums can organise special tours for deaf people with an interpreter, or implement the commentary and description of exhibits directly into various exhibition elements, e.g. installing tablets, screens or information kiosks.

This is rather common in larger museums in Great Britain or the USA (traditionally in these countries there is a strong community of the deaf with an equally strong cultural identity) where all audio-visual projections with spoken or written text are translated into sign language. Special videos for deaf people are also frequent. Such videos in digital form can be either played in the menu of information kiosks or on tablets placed near a group of exhibits, or they can be played through the visitors' smart phones or tablets. Commentaries

>> Fig. 97–98 Top – a video-guide for deaf visitors in the Sixth Floor Museum in Dealey Plaza (USA), bottom – elements for deaf visitors in the exhibitions of the National Maritime Museum in Greenwich (UK), photo by Petra Šobáňová, 2014

in sign language can be made available on the website of the museum or other accessible sites (e.g. You Tube).

Apart from making videos in sign language (with or without subtitles), there are a number of other measures made by museums or external suppliers that can improve the accessibility of museums for deaf people or people with hearing impairment.

Koutská (2014) lists for example:

- induction loops to increase the volume and to improve the auditory quality in a setting with disturbances and echoes (see the well-known pictogram with a crossed ear and the letter T),
- light signalling,
- simultaneous transcription with a recorder, Wi-Fi and a programme which projects the transcribed commentary on tablets or mobile phones,
- on-line interpreting services (distant interpreting via web camera),
- Web pages accessible for deaf people and people with hearing impairment. (Koutská, 2014)

The most progressive in considering visitors with disabilities are the United States of America, especially in implementing elements for deaf people. One of the many good examples is the Sixth Floor Museum in Dealey Plaza which deals with the theme of the assassination of president John F. Kennedy, and mediates his legacy. This museum has prepared exemplary tools in the form of the well-known audio-guides; hear only guides, or video-guides. These are commentaries for the exhibition in sign language played on tables.

Also European museums, e.g. The National Gallery in London or the Tate Gallery prepare a number of tools for deaf visitors – visual guides in the form of tablets and small mobile devices giving commentaries in sign language, or any of the above-mentioned additional tools on web pages or in the exhibition. Some of the larger museums employ a specialist who speaks sign language and is in charge of preparing tools that are very useful and not really demanding in terms of technology. Also the Museums of the Vatican which employs up to



seven guides for sign language (the majority of whom are native speakers, that is, also deaf) who offer special tours for deaf visitors. Some of the guides even speak other sign languages (e.g. English and French) which in tourist centres of museum culture is very useful.

The National Museum in Prague has been addressing the needs of deaf visitors for a long time. The museum cooperates with the Czech Chamber of Sign Language Interpreters, and prepares accompanying programmes and other tools. For example, the museum has designed a multimedia guide in the scope of the exhibition titled *Monarchie* [Monarchy] which contains both Czech and English language as well as a version for deaf people in sign language. The guide is available at the following address <http://pruvodce.nm.cz/>, it can be also downloaded via QR codes at the entrance to the exhibition. A multimedia guide was also prepared by the National Gallery in Prague for the exhibition of the works of Jakub Schikaneder from 2012. The guide contained a classical audio version in the Czech and English languages, and a small screen with the interpreter signing. These were available at the cash office.

Digital media and the widely available contemporary technology (including mobile technology) make the adjustment of exhibitions for the needs of deaf people significantly easier. Therefore, even a financially limited museum can prepare digital recordings in sign language without any problem – all is needed is to contact an interpreter. Digital recordings can be done on a simple video camera (though the best possible conditions must be ensured, especially the lighting directed on the interpreter and neutral background), and providing subtitles for deaf people whose primary language is a spoken one, is also not an issue today. Video recordings need to be edited only minimally, and then they are simply placed on the web of the museum or in another directory. The purchase of mobile devices is therefore not necessary. Based on these facts, it is interesting to see that many museums still chose not to do much, even though in majority of countries, there are many organisations uniting people with various disabilities, which can provide consultations or arrange for an interpreter. Not to mention universities where there are many specialists at the faculties of education.

Attention paid to visitors with disabilities is one of the factors indicating the quality of a museum institution. The accessibility of museums includes not only the physical accessibility of museum buildings and exhibitions but overall conceptual changes to museum thinking and to the exhibition ‘language’ in favour of employing more senses, and implementing elements designed for people



Fig. 99–100 A thorough application of elements designed for deaf visitors in the National Maritime Museum in Greenwich (UK), photo by Petra Šobánková, 2014

with disabilities. The greatest possible access is a valid requirement as Ellen Giusti (2008, p. 97) reminds us, ‘labelling’ or the exclusion of people with physical disabilities is a practice of the past. After all, people with various disabilities are all around us, in fact, they are us, because they are not different from healthy people in any fundamental aspect. Moreover, many healthy people may soon become physically disabled visitors themselves, due to an illness, age or an accident. People with disabilities represent a significant segment of the general public, and virtually everybody who lives long enough may become affected.

5.3 Interactivity

The efforts to make such exhibitions places in which visitors would feel comfortable led to wide-spread application of the principle of interactivity which has already been discussed in the passage dedicated to presentations for children. Interactivity means that visitors can indeed become an active part of an exhibition. They can engage in physical activity (not only in the movement from one exhibit to another), manipulate objects or didactic elements, communicate directly with exhibition elements such as information and play kiosks, and select the content or activities which they want. Interactive elements in the exhibition



Fig. 101–102 Left – Head Smashed in Buffalo Jump, Alberta, Canada; right – Ngomongo Villages, Mombasa, Kenya (Africa); photo by Jan Dolák, 2005, 2006

encourage communication between the content and visitors, and thanks to them, the quality and form of a museum visit is dramatically altered. Instead of pure visual reception, it also offers creative, experimental and work activities, manipulation with objects, selecting and activating exhibition elements – and thereby adjusting the form of a visit to meet with visitors' interests.

As an example of an exhibition that uses extensively interactive elements, we offer the Dresden Transport Museum (Verkehrsmuseum Dresden). The classical historical building that is now a museum was previously used as stables and for the storage of carriages. The museum now houses a collection of carriages, old locomotives, motorcycles, cars, bicycles and other means of transport. Exhibitions at this museum contain plenty of interactive elements and aspects of play: turning boards with information and pictures, exhibits that allow visitors to try and see the weight brewery horses had to pull, a model of a team of horses that visitors can sit in and try to hold reins, a station with farmer's work tools, etc. The museum has also allocated special space for a children's playroom with interactive elements, toys, tools for artistic activities and a seating area for relaxation, as well as a hall with a huge traffic route (or traffic playground) with small cars suitable for preschool children.

From the Czech context, we can offer the example of the Regional Museum in Olomouc and its exhibition titled *Příroda Olomouckého kraje* [The Nature of the Olomouc Region]. The exhibition tells the story of the natural



Fig. 103 Kaosiung, Taiwan, National Science and Technology Museum, photo by Jan Dolák, 2011

history of the region, and apart from attractive and adequate dioramas there are also plenty of interactive elements which allow visitors to explore the theme using other senses and not just sight. The exhibition designers have prepared drawers (with exotic fruits, plant seeds, casts of animal prints, snail shells, furs), scented little bags with herbs and soundtracks (sounds of various types of birds and mammals) which can be played by pressing a button. In the exhibition, visitors can look inside a beehive, and there are also many audio-visual effects to stimulate visitors and give them further information, or to help them relax. Thanks to data projectors, visitors can go fishing in the virtual museum pond, or lay in the grass and watch birds, or visit a prehistoric cave and watch Neanderthals during their rituals. Labels of the exhibits are written in Braille letters. Four touch screens with databases of plants and animals in the given biotope, geological finds of the region and other areas are installed in the exhibition to provide further information.

>> Fig. 104–105 An interactive exhibition titled *Krystalíza her* [Crystallisation of Games] in Špilberk in Brno (CZ) based on the concept of artist Petr Nikl, photo by Petra Šobáňová, 2013

Another type of method for activating visitors is the carrying out of programmes based on searching for mistakes that were intentionally made in the exhibition. The most stimulating is to motivate visitors to engage in their own and often manual activities. These can include archery or the crushing of millet like in the open-air museum in Ngomongo Villages near Mombasa. Visitors can also take part in the complete processing of a killed bison in the *Head Smashed in Buffalo Jump*, Canada. Another example visitor stimulation can be found in the National Science and Technology Museum in Kaosiungu in Taiwan where visitors can explore their creativity in a printing workshop.

Such activities are not only designed with children and the youth in mind. If visitors are given the opportunity to see for example the production process of a machine or, even better, they can try operating it themselves, they are ultimately drawn in and in a greater and better extent than through mere viewing an object or through a commentary no matter how well it is prepared. English specialised literature refers to such an approach as a participatory exhibition, and if the conditions of a museum are not suitable to organise such activities on a daily bases, it is desirable to organise such workshops at least on an ad hoc basis.

Commonly, we come across many other types of interactive examples, that are truly interactive to a greater or lesser extent. Sometimes, even an exhibition in which we can operate information kiosks with digital content, e.g. an extended database of the museum collections, proclaims itself as interactive. The interactive aspect of such exhibitions is minimal; it is comparable to the level of ‘interactivity’ when deciding which direction to take in an exhibition or when opening covered showcases. Real interactivity is not only the ability to select content, but also the opportunity to engage in beneficial activities relative to the content of the exhibition, or in experimental activities often using other senses apart from sight.

The quality of interactive exhibitions visits depends on the form and content of the exhibition as well as the extent to which visitors participate in it; on their abilities and will to engage. A visitor is not just a passive receiver of information; s/he takes an active part in the depth and quality of their learning





<< Fig. 106–107 Top – an exhibition with Daniel Rozin’s interactive work titled *Angels Mirror*, Ars Electronica Linz (Austria), bottom – view of a Museum Night at the Museum of Modern Art in Olomouc (CZ); photo by Petra Šobánková, 2013

which should be the main objective and purpose of interactive elements. That is why, these elements should not be an end in itself, only to increase the attractiveness of the exhibition without having clear objectives defined that are related to the content of the exhibition. Every interactive element should be designed with a clear and visible intent which is well comprehensible to visitors either on its own (e.g. shoe pieces to be put together in the exhibition on the production of shoes), or by way of textual instructions and explanation (e.g. turning glass box with water demonstrating the power of water flow that is used in power engineering). Interactivity does not offer only entertainment but also encouragement for more efficient learning. That is why it is no longer a practice used only in children’s museums. As the practice shows, it can be applied generally – interactivity in the form of physical activity, manipulation with didactic tools, or in the form of interaction with technology and new media content is increasingly more popular; also among adults.

5.4 New Media in Exhibitions

Following on from the previous subchapter, the application of interactivity is sometimes connected with new media and sometimes both terms merge together (it is assumed that the implementation of new media in exhibitions increases its interactivity). While this assumption may be simplifying things (new media are not always used in exhibitions to increase and enable interactivity), the fact is that thanks to new media there are new innovative forms of exhibitions, and entirely new ways of communicating with visitors are being formed.

New media are referred to in terms of technology as well as in terms of their content. Often there is no distinction made between these two meanings which leads to misunderstanding. The way we understand *new media* is in line with a detailed definition given by Lev Manovich (2002) who perceives new media in terms of media as a carrier and a mediator of certain content that is in digital form, or in terms of digital content (such is the definition of new media

in art, or the definition of a new media work of art). The existence of digital²⁸ content is dependent on the technological device and its hardware and software which cannot be separated from one another. This fundamental basis of new media is often referred to as *new technology*, *information technology* or the compound of *information and communication technologies*.

The term *information and communication technologies* (ICT) is a common term for technology which is currently used for the work with information and for communication among people, among institutions or various systems. The word *technology* itself refers originally to a production or a working process; together with the modifier *information* it refers to the ways computers work in terms of both hardware and software. Some authors define the term ICT as a common term for all technologies which relate to gathering, exchanging, storing, and processing information, and making it accessible. At the same time, *information technology* (IT) indicates a technological industry which researches this area and develops its innovations.

Also in museum culture, the term is most frequently used in its first meaning (technology in the context of gathering, exchanging, storing, and processing information, and making it accessible). Information technology then refers to every electronic device which gathers information (e.g. data on collection objects, databases of digitalised collections, etc.), performs certain operations with it, and is able to produce output data in accordance to given specifics. Today, we do not separate the communication element from information technology because individual computers as well as their input and output devices communicate with each other on a regular basis. That is also why the term *information and communication technologies* that integrates both levels is generally used.

New technologies are of course also used for the presentation of collections. They offer possibilities that were not thinkable before in the process of exhibition making as well as in various forms of alternative presentations

28 Digitalisation, which has informed the life of museums most significantly, came on the scene at the end of the 20th and at the beginning of the 21st century when the digital way of sound and image recording was undergoing rapid development, and digital data media such as CDs, DVDs, flash discs and compressed therefore easily transferable formats were widely spread. At the same time, efforts were made to transform analogue data to digital ones, and it is this process that continues to characterise our present, especially in the area of digitalising cultural heritage.

of collections. While entirely virtual museums can be created today (for more details see Šobánová, Lažová et al., 2016), new media can be implemented extensively also in classical presentation. They are used mainly in video projection, digital sound loops, projection of static image, and various special effects. In exhibitions, we can find computer stations with touch displays, electronically controlled moving models, and many other didactic tools. Audio guides are popular with visitors, especially tourists, and various digital content placed on the Internet is today considered a standard exhibition element.

It is evident that modern reproduction technologies make it possible to create attractive exhibitions in a completely new way: an extreme can be exhibitions based solely or primarily on digital content, be it digital representation of musealias, various simulations of phenomena and events, or presentation means based on the film industry (3D projections in planetarium, reconstructions of battles, popularisation projects based on the principle of living history presenting our image of the life of prehistoric people, etc.). Such an approach, no matter how problematic it is, due to suppressing authentic musealias, enables the museum to expand also into public space and to address a wider spectrum of visitors. There is no need to protect collection objects when using this approach. At the same time, new media make it possible to present also such realities for which we have no authentic evidence or the presentation of which is not possible (objects that are too rare, sensitive documents, realities that go beyond human, e.g. cosmic phenomena, etc.).

Thanks to the contemporary technological possibilities, collections can be presented also outside an exhibition setting: off-line on CD-ROMs and other media (nowadays obsolete), on-line on the web pages of the museum (databases of digitalised objects or a more sophisticated way of presentation in the form of virtual exhibitions), on umbrella portals or other directories (You Tube, shops for smart phone users), and increasingly more popular social networks. Today, almost all museums have their own web pages which they use to communicate with their visitors, to inform them of current events, as well as to present their collections, and to share their knowledge about them. Thanks to this development, museums have become an influential agent of e-learning because many of their on-line presentations offer didactic approaches to themes which are resourceful and of a high quality, be these classical portals and web pages, or mobile applications or other digital products. All these forms of new media are of great benefit also in the long-life learning outside museum culture.

The increasing application of new media in exhibitions and non-exhibition presentations gives rise to the important issue of the relationship between an authentic musealia and its digital representation, that is, the digital context, a non-physical yet ontic 'fact'. Currently, there is no doubt about the benefit of digitalisation (though we do not use its potential fully yet) but isn't the digital representation of a musealia going to overshadow or gradually substitute the authentic object completely? Will museum collections after being digitalised still have their purpose? And isn't presentation going to lose one of the rudiments which museology emphasises using the theory of the irreplaceability of an authentic musealia and its exceptional culture-making role?

The search for answers to these questions, as well as the search for the ways to efficiently present objects using new media is one of the most important tasks contemporary museums face today. Museums must reflect on dramatic social changes, as well as on their position among competitive media and other providers of leisure time activities. In this context, many authors such as Kesner (2000) point out that classical forms of museum presentation are losing their charm and relevance especially for the contemporary visitor used to audio visual stimuli and rich and easily accessible information sources. That is also why exhibition designers try to implement technological devices and digital content of various type among regular presentation elements as the right way and in fact the only way to respond to this development.

In fact, we can say that museums have never tried to look obsolete, that is, to use older way of writing, to use paraffin lamps in times of electricity, etc. They have always tried to use modern technology despite negative associations. It is no different today, and we believe that to use all that can help fulfil presentation objectives, is actually a museum workers' duty. We can observe that the majority of museum workers have always welcomed the opportunity to use and implement modern technology and new technology in presentations. Whether it was the application of a tape recorder, film, later on slide shows, the use of polyekran (an original Czechoslovakian projection system – translator's note) and video projection, stereo projection, holograms, etc. Naturally, since the beginning the most significant limitation for museums has been the high cost. Increased application of these elements has been noted since the 1960s. In 1973 in Czechoslovakia, Josef Beneš carried out in the museums in Tábor (CZ) and Uherské Hradiště (CZ) his research into the effects of various types of audio visual means on visitors. The research received some critical response internationally. (see Michajlovskaja, 1978,

p. 26) Also the theoretical museological community has always been opened to modern technology. The opinion of majority of museologists (Cameron, Piščulin, Michajlovskaja, Stránský, Beneš and others) on modern technology can be summarised as follows: it is an exceptional help for any presentation activity, however, it cannot be an end in itself, and it should not be the main or the single means of museum presentation. The doyen of Chinese museology, Su Dong Haj summarises that museums need modern technology but not technological doctrine. (Su, 2008, p. 19) Similar opinion on the use of digital technologies is also voiced by Dolák who believes that technology must be only the means to improve the presentation of our theme, not the objective that results in a film show. (Dolák, 2010; for more details on digitalisation see Dolák, *Digitalizace z pohledu muzeologie* [Digitalisation Perceived by Museology], 2011)

In terms of the application of technology, we can divide exhibitions into **static** and **dynamic**.

A static exhibition does not automatically mean a bad exhibition. This can be best shown through exhibitions of visual art, etc.

Dynamic exhibitions can be divided into the following three degrees:

1. **automatic** – the use of a film loop or a video, the so-called infinite loop;
2. **operated (controlled)** – those that can be activated by a user on a one-time basis;
3. **interactive** – draw a visitor into a kind of dialogue.

The third group can be further divided into **simulations** the mode of which allows for a multiple (infinite) number of solutions, and **educational** – with a given expected extent of a ‘dialogue’²⁹.

29 Here we follow and slightly change the approach of Peter van Mensch (1992). His classification of interactive exhibitions, in particular, the introduction of the educational type (as opposed to simulations) resembles e-learning products based on a prepared algorithm of a dialogue between the learner and an educational system. However, he does not take into account the fact that in learning (and therefore in teaching), we can use an infinite range of various types of didactic tools, including simulations, edu-clips, mobile applications, interactive textbooks, didactic computer games, etc. The rapidly developing field of digital presentation will in the future require an updated definition. One of the possible definitions is offered in the monograph by Šobáňová, Lažová et al. (2016).



<< Fig. 108–109 An image of a permanent multimedia exhibition of the Cairn of Peace Memorial titled *The Battle of the Three Emperors. Slavkov/Austerlitz 1805* (CZ). Photo courtesy of the archive of the Brno Region Museum, 2006

Certainly, everyone is familiar with the application of automatic loop. An example of a controlled exhibition can be demonstrated on the exhibition titled *Bitva tří císařů Slavkov / Austerlitz 1805* [The Battle of Three Emperors / Austerlitz 1805]. The theme of the exhibition of the museum located immediately beside the *Mohyla míru* monument is the military expedition of 1805 which culminated in the well-known Battle of Austerlitz. The exhibition designers have put a lot of effort into preparing a powerful experience for visitors. That is why they used a number of less frequent elements: audio visual projection, computer animation, the use of lighting and sound system to dramatize presented historical events. Apart from exhibits, there are also monitors and touch screens that offer further information such as: texts, illustrations, animations, and film scenes.

The possibilities for interaction encouraged by digital technologies seem to be unlimited; an unusual kind of interaction is for example offered by the Allard Pierson Museum in Amsterdam. A special computer programme translates our own names (according to Jan Buurman and Nicolas-Christophe Grimal) into Egyptian hieroglyphs and then prints them out.

And the list goes on. In an attempt to generalise these practices, we can conclude that the contemporary museum exhibitions and additional activities make use of the following basic types of technologies:

- personal computers, notebooks and tablets (apart from regular computers also computers adjusted to processing multimedia, gaming computers and compact mobile devices);
- TV and audio technology including LCD or plasma screens, MP3 and MP4 players, DVD technology, audio systems, rarely and only for special exhibitions also satellite technology;
- photo and video technology, that is, photo cameras, video cameras, projectors, photo frames and web cameras;
- special projection technology for advanced work with light and projections of multimedia content. This category includes various projectors for active 3D

>> Fig. 110–111 Top – an example of projection on the floor in the Kunsthaus Graz (Austria); photo by Petra Šobánková, 2015; bottom – Allard Pierson Museum, Amsterdam (The Netherlands), photo by Jan Dolák, 2011

projections, video-mapping and other special effects such as holographs, Pepper's ghost effect and Fog Screen to project image into fogged air and others³⁰.

As for computers, these occur in exhibitions most often in the form of information kiosks or tablets. An information kiosk is a terminal located at any spot in a museum or directly in an exhibition. The kiosk ensures access of information for visitors; usually the information about the museum and exhibitions and other digital content: e.g. databases of collection objects, presentation of themes, audio visual documents, etc.

Also other devices listed above are used in a museum exhibitions in a more or less regular manner: these involve devices used to project digital images, to present audio visual content or for activities involving learning, games, relaxation (taking photos of visitors in exhibitions and sending electronic postcards, playing computer games, e-learning activities, etc.). Equally popular and beneficial within museum exhibitions are also visitors' smart phones and tablets. Through QR codes, visitors can download a museum's content which thus represents an alternative presentation or is a means of extending an exhibition. Using these devices as well as those placed in the exhibition, we can reach digital content saved in a certain directory, e.g. the museum web pages or the YouTube channel of the museum.

Increasingly more experiments are being done also with soundtracks, or their alternative, individualised reception connected to a relevant device or special headphones. A generous experiment in this field has been carried out by the Victoria & Albert Museum when preparing an epic exhibition entitled *David Bowie* is. Considering the character of the presented content, which apart from artefacts commemorating the famous musician also included the projection of musical clips and recordings of spoken commentaries and music, the museum

30 As for 3D projections, we should mention the British-Polish project titled ARCO, subsidised by millions of EURO from European Union which was presented at the conference titled *Towards a Modern Museum* in Warsaw in March 2008.



sought for ways in which ‘to exhibit’ music and to allow visitors to listen to multiple soundtracks without them interfering with one another. In cooperation with Sennheiser, the museum accomplished its task: each visitor was given a set of headphones and was able to catch a signal near every segment of the exhibition and listen to the track. Thereby, the museum managed to also create a perfect illusion of a concert hall which visitors entered during their exhibition visit and could watch even several parallel concerts. All they had to do was to turn around, catch a particular soundtrack and watch the relevant large-screen projection. This innovative exhibition took place in the Victoria & Albert Museum in 2013 and today it travels to other destinations.

The most innovative area today is special projection technology. It allows for a complete transformation of the character of a museum exhibition and significantly increases its efficiency. One of the most popular one is video mapping, that is, projection on a particular object typically a building, in free space (though an interior can be also used). Apart from the predesigned digital content of the projection (which is usually tailored to the particular place using 3D models), the key requirements also include high-performance projectors, relevant software and darkness. This is how an audio-visual show is created that resembles a large-format film in which a certain real backdrop (e.g. the façade of a museum building) blends with a fictional narrative. Video mapping projections are site specific because the goal is the intentional interaction between projection and a given place (a selected object). By interrupting the perception of the real surrounding, video mapping creates an illusion of a real narrative. Using projectors, it is possible to deform or emphasise any shape or form, the narrative can take place behind the windows of the building or in its imagined interior.

A perfect video-mapping illusion was stage-managed by the Yokohama Museum of Art in Tokyo (2011) when a dinosaur which was brought back to life broke down the walls of a museum building, and plant tendrils grew through its debris which were also flooded by water with undersea people. In 2011, also the Tel Aviv Museum of Art had its building flooded, this time it was with changing shapes and other artistic forms. Het Scheepvaartmuseum in Amsterdam used video mapping for its reopening ceremony in 2011, and similarly the Singapore Art Museum (in 2013) gave the projection authors a free hand in playing with the architectural details of the building. In 2013, the Science Museum in London let its visitors ‘break’ the wall of the museum building and its interior only to magically rearrange all the fallen exhibits and cover the holes in the walls there after.

A powerful video mapping was also designed by the Museum of Art in Olomouc (CZ) and projected on the walls of the Archdiocesan Museum in 2014.

It is clear, that such shows are very attractive and they always draw in many people not only on account of them being still considered a novelty but also for their ability to create illusion. The question is whether we should continue using these shows for the promotion of museums and for entertainment, and also for making museum collections accessible. Since this technology offers great opportunities, it would be a shame to use it only for entertainment.

Though the technology of video mapping can be easily applied in the interior of a museum building too, it is usually regular type projections or various 3D projections that are used in museum exhibitions. An example of using video mapping in museum exhibitions is a project carried out by WARP6 for the Escher Museum in The Hague. The project, made public on You Tube, requires a projection room of a size of 15 x 2 m, and its conception follows the character of Escher's work. This Dutch print artist is well-known for his incredible and illusive illustrations which make use of perspective and create the illusion of a reality. The famous lithography of two hands drawing each other is one of Escher's works. The projection created a fitting follow-up to the character of the artist's works, and brought to life the principle of illusion which he studied. The presented works in frames begun to suddenly transform thanks to the projection, and one by one disappeared to make room for a new reality which then materialised before the viewers' eyes.

Museum exhibitions also now employ other special effects: 3D projections with special glasses, projections of computer 3D simulations (without glasses), audio visual projection of the so-called Pepper's Ghost effect which uses glass and special lighting equipment to create an illusion of a half-see-through person. Also holograms of collection objects enjoy great popularity. They are based on 3D recordings of an object on a 2D image media, e.g. on emulsion on glass, plastic film or classical film. An effective Fog-Screen, based on the projection of an image into fogged air is increasingly frequent.

An example of a special projection is the projection on the so-called PrivaLite glass wall, which can alternate between being a simple see-through glass, or a matte surface or a projection screen. The projection on PrivaLite glass wall is used e.g. in the Jewish Museum in Berlin where it creates an unusual exhibition element: it alternates between separating a visitor from the background and connecting them with it. The described installation of artist Arnold

>> Fig. 112–113 Top – video mapping in the Archdiocesan Museum in Olomouc (CZ); photo by Zdeněk Sodoma, 2014; bottom – a hologram in iQLANDIA (CZ); photo by Petra Šobánková, 2014

Dreyblatta is based on the minimalistic projection of text resembling a telegraph. These are excerpts from letters written by prisoners in concentration camps and the parts added by Nazi officers (orders, reports). The glass wall which is divided into several segments alternates between being the background for a running text, and being matte or completely see-through to let the background of a large-format photograph of the hell of the concentration camp in.

As we have shown, information and communication technologies can be of various form and can make accessible various content. Most commonly they have the form of databases of objects which have not been included in an exhibition, additional information to the theme, images, archive documents, audio-visual material, simulations, on-line camera transmissions, etc. Popular and beneficial from the viewpoint of education is the edutainment, or, e-learning content presented by way of digital games, interactive presentations, simulations, children work material and exhibition guides, videos, animations and others. Our existing research shows that even in the area of new media certain conventional approaches are still used, and that the presented digital content does not always use new media to its full potential. (especially when it has the form of texts with images which could very well be placed on classical exhibition panels.) Even though some of the points below are not exactly a novelty, digital media can bring many visible advantages:

- they help reduce what for some visitors appears to be redundant information
- they can replace classical labels and accompanying texts,
- they give visitors the opportunity to choose the extent of the accompanying texts (basic information and the possibility of further reading),
- they help provide other language versions including sign language for visitors with hearing impairment,
- it is easy to change the size of the font, and to add other parts of text or edit it,
- they help enhance the visual and multimedia content,
- They increase the attractivity of exhibitions especially for young people who are used to receiving information this way.

There is of course a multitude of ways in which new media can be used in a museum exhibition. They help in the implementation of almost any idea, any invention





<< Fig. 114–115 Computer kiosks in the Science Museum in London and in the National Maritime Museum in Greenwich (UK); photo by Petra Šobánková, 2013, 2014

or the creativity of the exhibition designer. Regarding visitors, new media helps increase the dramatic nature of a presentation and its illusiveness while intensifying the overall experience in general. They have also other advantages: e.g. they facilitate the participation of visitors with the content and the overall feel of an exhibition, and they make it possible for the museum to expand outside its physical boundaries. A contemporary museum plays also other roles: a museum is no longer primarily a depository of scientific material but rather a carrier of social information, a part of information memory; a significant element in the process of passing traditions on to the next generations. (Zouhar, 2008, p. 9) And this 'social information' can be in many cases better distributed via information and communication technologies which transform museum presentation in a way that helps meet the needs and requirements of people and which allow museum presentation to speak a contemporary language. The inventive and creative use of new media in the presentation of content based on the museum collections thus represents one of the most fundamental tasks and challenges that contemporary museums are presented with. The possibilities that exhibition designers are given thanks to information and communication technologies are many and they only have to navigate through them all.

5.5 Didactic and Entertainment Elements in Exhibitions

The turn to education which the museum culture underwent in the 20th century is today manifested especially by the change of the overall focus of the museum and its emphasis on making special educational programmes as well as on innovating the content and the form of museum presentation. That is why we can find in the contemporary museum exhibition not only collection objects but also other exhibits and exhibition elements whose objective is to facilitate visitors' learning and to amplify the illustrative nature of exhibitions. A museum exhibition thus sometimes stands on the border of education and entertainment and sometimes it has a clear entertaining and relaxing character. Even though there are plenty of other alternative forms of museum educational products (e.g. mobile applications

>> Fig. 116–117 Top – a didactic exhibit in Techmania Science Centre in Plzeň (CZ) showing the layers of Earth; bottom – Explora Children's Museum in Rome (Italy), a didactic exhibit showing what 1 kg of weight actually means; photo by Petra Šobánková, 2014

and e-learning portals), our book which primarily deals with classical museum presentation will focus on the description of didactic elements in an exhibition.

We consider didactic elements one of the most pro-active aspects of museums towards visitors; the concept of classical static exhibitions is slowly retreating and is gradually being replaced by exhibitions that are activating, communicative and which offer plenty of practical activities and learning opportunities. At the same time, a new character element to a museum visit is being established which transforms from passive viewing, of exhibits and reading of labels, into an active one, one of 'learning by doing', that is, learning actual activities, learning based on one's own experience. The realisation of this concept (the success of which in the practice has verified the efficiency of children's museums and science centres) would not have been possible without the application of various didactic elements in an exhibition whose role is to facilitate visitors' learning and make the understanding of presented phenomena easier, as well as to intensify the overall experience from an exhibition.

We refer to these elements as didactic exhibits and define them as objects which play the role of didactic tools which carry and make accessible certain didactic content. In terms of pedagogy, didactic exhibits are a type of didactic tool. Material didactic tools together with other components of education represent a useful and often irreplaceable tool to obtain educational objectives; be they part of classical school education or museum and gallery learning. These are material objects and equipment which help achieve educational objectives especially when coupled with an adequate educational method and an organisational form of education. (Maňák, 1995) Didactic tools are also key for making the learning processes of the subjects of learning easier while facilitating the participation of all the senses.

According to Malach (1993) didactic tools include: teaching tools, technical teaching tools, organisational and reprographic technologies, learning environment (in our case it is the area of exhibition or a playroom, a study and an art studio) and its equipment, the equipment of visitors which can be used in learning (this includes not only classical writing tools but also smart phones and tablets which are increasingly used more in exhibitions).





<< Fig. 118–119 A didactic exhibit in the science centre Fort Science in Olomouc (CZ); top – a comics-based history of the city and the activity of trying on period costumes, bottom – a didactic exhibit explaining the circulation of water in the landscape; photo by Petra Šobánková, 2015

A special category of didactic tools represents teaching tools the role of which is to make learning easier and to facilitate deep understanding of new information and skills. Teaching tools include original objects and realities, the depictions and drawings of objects and realities, textual tools, educational programmes and programmes presented by didactic technologies and other special tools. Technical teaching tools include audio, visual and audio-visual technology (various types of projections and ‘projections’ using interactive boards), and controlling and evaluating technology e.g. in the form of educational computer programmes, simulators and e-learning applications.

When talking of organisational and reprographic technology, we refer to copying technology, various museum video editing software, computer network, photo labs and systems of databases. In the context of museum institutions, the category of educational environment and its equipment primarily consists of an exhibition gallery and its content, or a special educational study room, art studios and playrooms with regular and special equipment. The teachers’ and students’ equipment includes all implements necessary for writing, drawing, counting, as well as notebooks and working clothes, etc.

Teaching tools used in exhibitions have many different forms today. As already mentioned, these include mainly objects that make ideas accessible or that simulate them, as well as help illustrate a certain phenomenon while making clearer the evidential value of products of nature, paintings, schemes, symbols, models, etc. (Průcha, Walterová, Mareš, 2013, p. 322) While doing so, the boundary between the authentic collection object (an exhibit according to the classical definition) and the didactic exhibit in the form of a teaching tool is not always clear. For example, Malach’s (1993) list of tools in the form of real objects includes the following categories:

- products of nature in its original state (minerals or parts of plants),
- products of nature that are adjusted by e.g. conservation (taxidermy, alcohol preserved specimens, etc.),
- human products (samples of products, instruments, works of art),
- phenomena (e.g. physical, chemical, etc.)

We can see that the categories of didactic tools and musealias can sometimes overlap: for example, a sample of a product of nature can be both a tool and a musealia. But there is a great difference between a sample of a rock placed in a showcase, and a sample of a rock that we can touch, feel its weight or analyse under a magnifying glass. Therefore, we cannot put a definite line between musealias and didactic exhibits because in the context of museum education musealias represent the carrier of educational content and they are placed in an exhibition precisely for the reason to demonstrate this content and to make it accessible. Though musealias and didactic tools can be sometimes the same object, one key difference is that while a musealia is and will continue to be a part of a museum collection for its own value independent of whether the musealia is on display or not, and whether it makes learning easier or it is completely 'illegible' with no illustrative aspect what so ever, a didactic exhibit, on the other hand, does not have its own museum value, and it is predisposed to get worn out, damaged and eventually replaced with another one. Though even didactic tools have their history and often they become collectors' items as well as a part of museum collections documenting the history of education, their primary and often their only role is to facilitate visitors' learning.

Contemporary museum exhibitions contain a wide range of didactic exhibits comprising audio, visual, and technological tools as well as tools based on image that help to present a given exhibition content and the significance of exhibited collection objects and their context in a better and more efficient way. Perhaps there is no such type of didactic tool which could not be used in museum teaching. Especially when working with young visitors, it is highly recommended to use various sound tracks, models of a static and functional nature as well as building sets, didactic images (boards), photographs, maps or depictions presented by way of didactic technology. Such depictions are often part of museum exhibitions, as well as sound tracks or even sources of olfactory stimuli. Also various technological teaching tools are frequently integrated in exhibitions. Currently these mainly include computer stations with touch displays, data projectors, interactive boards as well as regular music and video players.

In this sense, the most inspiring places are those science centres and children's museums whose exhibitions often present exclusively this type of exhibits while authentic collection objects are not present at all or only to a minimal extent. An example of a didactic exhibit is a simulator of drilling

into the layers of Earth which helps visitors understand better the order of these layers (Earth's crust, Earth's mantle, inner core of Earth), as well as the temperature of the individual layers and the depth a human being has reached so far. This content could be presented in different ways, e.g. simple sketch with text commentary, or using an interactive exhibit. Techmania (a science centre in Plzeň, CZ) has designed a simulator that allows visitors to take the head of an imaginary drilling rig into their hand and lower it down while observing the surroundings of the reaching point of the drilling as well as the additional information about the temperature and the life in the given depth, etc.

Another type of a didactic exhibit is a tool used in Explora Children's Museum in Rome which shows what 1 kg of weight actually means and presents the knowledge that density or specific weight of various substances and materials can differ significantly. Children can feel the weight of one-kilo wooden, metal or plastic cube and compare their size.

The Archdiocesan Museum in Olomouc (CZ) has integrated into their permanent exhibition a set of didactic tools that are playful and of high aesthetic quality. These are didactic toys which are designed to be self-explanatory and to stimulate children to engage in a creative play which is entertaining and which introduces selected exhibits. (Šobán, Šobánová, 2013)

In many museums, we can see very inventive didactic exhibits and other tools designed for visitors. Perhaps the most frequently used didactic tools include tools based on text, a time-proven way in which museums help visitors understand an exhibition, and acquire basic as well as more detailed knowledge about exhibits. Apart from classical texts in the form of guides, catalogues and publications, also work sheets have recently risen in popularity among visitors.

Work sheets or didactic guides represent a genuine didactic tool based on text because it is commonly designed by a museum educator or by a team under their supervision. Commonly, work sheets contain various interactive and activating elements in the form of introductory word, entertaining and study exercises and tasks, as well as other types of encouragement for learning, etc. They typically include – especially those that are self-served – a key to the tasks and terminological dictionary. Truly professional work sheets are also made visually interesting, containing illustrations and reproductions of exhibits.

>> Fig. 120–121 A didactic exhibit in the Archdiocesan Museum in Olomouc (CZ), photo courtesy of the Olomouc Museum of Art, photo by Zdeněk Sodoma, 2011

Most museums of today design their own work sheets, and distribute them to visitors for free; also through their web pages. Tools based on text can also be placed immediately in the exhibition (e.g. on tables in interactive zones or in the form of a tear-off calendar) where they become an actual didactic element of the exhibition.

Classical exhibition elements in the form of text or image panels also belong in the category of didactic tools based on text. In the context of pedagogy, we can refer to them as a didactic image which Maňák aptly defines as a visual medium presenting an opinion in education that is designed or adjusted according to educational criteria. It also represents a message, a non-verbal source of information, a visual task for seeing, observing, distinguishing and other mental operations. (Maňák, 2009, p. 261)

Considering the character of many museal items which cannot be understood without the context and additional information, it is necessary to perceive text panels and didactic images with illustrations, photographs and drawings as the key aspects also in classical 'non-didactic' exhibitions.

The use of various technological innovations, which belong to the category of didactic tools as well, is attractive for a wide range of visitors. They include e.g. interactive digital guides adapted for mobile devices and using the latest technological possibilities such as augmented reality.

A special tool in museum teaching represents the so-called museum kit. It is a set of didactic tools, stored in a little luggage or an adequate box which is given to visitors when entering an exhibition or at the beginning of an educational programme. Museum kits often contain everyday tools such as scissors, colours, clay or other artistic and non-artistic tools, as well as museum materials such as catalogues, work sheets, mobile devices with applications, or a type of substitute (most frequently a reproduction) or a didactic game, a puzzle or a building set. Visitors can work with these museum kits either directly in an exhibition, or in an art studio or a study room of the museum. A good example of museum kits are the ones prepared by the Comenius Museum in Přerov (CZ) for their exhibition titled *Meopta 80 / Historie optického průmyslu v Přerově* [Meopta 80 / The History of the Optic Industry in Přerov]. Didactic exhibits





<< Fig. 122–123 Top – a didactic exhibit in the National Maritime Museum in Greenwich (UK), photo by Petra Šobánková, 2014; bottom – a didactic exhibit presenting experiences of people forced to leave their homes; the Bundeswehr Museum of Military History in Dresden (Germany), photo by Tereza Hrubá, 2012

of this type activate visitors and apart from seeing they also offer the activities of *doing* which means creating and active learning. They are examples of practical application of contemporary knowledge on cognitive processes.

Not all of the above listed tools can be perceived as exhibits, often they are additional materials that visitors receive at the cash desk or during an educational programme and that are not placed in an exhibition. Let us conclude that a didactic exhibit is a solid part of an exhibition and its objective is to facilitate the understanding of presented realities and to encourage visitors' learning and the acquisition of new knowledge. A didactic exhibit can be an original object or a certain reality (however, a clear distinction between the importance of a musealia and a didactic element cannot be drawn because a musealia can almost always play the role of a didactic tool), as well as the depiction or graphic representation of an object or a reality, elements based on text, audio-visual content or applications presented by a didactic technology, etc. (Malach, 1993) A didactic exhibit often has an interactive character allowing for tactile study and manipulation typically in the form of play. During didactic play, which is in many aspects similar to a spontaneous play, we observe certain didactic objectives though these may not be immediately apparent. Typically play has primarily a stimulating charge as it triggers interest in visitors and increases their participation, as well as stimulating creativity, spontaneity, cooperation and competitiveness provided it takes place within a group. (Průcha, Walterová, Mareš, 2013, p. 52) Play can encourage visitors to use their existing knowledge and skills as well as their life experience (ibid), which helps integrate new knowledge from an exhibition into the existing knowledge of visitors.

Sometimes it can be difficult to tell a didactic toy from a purely entertaining element which is found in museums increasingly more often. Sometimes entertaining elements have the form of an object, or an exhibit, sometimes it is an installation or the entire active zone or a playroom. Occasionally, an entertaining element can go beyond the bounds of aesthetics or represents a theme that is irrelevant to a given exhibition. It can also be a good example to follow

>> Fig. 124–125 Entertaining elements in the National Maritime Museum in Greenwich (UK) and the Dresden Transport Museum (Germany), photo by Petra Šobánková, 2014, 2013

which shows the museum's focus on children's visitors and their needs for free movement, play, and relaxing activities in a very inventive way.

Many of the didactic exhibits described above are also entertaining (after all the best way to learn anything is through play and through engaging our emotions). Purely amusing and non-didactic exhibits or exhibition elements do not present educational content, do not facilitate visitors' learning, or do not follow the exhibition content. These are primarily designed for relaxation and play. The evaluation of such elements on a general level is not possible as they can have a very successful and resourceful form (such as playrooms in children's museums and science centres) but also an embarrassing one (exhibitions of bogeymen at some castles). Play as well as humour are of course valid and welcomed components but the problem is when they are seen as an end to themselves without any relation to the exhibition what so ever. Humour can be an adequate tool to popularise a certain remote theme, in some cases it is however entirely inadequate.

Stránský (2008, p. 77) connects the emphasis on 'illustrative education' and the 'entertaining' role of a museum with the tendency to neglect the expert aspect of exhibitions, and according to him this trend leads to vulgarisation of museum work or to the degradation of the museum phenomenon. This issue is related to the general expressions of a 'consumerist' approach to learning which are more and more frequent in the society (not only in museums). Nevertheless, we do not perceive the trend of being entertaining automatically as something negative, and we believe it is important to make a thorough analysis before giving a judgement. Through entertaining elements, the content of exhibitions can also reach those people who would be otherwise difficult to approach. Apart from that, entertaining elements have undeniably an educational effect because emotions stimulate learning, and we believe there is no activity during which we would not learn anything.

In museums, didactic tools and entertaining elements are the response to the natural human need to have fun, to experiment and to learn about the world through touch, play and manipulation. This need is felt by adults as well as by children. In the classical museum setting, this need is usually difficult to fulfil because rare and sensitive exhibits cannot be touched or manipulated in any way.



Didactic toys thus represent an opportunity in which to solve this problem, and to move an exhibition closer to the wider public and to fulfil the current requirements for interactivity. Besides an educational effect, educational tools are beneficial also for another reason: they make exhibitions more attractive and more revealing, and they help children and adults to form a relationship to the museum as a friendly place the visit of which is not only beneficial but also pleasant.

5.6 Architectonic Solutions to Museum Space, a Museum as an Artefact

Museums need space to be able to present their work, to store their collections, and to accommodate their workers as well as visitors. The overall impression from a museum visit is influenced by the complex effect of the entire museum setting, both from the macroscale (building, surrounding) and the interior solution sides (exhibition galleries and facilities). Just like a theatre a museum is also a 'total' space in which all elements are to optimally act on visitors.

There is a great deal of literature on the theme of museum environment, e.g. in the Czech context it was Jakub Kynčl (Kynčl, 2002) who dealt with the issue from the architectonical point of view in his Ph.D. theses, or Petra Šobáňová in her work *Muzeum jako edukační médium* [Museum as an Educational Medium] (2014a, 2014b), and Marcel Lalkovič (2005) in the Slovak context.

The establishment of a museum in a contemporary conception is linked to the Enlightenment whose objective was, among others, to replace religion with science; it strived to understand the world from our own studies and to control it according to selected systems and schemes. Museums together with their buildings were to play the role of 'temples of science'. And the architecture, often classical or in the new renaissance style characterised by its monumentality, symmetry, order, opulent pantheons, tympanums with praising images, etc. corresponded with this concept. Popular examples for museum buildings are the Dulwich Gallery in England, the Glyptothek in Munich, and the Altes Museum in Berlin. The building was part of the desire to control all things (culture). A certain notion of elitism, almost sacralisation which it has taken a long time to get rid of, was attached to museums. Museums played a significant role in the development of regional or rather national awareness; they also at times became 'the temples of nationalism' at least in central Europe.

Today's museums try to integrate into the social and urban structure of a city, often directly into the profane zones. Sometimes we feel as if an exhibition leaves the building of the museum and goes out to entice visitors in, and to prepare them for 'retuning' from the rhythm of the city to the rhythm of the museum.

From a psychological point of view, we perceive this 'retuning' of visitors from 'the rhythm of the city' to 'the rhythm of the museum' as rather important. It does not need to be automatically arranged in terms of 'entering the temple', though the architecture of the museum is often intended to do so.

More often than not, the cultural facilities are architectonically integrated with other institutions or transformed into administrative or commercial buildings. Some commercial complexes try to attract shoppers to cultural events or exhibitions. Museums try to expand their services also outside museum sphere. The steep differences between a shopping centre and a museum are being minimised which can be viewed both positively and negatively. Some museums merge into larger units which often results in creating certain museum parks; a new urban quality is being established.

At least in Europe, the wide-spread misconception that the more archaic the building looks (e.g. a former palace, castle, monastery, town hall), the more suited it is for the needs of a museum. The reverse is true. A building of this type is certainly very popular among visitors; it looks like an 'exhibit' in itself, and is usually located in a good area. On the other hand, it frequently obstructs the proper way to exhibit collections. It does not allow for wheelchair access, reconstruction is limited by the decisions of the National Heritage Board. It is difficult to create in such a building a good base for visitors, or even for museum workers. To establish a restoration workshop – a chemical laboratory – for example in a renaissance building is exceptionally difficult, often just impossible. In terms of our subject matter, to establish museums in such historical buildings is often obstructed mainly by the modern presentation of the collections. It is difficult to achieve the optimal lighting and comply with the requirements for temperature; otherwise beautiful gothic arches have no place in the presentation of sewing machines, etc.

The designers of museum exhibitions often find themselves in a dilemma. On the one hand, they want to create a modern, truthful yet attractive exhibition, but on the other, they consider suppressing historical elements of the building (pilasters, paintings, etc.) to be sacrilegious. The result is often

the presentation of exhibits from prehistorical central Europe with the paintings of women dressed in 19th century clothing, or with the paintings of the Taj Mahal, Stonehenge or a stylistic showcase corresponding with the interior of the building. These are usually filled with plants and a live lizards crawling on them, and a stream of water running through them. A beautiful oak door serves as the backdrop for the scene from the habitat of the hunters of mammoths, the door itself is ‘decorated’ with the mammoth’s head (all of this is in the Natural History Museum in Vienna).

In such cases, it is worth considering the temporary suppressing of unwanted architectonical elements. We do not refer to constructional adjustments which would face resistance from the National Heritage Board, and which would not be generally in compliance with a particular culture. We refer to more daring solutions by the exhibition architect that would include artificial ceilings that would lower the height of the original one, the disguise of some elements, etc. High-ceiling halls of historical buildings are not adequate also in terms of the perception of small objects which seem to be disappearing in the enormity of the space and when presenting them they lose the desired effect. One of the dominant features of Red Square in Moscow is certainly the building of the State Historical Museum. The interior layout of the building and the decoration



Fig. 126–127 Natural History Museum in Vienna (Austria), photo by Jan Dolák, 2007



Fig. 128–129 State Historical Museum, Moscow (Russia), photo by Jan Dolák, 2007

of the halls is so dominant that today this beautiful building is partly an exhibit in itself, and partly an impediment for modern presentation within the museum.

A museum building, and the environment including the architectonical solution of an exhibition can trigger certain subjective feelings in visitors with a tendency towards claustrophobia or conversely to agoraphobia. Museum environments should primarily evoke the feeling of euphory and harmony. This too needs to be taken into consideration when designing an exhibition in a space allocated for exhibitions, that is, a space that cannot be overly altered.

Ideally, we should also make an adequate entrance into the exhibition gallery (e.g. use the entrance hall with a cloakroom, sanitary facilities, museum shop, etc.). A reverse solution, in which the exit from the exhibition leads through the museum shop was adopted by the Tyrrell Museum in Drumheller in Alberta, Canada. When designing the architecture of a museum building and exhibitions it is also necessary to consider the ways in which we can prevent visitors getting too tired – e.g. making halls more flexible, alternating between large and small spaces, structuring the interior of exhibitions, altering the colours of halls, etc.

One of the key elements of any presentation is the manner and intensity of lighting. Light in a museum is perhaps the most discussed parameter. The key is to differentiate the light according to the presented exhibits, their

sensitivity to light, the way in which they are arranged. It is necessary to consider both the light intensity of the exhibits (usually less) and the light necessary to be able to see not only exhibits but also the accompanying texts. Light is not only an essential tool ensuring visibility but it is also an element that can prevent the weariness of visitors. Light must not be directed into visitors' eyes, it must be of optimal intensity, etc. To take into consideration all these requirements is not always easy. Suggested settings depend on the type of exhibited material. Considering that most exhibitions show various materials and the protection of exhibits is always paramount to the requirements of presentation, we must set the light to the intensity of the most sensitive material in the exhibition. This is because the intensity of light significantly affects the process of aging. From a physiological point of view, it is better to use natural day light. On the other hand, artificial light is easier to regulate and it allows for the adjustment of the spectral composition, thereby providing better protection of exhibits.

We can choose between lighting from the top, from the side, or diagonally from the top. The natural feel of this light is given by the laws of nature (sun, moon) which we have been used to for thousands of years. Unfortunately, some exhibition designers choose the revolutionary lighting from the bottom which creates unusual shadows and is overall unsuitable. When designing the lighting we work with the wide range of warm and cold lights (the latter is preferred by expert literature), stray lighting or spot lighting, lighting of the entire room or just individual showcases, etc.

Light in an exhibition is not only a technological parameter. Lighting equilibrium of the environment has an impact on the straining of the sight. A human eye finds it difficult to adapt when transferred from light to dark and vice versa (it can take up to several minutes). That is why, we should avoid extremes and aim for gradual transition phases.

Light is one of the most significant factors damaging collections. That is why we need to use a list of special measures, blinds or curtains on the windows, filters fitted to the light sources, protective filters on the glass preventing ultraviolet and infrared radiation. When designing lighting of objects with radically different requirements (especially paper and textiles are most sensitive) it is possible to leave objects in relative darker environments, and place all accompanying texts outside the object, beside the showcase and lit with a greater intensity.

Already when designing the scenery of the exhibition, we need to keep in mind that exhibits that create a natural group based on their time of origin, the process of artistic procedure used, may have entirely different requirements for the allowed intensity of light, or the humidity and temperature of the room, etc.

Important factors are also temperature and relative humidity. Constant conditions with the least possible fluctuations are ideal for all exhibits. While specialised showcases with acclimatization do exist, in most cases they are financially out of reach. The parameters depend on the type of material – for the temperature of 18 °C with the possible fluctuation of 2–3 degrees, and for relative humidity typically 55–60 %. Also the fluctuation throughout the year is considerable – we must take into account the heat from lights. Today's technology allows for rather easy monitoring of temperature and humidity throughout the whole year. Acclimatization is an ideal way to ensure much-needed fresh air and the protection of the environment against dust. Other requirements are given when considering the space for the movement of visitors, and others for the movement of museum workers. That is why the areas for museum workers should, wherever possible, be separated from the areas for visitors.

An important element is also the cleanliness of all museum spaces. This general condition is also important because in the eyes of the public, museums continue to be dusty storage rooms with stale air; graveyards.

A museum visit is quite a demanding and tiring activity both mentally and physically. Walking among showcases, irregular standing, interrupted walking and then speeding up is significantly more exhausting than equally long regular walks in the street. As Kynčl postulates, fatigue represents an important museum factor. A successful museum manages to minimise the feeling of being tired in visitors. That means to remove exhausting contemplation and thinking, as well as the pain in legs and replace these with joy from learning and reasonable 'portioning' of learning and relaxing. The architecture of a museum as well as the installation of exhibitions are equally beneficial in minimising the feeling of fatigue. While an installation can offer a pleasant experience, an exhibition should allow visitors to leave at any moment and without any problem. (Kynčl, 2002, p. 12)

When an exhibition spreads over several floors, it is suitable to implement a lift and to design the museum tour from top to bottom. But this is the point of many issues. The lift and the stairway often do not end at the same point. To illustrate this issue, let us look at the Haus der Natur in Salzburg.



Fig. 130–131 Left – National Museum, Reykjavik, Iceland – a relaxation room; right – Celje Regional Museum, Slovenia; photo by Jan Dolák, 2006, 2007

Since the exhibition starts from the stairway, visitors who use the lift that ends on a different floor walk the museum tour in different direction.

To provide visitors with enough places where to sit and refresh themselves should be commonplace. The National Museum in Reykjavik even provides visitors with a rest room, where a visitor (perhaps a small child) can take a nap.

The biological rhythm of a human being demands the alternation of stimuli in adequate intervals. This mainly relates to the concentration of sight on short focal lengths. A museum designer should respond to this issue by creating rest zones where visitors can rest and see something entirely different. A museum should create the feeling of a place which is safe, relaxed and friendly, almost like a home. A designer must take into consideration the differences between visitors and their needs. Ideally, a visitor should be able to rest anywhere. We are referring to children who can bring their light seat (the Celje Regional Museum, Slovenia) or a pillow (the Wawel Royal Castle, Krakow, or the City Museum in Sered, Slovakia) and other such things with them.

While in some museums (South Korea, China, Iceland), it is common to borrow a wheelchair or a stroller, we do not have the same experience in the

majority of museums, even though it is not a big issue in terms of finances and organisation.

Some discussions reflect on the (un)suitability of placing flowers in interiors, which is generally a big problem. (Kesner, 2005, p. 194–195) Also Swedish archaeologists Gudrun Adolfsson and Inga Lundsrtöm refused to put flowers into their exhibitions in Stavanger, Norway. According to them, it is not flowers that should revive the stereotypical and sterile exhibitions. It must be the language of the exhibition that does that. (Adolfsson & Lundstöm, 1991, p. 21)

A well-intended but in the end rather puzzling example was the attempt to revive the exhibition of ancient finds in the Celje Regional Museum which decided to actually place another exhibition within the existing one. While the actual idea of dressing up a showcase in a jacket and to smelt buttons is original, it created composition which in the end harms both exhibited themes.

Sometimes we can come across opinions that the older form of exhibitions should be preserved as evidence itself to the museum presentations of the past. It is not a coincidence that such an opinion is given by museum workers because among museum users such a notion is quite rare. By bringing this approach to absolutism, we would come to the conclusion that actually no innovation or even cancellation of museum exhibitions should take place. All that is needed would be to wait for the exhibition to be sufficiently obsolete and declare it to be the current presentation plan. It is necessary to consider the fundamental mission of a museum which is to fulfil the contemporary needs of visitors. Hundred-year old cars certainly have their charm, but if the car industry kept on producing them – there would be no real demand for them. The same applies to museum products.

We believe that some elements used in the past can be used in a modern exhibition but only as examples of period presentation and in contrast to today's modern approaches. But still, they can be included in a modern presentation only as an additional product, not as the main one.

In the past few years, we see increasingly more often other innovative features of museum culture which could be referred to as the transformation of museum exhibition or even of the entire museum building into the form that means it is similar to an artefact. This phenomenon can be observed in particular elements

>> Fig. 132–133 In some cases, a museum influences the architecture (or the decoration of buildings) of its surroundings as evident in the city of Shi-San-Hang in Tai wan. The motifs of decorative ceramics from the iron age can be seen not only on the faces of museum guides but also on the buildings of a nearby sewage treatment plant; Shisanhan Archaeology Museum, Tai wan; photo by Jan Dolák, 2011

as well as in the overall concept of the museum building.

An example of the former is the frequent implementation of works of art or art installations in exhibitions the theme of which is not art, in other words, in exhibitions of non-gallery type. The actual implementation of works of art in non-gallery exhibitions is certainly not new; examples that come to mind are, however, of a different nature. Here, the work of art or an art installation plays the role of a specific representative of a depicted reality; a representative which is not authentic proof of the reality (similarly to musealias) but still, it makes the reality accessible because it is the symbolic expression of the given reality. Such an exhibit, an installation, or a particular exhibition element (e.g. a sound track or an architectural element) works using pure artistic means; the characteristics of which we will describe below.

An example of the latter, that is, the transformation of the overall concept of a museum building, can be seen in some new buildings (especially monuments, but also exhibition complexes) in which the authors placed a lot of symbolic elements, just as authors of Gothic cathedrals did.

The whole building or its parts then bear witness to a particular theme; they evoke it through its architectural solution. Intentionally, these are not neutral exhibition spaces, nor do they carry a symbolic significance similar to the one classical museum buildings from the 19th century carried, often in the form of an ancient temple or a palace. With their splendour, these historical buildings expressed the reverence of the nation, the grandeur of the imperium, or the respectability of art and science. They also referred visitors into their respected positions in society should they be granted the permission to enter this elite and noble place. The buildings, that we have in mind, are created in such a way to give evidence – similarly to musealias – to some musealised reality or theme.

In these buildings, architectural means have meaning – they express certain attitudes, they evaluate acting on emotions and thereby they significantly intensify visitors' experience. It can include conceptual, intentional evoking of



feelings such as unfamiliarity, uncertainty, despair, or freedom, happiness, aesthetic liking. While classical museum buildings from the 19th century created real as well as imaginative barriers creating a distance between visitors and the presented items inside (the building, exhibition, showcase, diorama), some contemporary museum buildings draw visitors in; immediately inside the meaning, so that they find themselves inside a very believable fictional world, similar to what we have discussed in the chapter on illusiveness.

In that chapter, we explained that illusiveness and a great impact on visitors can be achieved by using symbolic often entirely minimalistic means, such as an empty space as in the case of the Holocaust Tower in the Jewish Museum in Berlin designed by Daniel Libeskind.

This museum is the best example of the described tendency which could be referred to as the *total work of art*, or *Gesamtkunstwerk* – using the art-history term with a bit of exaggeration. In the context of art history, this term has clear period determination, but perhaps we could use it as well, since *Gesamtkunstwerk*, similarly to the described exhibitions and museum buildings as artefacts, represents an integral work in which several types of art are united in an exceptional manner (not only architecture, visual art, design, music but also the art of exhibition management, the art of exhibition ‘language’).

The barriers between the reality and the work of art disappear, and this artefact has its own validity because a certain idea is expressed here through individual elements that can be perceived through our senses (an architectural detail of the façade of the building, a constructional element in the form of an inclined wall, colour, material). A museum building or exhibition in the form of a work of art presents its own significance without the necessity to present a collection object which is confirmed in Libeskind’s building of the Jewish Museum in Berlin. According to the testimony of many people, the attractiveness of this building was even greater before when no collections were put on display³¹.

This museum exemplifies more than fittingly the above described tendency. Even the ground plan of the building is a symbolic expression of theme as it resembles fragments of the Jewish star from Libeskind’s original sketches in which this Jewish symbol was used in its entirety. The façade of the building is dressed in metal and an important role of the whole building is played by the

31 The construction was finished in 1999, the official opening of museum exhibitions and of the museum as a whole followed in 2001.

exposed concrete and the windows arranged around seemingly random lines – typical for Libeskind.

Equally typical is his application of inclined walls which lead to sharp angles, not right-angle corners. The entrance into this unusual museum leads through the original historical building of the Berlin museum and the underground along three axial routes each of which tells a different story of Berlin's Jews, each of which comes to a different end. The longest axis that leads to the stairways and to the regular exhibitions is *the axis of the continuity of history*. The second axis of exile leads visitors out of the building into the *Garden of Exile* where they can find a sunken and diagonally arranged outdoor space enclosed with concrete walls that prevents visitors from seeing outside.

The *Garden of Exile* commemorates everybody who was forced to leave Berlin, and exile destinations as well as the new state of Israel are symbolised by six-meter high concrete columns the tops of which are planted with olive trees. The third of the routes, *the axis of holocaust*, is deeply tragic because it leads to a blind alley at the end of which there is *the Holocaust Tower*. Visitors find themselves in a dark, high and cold place which is isolated from the outside world and the rest of the museum building. As soon as a heavy door shuts behind a visitor with a loud noise, s/he becomes 'imprisoned' and can either watch the rays of sun which reach there through narrow slits near the ceiling, or analyse the walls leading to the slit-like narrow corners, or observe an unreachable ladder at a height that leads nowhere. This meditative and very expressive space is gloomily mediating the feelings of despair and hopelessness of the Jews deported to the death factories.

A key role in Libeskind's museum building is also played by free space which evokes the absence, or emptiness. Libeskind refers to this empty space as *Holocaust Void*, and in various places throughout the museum, he allows visitors to look into the place using different windows and openings. 'Void' stretches over a part called Memory Void where we can find an installation of Menashe Kadishman which has the form of approximately ten thousand stylised metal faces which are thrown in layers on the floor thereby evoking piled up bodies of tortured Jews. Visitors may enter this space; however, they cannot avoid stepping over the faces which release loud metal noises. According to the concept of the author, the faces thus give back voices to the dead people.

The Void is virtually the central architectonical point around which hallways and rooms with exhibitions are arranged. Walking between them is



Fig. 134 The view inside Libeskind's building of the Jewish Museum in Berlin (Germany); Memory Void with Menashe Kadishman's installation; photo by Petra Šobáňová, 2014



Fig. 135–136 Top – view inside Libeskind’s building of the Jewish Museum in Berlin (Germany);
bottom – the axis of exile leading visitors into the Garden of Exile; photo by Petra Šobáňová, 2014

possible by crossing bridges overarching the void which the holocaust left in Germany and the whole of Europe.

Libeskind's Jewish Museum thus represents a building which functions as a sovereign symbol, and using architectural, spatial, visual or audio means it communicates with the described cultural content. Even though the author said it is a museum like any other with white walls to hang pictures on and exhibit objects, it is an artefact par excellence, not only an interchangeable place for housing museum collections. (Studio Libeskind, 2000) There is no doubt that this is a master piece, a spatial expression of an idea, a monument deserving its name. Libeskind gives visitors a space for meditation and subjective, personal perception of the building whereby its meaning is formed over and over in the minds of every visitor (JM Berlin, 2014)

A similar approach was used by this internationally recognised architect also in other projects from which we only briefly mention those that are relevant to our subject matter. Immediately on the opposite side from the Jewish Museum in Berlin, there is the Academy of the Jewish Museum Berlin (Eric F. Ross Building, 2012) where Libeskind has created a generous base for organising cultural and educational events, as well as study rooms and a library. The theme of Jewish culture and holocaust has been addressed by Libeskind also in other of his projects located in Europe as well as overseas: after the Jewish Museum in Berlin came the Danish Jewish Museum (Copenhagen, Denmark, 2013), Contemporary Jewish Museum (San Francisco, California, 2008), Ohio Statehouse Holocaust Memorial (Columbus, Ohio, 2014), Ottawa Holocaust Monument (Ottawa, Canada, the construction was finished in 2015).

A good example of Libeskind's talent is also an extension to the building of the Denver Art Museum (Frederic C. Hamilton Building) in Denver, Colorado (2006), or Royal Ontario Museum in Toronto, Canada (2007).

Two of his significant realisations reflect on the theme of war and military affairs. The Imperial War Museum North is located in Manchester, UK and was built in 2001; as in the case of the Bundeswehr Museum of Military History in Dresden, Libeskind designed a specific architectural element in the form of a vigorous intervention into the original historical building.

Libeskind cut through the building using a massive five-floor wedge made from concrete and steel which is not only an extension to the exhibition area but it creates a contrast with the original mass of the façade because it is

transparent. It also offers a view of Dresden and carries a symbolic significance. On one hand, it emphasises the contrast between the authoritarian past (the heavy mass of the original building) and the open-mindedness of a democratic society (the lightness and openness of a new façade); and on the other it extends the exhibition which also tells the story of the bombing of Dresden.

Thanks to the view of the city that this extension offers visitors, they can see the extent of the damage caused by the bombing, and a part of the exhibition also shows the inevitability of the suffering of common people on any side of a conflict. To some, this sharp extension resembles a finger pointed to the sky, from where the fiery hell came down on the city on February 13, 1945 and took the lives of 35 thousand people before which Dresden – was compared in its beauty to Florence. Together with the architecture, the museum as a whole creates a dramatic space for reflection on these events, and re-evaluates the way we perceive war in general.

The proof of this change is in the overall concept and narrative of the indoor exhibitions of the reconstructed museum which is now the official primary museum of the German armed forces. Instead of pomp and ceremony of the successes of the military, the museum presents the way war interferes with people's lives and the way it desolates everything that is good. It is a memento and an example of deep self-reflection of Germans who through this museum dissociate themselves from the cruelty and failure of their nation.

Other projects by Libeskind related to museum or memory institutions are due to be finished in the near future. For example, Zhang ZhiDong and the Modern Industrial Museum in Wuhan, China, which will tell the story of this modern city and the centre of the steel industry in the context of the industrial revolution.

For obvious reasons, it is the landscape solution for Ground Zero in New York commemorating the tragedy of September 11, 2001 that is the most important of Libeskind's works.

Out of many other designs for architectonical and landscape solutions for this place it was precisely Libeskind's design that was selected in 2003. In this case, the architect's studio plays a conceptual and coordinating role; Daniel Libeskind took upon himself the role of the main architect and engaged other artists and architectonical studios to design other parts of the monument.



Fig. 137 Libeskind's extension to the historical building of the Bundeswehr Museum of Military History in Dresden (Germany), photo by Tereza Hrubá, 2012

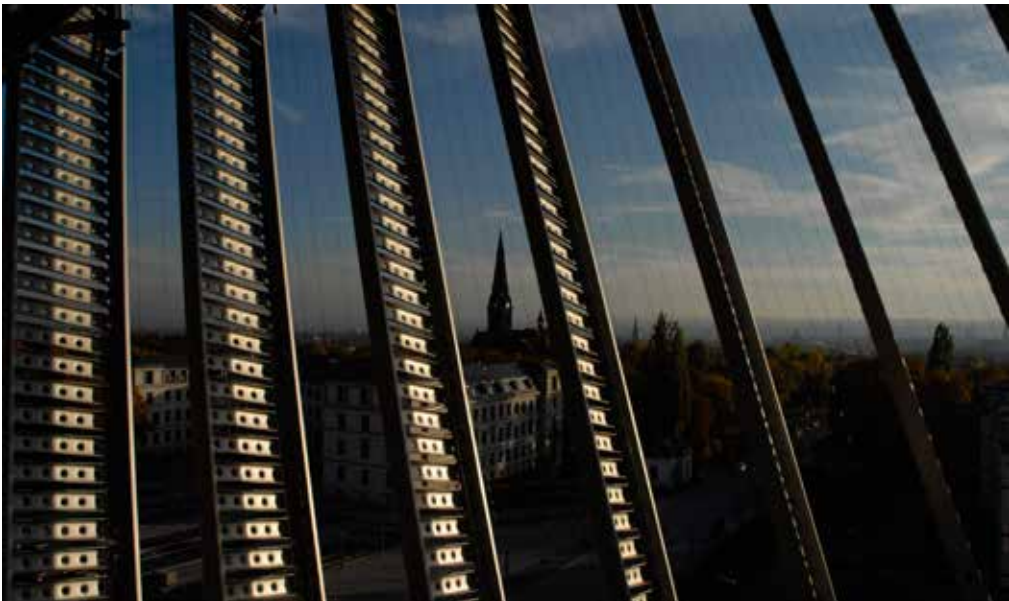


Fig. 138–139 Libeskind's extension to the historical building of the Bundeswehr Museum of Military History in Dresden (Germany), view of the interior (top), and view of the city (bottom); photo by Tereza Hrubá, 2012

Currently, the One World Trade Centre monument is finished, that is, the first one out of the four skyscrapers that are planned known as the Freedom Tower the symbolic twin of which is the Statue of Liberty. This skyscraper is built in the immediate vicinity of the original place of the two buildings of the World Trade Centre, and also this building contains symbolic elements: apart from being a pendant to the Statue of Liberty, it is 1776 feet high which is a reference to the year of the United States Declaration of Independence. The Freedom Tower was designed by architect David Childs from Skidmore, Owings & Merrill studio.

A new emerging complex at ground zero, a term used to mark the point of the most severe damage or destruction due to bombing or earthquake, will contain also other buildings. Under the management of Libeskind, four skyscrapers are being gradually erected, and recently the construction of a monument, a museum, a visitors' pavilion and a necessary traffic hub have been completed.

The monument entitled the National September 11 Memorial & Museum (in short 9/11 Memorial) is now opened to the public and is a successful example of the described trend that uses artistic and symbolic elements for the presentation of a certain museum theme.

It has an outer form consisting of two fountains in the shape of square cavities with water streams flowing down into the containers which were created in the place of the foundations of the two destroyed buildings. The original Towers were destroyed by an act of violence, and their absence creates the most profound impact. The monument strived not to silence it, but instead to create a contemplative area, separated from the bustle of the megapolis, and where people can commemorate those that died in the tragedy, and to contemplate on the absurdity of the tragedy.

The foundations of the buildings where water runs (already full of symbolic meanings: tears of grief for the lost, but also a healing power of this life-providing element) are lined with bronze plates with all the names of the deceased. The surrounding area around the monument is ringed by 400 trees including a tree named Survivor Tree. In October 2001, this heavily damaged tree was found near ground zero uprooted and with burned and broken branches. The tree was lifted up from the debris and entrusted into the care of New York City parks. In the end, the tree was rescued and returned to the monument in 2010.



Fig. 140–141 Top – Ground Zero in New York (USA) in 2001, photo by Mate Eric J. Tilford, 2001; bottom – view of the place in 2012 – with the monument and adjacent park; photo courtesy of Cadiomals, 2012



Fig. 142–143 National September 11 Memorial in New York (USA); photo by Sascha Porsche, 2011 (top) and Luigi Novi, 2011 (bottom)

Its new branches growing from the stubs are the living symbol of resurrection, human durability and the ability to survive. (9/II Memorial, 2014)

The National September 11 Memorial (that is the monument itself) is the work of architects Michael Arad and Peter Walker, and it was officially opened in 2011. The National September 11 Museum, the museum underground area, is from the workshop of Davis Brody Bond, and was opened to the public in 2014. The Memorial Museum's Pavilion (the entrance pavilion to the museum) is the work of SNØHETTA, an architectonical studio.

Another significant personality of museum architecture beside Daniel Libeskind is Zaha Hadid. She is the designer of a number of internationally recognised museums of contemporary art in the USA, namely The Rosenthal Centre for Contemporary Art in Cincinnati (Ohio, 2003) and the Eli and Edythe Broad Art Museum in East Lansing (Michigan, 2012). In Europe, she created MAXXI – the National Museum of 21st Century Arts (Italy, 2009).

Another project in Flaminio, a city district, is an example of architecture that presents its own content independent of the actual exhibitions.

It is evidence of human creativity and can be perceived as materialised meditation on the beauty and aesthetic opinions applied to arts.

The project of Zaha Hadid included the draft design of the building as well as the overall solution to the adjacent landscape which is why also the surroundings of the building are a manifestation of aesthetic ideals of modernity. As typical for Hadid, the building resembles a fluid matter and is made of used materials, especially exposed concrete, steel, glass. The interior is connected with the exterior through glassed areas and with a smooth entrance to the building, where both parts observe variously intersected lines at times dramatically rising up and descending down again. The determining element of the interior is an especially impressive stairway and an ingenious system of landings distributed outside any unifying level as if floating about the entrance hall.

Hadid is also the designer of the extension to the original building of the Ordurpgaard Museum in Copenhagen (Denmark, 2005), and of the Phæno Science Centre in Wolfsburg (Germany, 2005). In this project, Hadid used advanced special materials which help her make a building with exceptional lighting set on conical legs high above the street. The interior of the science centre resembles a sheltered artificial landscape which is seemingly materialising sci-fi elements from well-known movies. This also corresponds with the content of



Fig. 144–145 Left – MAXXI, the National Museum of 21st Century Arts in Rome (Italy) designed by architect Zaha Hadid, photo by Petra Šobáňová, 2014; right – Glasgow Riverside Museum (UK) designed by Zaha Hadid (a view from the river side); photo by Bjmullan, 2012

exhibitions which present the world of science and technology. The changeable interior of the science centre is full of energy and dynamics just as the presented field of human activity is.

In Glasgow, Zaha Hadid designed an unusual museum building, the Riverside Museum (2011) that symbolises the dynamic relationship between the river and the city. The encased wave of the building evokes a river as well as the dynamic movement of transport. It resembles a stream flowing from the city to the river, and according to the author it becomes the voice of the two elements: the city and

>> Fig. 146–147 Phæno Science Centre in Wolfsburg (Germany) designed by Zaha Hadid; top – view of the building, photo by Doom Meer, 2009; bottom – the interior of the science centre, photo by Hannes Grobe, 2008





Fig. 148–149 Left – Guggenheim Museum Bilbao (Spain) designed by Frank O. Gehry; photo by Myk Reeve (2005); right – view of the back of Vitra Design Museum (Weil am Rhein in Germany) designed by Frank O. Gehry; photo by Sandstein, 2006

the river. The design of the building makes it possible to interconnect the indoor environment of exhibits with the surroundings of the building and the entire project has the configuration of a tunnel reversibly flowing between the city and the river, between the exterior context and the interior world of exhibitions. The main exhibition area is, thanks to the ingenious construction of the building, free of any interfering columns thereby becoming a true materialisation of a water current, of the dynamics, and the movement. The wave of the building is characterised by openness and ‘liquidity’ which symbolically as well as factually invoke a wider context and the particular content of exhibitions, as well as the history of Glasgow and its future.

Another key personality in museum architecture and design is Frank Owen Gehry, famous mainly for his design of the Guggenheim Museum in Bilbao (Spain, 1997). It is a museum of modern art whose unusual architecture resembles a transoceanic ship, and its attractiveness is based on the combination of curved shapes, the ‘disappearance’ of classical roof, and on the used materials (titan on the scales of the façade, stone, glass).

The museum was built in a former shopping and warehouse district near the river Nervión in which the building is reflected. The building is entered through the central atrium which is 50 meters high and which is designed using inclined glass walls and variously castellated hallways with a system of stairway towers and arched footbridges leading to individual exhibition galleries on three various levels. A glass roof designed as a sculpture is a generous source of

light also for the galleries which are located in three wings which have either square or curved shapes passing through the whole building. One of the galleries is a large exhibition space where the congenial sculpture of Richard Serra is installed. The building is also uniquely integrated in the context of the city district. The design of the immediate surroundings of the building becomes an open-air gallery not only because of the solitary objects but primarily because of the building itself which is a genius work of 'sculpture'.

However, the Guggenheim Museum in Bilbao is not the only Gehry's work that has helped transform the image of museum culture. In 1989, the construction of Vitra Design Museum (Weil am Rhein in Germany) was finished. It is a fragile white building formed from a mass of organised oval and sharp shapes. From various points of view, the building resembles a stylised group of thrown together armchairs and chairs from Vitra, the famous furniture company; as if waiting to be placed in an exhibition. The building itself is a design piece as much as the icons of furniture design presented in it.

The latest Gehry's museum project in which the author pushes further the boundaries between architecture and a sculptural object is the new museum of contemporary art and the residence of the Louis Vuitton foundation. Open to public in October 2014, the building shows a number of technical peculiarities including an external coat formed by twelve 'sails' made of layers of quenched bent glass attached to stainless steel frames. In the project, Gehry used the latest technological procedures that made it possible to carry out his unusual architectonical visions of an aerial architecture object resembling an iceberg or a cloud. This delicate and dream-like building sits on the edge of the Jardin d'acclimatation in the Bois de Boulogne in Paris.

Even though, many other exceptional museum buildings were built during the 20th century and at the beginning of the 21st century, there is not enough space to introduce them all. These excellent projects can be found in Europe, the USA, Israel or Japan. Prominent Architects worth mentioning are Daniel Libeskind, Zaha Hadid, and Frank O. Gehry, Renzo Piano, Steven Holl, Mario Botta, David Chipperfield, Tadao Ando, Yoshio Taniguchi, Jacques Herzog, and Pierre de Meuron.

These designers of innovative museums from all around the world are pushing forward the frontiers of our existing ideas about the functions of museums, often enriching architecture with a number of symbolic meanings and attractive elements. The 'language' of the building becomes 'the language of the



<< Fig. 150–151 Top – the building of the Foundation Louis Vuitton in Paris (France) designed by Frank O. Gehry; photo by Olevy, 2014; bottom – another example of an interesting museum architecture: Kunsthaus Graz (Austria) also referred to as ‘Friendly Alien’ by Peter Cook and Colin Fournier; photo by Petra Šobáňová, 2015

museum’, and the architecture is no longer a neutral space in which exhibits are the main focus. Museum buildings now function on their own as an exceptional, unusual exhibit, as a significant complex; a sign representing a certain reality. The conceptualisation of museum buildings which contributes to making visitors’ experience significantly more intensive, represents one of the key trends in museum culture.

Not only the museum building but also its interior parts can relate the presented theme using their architectural, design or artistic solution. More often than not, we can see the implementation of art objects or installations into non-artistic exhibitions. These are commonly custom-made for a particular museum or an exhibition designer integrates them into an exhibition with the objective of evoking the theme and represents a given reality using other means other than classical museum tools. This is one of the most frequent ways in which the art of installation is used. It complies well with an experimental curator’s intentions and is often site-specific which means that it integrates well with the given space in a museum. It extends or implies a reality which is presented in other parts of the exhibition, and activates visitors. Museums employ these elements not only in order to conceptualise museum presentations for which artistic means are a perfect solution, but also to spice up an exhibition, and attract more visitors. Works of art have the ability to draw visitors’ attention, and when having an interactive aspect, they become a sensational event, an activating element and a ‘magnet’ for visitors.

The forms of such artistic installations are various not only in terms of themes but also in terms of employed tools. Sometimes they have a serious, existential meaning, other times they are humorous and playful. Once in a while they have the character of a classical work of art (drawings, paintings, sculpture, photography), often they are conceptual works, installations, or are based on new media.

An interesting video installation is for example in the Bundeswehr Museum of Military History in Dresden located at the intersection of the old



Fig. 152–153 Top – Chava Rosenzweig, *A Star Shall Stride*, an installation in the Imperial War Museums North in Manchester (UK, 2013), porcelain burnt in a gas kiln; bottom – a silver star commemorating the author’s grandmother, photo courtesy of the archive of Chava Rosenzweig (2013)

building and the ‘thrusted’ wedge of the new Libeskind’s extension. On the way through these ‘vertical showcases’, as the author refers to the shafts that resulted from the wedge-like extension, there is a projection of Scottish artist Charles Sandison entitled *Love and Hate*. An endless loop of the words love and hate is projected onto the walls. The words fight to have the upper hand over the space. Thanks to the projection technology, visitors can also become part of the installation as the words love and hate are projected over them. The same museum has commissioned a famous photographer James Nachtwey to show his black-and-white photographs of people whose lives were altered by war.

Artists have been commissioned also by the Imperial War Museums North in Manchester. It offers them a space for a creative response to the building or the theme of exhibitions which reflect on war and the destructive impact it has on human lives. In 2013, the ceramic artist Chava Rosenzweig took the opportunity and created a large-format installation entitled *A Star Shall Stride*. This intimate installation inspired by the fate of the author’s family consisted of hundreds of tiny porcelain stars symbolically burnt in a gas kiln. According to the artist, the theme of the installation is the impact of holocaust on the second and third generation of surviving victims and the questions of how to live with this tragic burden. (IWM North, 2013) The yellow Star of David, a former symbol of the pride of the Jewish nation was transformed by the Nazis into

a symbol of humiliation. Similarly, the tiny ceramic plates of the stars were disrupted when being burnt, each of them damaged its own way, its unique way. One of the Chava Rosenzweig's stars bears the identification number which was once given to her grandmother in Auschwitz; the work thus capitalises on the family history of the artist, and meditates on the impacts of holocaust. At the same time, the installation is inspired by the presented personal objects of the holocaust victims and by their symbolic value; it interconnects with other presented content and the actual mission of this war museum.

Bruce Shapiro is a well-known artist specialising in installations for science centre exhibitions. This artist deals extensively with the phenomenon of movement and with constructing facilities which make it possible to use movement as a medium of artistic expression. Shapiro's moving installations that are on the border of science, art, and education can be found in the Science Museum of Minnesota (1999), Science Centre v Cedar Rapids (Iowa, 2000), Swiss Science Centre Technorama in Winterthur (Switzerland, 2003), Ontario Science Centre in Toronto (Canada, 2006), or Science Centre of Iowa (Des Moines, 2006). The works of the Pipedream series (I. to IV.) consist of a number of parallel tubes filled with special oil in which air bubbles float controlled by computer, and create interesting shows. In one of the last shows held for example in Ontario Science Centre in Toronto, it was possible to transfer certain scenes through the computer immediately into the installation. The author thus offers the projection of various images including the possibility to view their own face on a large-format surface of the installation.

Other successful works by Bruce Shapiro include the installation from the Sisyphus series which is based on an area of fine-grained sand, a small magnetic ball and special software which transfers pre-programmed algorithms of movement directly into the installation. Thereby a computer rolls a small ball just as the mythical Sisyphus does for an eternity while creating attractive though temporary images. The installation from the Sisyphus series was shown in many museums in New York, San Francisco, Fort Worth, Texas, Breckenridge, Colorado, as well as in Dublin. Sisyphus III, 3 meters in diameter has been permanently installed in the Swiss Science Center Technorama in Winterthur since 2003. (Shapiro, 2014)

Another Shapiro's work, the focus of which is on movement, is the installation entitled Ribbon Dancer, that is, a dancer with a ribbon. The author

installed it in the Science Centre of Iowa (Des Moines) in 2006; being inspired by Chinese ribbon dancers. The installation has the form of two robotic arms hung from the ceiling that move with silk ribbons and thereby creating infinite 'dancing' variations. Whether it is bubbles, prints in the sand or the movement of ribbon, Shapiro's works, coupled with his ingenuity and the use of modern technologies, bring lively elements of beauty into technical exhibitions. They show a different dimension to technology; they demonstrate the permeating of individual fields of human culture, and visitors are justifiably fascinated by them.

There are plenty of similar examples of integrating art installations or singular works into non-artistic exhibitions. Key authors include Camille Utterback and Romy Achituv (Text Rain installation), Osman Khan and Omar Khan (*Unviewed* – an interactive installation), as well as the previously mentioned Daniel Libeskind and his object entitled the *Wheel of Conscience* which he designed for the Canadian Museum of Immigration at Pier 21 (Halifax, Canada, 2011). This object makes reference to the tragic voyage of the ship called St Louis and its Jewish passengers escaping Nazi Germany in 1939. Most of the countries which they asked for asylum (including Canada) turned them away – sending them back into a Nazi hell after a series of cynical bureaucratic procedures. Libeskind's *Wheel of Conscience* has a symbolic form of a gear which is propelled by the signs of *hate – racism – xenophobia – antisemitism*. Gearwheels are accompanied with a map depicting the futile voyage of the ship with the names of all passengers engraved in metal.

Different types of museums commission artists – for example the International Museum of Surgical Science in Chicago. This museum even organised its own artistic project entitled *Anatomy in the Gallery* in which contemporary artists talk about the collections of the museum.

A similar element was applied in the Regional Museum of the Jeseník Region (CZ) which prepared a symbolic film of the first case of witchcraft in the Jeseník Region, and which is projected in the exhibition on a screen of dry fog.

It is evident that the demand for artistic installations which would complement or reinterpret museum collections is great and is an expression muse-

>> Fig. 154 Bruce Shapiro, Top Pipedream IV, an installation in the Discovery World in Milwaukee (USA); tubes with oil and air bubbles controlled by a computer; photo by William Thomas, 2010





Fig. 155 Bruce Shapiro, *Top Pipedream IV*, an installation in the Discovery World in Milwaukee (USA); Bruce Shapiro's work from the *Sisyphus* series, sand and a small magnetic ball controlled by a computer; photo by Scott Beale / Laughing Squid, 2008

ums' efforts to innovate classical exhibition tools and to seek new ways in which to attract, activate and trigger interest in visitors. Using visual, verbal, spatial, and audio tools helps communicate a certain cultural content that is 'behind' collections; be it historical, natural, or social phenomenon or subjectively experienced events, or abstract ideas. In this way, a classical musealia but also a work of art in an exhibition, even the entire museum building, can play the role of expressive symbols and informative presentation tools. The important thing is that through certain modes of reference these tools contribute to our image of the world and to creating it – similarly to a classical museum.

The irony is that nowadays this symbol is becoming emancipated, and it often lives its own life freed from the classical principles of museum presentation. This refers primarily to the contemporary museum architecture. Sometimes it even becomes self-centred: it attracts attention to itself as a specific 'exhibit', and it makes the presentation of museum collections more difficult.

The commissioners of such architecture gave preference to the symbolic effect of the building rather than to the presentation needs. This trend is shown by an increasing emphasis on innovative artistic solutions to exhibitions, so that the role of representing a certain reality is played not only by museum buildings and purely artistic installations but also by the design of exhibition movables, exhibition galleries, additional materials; graphic design of labels, information system and web pages.

Museum exhibitions and entire buildings as well as interior furniture and their content have become a type of expressive manifestation. While previously symbolic elements of this kind were in terms of museum culture used mainly in monuments, today they also appear in technical or regional exhibitions and science centres. They can also be perceived as the consequence of a major shift in the understanding of museum functions which, in a de-sacralised society, increasingly often takes on a role which had previously been played by religion. They are the declaration of a common vision of the world, they show the direction of our journey, they support collective will for the humanisation of society, and they warn us about falling into evil (see exhibition-mementa). Museum exhibitions manifest shared ideas, they perform certain 'missions' of culture and humanity. It is not a coincidence that some of the new museum buildings are beginning to resemble a sacral type of building and visitors' experiences can take on a spiritual character.

As Zaha Hadid aptly puts it, through architecture, we can analyse our future possibilities as well as our cultural foundations. (Hadid, [2011], p. 2) Increasingly, museums stimulate such a reflection and provide visitors with an experience of integrity and an interconnection of an individual with a human community, culture and nature; with an experience often spiritual almost mystical. Museum exhibitions just as works of art become mediators between a visitor's subjective experience and a generalised experience of the previous generations while offering the interpretation of our existence. Whether this mediation occurs exclusively through museum collections, or by using other additional and equally expressive means is no longer important.



6 The Process of Making Museum Exhibitions

A museum fulfils its role in presenting collections of objects in various ways, most typically through exhibitions. The actual opening of an exhibition is preceded by a complex process which according to Neurath (1936) includes the selection of relevant information, the preparation of the conception for space and an exhibition approach for the given theme; and also efforts to objectively transform the information that connects the expert knowledge of various fields. The result is a composite communication medium of museum presentation usually in the form of a museum exhibition which reflects the designers' preferences in terms of possible exhibition approaches and various contemporary exhibition elements. While the latter was discussed in the previous chapters, the following chapter will deal with the process of exhibition development which involves a wide range of museum professions.

6.1 Museum Exhibition Production

There is no museum in the world that has been established only for the sole purpose of collecting and preserving the key role of a museum is to present to the public its collections in the most complete, scientifically correct and comprehensible manner possible. It would be irrational not to use the enormous informative potential collections have, especially in an age characterised by an explosion of information.

Collections are not mere carriers of information. Adequately presented collections form our thoughts, broaden our abilities, and cultivate our personalities. It is the personal contact of a museum visitor with objects where the specific aspect of the role of museums lays. Original collection objects represent both the carriers and the direct sources of information. The presentation of these objects is based on the fact that authentic evidence is immanently present in them. It can be scientifically analysed as objective learning of a reality (primary learning for the purposes of the science). It can also be communicated via the visual³²

32 Naturally, there are also other forms of perception, and some museums are successful in providing visitors also with those (e.g. tactile exhibitions), however, visual perception of exhibits is certainly the most popular and it will continue to be so in the future as well.

perception of the external characteristics of the object. In other words, it can be perceived and thereby transferred into the consciousness of visitors (secondary learning of a reality). Original pieces of evidence, witnesses to human life and the development of nature, are the working and expressive means of museums. These are to be preserved as a legacy for future generations, and used for the purposes of contemporary cultural life to the same or even greater extent. The emphasis on the current application of objects should be put primarily in terms of the understanding that our knowledge expressed by the possession of particular collections is to the future generations only a legacy which they are to accept as their cultural heritage or not. The emphasis on current application is not to be put in terms of the 'consumption' of objects as in educational programmes which we can read about in the works of some of the most radical representatives of new museology with whom other authors strongly disagree (Waidacher, 1999; Dolák, 2004) but in terms of the understanding that our current knowledge expressed by the acquisition of particular collections is to the future generations a mere legacy which might or might not be accepted by them as part of their cultural heritage. In other words, to be in possession of objects that are not necessary believing that one day they might become needed, is taking the risk that after many years of strenuous holding these objects will not sink into oblivion but into an actual swamp.

A museologist who takes objects out of their reality and places them in a museum will provide accompanying documentation, a report of the find. However carefully this work is done, these objects are always decontextualized and relocated into the artificial world of museum collections, or into a certain meta-world as Zbyňek Z. Stránský puts it. When presenting objects, it is paramount to contextualise them again, to introduce not only the objects themselves but also the worlds of their origins and of their actual application. Jakub Kynčl recommends replacing the former approach of 'a list – a warehouse' with the approach of 'a story – an installation'. (Kynčl, 2002, p. 15) To be able to do that, it is necessary to know museum exhibition language through which a museum designer can fulfil given objectives. Just as the presentation of a musical or drama piece can be approached differently and successful in all its versions, also the approach to museum presentation can vary (as we have already shown). But just as musicians must be able to read sheet music, neither can a museum designer base the preparation of a museum presentation solely on their 'personal approach and preferences' or on the tastes of visitors. A certain set of principles

is to be observed which of course does not contradict the desire of being original. That is why we must first aim to define the generally applicable principles, and the theories of museum exhibition management. After that, it is necessary to analyse using particular examples the way a museum exhibition functions, the approaches used by the museum designers, and the impact it has, in order to see whether the initial objectives were achieved or not.

Today, we certainly live in an age of information explosion fuelled by globalisation (Pierre Teilhard de Chardin uses an elegant term of *planetisation*). A global village is changing into a real village full of gossip and prejudices. Mass media offers an infinite supply of all kinds of news; we know more and more but about nothing. Umberto Eco (Mélinard, 2015) has pointed out that journalists, under the pretext of not confusing 'acts' with commentary, attach inverted commas to any statement whereby they turn them into 'acts'. This is to say that the media changes any opinion into a verified reality. Bulgarian philosopher Todorov who lives in France believes that the ability to remember is threatened by the excess of information rather than a tendency to forget. (Todorov, 1998, p. 93) The liberal democracies of Europe and North America are sometimes blamed for contributing to the phenomenon of disappearing memory. Our eagerness to consume more and more information leads naturally to its equally rapid loss. Tzvetan Todorov talks about the celebration of forgetting, and about being satisfied with the futile pleasures of the present moment. (Todorov, 1998, p. 94) After all, we are being attacked by such a huge amount of different information on a daily basis which we are not capable to thoroughly analyse and that makes us base our opinions on already accepted knowledge which changes very slowly; we could even say that we base our opinions on certain 'beliefs' rather than subjecting our ideas and knowledge to the hermeneutical circle.

New technologies as well as the changes in the political map of the world give us the opportunity to receive information to a degree that our ancestors would find entirely unthinkable. In the majority of cases, we receive information second hand, that is, information that has already been prepared, prefabricated, and hence distorted to a considerable extent. On the other hand, an object in a museum is an authentic witness of a certain reality. In the museological literature, we often come across the statement that an object itself is the direct carrier of information. That may be, but only occasionally is a non-expert able to detect and understand this information. In fact, everything that we see in an exhibition and is not an object is information that was extracted from an object by a professional

who is presenting it to visitors. An exhibition visit could then be defined as an activity realised in time and space during which visitors perceive a system of purposefully arranged stimuli to be able to confront their own subjective imagination with a scientific artistic model that was intentionally created by a museum to facilitate learning, experiencing and acquiring the principles of natural and historical processes. (Beneš 1981, p. 98) That means that to communicate effectively, one has to know the theory and methodology of this special type of communicating, a particular part of the theory of information with the application of museological aspects which we can refer to as exhibition languages, as we already did in the previous chapter. While in the previous chapters, we dealt with the specifics of this 'language' and the way it manifests itself, in this chapter our objective is to analyse the phases of its application, the phases of making the most typical form of museum presentation which is a museum exhibition.

6.2 Defining the Phases of Museum Exhibition Preparation – Theme, Libretto, Script

The preparation of a museum exhibition is a very demanding and complex process. A designer must have good organisational skills as well as expert knowledge. Equally important is to have knowledge of the field and of museology. It is presumed that a designers' approach to their work is positive and creative, and that they are able to present their ideas in a clear and communicative manner. They should also have aesthetic feelings, the ability to express themselves well in written form, and managerial skills allowing them to set adequate educational objectives, to understand the profile of visitors and to be able to guide visitors well through the museum, etc. (Dean, 1994, p. 1)

Considering the given requirements for an exhibition designer, it is considered suitable for the members of the design team to have the best possible awareness of the principles and theories applicable in exhibition management, as well as of the methodology and practice of exhibition making. According to Stránský, competence in the field includes not only expertise in the given scientific discipline but also the skills related to museology and presentation, as well as museographic and exhibition management.

It is not only a matter of knowing certain facts, methods and technology but also of having the skills to take one's own stand on the new tendencies

in exhibition management (Stránský, 2005, p. 135) which are plenty in light current plural societies (and the impact of previously inaccessible technological possibilities). It means that exhibition designers should make an educated choice when considering all the possible presentation approaches to choose the one that best suits their intentions and the needs of visitors. To this end, a lot of instructional books have been published, research studies analysed, and evaluations carried out.

According to Waidacher (1999), an exhibition is to contain exhibits arranged in terms of their logical relations. Stránská a Stránský (2000, p. 73) describe the process of making such an exhibition as composing presentation forms, and they recommend working with preparation documents that have the form of a libretto and a script. They emphasise that during the process of making an exhibition the key is not to explain scientifically the presented theme but to provide 'a sheet music' on the basis of which a presentation medium can be carried out.

Waidacher also uses the terms libretto and script³³ when he explains these phases of the process of making an exhibition; adding another term – a theme. A theme is at the very beginning of the process of presentation planning – it justifies its content and mission; which are to be in line with the mission and objectives of a museum as well as with the actual possibilities of the museum. Already when thinking of the theme, target groups of presentation and its methods can be considered.

Another step in exhibition planning is *libretto*. Waidacher (1999, p. 165) refers to libretto as the focal point of the entire process; it is the basis of the actual form of the exhibition. Libretto reveals the concept of the intended exhibition as well as its theme formulated on the basis of the knowledge of certain scientific disciplines. The author of an exhibition formulates not only the particular exhibition principles but also considers the spatial and technological possibilities of the dislocation of the exhibition. Libretto also includes the preliminary proposal of the budget.

The following step is to develop the libretto into a detailed script of the exhibition. A Script is the detailed description of the exhibition project and it contains a number of technological and other details: the exact list of exhibits and their arrangement within an exhibition, the final proposal for the reference

33 It is not a coincidence these terms are taken from the drama and film science.

and explication elements – accompanying texts and additional images and audio-visual material. The script of the exhibition, a certain ‘application and use manual’ and an ‘installation manual’ contain a list of all necessary technological means and increasingly more often it also develops a strategy for addressing the target groups and providing media and web support for the exhibition. An obvious part of the script is a detailed item budget.

Especially when organising larger events, it is necessary to develop a technological script that will contain the description of the individual phases in all their detail such as a detailed description of the entire presentation, the spatial and visual solutions, etc. The technological script also provides instructions for mounting large-format exhibits, suitable technology for adjustment, texts, type and size of the font, etc.

A script should be duly reviewed to make sure the exhibition plan is correct in terms of achieving the overall objectives of the exhibition; expert opinions, and in terms of the museological, visual and financial aspects. In practice, scripts are reviewed only occasionally and usually only exceptionally large exhibitions are being reviewed. It is not good that in the majority of the cases, the reviewers are only field specialists, that is, historians, ethnographers, and so on. We believe, a qualified museologist and a specialist in target groups’ needs, and a specialist in making the content accessible to visitors (educator) should be involved already at this stage of the exhibition making process.

A museologist might not understand the details of the given field the exhibition is focused on, but as a specialist in museum language, s/he can adequately assess whether the presented script is well written in terms of museology, that is, whether the proposed presentation approaches are adequate. It is the task of an educator to assess whether the content is adequately transformed into the form which is well comprehensible for the target group of the exhibition, or, s/he can propose a particular measure which could expand the target group.

Sometimes it seems as though some (usually smaller) museums try to protect themselves in case of a negative response by presenting a script prepared by significant field experts for example by universities. Their knowledge of e.g. geology or prehistory of a given region is undoubtable but it does not mean that these top scientists can write a good script for a museum exhibition. It is not possible without museological knowledge. Not even large museums would have a worker whose only task would be to write exhibition scripts. The exhibition scripts are in the majority of cases written by a curator whose theoretical preparation for museum presentation

is usually not sufficient; often this museum worker has not had the opportunity to test their skills previously which of course does not help much. The presented list of many approaches to exhibition making and the number of contemporary innovative elements used in a museum exhibition show that having a good command of museology is key to realising exhibition projects of a high quality.

The preparation of a libretto and a script is followed by activities performed by other specialists, particularly of an architect and a graphic designer, or an artist. An architect deals with the visual and spatial arrangement of the exhibition, in accordance with the available space, the exhibition script and the financial resources of the museum. An architect plans for the placing of exhibition elements in the given space as well as for the colours of the exhibition or the manner in which visitors are to circulate. A graphic designer or an artist designs the orientation plan, artistic solutions of labels and textual or image panels and other graphic or artistic elements. In the last phase of exhibition making, an arranger or an installation worker comes in. S/he is in charge of arranging exhibits in showcases, installing walls, panels or pedestals, or of placing them into the free space, and creating dioramas, or reconstructions. (Šuleř, [2014])

6.3 The Phases of Museum Exhibition Development

When browsing through the contemporary books on the process of exhibition development we find that the authors use different terms from those we introduced in the previous chapter. As the decisive example we take David Dean's model (see his works *Museum Exhibition: Theory and Practice*, 1994) or the model of Barry Lord and Gail Dexter Lord (see *The Manual of Museum Exhibitions*, 2001). What follows from the structures proposed by these authors is that the exhibition development is a complex multidisciplinary process.

Dean (1994, p. 9) divides the process of exhibition preparation into the following basic phases:

- (1) conceptual phase, (2) developmental phase, (3) production phase, (4) functional phase, (5) assessment phase. The author points out that throughout development, there are the following three principle tasking areas.
- product-oriented activities – efforts centred on the collection objects and their interpretation;

- management-oriented activities – tasks that focus on providing resources and personnel necessary to completing the project;
- coordination activities – keeping the product- and management-oriented activities working toward the same goal.

Each of the developmental stages is defined by Dean (1994, pp. 10–18) in detail which we will introduce briefly on the following pages.

Conceptual Phase

Exhibitions start as ideas that come from many sources. Most frequently it is the idea of curators or the museum management, Dean (1994) points out that it can also be the suggestions made by an audience, board members or trustees, community leaders, educators, staff and volunteers. Ideas for exhibitions can be conceived in relation to ongoing events or an upcoming anniversary. In all cases, the motivations to exhibit should emanate from a prevailing predisposition toward serving the public. The conceptual phase should not be the contemplation on how to fill an empty museum gallery but the search for a principal theme and the consideration of its educational potential.

The contemporary practice of the museum role in a community brings two important aspects into the conceptual phase of exhibition development: the responsibility toward visitors, or community, and the adherence to the professional standards of museum work. That means that the basis of a new exhibition is not personal interest or ‘the passion’ of a curator. The decision-making process and the process of exhibition development should be based exclusively on the needs of the community and on the professional approach. The result of the conceptual phase is a detailed exhibition plan and a list of the means necessary for the realisation.

Product-oriented activities:	<ul style="list-style-type: none"> - collecting ideas - comparing ideas with audience needs and the museum’s mission - selecting projects to develop
Management activities:	- assessing available resources to do the project
Results:	<ul style="list-style-type: none"> - a schedule of exhibitions - identification of potential or available resources

Development Phase

This phase primarily involves planning. Dean (1994) refers to the *storyline of an exhibition* which is a similar term to the *script of an exhibition* used previously. Dean perceives the storyline as a compound document that serves design and production by providing the framework upon which the educational content of the exhibition hangs.

According to Dean, the storyline consists of:

- a narrative document,
- an outline of the exhibition,
- a list of titles, sub-titles and text,
- a list of collection objects.

The process of storyline and text development begins at the point of origin for an exhibition idea. At the beginning of an exhibition idea comes the need to determine the way in which the exhibition will speak to the visitors. This is the interpretive strategy whose development is the start of the storyline process. Considering the importance of the storyline phase, Dean talks about the individual steps of this phase in great detail. These steps include: determining the concept of the exhibition, brainstorming sessions (searching for new ideas during a spontaneous discussion), meetings of the team in charge of exhibits, determining the objectives and particular tasks of the members of the team, and the determining of target groups of visitors. Furthermore, this phase includes: the ongoing research to produce the storyline – a narrative of the exhibition, the ongoing research to address collection management issues, and the permanent cooperation of a curator and an educator who produce an outline of the exhibition.

Equally important is the development of the preliminary list of artefacts, and determining the message the exhibition is to communicate. In this phase, the conception plan is being refined e.g. by way of development graphs and tables illustrating the story and additional information, the preliminary list of graphics is developed (including the working version of their graphic design), and the selected exhibits are placed in the storyline of the exhibition. Before the actual showing of the exhibition it is necessary to complete the list of key exhibits, as well as the writing of text, labels, overall design of the exhibition and its traffic patterns; the graphic design is assigned to the storyline and the artefacts and their placing within the storyline, as well as the development and testing of titles, sub-titles, and labels.

Dean recommends including also testing design elements for effectiveness and durability, and testing text, labels, and copy for comprehension and terminology. Where a detailed conception is planned what follows is the planning of all steps relating to the actual assembling of the exhibition; the production of some missing exhibition elements and the installation of exhibits. Also the details regarding the opening of the exhibition, the functional phase and its termination phase are also planned for including dismantling and evaluating the design and the storyline process and its interpretive value. (Dean, 1994, pp. 103–106, adjusted)

Product-oriented activities:	<ul style="list-style-type: none"> - setting goals for the exhibition - writing the storyline - designing the physical exhibition - creating an educational plan - researching promotional strategies
Management activities:	<ul style="list-style-type: none"> - estimating costs - investigating sources and applying for funding - establishing resource budgets - appointing tasks
Results:	<ul style="list-style-type: none"> - an exhibition plan - an educational plan - a promotional plan

Production Phase

According to Dean (1994), the production phase involves activities related to management, the development of the exhibition as well as accompanying activities related to the standards of museum work. It also includes the selection of the conservation technology used for the presented exhibits and of the parameters for the climate of the exhibition (light, humidity, temperature), or the determination of the circulation schedule of the presented exhibits (if a dynamic conception of the exhibition is considered), and the maintenance plan. Loans are being arranged for and contracts signed, detailed reports of the state of the collections are being produced, and safe transportation of exhibits arranged. Labels and accompanying texts are being produced, exhibition galleries and the installation of the exhibition are being prepared; educational programmes

and accompanying events for the public are being developed. In this stage the exhibition is being promoted and the advertisement strategy developed.

Management activities include overseeing the budget, as well as the process of exhibition preparation and the quality of outcomes as well as necessary administration activities. The result is not only the presentation of the exhibition to the public that has the desired quality and extent but also functional, educational and other accompanying programs as well as instructions for the due care and maintenance of the exhibition. (Dean, 1994, adjusted)

Product-oriented activities:	<ul style="list-style-type: none"> - preparing the exhibition components - mounting and installing the collection objects - developing the educational programs and training docents - implementing the promotional plan
Management activities:	<ul style="list-style-type: none"> - overseeing the availability and use of resources - tracking progress and coordinating activities
Results:	<ul style="list-style-type: none"> - presenting the exhibition to the public - using the educational programs with the exhibition

Functional Phase

The phase of exhibition development that is most obvious to the public is referred to by Dean (1994) as the functional phase. As follows from the title, it is a phase that comes after the exhibition is open to the public when the smooth operation of the exhibition must be ensured, and educational programmes as well as other accompanying activities designed for the public are implemented. This stage also involves an ongoing evaluation of the exhibition as well as corrections of individual elements, such as the relocation of an inadequately placed showcase or the correction of a spelling mistake on a label. The terminating stage includes the closing of the exhibition and its dismantling. Documentation necessary for the transportation of collection objects back into their collection storage is duly processed; loans are prepared for the transport to their home institutions. Accounts are balanced, and the management carries out the final counting of the actual costs for the purposes of the report for the founder or grant agencies.

Product-oriented activities:	<ul style="list-style-type: none"> - presenting the exhibition to the public on a regular basis - implementing the educational programs - conducting visitor surveys - maintaining the exhibition - providing security for the exhibition <p>Terminating stage:</p> <ul style="list-style-type: none"> - dismantling the exhibition - returning objects to the collection storage - documenting collection handling
Management activities:	<ul style="list-style-type: none"> - settling accounts - administration of personnel and services <p>Terminating stage:</p> <ul style="list-style-type: none"> - balancing accounts
Results:	<ul style="list-style-type: none"> - achieving the exhibition goals - preventing deterioration of collections <p>Terminating stage:</p> <ul style="list-style-type: none"> - the exhibition is ended - the collections are returned - the gallery is cleared and repaired

Assessment Phase

The final phase of the complex process of the exhibition development comes after the exhibition is concluded. Even though, the exhibition no longer exists physically, according to Dean (1994), this phase is very important. The objective of this phase is to assess the effectiveness of the exhibition and to evaluate the gained experience for the development of future exhibitions. When conducting the assessment, it is recommended to specifically observe the following aspects: the suitability of educational and otherwise publicly beneficial objectives and the extent to which they have been achieved, the effectiveness of the process of planning and the coordination of the overall process, as well as the actual showing of the exhibition. The final assessment of the exhibition includes the

findings from the visitor surveys as well as the media response and the opinions of the experts.

Product-oriented activities:	<ul style="list-style-type: none"> - assessing the exhibition - assessing the development process
Management activities:	<ul style="list-style-type: none"> - creating an evaluation report
Results:	<ul style="list-style-type: none"> - an evaluation report - suggested improvements to the product and the process

Similarly to Dean (1994), also Barry Lord and Gail Dexter Lord (2001, p. 4) propose a structure for the exhibition development process. They refer to development phase, project phase, and implementation phase. According to the authors, the development phase includes a drafting of the exhibition conception, interpretation planning, research or expert activities, the development of the exhibition design including the draft of preliminary budget, time schedule, and generating financial and other sources as well as assigning tasks.

During the project phase, a scheme of the exhibition is proposed, as well as the design of the project and the specification of individual key activities. It also involves a detailed budget, a time schedule, and the expert development of the content of the exhibition as well as the texts, etc.

Lord and Lord work with the premise that during the implementation phase the success of a project is determined by the grant application. A successful project is further developed with the project and construction departments being involved as well as the exhibition department including internal and external experts in audio-visual and multimedia. Also the quality and costs control department as well as the coordination department and installation workers are also involved at this phase. Before the opening the overall product in the form of an exhibition is refined then after the exhibition is concluded comes the evaluation (in more detail, Lord and Lord, 2001).

>> Fig. 156–157 Examples of presentations using a story; top – an exhibition of the Municipal Museum in Skuteč (CZ), bottom – an exhibition of the Jewish Museum in Berlin (Germany); photo by Petra Šobánková, 2014

6.4 Unjustly Neglected Phase: The Research into Community Needs, Narrative Development, Evaluation

In their books, Dean (1994), Lord and Lord, and other authors elaborate on the individual phases; we have strived to briefly introduce only the key aspects. It is evident that the process of exhibition development comprises a very complex and demanding set of activities. The negligence of some of the phases, though there are differences in classification, will always show in the end.

Frequently professional standards of museum work do not include many of the most important aspects, even though these standards appear to be maintained (an exemplary protection of musealia, the scientific character of the exhibition, the expertise of the texts, the design of the exhibition and movables). For example, the connection between exhibition development and the needs of the community is paid little attention to, contextuality and narrativity it is scarcely applied, and evaluation is being neglected.

Museum workers usually have their own vision of what is necessary for the public and what themes are relevant. However, they often follow their own ideas, or are influenced by their own subjective passion for their field and the collection fund of the museum. On this pretext, exhibition designers sometimes feel like messiahs, showing public the, and are disappointed when the exhibition does not have a large visitor turnout. It is best to research and analyse the needs of the community. The objective is not to hawk but to try and make people perceive the museum as their 'own' institution which has to say something about their troubles, life issues and the current social challenges.

The above mentioned refers mainly to the conceptual phase. However, museum culture could benefit from increased consideration given to the development phase. In particular, the development of the story of the exhibition (narrative)³⁴,

34 Here, we use Dean's (1994) term *narrative* of the exhibition. The author does not necessarily mean to implement narrativity, or a story as we referred to it in the chapter on exhibition approaches. Dean's term has a similar meaning to the term *libretto* of the exhibition.

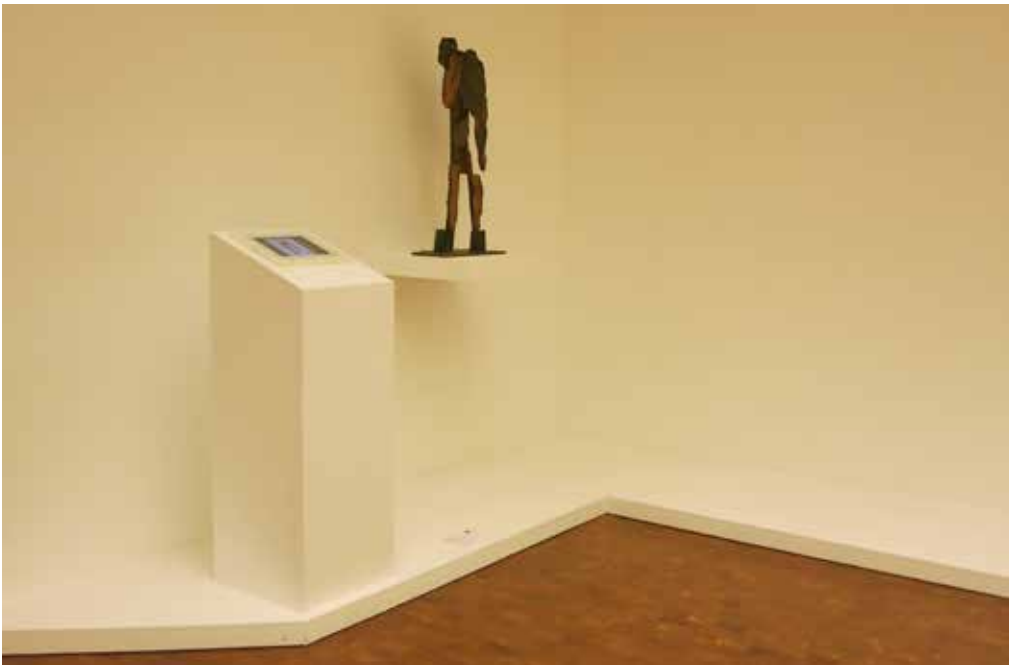


>> Fig. 158–159 Top – Museum Schnütgen in Cologne (Germany), bottom – the exhibition titled Museum Ludwig Goes Pop in the Museum Ludwig in Cologne (Germany); photo by Petra Šobánková, 2014

that is, the way in which the theme is presented, the overall result and the application of the museum ‘language’ and the feel of the exhibition. The previous chapters show that the ‘storytelling’ mode (the presentation mode) of the same theme can be different every time. We have discussed formalistic approaches as opposed to contextual, functional-ecologic or narrative approaches. The narrative of the exhibition refers not only to the approach to musealia and its role in the presentation but also the actual approach to the theme and its presentation which naturally has a decisive impact on the overall impression of the presentation. The theme of military affairs can for example be presented as a spectacular show of military vehicles, but elsewhere it can be presented through the individual stories of real people whose lives were changed because of war. It is clear that the impression of each of these exhibitions would be completely different; for example, the first exhibition could present military successes and the army attracting boys and men on the other hand, the second exhibition could present real-life stories. As we can see, not even the themes are neutral nor are designers unbiased – here, the narrative refers to the most explicit denomination of the designer’s attitude toward the given theme and the mode in which they are planning to support their approach using a museum’s various facilities and mechanisms.

The issue of a narrative is extensively discussed in many books. For example, Roppola (2012) shows that there is a plethora of different types of narratives in which a theme can be presented. He mentions the simultaneous presentation of contrasting angles in which to view a theme (visitors have the opportunity to learn about different points of view as well as about the sources of these different perspectives). Roppola puts emphasis on making connections with previous knowledge (from the familiar to the new), and on a visitors’ imagination (he doesn’t work with what visitors know but with what they are able to imagine).

Perhaps the most popular and most efficient mode of presentation is the one using the stories of real people. The advantage of this mode is that in using real stories we can explain even the most complicated realities which are difficult to imagine. Stories stimulate imagination, empathy and visitors’ emotions;



they also show various perspectives of a certain phenomenon. Logic and thinking through a story are both very important for understanding, and both of these modes should be well represented in an exhibition. (Roppola, 2012)

The planning for the most suitable narrative of an exhibition is to be perceived as one of the important steps towards real professionalism because in museology well-educated exhibition designers know that an exhibition can be presented using a variety of different approaches based not only on the systematics of the field but also on the structure of the collection fund or a momentary idea. Perhaps it is the selection of the exhibition mode that we should devote more time to.

Another phase which is often underestimated is the assessment phase, the final evaluation. It is rather easy to monitor visitors' turnout, however, museums do not pay much attention to the structure of museum visitors and to how visitors react to the exhibition and how they accept it. The evaluation of the British Museum in which four aspects are observed can be used as an example of a well-designed strategy evaluating the functionality of the museum:

- What motivates visitors to visit the museum? (The museum identifies four types of reasons for a museum visit: spiritual, emotional, intellectual, and social.)
- How do visitors use the supportive material, how well were they informed?
- How do visitors respond to the design of the exhibition? (What is their view on the exhibition, the audio background and lighting, the layout of the exhibition, the coordination of the number of visitors in exhibition galleries.)
- What do visitors think about the content of the exhibition? (this question refers to the theme and mode in which the theme is presented, the structure of the narrative, its overall feel and the language used, the presented exhibits, star exhibits, the amount of available information, maps, schemes and photographs, the use of film projection, and digital media.) (Morris Hargreaves McIntyre, 2012)

Such an evaluation can certainly act as a springboard to other exhibition projects while providing the exhibition designer with constructive feedback. Naturally, there are a lot of different types of evaluation questionnaires, however, due to the limited space we cannot go into any further details. What has been established is that evaluation is one of the fundamental issues that needs to be addressed when planning for a museum exhibition.

6.5 Involved Professions and the Role of a Museum Educator

In the course of the development of museum culture, the diversity of museum professions has increased and museum workers have become specialised which is naturally connected with the development of memory institutions and thereby with the broadening of the roles of museums and with the shift in the way museums perceive their mission within a society. That is how many professions and areas of human activities are now employed in the complex process of selection, thesaurisation and museum presentation development. It is also important to mention the traditional relationship between a museum and science, after all collections are often created as material for scientific research or as one of its outcomes. The research into museum collections can no longer be carried out without the participation of other specialised professions. They are now referred to as scholars, especially in comparison to non-specialised professions, supportive or accompanying professions where no deep expert knowledge and skills are necessary.

The development of museum culture with the emphasis on innovation and the quality of the forms of presentation have demanded other specialised professions to be established which can no longer be perceived as non-specialised. Regarding the shift of museum culture towards visitors and their needs, it is primarily the profession of a museum educator. However, this is not the only profession whose expertise is today undeniable and whose role in today's museum is essential.

It is evident now that such a complex and demanding process of museum exhibition development requires the participation of many professions and areas of human activities. Waidacher (1999, p. 152) includes for example: representatives of scientific disciplines, museologists, psychologists and artists. In practice, these are mainly museum workers, that is, curators, whose education in a particular field is often complemented with museological education; and workers from the installation department occasionally being supervised by an external architect, or artist.

Also Lord and Lord (2001, p. 3) point out the multidisciplinary character of the process of exhibition development. In the table below we mention their list of professions involved in exhibition development. Some underfunded museums which often cannot afford to fill even the fundamental professions may find the list below informative.

Visitors groups specialists	marketing
	evaluation
	fundraising
	sponsorship
	education
Exhibition content specialists	curators and researchers
	collection administration
Communication specialists	interpretative planning
	designers, project architects
	audio-visual technology
Exhibition installation specialists	conservation of collections
	economic department
	project management
	construction
	graphics
	other specialists

In terms of the museum teams of exhibition designers we must add that in practice the role of a museum educator is still underestimated in many places, and is not perceived as a relevant member of a team. This status quo reflects the traditional and in many aspects obsolete scheme of museum professions which can be defined by the dichotomy 'scholar-curator' versus 'the others'. (Boylan, 2006) The classification of professions into 'specialised' and 'non-specialised' can have a negative impact on the necessary cooperation among the professions because a 'scholar-curator' is usually not open to cooperation as they guard their dominance in the process of presentation development. That is why museum educators often deal with the burning issue of being underestimated and the importance and specifics of their profession not being understood. It seems as though the position of a museum educator in the hierarchy of museum professions is not resolved, and it is evident that a museum educator is not perceived by the traditional 'specialised' professions as sufficiently 'scholar'.

So what is the specific expertise of educators? And how does this expertise contribute to the quality of museum presentation? To answer these questions,

we can look to the term pedagogical content knowledge (Shulman 1987, Shulman & Grossman 1988). *Pedagogical content knowledge* is based on the synthesis of three knowledge bases: (1) subject-matter knowledge, (2) pedagogical knowledge and didactic skills, and (3) context knowledge. In terms of the dichotomy of museum professions, it is interesting that the term *didactic content knowledge* was once useful also in distinguishing between teachers of natural sciences and natural scientists – equally, it can help distinguish between museum educators and curators. Teachers differ from biologists, historians, writers and many other professions not in terms of the quality or the extent of their knowledge but in terms of the way their knowledge is organised and used. (Cochran, King and DeRuiter, 1991, p. 5) Subject-matter knowledge of an educator represents the basis which helps visitors understand specific terminology and the museum presentation message. In other words: an educator knows and further studies in order to help others to know and to understand. On the other hand, the knowledge of a scientist is organised from the perspectives of research and is used as the basis for building and acquiring new findings in the given field.

Content is certainly something that connects the profession of a curator with the one of an educator; however, each of them approach it in their own way with different objectives. An educator is an expert in the content just as the ‘scholar-curator’ is (usually, the knowledge of a curator is greater and more profound including also the methodology of the given field); while a scientist studies the content in order to produce other content, and an educator studies the content in order to be able to explain it and enable others to understand it. Certainly, also a scientist shares content among themselves, however, this is a communication of a small expert group of people with similar interests; on the other hand, an educator strives to make content accessible to all from the wider public including children and visitors with specific educational needs – it is because an educator believes that content can enrich all people and that human knowledge is for all without exception.

The given difference between specialists-scientists and specialists-educators and their common content basis are at the heart of the cooperation among traditional specialised professions (curators) and museum educators: a field specialist produces and deepens our knowledge, shares it with an educator and they both search for the main part of the field content which will be subsequently didactically processed by an educator and transformed considering visitors’ abilities, needs and interests. An important question is where the museum presenta-

tion stands in this process and what role it plays in imparting knowledge on the public. Though the educational aspect of museum presentation is continually under discussion, we can pose a simple question: isn't it true that all museum presentations are essentially educational? After all they are the results of more or less successful attempts to make existing evidence of the social and natural processes available to the public and to impart on them what is known about these processes. Isn't it true that every exhibition should be the result of the process in which the content is discussed, and its main dimensions, adequate extent and depth decided upon? Isn't it true that every exhibition should be based on didactic transformation of museum content? After all it is a product which is designed for the wider public and not only (or primarily) for field specialists.

We believe that the phase of didactic transformation – that is, the preparation including a critical analysis and interpretation of the theme, its structure and phases considering the objectives, the representation based on due consideration of the best representatives of the content to be used (selecting an exhibit that best represents the presented phenomenon or reality, selecting various analogies, metaphors, demonstrations, etc.), selecting the best approaches and strategies, and finally adjusting the content to the target group, whereby considering the specifics of visitors, their needs, existing knowledge, gender, age, motivation, interest, abilities, etc. (adjusted according to Janík et al, 2007, p. 26) – should be applied also to exhibition designers because they do not prepare exhibitions for experts and specialists but for the wider public.

The basis of every successful exhibition conception and its revealing nature is in well-prepared didactic transformation. Exhibition designers-curators have deep even exceptional understanding of the theme, but they often neglect the didactic transformation. It is no surprise, then that the ability to didactically transform the exhibition content for various groups of visitors including children is not part of their profession. They were not trained for this task; it is simply not part of their professional training. That is the reason we have so many 'lost' exhibitions, even though the exhibitions show unique and rare musealia and are designed by true experts. It is the museum educator who is specialised in the key ability of didactic transformation, and that is why we and the majority of experts involved in exhibition planning believe that a museum educator should be an irreplaceable part of the team of exhibition designers. After all, the results of such a team are easy to recognise and they speak for themselves.

Our opinion is also supported by the contemporary theory and practice of many foreign institutions as well as by professional organisations (ICOM as well as other significant associations of North American, Australian and other museums). According to ICOM (2001), education is one of the basic duties of museums; the necessity of educators in museums has also been acknowledged by many delegates of significant conferences. Basically, all contemporary authors perceive education as one of the essential components of an exhibition project. Shettel (1973) also adds that when imparting information on visitors by way of exhibitions, we need to cooperate with specialists in the psychology of human learning and educational processes. Shettel as well as Dean, Lord and Lord and many other authors also advocate in the development phase the continuous cooperation of a curator and a museum educator who will work together on the conceptional plan of the exhibition.³⁵

Šuleř points out that museum exhibition development involving many professions can generate many discussions and differences of opinions. He suggests these differences should be resolved by production managers who oversee the implementation of an exhibit as well as the time schedule and budget expenditure. The exhibition development or the script realisation is sometimes outsourced and delivered as a turnkey project. Smaller exhibitions are usually self-realised with limited financial resources. In practice, it is common to use standardised museum furniture and if there are no changes done to the exhibition gallery there is no real need for an architect. (Šuleř, [2014]) However, including professionals in the process of exhibition development brings has a positive effect and is well worthwhile especially in long-term exhibitions.

Stránská, Stránský (2000, p. 73) emphasise that museum presentation today must face intense exhibition competition. That is also why large museums especially rely on the services of professional exhibition businesses or external architects and artists. Stránský, however, warns us about leaving the whole process of exhibition development in the hands of external non-museum entities. It can be to the detriment of the quality because a museum exhibition has its content specifics, and as we stated in the previous chapters, it also has a wide range of museological approaches which are to be carefully followed. We cannot expect non-museum exhibition companies to be well aware of them. In

35 According to Dean, the exhibition plan is developed on the basis of a narrative ('story'), a preliminary list of exhibits, and educational objectives of the exhibition.

this context, Stránský talks about 'presentation or exhibition thinking' which should follow on from the museological theory of presentation and applied museographic findings.

Ultimately, it is museum workers who are largely responsible for the quality of museum exhibitions, even though they are often qualified in a given field and not in museology. According to Stránský (2000), we cannot say that the profession of a museum educator has nothing in common with the specialised and scientific work. To think that would prove that museum work as well as the mission of museums is fundamentally misunderstood. Also museum workers have to adopt their attitude toward new tendencies in exhibition management where we increasingly more often see the application of audio-visual systems and where the actual reality is being replaced with virtual hyperreality. (Stránská, Stránský, 2000, p. 73)

The process of exhibition development is demanding and complex. The result of this process reflects the work of all professions involved as well as the quality of the members of the team of exhibition designers; and sufficient attention needs to be paid to all individual phases of this process: conceptual, developmental, production, functional and assessment. The negligence of any of them will always show – be it insufficient attention paid to the needs of the visitors and the community, to the exhibition narrative development, or to the assessment phase which is to be the springboard for future projects. We have demonstrated why the key role of a museum educator should not be neglected when developing a museum exhibition while striving to explain the essence of the didactic transformation of the museum exhibition content which should be integrated in the process of the museum exhibition development (just as any other tasks) and performed by an expert. Exhibition designers should understand well the mission of the museum as well as the specifics of this institution. They should strive to make museum presentation – the shop window to the entire museum culture – of the highest quality possible. To this end, the field has produced many recommendations the selection of which will be presented in the following chapter.



7 Recommendations to Exhibition Making

The process of museum exhibition making is influenced by a number of factors. These include not only the actual choice exhibition creators make between museological and methodical approaches which have already been described in the previous chapters. Also external factors play a significant role as well as financial and personal limits. In any case, the specialisation or purpose of an exhibition is determined by its creators who primarily decide the narrative of the exhibition, its content, appearance, structure and the overall feel/impression. The basis of exhibition making lies in the ability 'to visualise the intended'. (Stránský, 2005, p. 128)

In the process of constructing exhibitions we do not primarily focus on presenting things in the space according to certain period criterion but on presenting the given theme in its complexity. Therefore, the focus is not on creating an order according to a scientific system nor on creating aggregates of things into aesthetically appealing units. Rather than revealing 'a piece of scientific information' we should focus on imparting 'a piece of cultural information'.

Sometimes we see an exhibition designed as 'a book on panels'. If we design an exhibition as a scientific study (and neglect the transformation of museum content), we cannot be surprised that such an exhibition does not receive a great response. Even though the basis of every product of presentation is thorough knowledge of a given issue (that is knowledge linked to a scientific discipline), a mere visualisation of such knowledge without didactic reduction and the use of intentionally selected and conceptually well-founded exhibition approaches cannot be, from the museological point of view, perceived as a successful exhibition.

The leading paradigm of museological literature in the field of exhibition making of the past decades is to encourage exhibition makers to move from object-oriented exhibitions to the so-called 'idea approach'. The emphasis is therefore now put on the concept rather than the object; English writing on the subject alternates between the terms: *concept exhibition*, *conceptual exhibition*, *concept orientated exhibition*, though the exact meaning is still not clear. As already mentioned above, we can recommend contextuality, or, narrativity, as well as due attention to the overall narrative and the concept of the exhibition. Non-contextual exhibitions (that is object-oriented exhibitions) usually capitalise on a minimum of all the possibilities that such objects can offer to visitors.

>> Fig. 160–161 Top – an example of interdisciplinary cooperation and a holistic approach in the exhibition of Water in the Landscape in the National Agricultural Museum in Prague, CZ (visitors learn about various context in which to understand the importance of water in the landscape, rivers, human lives, etc.); photo by Petra Šobášková, 2017; bottom – Reykjavik, Ethnological Museum (Island), photo by Jan Dolák, 2006

Popular and often recommended is to span narrow specialisation and to support interdisciplinary cooperation and a holistic approach. A Czech archaeologist Václav Matoušek believes that if a traditional regional stone museum is not to be perceived as a heterogeneous conglomerate of unrelated pieces of information, then it is necessary to conceive of all its natural and scientific exhibitions within one paradigm. (Matoušek, 2000, p. 462) Another Czech archaeologist Karel Sklenář is surprised that an institution such as the National Museum in Prague has not surpassed yet the traditional internal layout, and at least in theory tried to design an exhibition that would present the earliest historical periods in cooperation with archaeology, anthropology, petrography, zoology, botany, etc. It would be one of the few possible ways in which to benefit from its existing structure from the revival period, and to surpass the surpassed (that is the textbook) segmentation of disciplines. (Sklenář, 1998, p. 28)

A Brazilian professor Tereza Scheiner (1999, non-paginated) writes that the contemporary dominant model of a museum is an orthodox traditional museum as a paradigm of the end of the 18th century in which there is no (seemingly) space for surprise, grief, happiness or passion – for any feeling which could interfere with the unimpeachable order of things; spaces are strictly in line, objects classified and presented in respectful symmetry which makes them falsely Apollonian as much as a modern man is falsely Apollonian himself. In her comparison, the founder of museums is Dionysus as a symbol of emotions and chaos while the following traditional museum has become too Apollonian, that is, related too much to harmony, order and reason. The definition of Dionýsos concept is fitting for today's children's museums, science centres, and other interactive centres. But also, the presentation of some entities in common museums such as a boy's room from the 1970s cannot present anything else but chaos as can be observed in the Ethnological Museum in Reykjavik.³⁶

36 State of things in 2006.



The process of making exhibitions in museums has its own architectonic, artistic and technical form. Artistic and technical solutions are only one part and certainly not the most important one. To exhibit is to impart thoughts in an illustrative way to which visitors respond by absorbing information and adopting values. If an exhibition fails to efficiently inform human consciousness, it is not a good one even if it is showy in its form with costly technical equipment. An exhibition that is beautiful in its form but has a low communicative potential is actually a reject just as a beautiful car that does not work is... (Beneš, 1981, p. 13)

While we cannot say that a certain approach is better than another, museum practice and the knowledge of related disciplines (pedagogy, philosophy, psychology, sociology) make it possible to formulate various recommendations which should be followed by exhibition creators should they want to enhance their communicative and learning effect. Many research studies were performed precisely to this end which have brought new knowledge about visitors behaviour in exhibitions, about their preferences or the attention they dedicate to various types of exhibits. Though many recommendations have already been expressed in other parts of this book, here we add some more.

7.1 Recommendations Based in Pedagogy

Every museum presentation can be perceived not only as a communication but also as an educational medium – learning new things can happen in various situations and settings, even in less stimulating ones, least communicative and purely formalistic museum presentations. On the other hand, we assume that exhibitions can meet visitors half way and provide answers to their educational needs by implementing particularly supportive elements. This subchapter will thus try to point out the aspects that learning in exhibition can influence, and to present the ways in which the educational effectivity of exhibitions can be enhanced.

Before we start, we would like to clarify one of the premises on which our thinking is based. It is an assumption that museum visitors have educational needs, that is, a natural human potential to learning and permanently developing their knowledge, abilities, skills, opinions and ways of everyday conduct. Such educational needs are often accompanied by the desire for

self-fulfilment, or self-advancement, the tendency to increase their experience, knowledge, as well as the quality of their spiritual, emotional and social life. We assume that all these potentialities a visitor can fulfil by taking an active part in museum culture.

Even though, educational needs are different in different individuals, we can assume that museum visitors are people who in general feel these needs more strongly and try to increase their intellectual, spiritual, and emotional life. Educational needs can be felt by children, the youth and adults alike. We believe that the need to learn and to seek new stimuli is a natural human need. The role of a museum is to stimulate the educational needs of visitors, to meet them and respond with adequate exhibition approaches and various teaching tools which not only facilitate but also initiate visitors' learning.

What exhibition can hence be perceived as an efficient and stimulating educational medium? It is an exhibition which makes the most effort to meet visitors' educational needs and to satisfy them using various forms: offering them thought-provoking themes and particular stimuli in the form of a musealia together with numerous additional presentation tools which put the exhibits into context and clarify their meaning. An exhibition which is to be designed as an efficient educational medium, that is, an exhibition which contain not only musealias but also objects or facilities that play the role of a teaching tool.

The objective of such didactic exhibits (imagine a model of a wind power station or a simulator of the power of wind) is to make accessible the given theme and the content of the exhibition, the meaning of the collection objects on display and their context in the best and the most efficient way. The task of such exhibits is to satisfy the educational needs of visitors and to make an understanding of the presented realities easier.

Not only the theme but also the content of an exhibition can influence to what extent a museum exhibition becomes efficient. Also approaches and strategies which have been applied when presenting a theme play an important role. We now know that a single theme can be presented in hundreds of different ways. We thus reiterate that the easiest and from the point of view of visitors' learning also the least efficient and stimulating is to simply take some of the thematically related objects from a depository and place them into a showcase with a label. We will refer to such exhibitions of musealias without a context or any kind of explanation of their meaning as formalistic, non-contextual. This approach will form one of the poles between which exhibitions can be placed

depending on the approach applied. It is clear that this pole represents exhibitions that are the least efficient with zero support for visitors' learning.

The other pole consists of exhibitions in which creators have considered the educational needs of visitors already at the preparatory stage, and which contain various types of teaching and additional tools. These are integrated directly into the exhibition plan forming a coherent complex together with musealias and additional tools (texts and illustrations). Such exhibitions are designed to offer visitors various stimuli that would facilitate their curiosity and desire to learn new things and employing particular methods they make an understanding of the presented realities easier. Naturally, creators of such exhibitions follow verified pedagogical principles which can be applied not only to the work of educators but also to exhibition creators or to the exhibition itself. There are a number of didactic studies and research analyses that address the issue of pedagogical principles (e.g. Malach, 2003, Dostál, 2008); however, due to the lack of space, we will mention only some of the most significant ones.

Leaving aside the principle of a scientific character which is perhaps the only pedagogical principle that is applied in museums thoroughly, we need to mention especially the principle of consciousness and activity. To apply this principle in an exhibition means that its creators strive to make visitors actively and deeply interested so that they perceive the exhibition as one that was made for them and one which they will find worth visiting. Exhibition creators always conceive of an exhibition as something that has a beginning, a certain direction, and its conclusion – only sometimes do they also think about the ways in which to keep a visitor's attention in all the units of an exhibition, to keep them engaged, and to motivate them in such a way so that they want to see and pay attention to the entire exhibition. If a visitor only walks through the exhibition without making a stop at any of the exhibition units and trying to understand them, the efforts of museum workers are wasted. A success means deeply interested visitors who spend a longer time in an exhibition, and who walk carefully through its parts, and who ponder upon presented content. Based on prepared stimuli, they continue participating in a desired activity which helps develop and enrich their personality.

One of the most important principles mentioned in all lists is the principle of adequacy which in the context of museum exhibition can be perceived as the principle of not overloading visitors with an excess of unimportant information or with excessively 'overloaded' themes which contain many different

concepts. In this context, Shettel (1973) talks about 'operant span' which refers to a certain maximum amount of new information which can be conceived of in an exhibition at one time. This 'operant span' should of course not be exceeded but how can we determine the maximum amount of information and stimuli? Is an optimum possible to reach at all? Naturally, this is a subjectively perceived amount but still, we should not give up on trying to determine it. That is why many museums abroad test and evaluate their new presentations (especially for long-term exhibitions) which is connected to another pedagogical principle which is the principle of feedback. Implementing this principle helps us to diagnose blind spots in an exhibition or parts which are hard to understand, and approaches which are inefficient.

In this context we can see clearly that it is very important to differentiate visitors – at least into children and adult visitors because their operant span is completely different. We are then to apply the principle of adequacy to the age and abilities of various people visiting a museum. The principle of adequacy is also important to apply not only in terms of number of stimuli (concepts and objects on display) but also in terms of expertise. There are still a large number of specialised exhibitions which seem as if they are created for museum workers and not the public.

Sometimes we feel that the principle of adequacy to age and visitors' abilities, or, the principle of an individual approach is not possible to apply. However, successful exhibition that consider various groups of visitors (apart from the 'universal' visitor; these usually include children, school youth or people with handicap) prove that it is possible.

Another key principle is the principle of a complex development. This principle is often breached by museums on the basis of the character of their collections which often conform to either the cognitive side of visitor's personality or to their spiritual or emotional life. Also in this category there are a lot of exhibitions which try to balance their one-sided nature in adequate ways implementing elements that (usually) balance the exceeding intellectual character of the exhibition.

Also the principle of the interconnection between theory and practice is very important. Neglecting this principle in a museum means to present exhibition content that is not anyhow related to the day-to-day life of visitors. Without this relationship, visitors may find it difficult to see the purpose of museums within society.

And we will add yet another principle, that is, the principle of gradual 'didactic' delivery of a theme/topic: as already evident in constructivism, it is always easier to proceed from realities that are more familiar to visitors to realities more distant and unknown. It is good to always go from concrete to abstract, from simple realities to the complicated ones, from that which easily comprehensible to that which is difficult to grasp.

The principle of emotionality follows on from the fact that emotions have great impact on learning. A museum exhibition can be characterised as a setting/environment which influences and alters visitors' opinion on a presented reality, and which forms their awareness of the theme. When an adequate way of delivery is selected (or exceptional and emotion-stirring objects or unique things are presented), exhibitions may impact greatly on visitors' feelings. It is well-known that emotions have a positive impact on memory which is one of the reasons museums (using today's technical possibilities) often stage situations that create strong experiences. These museums know that cold showcases with objects do not create such a strong imprint in visitor's memory such as a passage way through a dark tunnel with sounds and walking on a shivering floor (an effect simulating a marching army in the Military History Museum in Dresden), or the movement of a body on an earthquake simulator (iQLANDIA science center Liberec, CZ).

Emotions are stimulated also by exhibitions that are 'humanised' as we refer to an influential trend of narrativity, that is, the presentation of a theme by way of a story of real people. Such a way of presenting is nowadays rather common and also very efficient (see the testaments of people whose lives depends on sea the National Navy Museum in Greenwich, or the responses of young people to their different sexual orientation in iQLANDIA Liberec). For the same reason to make a museum visit connected with an emotional experience, various entertaining elements or stations with activity or creativity offering a play or other stimulating activities are placed in the exhibition. In this case the aim is to create a feeling of happiness, optimism or surprise, that is, positive emotions.

Perhaps the most important principle yet is the principle of illustrative nature and thanks to its conception (to show real, authentic objects); museums are one of the most illustrative educational media. Stimuli do not have to be necessarily visual, but they can also be auditory, olfactory, gustatory, tactile or motoric. How to make really illustrative exhibition? As Maňák (2009, pp. 260–261) reminds us, if a connection is not made between a sensory organ

receiving a piece of reality and a given area of brain which processes this perception, an individual is not able to perceive any stimuli which means they do not see or hear. This often happens not only at school but also during a museum visit, especially when visiting a formalistic exhibition (a visitor is dependent on their ability to identify objects only by dates, functions, and place of origin, or, by placing an object into the system of certain field of study) rather than an analytical or contextual one.

This means that even though a musealia is the main determiner of museum education (it is the source and carrier of educational content as well as a teaching tool); presented objects in themselves cannot guarantee that a visitor will acquire new knowledge that would come as a result of cognitive or learning processes. New knowledge can be gained only when interacting with musealias and interpreting them for ourselves.

Such thesis is now accepted by museums, though it is not always duly considered in an exhibition. It is therefore important to emphasise that while the cognitive process starts with the observation and perception of concrete data, information, and perceptions; it is developed, deepened and completed by conceptual thinking – it is a mutual relationship of the sensory and rational processing of data of the learnt reality. (Maňák, 2009)³⁷ Modern understanding of the principle of illustrative nature is therefore based on the unity of sensory and rational procedure when acquiring new knowledge. A museum exhibition seems to be in this sense an ideal educational setting in which under certain conditions we can initiate the process of the transformation of perceptions from sensory memory to processing information into qualitatively structured units of a higher level in long-term memory and into verbal determination and concepts. (ibid, p. 261) The ratio between sensory perception and its rational processing depends on previous experience, the level of thinking and the developmental stage of a visitor; but also on the character of the new content that is offered by the exhibition. It is therefore logical that the notion of an exhibition for all has been surpassed. A ‘universal’ visitor does not exist. And should a museum exhibition be an efficient education medium, it must

37 According to Maňák (2009) this is the cornerstone of illustrative nature which he divides into object illustrative nature (a subject immediately perceives objects and phenomena) and verbally illustrative nature (a subject perceives a verbal description of objects and phenomena). Also the later type of illustrative nature leans heavily on previous sensory experience.

>> Fig. 162–163 Learning by doing and social interaction in a museum (Minneapolis Institute of Arts, USA), photo courtesy of Minneapolis Institute of Arts, 2014, 2009

consider this fact (e.g. by way of exhibition elements designed for children and the youth, or visitors with specific learning needs).

In terms of education, a reflective or problem-solving way of presentation is a very efficient strategy. In this case, the presented theme is delivered through the confrontation of various viewpoints where an exhibition by the tone of its narrative does not lead visitors to a definite opinion. An exhibition that poses questions motivates visitors to critically evaluate a given phenomenon or an issue and to take their own personal stand.

When an exhibition educates us using an accessible method with entertainment and activation elements, the experience from a museum visit becomes transformative – it becomes something visitors seek and appreciate. Thanks to the outlined specifics and especially thanks to the interaction with authentic musealia, it is a type of experience which can be offered to the public only and exclusively by museum exhibitions.

A museum exhibition that is to be a really successful educational medium should not only meet the expectations of visitors but also take into account current knowledge – be it related to the psychology of visitors, the principles of cognitive processes or pedagogical principles; the application of which determines the success of all educational media without any exceptions.

As mentioned by Lord & Lord (2001, p. 18), a museum exhibition is not a library and so it should not be ‘a book that we read standing’. A museum is not even a school or university where new knowledge is mostly delivered verbally. Therefore, a museum exhibition should not apply text as its primary presentation tool, and it should not be a kind of lecture in a space (see some of the panel exhibitions). However, it is neither a place of worship or a pulpit, it is not a film, a computer game or an exciting ride even though it increasingly implements audio-visual and interactive elements. (Lord & Lord, 2001, p. 18) In our opinion, it is necessary to find a balance between a formalistic presentation of objects, verbalism and multimedia which are sometimes used without purpose. Multimedia can attract visitors and leave great impressions on them but without conceptual content and objectivity, it leads to confusion; it is more entertaining than educational. (see the example of an exhibition with multimedia in one





<< Fig. 164–165 An example of a well-arranged orientation system in iQLANDIA Liberec (top), and an example of relaxation and educative zones in the Gallery of the Central Bohemian Region in Kutná Hora (bottom), photo by Petra Šobáňová, 2014, 2015

Italian town which for lack of other exhibits chose to present the theme of ancient Rome through a film projection of clips from Hollywood films. It was more of presentation of the film industry and its ability to make epic films rather than a presentation of the life of ancient Romans).

In museum presentation, original collection objects should not be put into the background but they should be at its heart. Multimedia as well as other non-museum tools should play the role of subsidiary tools, or there should be a hybrid type of relationship between a musealia and the additional tools which means that one cannot exist without the other.

In conclusion to this subchapter, we would like to mention the view of some authors who perceive danger in an exhibition that aims to be an educational medium. While THE educational role of museums has been emphasised by many museologists, and museums define themselves as educational institutions striving to increase public awareness, concerns over museums turning into schools still exist. (see Waidacher, 1999, Stránský, 2000) If museums accept that their exhibitions are to be an educational medium, will they lose their unique nature? Will an exhibition that facilitates visitors learning sufficiently be museum-like? And what does it actually mean to be museum-like? We believe that the identity of a museum does not have to be one associated with airy halls with polished wooden floors, high ceilings and hermetically enclosed showcases; with a formalistic approach to presentation. The most important thing is to place musealias (and their related knowledge) back into people's lives. Authenticity and credibility of presented objects are the qualities that visitors seek. The task of a museum is to facilitate the interaction between visitors and musealias using all accessible means in such a way that allows musealias to continue to exist within a society through visitors' new knowledge acquired in a museum.

7.2 Recommendations from Behavioural Psychology

The first group of recommendations are those that follow from the findings of behavioural psychology. Behavioural sciences, that is, sciences dealing with the study of human behaviour in a society are applied mainly in an American environment which means that many recommendations that are based on the relationship between an impulse (e.g. exhibition elements) and reactions (of visitors) are given by American authors.

Based on his research, Shettel (1973) recommends that exhibition creators focus on six key areas which for are the efficiency of exhibitions of utmost important. These include:

- definition of objectives,
- selection of content,
- order and structure of information,
- active participation,
- methods fixing acquired information,
- testing of efficiency.

An exhibition must have clearly defined objectives because without them it is not clear what it is we want to achieve or whether we will achieve it. Shettel refers to the so-called behavioural objectives which should accompany all activities related to the preparation of presentation of a given exhibit including the preparation of educational material and other supporting measures. Exhibition creators should ask themselves what it is that a visitor may add to their 'behavioural repertoire' after viewing the exhibition and what can make this repertoire richer. The answer should include not only the acquisition of new information but also some change in behaviour or attitude to the given theme. Considering the fact that visitor groups are usually heterogeneous, Shettel recommends to set multi-layered objectives – some designed for collectors, others for educated amateurs and others for laymen. A determining factor of multi-layered objective could be the age of visitors.

The key is certainly to choose an adequate content for an exhibition. The content can become clear once creators know what their objectives are and for what target visitors group or groups. The selection of adequate content which helps achieve the objectives is dependent on the specifics of the visitors group. This also applies to the amount of information that can be presented

to visitors at one time. Shettel reminds us of the existence of operant span which refers to a certain maximum amount of new information which can be conceived of in an exhibition at one time. Exhibition creators should be well aware of this phenomenon and aim not to exceed it.

It is also important to think about the order in which new information will be presented to visitors and to make sure that it can be easily followed when designing the exhibition. Shettel also points to the amount of strategies which can be used: from easy to more complex, from the beginning to the end, from general to concrete, inductive, deductive, geographical, etc. This thinking is part of advanced planning during which the fundamental approach to the presentation of a theme is decided.

Another key principle based on behavioural psychology Shettel describes is the importance of active participation. Also this aspect can be enhanced (or unknowingly hindered) by the concept of an exhibition. Active participation increases the visitors' ability to acquire and retain new information. However, it cannot be just any type of participation but such participation that is part of a certain activity, a concrete project or creative activity which in general significantly enhances the educational effect of an exhibition. What comes right after participation is the choice and application of methods that help retain newly acquired information. The objective of strengthening new information can be helped by verified in behavioural psychology; according to which people have the tendency to repeat behaviour for which they are praised, and to avoid behaviour for which they are reprimanded.

We add that this finding can be used within museums not in the sense of reprimanding visitors who do not pay attention to the content of an exhibition. But on the other hand it can help us understand why many people do not like to visit museums: maybe as children they were reprimanded in a museum or had an unpleasant experience – feelings from the unknown, huge and unfriendly space, by being shout at to keep quiet or closely observed by custodians. Naturally, they do not feel like coming back to those places. But a certain sign of approval (a symbolic reward given to children for accomplishing tasks, recognition of performed activity) can encourage further visits. Shettel (*ibid*) says that the methods are those that are efficient and hidden at the same time. An example of this is a game, but still he recommends not to overuse it: a museum is not and should not be an amusement park.

The last arrangement which according to the cited author increases the efficiency of an exhibition is due evaluation and testing of all exhibition components including additional material performed before the opening of an exhibition. This step is important especially because many exhibition components and additional material are costly and the financial funds allocated for exhibition should not be wasted on non-efficient items.

It is interesting to see people applying certain natural responses to various stimuli. Behavioural psychologists find these very important. They record them and analyse the relationship between these stimuli (e.g. the colours and lighting of various parts of an exhibition) and visitors' responses. Based on this, they can issue concrete recommendation, related for example to the entrance to individual parts of an exhibition: Dean refers to those as 'entry response' explaining that when having a choice, people will always choose the widest opening for an entrance. In the American museum setting characterised by the application of behavioural theories and findings, museum workers count on a list of observed rules, or, tendencies of human behaviour. These are informative which is why we list them below:

- people have a clear tendency to go right after entering an open space without interior layout;
- they usually chose to walk along the wall on the right;
- they have the tendency to stop at the first exhibit on the right;
- they are more likely to stop at the first rather than at the last exhibit;
- exhibits located near the exit are viewed the least;
- people like well visible exists;
- they prefer the shortest route;
- they read exclusively from left to right and from top to bottom which is why experimenting with the sequence of texts is not recommended;
- people do not like darkness;
- they are attracted by bright colours (the so-called chromaphilic behaviour), large dimensions (megaphilic behaviour) and brighter lightening (photophilic behaviour);
- an extensive number of stimuli leads to exhaustion from exhibits and has a counterproductive effect;
- 30 minutes limit has been monitored as the average attention span of adults;
- people are more likely to read large signs, that is to say, if a sign is written in large letters, people will read it. (Conroy, 1988)

Naturally, we cannot definitely say that exhibition creators should comply with all these tendencies and intentionally go against some of the stereotypes (e.g. to lead the visiting route to the left, or to place an interesting exhibit at the end of the exhibition, so that less attractive objects can be placed at the beginning of the exhibition and thus attract more attention). Dean (1994) is certain about recommending the use of a lot of light and colours, placing important objects throughout the exhibition, using frequently apt and brief signs written in large letters, or implementing diagonal or curved layout of exhibits which he perceives as stimulating. Creators also ought to pay attention to the transitional spaces and the management of visitors' movement within a museum which is certainly needed in large and popular museums that are visited by hundreds or thousands of visitors daily.

Dean is surely right to say that visitors' attention gradually decreases in 'common' exhibitions, and that objects placed at the end are viewed significantly less. That is why museums should strive to create a dramatic narrative to present a given theme. That is to say that presentations should have an escalating character culminating at the end. A good example of this method is the exhibition of reliquaries of St Mauro at the Bohemian castle Bečov or the presentation of the supposedly oldest wheel in the world in the City Museum in Ljubljana. In fact, these are exhibitions of one central exhibit. The exhibitions start with the introduction of context and the description of the whole situation – when and how the given object came to existence, and when and how it was discovered. In the last room of the exhibition, we can see the actual unique object on display without any interfering explanations. That is why we see the considerations of whether to place the most valuable object at the beginning or at the end of an exhibition as futile.

However, the question is whether the observed behavioural pattern of visitors and their responses are universally applicable, and whether the experience of American museum workers, to list just one example, can be applied elsewhere, or whether these are suitable only in a certain cultural environment. For example, Dolák (2012, p. 99) argues against the Dean's statement of 'dextrorotation' of visitors. According to him, the decisive impact on which way the visitor will go in an exhibition is given by the overall scenery. In a neutral environment, a visitor views an exhibition as a text, that is, from the left to right. To answer the above question, we must engage in the observing of concrete situations (e.g. observing of visitors and recording their behaviour in a particular



<< Fig. 167–168 Top – The visualisation of the future exhibition in the Reliquary of St. Maurus in the castle and palace in Bečov, CZ (completion expected in 2020 in renovated premises); the winning solution of an architectonical tender designed by SGL Projekt. Bottom – City Museum in Ljubljana (Slovenia), photo by Jan Dolák, 2013.

exhibition), or – better yet – in representative research. And this brings us back to the issue of insufficient research into visitors, their needs and responses.

7.3 Recommendations from Constructivism

Shettel's recommendations based on the application of findings from behavioural psychology can be complimented with recommendations from the findings in constructivism, a large group of social, psychological and pedagogical movements which among others also deal with the issue of gnosis, and are based in the axiom that knowledge is not the reflection of reality just as a social reality is not an objective fact but is in the minds of individuals incessantly reconstructed in the process of social interaction and communication. (see Berger and Luckmann, 1999) Knowledge is dependent primarily on thinking and not just on the contact of senses with stimuli. Equally sensory perception cannot be perceived as independent objective registration of some fixed reality; in a museum for example as an aggregate of musealias.

For museum exhibition creators, this leads to the following weighty consequence: the meaning of presented objects cannot be expected to be understood automatically, they are actually assigned by social players which is why the meaning can change from one person to other. We need to work actively with this finding and seek ways that could have a positive impact on the process of assigning meaning in an exhibition. Impulses for the application of these findings can be found especially in social cognitive constructivism which apart from social dependency of all learning also emphasise the importance of one's own interaction with object when acquiring knowledge. (Jandourek, 2001)

Constructivism was founded on the bases of previous philosophical findings related to the issue of sensory perception and learning. We can observe that already Kant (and after him a number of authors) re-evaluated the existing belief that human knowledge occurs only in a direct contact of the senses with

the phenomena around us, and pointed out that it is variously dependent on our a priori categories. These schools of thought are related to the so-called 'turn to language' which is a brief expression of an attention towards human language which plays a key role when constructing a social world of an individual; and in cognition. It is the language that the world uses to grasp and create, and, as Ferdinand de Saussure and others believed, there is no more important factor in the life of people and the whole of society than the factor of speech. Also, Ludwig Wittgenstein voices similar views in his work *Tractatus Logico-Philosophicus* in which he determines the boundaries of his language as the boundaries of his world. (Wittgenstein, 1922, p. 74) Just as a language is not enough for a human being to make a statement of the world in an un-clear and exact way, neither is a museum exhibition capable of the same. What can be done, however, is to influence the extent of such a statement, that is, the extent of its success.

Apart from the determination given by a language (the language of a subject, the language of our culture, but also verbal schemes integrating presented objects and the reality represented by the objects into conceptual structures), the key factor of cognition is also material culture (museum exhibits), that is, the specificity of museum communication, as well as social interaction. For cognition is best developed in a dialogue, in a social group, or in cooperation with other subjects. This results into the following recommendations for exhibition creators:

- to dedicate maximum attention to the selection of objects and the manner of additional texts narration;
- to select such themes and such ways of their presentation so that the content of a museum exhibition can be linked to the actual life of today's people;
- to stimulate social interaction of visitors within a museum exhibition;
- to add to the exhibition such elements that would stimulate visitors, e.g. creative activities, handling of objects, cooperation.

Many of the recommendations to constructivist exhibition were formulated by Hein (1999). He explains the way in which the process of acquiring knowledge in a museum exhibition can be influenced (often negatively) by the museum building or exhibition gallery. According to Hein, a visitor needs freedom of movement, the feeling of safety, and being in control of the space. The environment should be friendly, stimulating to the senses, but not irritating or aggressive – if not intended by the creators to present a certain theme in a more convincing way

(e.g. war, catastrophic phenomena). The amount of presented information should take into account the mental capacity of people otherwise it can have a negative impact on cognition. Another way in which the cognitive processes of visitors can be stimulated is in respecting their need for privacy and comfort when learning. Hein (ibid) suggests designing and adjusting the internal space of an exhibition in a way so that it appears smaller and contains nooks in which one can contemplate, relax or engage in activities in relative privacy. He appeals to the creators to make museum exhibitions more human and more pleasant for visitors.

The human need to have control over a space can be reflected in creating a high-quality orientation plan, that is, signs, maps, colour coding, graphic plans and ideograms, including human guides who are available to answer visitors' questions. The system of orientation is key; mainly because the feeling of uncertainty and confusion from being in an unknown place can make visitors uncomfortable and makes their learning impossible.

However, creating pleasant feelings and enabling visitors to navigate well in a museum does not guarantee that an exhibition will be accessible to visitors and that they will understand its message. Visitors must be able to make use of many different leads, including leads to generally known information. The presentation of unknown objects that are difficult to understand and that are accompanied with a text that speaks to visitors in an unknown language results in the inability of visitors to learn anything or to acquire any new knowledge. How can we then help visitors to make in their minds new meaningful units based on the exhibition?

Hein (1999) recommends the following two measures:

- to interconnect known realities with the new unknown ones;
- to implement common objects that are well-known to visitors into the main part of an exhibition.

The measures are to guarantee that connections will be created in visitors' minds between the known and the new realities. For example, in the exhibition on ancient currency we can also find current coins, or in the exhibition on steam energy we can find a tea pot. An exhibition designed according to constructivist principles presents new components in such a way that extends the existing knowledge of visitors. This, however, assumes they have good general knowledge which cannot be acquired in any other way but by incessant research.

>> Fig. 169–170 An example of the application of the constructivist principle by connecting a presented reality with visitor's experience and everyday objects – a plastic bottle in the geologic exhibitions in the Naturkundemuseum (Universalmuseum Joanneum) in Graz (Austria) warns about the impact human activity has on nature and at the same time it poses and unsettling questions (also by accompanying texts): What is going to be left behind by people in physical archives? Won't petroleum products and radioactive waste leave indelible marks? Photo by Petra Šobáňová, 2015

In many works, we can find lists of specific characteristics of objects which generally attract the attention of people which is why visitors go to them spontaneously and observe them for a longer time. These mainly include large objects, moving objects, something new, unusual or sensational (such objects usually serve the role of a big draw and a marketing tool, or, an iconic objects of the given exhibition project). Objects can become attractive to viewers for their value or the danger they represent; the attractiveness of the young of animals is used on TV and in advertising and it has the same effect in a museum exhibition. (Conroy, 1988, Dean, 1994)

When preparing an exhibition, it is necessary to take into consideration the physiological and other 'human' factors, e.g. the average size of a human body. It is necessary to apply common standards such as the average height of a standing person, eye level, the width of shoulders, arms stretched forward or upward or arms spread, the space necessary for turning around, and so on. Also the height of children and the eye level of people in a wheelchair must be considered as well as the dimensions of a wheelchair to make a wheelchair accessible exhibition. The viewing height is very important because people will always view things and read materials located at their comfort level. On the other hand, materials placed inadequately will be neglected. People have a tendency to sit on, lean on or rest their leg upon surfaces and spaces located at adequate height – it is good to be aware of this in order to protect places which are not suitable for such use, or, in order to make an exhibition more visitor friendly (by creating places which can bring more comfort to visitors). Visitors also need to be provided with sufficient personal space for viewing an object. A zone in which we expect increased concentration of people should be afforded the largest amount of space (in more detail Dean, 1994).

It is well known that emotions have a great impact on the learning and memory processes. It means that if a reality (such as an exhibition visit)





<< Fig. 171–172 Example of illustrative approach and the application of well-known object in the exhibition of the Municipal Museum in Skuteč (CZ), photo by Petra Šobáňová, 2014

is connected with certain positive or negative emotions, it remains deeper in the minds of people and for a longer period of time. That is also why many creators employ dramatic elements or try to create an illusory presentation of a theme which helps draw visitors deeper into a fictional world, as well as making the barrier between presented reality and a viewer seemingly disappear. It is an illusion but with a powerful effect which is nowadays greatly enhanced by new media. Thanks to various dramatic and illusory elements, a visitor can be transported into the world of fiction and experience a dramatic event (the drama of a battle, the escape from enemies, hunting for a wild animal, etc.). It is evident that the current age of media has changed our visitors and that the means that were efficient fifty or a hundred years ago seem today clumsy and have little effect on a viewer. The efforts to make an illusory experience can turn into embarrassment (e.g. the use of overly stiff figures in dioramas, crackly speaker with ‘authentic’ music, taxidermy in natural dioramas placed on a marble floor under an opulent chandelier and so on).

Visitors’ emotions can be triggered also by a much simpler means; sometimes more efficient. Simple presentation of impressive evidence (a letter sent during war, clothing of the victims of a disaster), photos, and testimonies of real people – these can act strongly on visitors’ emotions, even without using illusory or overly dramatic elements. A similar effect is also offered by installations, or the presentation of a theme with the use of artistic means (e.g. the Jewish Museum in Berlin). The choice of all means that are to increase illusory notions and trigger emotions should be made carefully – to find the right amount is the task of an exhibition creator in accordance with his sense of invention and taste.

Learning about the world through relics of the past does not always involve only the transmission of new information but also the concrete specification of the content of concepts, the confrontation of subjective images of things, as well as associations triggered in human consciousness at the aesthetic and ethic level. For example, the handle of an axe touched innumerable times by human hands or Palaeolithic objects smoothed by human touch and used for processing fur can speak more convincingly than any verbal description. This is the act of emotions with all its human dimensions. Just as a composition is the



Fig. 173–174 An illustrative haptic tool (visitors can compare classical cotton fabric with silk) and ‘smelling boxes’ with spices; National Maritime Museum v Greenwich (UK); photo by Petra Šobánková, 2014

expression of a composer’s legacy which we do not want to and cannot express in verbal code, the same applies with the above-mentioned examples³⁸.

7.4 Recommendations for the Text in Exhibitions

Another component of an exhibition are texts which Josef Beneš (1981, p. 71) sees as ‘necessary evil’, and others as an essential element that facilitates understanding of the content of an exhibition, naturally when used adequately. Not only its quality but also the amount of texts is important for the overall impression of an exhibition. A text in an exhibition should like an illustration in a book and not the other way around. While there are only a few texts in aesthetic exhibitions (e.g. National Archaeological Museum in Madrid, Kunsthistorisches Museum in Vienna, Archaeological Museum in Poznan), the majority of museums tend to exceed its use. Texts must be correct in terms of facts but

38 It was Otto Čáčka (1997) who in the Czech context dealt with the issue of imaginative-experience communication, its function and unexplored nature in the museum

also well written in terms of language skills, and above all: they must be easy to follow which is not always the case.

The role of texts as points of orientation and explication is certainly very important. Such texts have a great impact on the overall success of an exhibition, as well as on the learning of visitors. That is why many authors analyse texts in their work (see e.g. Lord and Lord, 2003, Wetterlund, 2013, American Alliance of Museum's Curators Committee, 2014b, Beneš, 1981, Douša, 2008a, Dolák, 2012, Šobánková, 2014a, 2014b). Texts in exhibition can be divided into the following six categories:

- title signs,
- sub-titles – or the titles of the sections of an exhibition,
- introductory text – entry text summarising the realities which led to the making of the exhibition or to the selection of the theme,
- group texts – a continuous accompanying text common for a group of objects (usually on a textual panel in an individual part of an exhibition),
- object labels – brief labels with information about an object,
- distributional materials – promoting information about a museum, brochures, catalogues, etc. (Dean, 1994, p. 110)

Dolák (2015, p. 55) offers other categories. According to him, texts should be distinguished on three levels that are graphically and colour coded:

1. Basic labels. Simple information in one or several sentences. It gives the most basic explanation – if satisfied, a visitor continues in their visit. Brevity is not always applicable. A layman might not be familiar with the title 'wharve'³⁹ or 'tutuli'⁴⁰.
2. A brief text explaining basic context without which the information on a given panel or a showcase would not be complete.
3. Detailed explanation of the issue with possible additional references for people who are genuinely interested.

The third and last level does not need to be placed on a showcase or a panel. Such information can be given in an electronic form by way of nearby technical equipment. Texts, labels, images or sounds can be mediated using the classical

39 A wheel or round piece of wood on a spindle.

40 Spiral targets with conical tip from the Bronze period in central Europe.

use of a PC but also mobile applications, MP3 and MP4 players, Near Field Communication (NFC), QR codes⁴¹; there are some problems also using Radio Frequency Identification Device – RFID, or bar codes as we can see in the Belgian Préhistosite de Ramioul⁴².

Increasingly, visitors obtain and read texts using their smart phones which can display other additional information through applications. In the Czech Republic, such modern approaches can be found in the National Museum in Prague, Museum of Vysočina in Pelhřimov, and elsewhere. Even though, these offer really interesting possibilities (e.g. augmented reality), we need to keep in mind that the excitement from communication through mobile phones is not shared by all the population. Elderly people especially cannot use this technology and they do not really want to read texts on a small display, or they simply cannot see them.

On the pages of the Slovak journal *Múzeum* [Museum] (Douša, 2008b) and in the anthology titled *Muzejní výstavní tvorba* [Museum Exhibitions] (Douša, 2008a) it was Pavel Douša, among others, who dealt with the issue of texts in exhibitions. Pavel Douša points out some of the traditional mistakes that occur when creating texts for exhibitions (overtly academic, inadequate size, lighting, length of texts, the use of serif typeface, wrong contrast, low quality print) and offers some other solutions. Texts should be written in straight font rather than italic which only makes reading more difficult. A frequent mistake is committed when placing text on glossy, see-through or image backgrounds. Texts should be aligned to the left, and a compilation of texts should be justified. The accent of some authors on the use of passive or active voice in sentence is arguable. This could create problems for example in the field of Archaeology. Especially in archaeological exhibitions, we are not always sure ‘who made it’, who was ‘the active one’. That is why we often use for objects the following descriptions: it was made, it was used, it was hunted, etc.

Very arguable still is to try to optimally quantify the length of texts. A free-lance journalist, Laura Gascione says that graphic manuals for museums mostly agree on the length of 100–150 words for a panel, and 30–50 words for a label. (Douša, 2008a, p. 12) We need to keep in mind the plethora of muse-

41 An inspirational work on the use of QR codes has recently been defended at ÚAM FF MU as her bachelor thesis by Bc. Barbora Vyzinová. Available online at www.muni.cz

42 State of things in 2009.



Fig. 175–176 Top – Préhistosite de Ramioul, Luty, Belgium; photo by Jan Dolák, 2009; bottom – Auschwitz, glasses of the victims; photo by Dimitris Sfikas, 2010

um exhibition types, some of which require more texts, others less. For example, the exposition of the former concentration camp in Auschwitz in Poland is rightly almost without any texts.

The recommendation of Armina Neal based on the fact that visitors are less likely to read texts longer than 60–65 words is more qualified, just as the recommendation for the optimal length of films to approximately 2–3 minutes. (Neal, 1976) Excessive use of texts exhausts visitors and distracts them from focusing on the authentic message.

It is also desirable to communicate with visitors from other language regions. Providing labels and texts in two or three languages can, however, pose serious problems. Not only is the overall length of the texts multiplied, but it is virtually impossible to place all the texts at eye level. Here we suggest using technical equipment that provides information in the given foreign language. Texts in foreign languages are not only an act of responsiveness in an effort to increase communication but sometimes such texts can go beyond the museum and have a certain society-wide almost political dimension. A total absence of the Slovak language in the Royal Palace in Visegrád (Hungary) is disappointing, on the other hand, a Slovak castle Modrý Kameň⁴³ does not have many texts in the Hungarian language either.

The leading problem of museum workers in terms of texts is that they have the need to say ‘everything’ or at least ‘as much as they can’. The result is information on the place where the object was found, by whom, and even its registration number. From the visitors’ point of view, such information is secondary; it distracts them and brings them little benefit.

As for the titles (be it the title of the exhibition or its individual parts), they are very important because they provide visitors with the primary information. That is why they should be catchy, and also visually attractive so as to look impressive on promotional materials. The title points out the main theme and content of the exhibition, and its task is to attract attention and interest. The exhibition creators should avoid hackneyed phrases, clichés and talkativeness. The title is to inform visitors of the theme without giving away too much. Its purpose is to stimulate people’s imagination and to motivate them to the visit. It should be brief (max. 10 words) and should create a fitting atmosphere, be it humorous, serious, controversial or respectful. (Dean, 1994)

43 Related to the significant Renaissance Hungarian poet Bálint Balassi. State of things 2013.

Equally important are also sub-titles which play a uniting role of both visual and verbal guide through the exhibition – they represent its points of orientation. Dean compares them to newspaper titles as they play a similar function. They are a type of signs that navigate visitors, and their task is to organise the exhibition into a structure and provide brief information about their individual parts. After reading a sub-title, visitors should have a general idea about the topic of the given part of the exhibition. When creating sub-titles, a play on words ignites visitors' imagination, whereas opposites, alliteration (identified by the repeated sound of the first or second letter in a series of words), metaphors and others stimulate interest. While metaphorical and often general titles of an exhibition cannot do without further explanation, the importance of sub-titles should be clear right away. According to Dean (1994), a sub-title can be longer (max. 20 words⁴⁴), but always concrete. It should be printed in large font and placed in a visible place within the exhibition where it can be read even from distance.

Regarding introductory, or, entry text, it is a kind of a 'preface' to the exhibition introducing the theme, the leading idea of the exhibition and the motivation behind it. It is the first lengthy text of the exhibition which is why it should provide introductory and necessary information to understand the content of the exhibition. Traditionally, it is placed in the vicinity of the entrance into the exhibition gallery, or on the right at its beginning. Dean (1994, p. 113) recommends for the introductory text to be of maximum 200 words, and divided into several apt paragraphs. It should also have the form of a complete statement on the main idea of the exhibition and the reasons which led to creating it.

Also all other related texts of the exhibition have not only an identifying but primarily explication role. A text panel or a smaller banner located anywhere near exhibits is usually part of every content segment of the exhibition, or of a group of objects which share the same characteristic, or represent a certain concrete phenomenon. Creators of exhibitions that contain mainly didactic hands-on exhibits usually place a text at each exhibit – so that it is clear what phenomenon a given exhibit represents and how to approach it. Texts should be apt, unambiguous, and of a high language and stylistic level. According to Dean (*ibid*, p. 114), the recommended length of such texts is a maximum of 150 words. The same author also recommends the implementation of a so-called

44 Author's recommendation applies to the English language only: other languages would surely have different word limits perhaps even less.



Fig. 177–178 Left – an example of a caption, Explora Children’s Museum, Museo dei Bambini in Rome (Italy), right – an example of well-designed textual panels with images; National Maritime Museum in Greenwich (UK), photo by Petra Šobánková, 2014

‘kicker’ which introduces the text. The role of the kicker is to attract attention and draw in more readers. It has a form of an element (a word, a thought, a question) which draws attention or triggers a surprise.

The text of labels is also of utmost importance even though it is sometimes given least attention. Even a well-prepared exhibition can fail on the basis of labels that were not well considered and are poor in content. Labels together with other texts conceptualise the educational content of an exhibition, and as Dean stipulates (1994, p. 110), they give a voice to the collection object. We have already talked about the fact that learning new things depends primarily on thinking, and not only on the contact between senses and a sensory impulse. And it is the texts and labels that help verbalise the content which is present in the objects and what is hidden ‘behind them’. It is no exaggeration to say that labels and other accompanying texts in an exhibition play a decisive role in understanding the exhibition – this is the case when a museum visit is not organised or guided by a tour guide, or facilitated by other educational activities. Texts help set the content within its conceptual schemes and to integrate it with the existing structure of visitors’ consciousness. That is why the preparation of all texts must be closely observed.



Fig. 179–180 An example of well-designed textual panels with images and an example of well-designed explicating and referential elements; National Maritime Museum in Greenwich (UK), photo by Petra Šobáňová, 2014

The text of labels and texts on panels or in other information sources within the exhibition explain, broaden and reveal important aspects of an exhibition. While labels are more likely to identify and specify exhibited objects, other accompanying texts serve as the primary and detailed educational source of the exhibition. They point out significant aspects of the theme and clarify the importance and legacy of exhibited objects.

The task of the texts is to help interpret the exhibition and apart from titles, labels and accompanying texts they also include distribution materials such as brochures, educational (work) sheets, programmes and detailed catalogues. These usually contain the reproductions of key exhibits and offer further information which was not possible to include in the actual exhibition. This kind of material supports people's interest in the given theme and stimulates their further studies; and it can also be a nice souvenir.



<< Fig. 181–182 An example of well-designed explicating and referential elements and the overall concept of texts and images in the exhibition in the Science and Technology Center Ostrava (CZ); photo by Petra Šobánková, 2018

7.5 Summary of the Current Trends and Problematic Moments in Today's Presentations

A focused research study of museum presentation, to which both of the authors of this book have dedicated many years, shows that the degree of exhibitions excellence is very unstable and the shortcomings current exhibitions suffer from cannot be simply blamed on the local conditions or lack of financial resources, lack of time, limited space for exhibition, etc.

Recalling Beneš's basic categories of approaches to exhibition making, we can divide them as follows:

1. gallery approach – the exhibiting of 'beautiful' objects, emphasis on the individuality of objects;
2. didactic (museum) approach – linear, chronological approach from – to, presentation of objects accompanied by maps, drawings, texts, sometimes even by modern technology, etc. (absolute majority of existing exhibitions); there might (but not necessarily) be some modifications:
 - dramatic approach (State Museum of V. V. Mayakovski, partly Fires of Moscow – both in Moscow)⁴⁵
 - associative approach – not very common (Stockholm – exhibition on the History of Sweden)⁴⁶
 - multimedia show (Museum of the Origins of the Polish State in Gniezno, Poland)⁴⁷
3. 'in situ' exhibitions. Ideally with the preservation of the original furniture in the original setting (there are a number of modifications to this approach).

When we said that contemporary museum culture is going through many changes and innovations, we were referring mainly to the second approach to

⁴⁵ State of things in 2010.

⁴⁶ State of things in 2007.

⁴⁷ State of things in 2007.



<< Fig. 183–184 Top – an example of gallery approach: view of Museum Schnütgen in Cologne (Germany), bottom – and example of didactic approach: an activating element in the exhibition of the West Bohemian Museum in Plzeň (CZ) – based on the living history strategy; photo by Petra Šobáňová, 2014

museum presentation (or alternative presentations in children's museums or science centres) – while the other two, that is, gallery and 'in situ' ('conservational') approaches remain, in the context of applied presentation approaches, in relatively stable, less innovated forms. The problematic aspect of classical gallery or conservational exhibitions typically include lesser communicativeness in the exhibitions and frequently neglect other groups of visitors and are focused on the imaginary universal visitors (meaning educated adults). In art museums and galleries such an issue is resolved by offering a list of diversified educational programmes or increasingly by the boom of application software which is freely available for visitors and which helps them understand presented exhibits. In the field of monuments, such possibilities are now being discovered but in the majority of institutions the less efficient manner of interaction, in the form



Fig. 185–186 Examples of 'in situ' presentation: left – a monument in a conservation built area in Olomouc (CZ), included in the list of UNESCO world heritage: Holy Trinity Column built between 1716–1754; photo by Ondřej Ness, 2016; right – Pompeii, musealised relicts of an ancient city in the region of the metropolitan city Napoli (Italy); photo by Petra Šobáňová, 2015

of group tours prevails. The problem and low efficiency of such a type of presentation is surely evident to all readers who got to this page.

In terms of the historical development of presentation activities in museums, we can conclude that the number of exhibits on display is gradually decreasing. Halls filled with objects without any context which were typical at the turn of the 19th and 20th century are becoming less prevalent. Sometimes an exhibition includes a single exhibit only or one main exhibit such as in the case of the Vasa Museum in Stockholm, and Plimmer's Ark in Wellington (in both cases it is the exhibition of one ship), or in the City Museum in Ljubljana (apparently the oldest wheel in the world). We can say that while authentic objects are being exhibited with lesser frequency, the importance of supporting, that is, explication and illustrative elements is growing, including the didactic exhibits, didactic toys, or digital products accessible from various devices.

Up to now we have focused mainly on the trends of contemporary museum culture, and in the following list we will offer brief descriptions of the most frequent mistakes committed while designing a museum exhibition.

Non-contextuality

If we were to summarise contemporary modern trends of museum exhibitions, we could use the words contextuality and narrativity. The opposites to those two words are non-contextuality and formalism. An exhibition creator must be aware of the fact that every exhibit has different ways of communicating; they should therefore always strive to maximize their ability to convey a message of the given exhibit, and to place it into a context. Sometimes it is advisable to move from explication (how to understand it) toward instruction (how to use it). In any case, the theme of the life in Neolithic period is not the same as the display of archaeological finds from this period. That is why we perceive non-contextuality as one of the basic mistakes of museum exhibitions.

Do we present a theme or the history of a museum objects' discovery?

Sometimes we make mistakes already at the start when setting our basic objectives. Instead of presenting a particular time in a given region, we present the history of the research into the period (e.g. an archaeological exhibition at the castle in Cheb, CZ)⁴⁸. Instead of presenting the nature of a given region, we

48 State of things in 2007.



Fig. 187–188 Top – Vasa Museum, Stockholm, Sweden; bottom – Pimmer's Ark, Wellington, New Zealand; photo by Jan Dolák, 2007, 2006

present the results of the collection activities of one individual which materialises into exhibitions of thousands of butterflies with names in Latin without any context or explanation, or into exhibitions of minerals (both are examples from J. A. Comenius Museum in Přerov, CZ)⁴⁹. Instead of presenting the nature of a particular region, we fixate on a natural science exhibition from 1884 (sic!) believing that presenting objects in the way that was used over 100 years ago is an interesting theme for the wider public (Museum and Gallery in Čáslav, CZ).

Too wide a theme

The wider a theme we select, the sooner we usually ‘run out of breath’. We will not have enough original or attractive pieces of evidence for such a theme. That is why museums dedicated to world religions or world architecture (both located in Taipei, Taiwan) resign themselves to exhibiting generally well-known symbols in some parts of their exhibition (a cross, David’s start, etc.), and to a model of the Sydney Opera house. Such malpractice also includes extensive use of comparative materials and information.

Attempting to say it all

Another frequent mistake is to attempt to ‘say as much as possible’. That is how we find information included in the label saying that this archaeological find is from the grave no. C12 and this one from C42 (Hongkong Museum of History)⁵⁰ which might not be exactly clear to many professional archaeologists let alone the general public. Also in otherwise better-than-average exhibitions of the Museum of Romani Culture in Brno, or the Museum of the Jindřichův Hradec region (both in the CZ) we can find included in basic labels ‘flawless’ information about the book from which passages are cited including the ISBN number or the serial number of the engine in the pursuit plane messerschmitt. Such data which is completely inomissible in a publication are entirely omissible in an exhibition. If even the curator does not know such data by heart, why force them onto a visitor? Equally useless, almost contra productive, is mentioning a museum’s inventory number on the labels. As ad absurdum we can use the example from a museum in Amsterdam where in some cases an inventory

49 State of things in 2011.

50 State of things in 2008.

number is the longest piece of information about a given object⁵¹. And the Jewish Museum in Prague went even further when their new exhibition located in Maisel's synagogue included not only registration numbers of objects but in the case of facsimile also the number under which the objects are registered in the national archive or national library. Mysterious abbreviations in Anthropos in Brno (CZ) – KNM and a number – tell us the inventory number of the original of the skeleton which is located in the National Museum of Kenya in Nairobi! Such information is of course for a regular visitor completely redundant.

Fear from marginality

The previous examples are closely related to the so-called 'fear from too little', that is, the extensive use of comparative materials. As if the theme we choose is not enough and it is necessary to compare it to realities from elsewhere. This is quite evident in the exhibition of Ostrów Lednicki Island⁵² but also in many other institutions. To be a local or a regional museum is no shame, the attempt to gain a worldwide reputation is in all cases contra productive.

Mistakes in the concept of texts

As for texts, often we find their use inadequate. They are either too short (archaeological museums in Poznań and Madrid) but usually because they are too long. We need to realise that an image illustrating the use of a wharve may be more comprehensible than just one word or a lengthy text. Our experience is that in many cases texts are written in specialised language and are really difficult to follow. Other extremes are cases of forced 'folksiness' in texts. The emphasis on comprehensibility must be put also on other additional information such as maps, graphs which are often mechanically copied from specialised books.

Isolation of fields

Modern museum exhibition management strives to release itself from the rigid categorisation of exhibitions into ethnographic, historical, natural science, etc.

51 State of things in 2011.

52 Ostrów Lednicki Island is one of the most famous archaeological sites in Poland. The exhibition in the local museum represents mostly formalistic presentation of objects accompanied by an extensive photo-line of the history of human kind from the predecessor of human being to the Sydney Opera. State of things in 2007.

but it tries to approach the explanation of the world (and a museum collection is a certain image of the world) in a holistic sense of the word. A good example of this can be observed in the Museum of New Zealand Te Papa Tongarewa in Wellington. For example, the exhibition entitled *Blood, Earth, Fire* deals with the tectonic nature of New Zealand which is subjected to frequent earthquakes which is certainly a geological phenomenon which has a significant impact on the natural life and on the work and life of people⁵³. Recently, this museum cancelled the exhibition entitled *On the Sheep Back* which described the importance of sheep for the life of New Zealanders. It was partly a natural and partly economic, historical and ethnographic exhibition⁵⁴. In the case of some themes, no human activity can be conceived of without the reference to nature and climatic changes; we refer to the entire period from the origins of human being to modern time. A small leap forward in overcoming this artificial categorisation of themes into fields could have been the latest exhibition of the National Museum titled *Light and Life*, which aimed at contextuality but actually stayed very much within the boundaries of zoology – while it could have made links to physics and other fields. A more successful example of integrating fields can be the exhibition entitled the *Story of Stone – the Exhibition of Geology, Archaeology and Collection of Stone Monuments* which is offered by the Regional Museum in Olomouc (CZ). The exhibition monitors the theme from the oldest history of new age and stone is introduced as a rock, as an artefact (e.g. in the form of a tool) and as a work of art. The exhibition hence offers a real multidisciplinary approach as it integrates the viewpoints of both natural sciences and arts. Even though the majority of new exhibitions go partly beyond their original ethnological, historical or other character, it is often only to a minimum extent which is a shame.

Attempting to achieve balance at all costs

The key decision is whether we design the scenario of the exhibition as an ‘epic narrative’ (more frequent with long-term rather than short-term exhibitions) or whether we focus on the selected key ‘micro-images’. A compromise in

⁵³ State of things in 2006.

⁵⁴ In the Czech context, a successful example of a holistic approach was the exhibition titled *Water and Life* in the National Museum in Prague in 2003 in which this substance was presented also as the habitat of fish, a traffic route, and a means of subsistence (fishing) and the carrier of disaster (floods).

which we present all historical periods with the emphasis on exceptional events can be a good solution. We consider to be one of the gravest mistake of many exhibitions is their attempt to spatially 'balance' all periods of time, significant ones as well as the less significant, periods of which we have a plenty of information (exhibits) as well as periods where the results of our research are still lacking. Such a 'balanced' exhibition can be seen in the Museum of History in Moscow where the key information (a part of Russia is the cradle of not only the Slavs but perhaps also the Indo-Europeans) is entirely lost in a sea of information.

Technology for technology itself

Another neuralgic issue is the unclear relationship to using modern technology. Technology is surely welcomed in all fields of museum work. But we should be careful when it comes into museum presentation. Generally though modern technology should be welcomed, some exhibitions could not really work without it (e.g. Reykjavík 871±2, Museum of New Zealand Te Papa Tongarewa in Wellington, underground of the Archaeological and Historical Museum in Montreal, etc.). Technology must, however, be only the means to a better presentation of a theme and not the objective that leads to film shows as we can see in the Museum of the Origins of the Polish State in Gniezno, Poland⁵⁵. It is in the right balancing between the use and non-use of modern technology that we see the key task of the contemporary museum exhibition activities.

Digression from reality

Another key factor of the future museum development is also the well-balanced relationship between a museum object, modern technology and the truth (reality). Interesting questions are being raised in relation to the development of virtual reality and augmented reality in relation to the development of digital media but they also bring other issues apart from the issue of the right amount of technology in an exhibition.

With a reference to Umberto Eco (his visiting of American wax museums is well known) and other authors, Peter van Mensch fittingly notes that museum reality is becoming a certain type of hyperreality – it is more beautiful, more exciting, more truthful than the reality outside the museum. The reality

⁵⁵ State of things in 2007.

>> Fig. 189–190 Top – a diorama in the Slovak National Museum in Bratislava (SR), bottom – view of the exhibition on the human body in the Natural History Museum in London (UK), photo by Petra Šobáňová, 2009 a 2012

is designed. Fairy tales for kids become reality, historical reality becomes a fairy tale for kids. The past is made more beautiful, sanitised. Assumed reconstructions are in fact new constructions. And the specialised literature offers the following terms: *inszenierte Geschichte* [staged storytelling], fake-lore, reality as design, the sanitised past. (van Mensch, 1992) On numerous occasions, Zbyněk Z. Stránský criticised museum hyper reality.

In this context Ivo Maroević asks whether museums present objects or concepts; but there is no one defining answer. According to him, we present concepts through objects but also objects that facilitate concepts. (Maroević, 2002, p. 78) Maroević is moderately conservative in his approach to the presentation of virtual reality. He compares it to the song of the Sirens behind which there is no real truth, it is too seductive and too subjective. It can form a certain backdrop but on the scene the main protagonists of the play must be real objects. (Maroević, 2002, p. 78) Also an American museum scholar Stephen E. Weil asks the same question as Maroević, and offers a similar answer. (Weil, 1988)

And Tereza Scheiner writes that the notion according to which exhibitions created with ‘leads’ or transformed into multimedia shows as a means of communication must fully absorb visitors, is a grave misconception of a fantasy. (Scheiner, 2002, p. 99)

In the Czech Republic, it was Ladislav Kesner who dealt with these questions. His take on this is that many voices of today say that a successful exhibition must be interactive, dynamic, it must draw visitors in with the use of modern digital and communication technologies. We should apply certain scepticism and common sense to deal with this hypertrophied rhetoric of interactivity. (Kesner, 2005, p. 195) Ladislav Kesner is certainly right, though we would substitute the words scepticism and common sense with creative approach based on profound specialised and museological knowledge⁵⁶.

56 The thin line between an adequate and less adequate use of technologies can be shown on the example of the exhibition in the Museum of New Zealand Te Papa Tongarewa





<< Fig. 191–192 National Gallery in London (UK), Kampa Museum in Prague (CZ) and thousands of other museums around the world – educative media generously applied; photo by Petra Šobáňová, 2013, 2018

A museum scenarist simply cannot start their exhibition plans thinking that an exhibition must be full of multimedia technologies or tactile elements. These are merely additional; they are the means, sometimes very useful and thanks to the exhibition designer also organic, but still they are dispensable. A discourse of a museum exhibition is far more complex and it cannot be reduced to a greater or lesser number of certain elements in it. As Scheiner believes, the real communication (pedagogical) dimension of a museum is not the result created by means managed by didactic operations based on logics, but a spontaneous flow between an individual's capacity for imagination and the amount of languages within an exhibition. (Scheiner, 2002, p. 101)

We believe that both a museum specialist and a museum visitor share the same goal, which is to have access to a situation. The objective of a specialist is not a priori a certain object, a find (a shard, skeleton, construction, etc.). A specialist aims to learn about the subject matter, with their work a specialist hopes to contribute to this knowledge, to find the new and to disprove the invalid. To reach this objective, they use certain methods which help them get closer to new finds and findings which they interpret and use to move the new knowledge forward (or rather the knowledge of other people). By doing so, a specialist realises themselves and finds 'beauty' in it. Also a visitor desires to learn something new, to broaden their knowledge,

in Wellington. The geological instability of the landscape is represented by the model of a house in which visitors can experience earthquakes of various degrees on the Richter scale. A large-size brick placed in the middle of a baby's cot evokes fittingly the image of the adverse consequences of such geological phenomena. Immediately beside the 'house' there is a measuring device similar to a personal scale which measures the degree of earthquake we cause when we hit the device with a large mallet. While the first example evokes a true feeling in visitors of experiencing an earthquake, the second one inclines to a simple fairground amusement, to a kind of collection of curiosities and perhaps even to misunderstanding. After all, no earthquake is caused by using a large mallet; no human being has such power to cause even the tiniest earthquake.

but also to let the exhibition act on their emotions. While a specialist strives for performing well their work, a visitor seeks an active form of entertainment and learning. For both of them, the object is just a means to get something. In our view; the fact that in museum exhibitions this sometimes seems to be the other way around is the biggest deficiency yet within a museum exhibition. As if endless rows of various finds with texts (labels) represent the final objective.

In this context, we need to realise that while 60 years ago a plain piece of information saying 'this is what a bronze dagger looks like' was the order of the day in most museums, today the situation is entirely different. The Internet provides us with infinite number of photos and labels to objects 'of museum type'. This of course does not mean that museums should do less. It is necessary to enter a freed area perhaps with a different presentation product rather than just simple exhibition of an object. And in what way we should do that is something this book aims to answer. More than a hundred years ago Alfréd Lichtwark wrote that if museums manage to adjust to the time, they will not fossilise. And his words are valid today.

At the discussions on this theme, extreme approaches often resurface. They say to either conserve the status quo as well as all approaches of the past, or, to implement new radical approaches the application of which in the museum practice could lead to the dismantling of today's museums. Josef Beneš aptly noticed that those who aim to create museums that are less museum-like (that is to free museum halls of their deathly emptiness), and those that aim to make museums more museum-like, or museologise them (that is to involve them in the life of the society) in fact want the same thing. (Beneš, 1981, p. 305) And then we endlessly read in specialised texts about 'new museology', 'critical museology', or 'post-museum' or even 'anti-museum'. We believe that none of this matters. What matters for society is high-quality museology and high-quality museums.

The future of museum communication will depend on the available spatial, technical, personal and financial conditions. But before a museum worker makes new requests of this kind, s/he must know, what to want and why; so that their arguments are convincing. To rely on some information-imparting ability of objects placed in a kind of temple of knowledge would be foolish. A museum exhibition must be a life bridge that leads to visitors' understanding, a bridge between the scientific research base and the public. On the other hand, a museum exhibition must, in our view, remain a museum product. It is necessary to find our own playground which is not present in other cultural and educational insti-

tutions, that is to say, to create exhibitions and follow-up programmes which will not double with anything else and which will not substitute the role of anything else either. Entirely wrong is the notion to turn museums into multimedia facilities, that is, to substitute objects with only images, computers, sounds and videos, managed from some complex panels of control units. On the other hand, to avoid modern technology would mean to deprive museums an expressive means of new dimensions. Technology should be used only where desired messages cannot be expressed in other ways, or where it can help express further important dimensions of the content present in an object.

An ideal solution is certainly not a short-term exhibition that leaves no expression on the faces of visitors, nor a long-term deathly exhibition. Considering the fact that making a museum exhibition is a rather demanding activity not only in terms of finances but also in terms of personal resources and time, it is advisable to design an exhibition that would last at least several months, and ideally not in one place only. On account of fast developments in sciences as well as exhibition approaches and practice, we cannot address the public with the same product over and over again. When preparing an exhibition, we must work from an unrestrained practical orientation, from individual amateurism towards collective, highly professional performance, and from unrestrained immediate ideas toward long-term planning, and without exaggeration, toward well-thought-out strategy.

In conclusion we wish to emphasise the following aspects which are key to any optimal development:

- educational programmes for museum workers that are broader and of higher quality, in this case not only for curators but also for artists, public relations workers and also management;
- wide production and accessibility of high-quality museological literature, including university textbooks, translations of significant works into various language versions;
- exhibition critical reviews, the possibility of discussing what went well and what is open to dispute;
- deep analyses of the effect of exhibitions on different groups of visitors.

The majority of exhibitions, which were analysed by the authors of this book, are still considered to be object-based (formalistic). Certainly, this approach to presentation is easier than others. Intentionally and for good reasons, the present text offers solutions that are more complex, perhaps not financially but



<< Fig. 193–195 Top – Museum of New Zealand Te Papa Tongarewa, Wellington, photo by Jan Dolák, 2006; bottom – Junior Museum in the Museum Schnütgen in Cologne (Germany), where children are visually introduced to the various life styles of families from various places in the world; photo by Petra Šobáňová, 2014

conceptually. These are more demanding in terms of thinking, good ideas, creativity, time and in terms of having the strength to follow it through. Even though the presented path to the museum product is difficult, it certainly leads to better results.



Conclusion

There are many aspects that should be conceptually considered by the creators of museum presentation. The authors of this book aimed to present the main ones while clarifying the ways which could significantly help increase the quality, potential and effect of a presentation. Primarily, they explained the museological view of this issue, though the process of presentation making certainly also includes the viewpoints of other fields of study. Readers were introduced to the theory of presentation and the context of contemporary museological thinking, as well as to particular rules that are important in presentation making and that are based on these theories and proven by research and practice. Special attention was paid to the explanation of the nature and advantages of contextuality and narrativity. A museological understanding of the position of musealia within a presentation in the context of subsidiary tools was explained (including tools based on new media), as well as the purpose of texts and didactic or other additional tools in a presentation.

Museum Presentation devotes considerable space to the museum object itself which is the base of a museum presentation and without which a museum could not exist. The Authors reflected on the theory of musealia, its identity, the typology of exposition elements and the interaction between visitors and musealia; but also on the types of presentations according to the position of musealia within the whole of a presentation. The core of the book is certainly the presentation of musealia and the genuinely museological issue of the approaches to exhibiting museum objects and their content. The book offers many different classifications of presentation as well as an overview of contemporary approaches and trends in this area with many examples from the field. Museum workers especially can appreciate the overview of contemporary approaches to presentation but also the model of the process of presentation making which is offered by the parts focused on the individual phases in the preparation of presentation making as well as on the recommendations for the process. In particular, recommendations stemming from the findings of pedagogy, behavioural psychology or constructivism were presented, as well as recommendations based on the physiological determinants of a visitor or tried and tested rules for texts writing. The book also points out that introducing musealia and its related knowledge into the lives of people cannot be

done without the necessary categorisation of visitors according to their age and other specifics.

The current development of the world in the past decades, especially in western Europe and North America progresses in the spirit of the motto ‘otherness enriches us’⁵⁷. The accent on local, regional, national, religious or gender differences is certainly right, and it should certainly be reflected in the everyday activities of museums as well as in the theory of working with heritage. On the other hand, we cannot give preference to some absolute fragmentation of a society *ad absurdum*. We believe people in the whole world are more alike than different. That is why also the work of museums in the whole world should be based on the same general principals while maintaining the respect for other cultural traditions and specific customs in the field of documentation and presentation. Our book hopes to serve in this aspect too, though it has been written primarily with the European traditions in mind. However, it emphasises a generally applicable fact which says that museums remain an irreplaceable part of the system of cultural and educational institutions, and that their importance is still significant even in these times when digital content and platforms dominate other areas. Perhaps it is the other way around, the value of museums is increasing. The importance of the basic functions of museums is still valid, and the possibilities in which to use a museum for pleasure, studies or education are not lesser. In conclusion, we would like to reiterate that a museum is not focused only on material culture but also on human beings. It manages to interconnect people and to contribute to their understanding of the world and society – which is how museum presentation and the entire system of museology fulfil their generally humane mission.

57 An expression used by Jan Keller – a Czech professor of sociology.



Souhrn

Ústředním tématem knihy *Muzejní prezentace* je klíčový muzeologický problém prezentace muzejního obsahu. Jde zajisté o téma vysoce aktuální, protože v dnešní době existuje pluralita různých přístupů k tvorbě muzejní prezentace a sprezentačních prostředků, ale i škála typů produktů muzejní prezentace, kterou nevídanou měrou rozšiřuje současný technologický rozvoj. Přestože hlavní zájem autorů směřuje ke stále nejtypičtějšimu prezentačnímu produktu, jímž je muzejní expozice, snažili se zohlednit i jiné typy muzejní prezentace s předpokladem, že většina muzeologických axiomů a doporučení je obecně platná.

Knihla podává obraz o současném stavu muzejní prezentace, o jejích teoriích i praxi, o současném muzeologickém myšlení. I když obsahuje mnoho příkladů a konkretizací, rozhodně nepřináší jednoznačné návody k tomu, jak má vypadat pomyslná „ideální“ prezentace. Autorům nešlo o návody, spíše chtěli ukázat, že tvorba muzejní prezentace by měla být koncepčně uchopena, měla by být tvůrčím procesem a měla by zohledňovat současný stav poznání v muzeologii. Pokud je autorům osobně blízký některý z představených přístupů, pak by to byla otevřenost oproti rigiditě, kontextualita oproti formalismu, tvořivost oproti rutině, interaktivita oproti „přednáškám na panelech“, snaha jít do hloubky oproti povrchní efektnosti. Tvorba muzejní prezentace musí být tvůrčí, hluboce promyšlenou činností, v níž by se měla uplatňovat invence i názory konkrétního tvůrce.

O šíři různých přístupů k tvorbě prezentace se mohou čtenáři přesvědčit v oddílu věnovaném klasifikacím expozic nebo inovativním prvkům současné muzejní prezentace. Tyto kapitoly – vycházející z realizovaných výzkumů muzejní prezentace, jež v předchozích letech realizovali oba autoři – stojí mimo výzkumu také na zevrubné teorii, již nabízejí úvodní oddíly věnované muzejní prezentaci v kontextu současného muzeologického myšlení, multidisciplinárně pojaté teorii muzejní prezentace (autoři integrovali poznatky muzeologie spolu s poznatky teorie komunikace, teorie informace, filozofie, pedagogiky, psychologie, nebo sémiotiky) a teorii muzejního předmětu jako báze muzejní prezentace. Kniha tak jde od teorie k praxi, protože ji uzavírají kapitoly věnované procesu tvorby muzejní expozice, jednotlivým fázím tvorby muzejní expozice a doporučením k tvorbě expozice a textů, stejně jako shrnutí současných trendů a problematických momentů současné prezentace.

Výsledek spolupráce obou autorů – již doprovázely zajímavé výměny názorů, užitečné zpřesňování teoretických východisek a snaha o co nejvýstižnější pojmenování zkušeností z výzkumu – dobře ukazuje, že muzejní kultura se dnes vyznačuje značnou proměnlivostí. Kromě nových pojetí vzešlých z často velmi kritické reflexe historických přístupů k funkci muzea a tvorbě expozic se v ní uplatňují také vlivy celospolečenské – ať již jde o demokratizaci společnosti, zvýšenou pozornost věnovanou dříve marginalizovaným skupinám návštěvníků, nástup nových médií a proměnu komunikačních prostředků i chování lidí, konzumerismus a trend zábavnosti nebo na druhé straně návraty k tradičním hodnotám, zájem o historii a reflektování zkušenosti pamětníků, snahy o hledání identity. S tím souvisí i rozvoj nových způsobů prezentace muzejních sbírek, vznik specifických metodik tvorby expozic a zavádění řady podnětných inovací. Pomineme-li křiklavé příklady nevhodného uchopení prezentace (vedle tradičních formalistických expozic je často nacházíme ve společnosti digitálních médií, jež někteří nesprávně chápou nikoliv jako prostředek, nýbrž jako cíl), většinou se jedná o žádoucí přístupy a prvky, které významně podporují kvalitu a sdělnost expozic a posilují jejich edukační účinnost. Jde zejména o interaktivitu, nová média, didaktické a zábavní prvky nebo o expoziční prvky zohledňující návštěvníky s postižením. Zajímavou inovací je vytváření expozic anebo celých muzejních budov, které fungují jako specifický „exponát“ a k návštěvníkovi hovoří pomocí expresivních prostředků.

Většina popsanych inovací je přitom výrazem obratu k návštěvníkovi a k jeho vzdělávání, kterým muzea procházejí již řadu desetiletí – některá razantněji a s úspěchem, jiná pomaleji a s váháním. Domníváme se, že aplikace našich postupů, přístupů a hodnocení by mohla napomoci změnit názor stále ještě přetrvávající u části veřejnosti, že muzeum je neživotná a nezajímavá instituce, která nemá co říci k našim současným problémům. Kniha ukazuje, že muzeum se nesoustředí pouze na hmotnou kulturu, ale také na člověka. Daří se mu spojovat lidi a přispívat k jejich porozumění světu a společnosti – a právě tím také muzejní prezentace, respektive celý systém muzeologie, plní svoje obecně humánní poslání.

Le Résumé

Le thème principal du livre *Muzejní prezentace* [La présentation du musée] est la problématique de la présentation du contenu du musée. Cela est un thème très actuel non seulement parce qu'aujourd'hui il existe une pluralité d'approches différentes de la création de la présentation muséale et des moyens de cette présentation mais aussi parce qu'il y a beaucoup de types des produits de présentation du musée qui élargissent les développements technologiques actuels. Même si l'intérêt principal des auteurs se dirige vers le produit de la présentation le plus typique, l'exposition de musée, ils ont essayé de prendre en compte aussi d'autres types en supposant que la majorité des axiomes et des recommandations muséologiques sont généralement valables.

Le livre donne une image du état actuel de la présentation du musée, sur ses théories et sa pratique, et de la pensée muséologique contemporaine. Bien qu'il contienne de nombreux exemples et concrétions, il ne donne certainement pas des indications claires pour la présentation "idéale". Le but des auteurs n'était pas de donner des indications, mais de montrer que la présentation du musée devrait être faite conceptuellement. Il faut qu'elle soit un processus créatif et qu'elle prenne en compte l'état actuel des connaissances en muséologie. Les approches présentée les plus proches des auteurs sont l'ouverture contre la rigidité, le contextualisme contre le formalisme, la créativité contre la routine, l'interactivité contre les "conférences" et l'effort d'aller plus loin contre l'efficacité superficielle. La création de la présentation du musée devrait être une activité créatrice, bien pensée dans laquelle les inventions et les opinions d'un créateur particulier soient appliquées.

Les lecteurs peuvent voir l'étendue des différentes approches pour créer une présentation dans la section sur les classifications d'exposition ou les caractéristiques innovantes de la présentation actuelle du musée. Ces chapitres – basés sur des recherches réalisées sur les présentations de musées, qui avaient été effectuées les années précédentes par les deux auteurs – sont en dehors de la recherche sur une théorie complète proposée par les sections introductives consacrées à la présentation muséale dans le contexte de la pensée muséologique contemporaine, la théorie multidisciplinaire de la présentation muséale (les auteurs ont intégré la connaissance de la muséologie à la connaissance de la théorie de la communication, de la théorie de l'information, de la philosophie, de la pédagogie, de la psychologie ou de la sémiotique) et à la théorie

du sujet de musée en tant que base de présentation de musée. Le livre passe de la théorie à la pratique, parce qu'il se termine par des chapitres consacrés au processus de création d'une exposition de musée, aux différentes étapes de l'exposition de musée et à des recommandations pour la création d'expositions et de textes, ainsi qu'un résumé des tendances actuelles et des présentations problématiques.

Le résultat de la collaboration des deux auteurs – accompagné d'intéressants échanges d'opinions, d'un raffinement utile des bases théoriques et de la tentative d'identification de l'expérience de recherche aussi précisément que possible – montre bien que la culture muséale est aujourd'hui caractérisée par une variabilité considérable. Il y a des influences sociales, ainsi que de nouveaux concepts découlant de la réflexion souvent très critique des approches historiques de la fonction du musée et de la création d'expositions – la démocratisation de la société, l'attention accrue portée à des groupes de visiteurs auparavant marginalisés, l'arrivée de nouveaux médias et la transformation des moyens de communication et du comportement des gens, le consumérisme et la tendance du divertissement ou, d'autre part, revient aux valeurs traditionnelles, à l'intérêt pour l'histoire et à la réflexion des expériences des témoins, à la recherche de l'identité. Ceci est lié aussi au développement de nouvelles façons de présenter les collections de musée, à l'émergence de méthodologies d'exposition spécifiques et à l'introduction d'un certain nombre d'innovations stimulantes. Ce sont surtout des approches et des éléments souhaitables qui améliorent de manière significative la qualité et la communication des expositions et améliorent leur efficacité pédagogique outre les exemples flagrants de présentation inappropriée (les exemples sont trouvés souvent dans une société de médias numériques que certains comprennent mal, non pas comme un moyen mais comme un objectif). Il y a surtout une interactivité, des nouveaux médias, des éléments didactiques et de divertissement ou des éléments d'exposition prenant en compte les visiteurs handicapés. La création d'expositions ou des bâtiments entiers de musée qui agissent comme spécifique « exposition » et qui parlent à un visiteur en utilisant des moyens d'expression est une innovation intéressante.

La plupart des innovations décrites sont l'expression d'un revirement du visiteur et de son éducation, vécues par les musées depuis des décennies – certaines plus vigoureusement et avec succès, d'autres plus lentement et avec hésitation. Nous croyons que l'application de nos pratiques, approches et éva-

luations pourrait aider à changer l'opinion, que le musée est une institution sans vie et sans intérêt qui n'a rien à dire sur nos problèmes actuels, qui reste encore dans le public. Le livre montre que le musée se concentre non seulement sur la culture matérielle mais également sur les êtres humains. Le musée réussit à réunir les gens et à contribuer à leur compréhension du monde et de la société - et c'est la raison pour laquelle la présentation du musée, ou tout le système de la muséologie, remplit sa mission généralement humaine.

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Jan Dolák

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PhDr. Jan Dolák, Ph.D., is a Czech museologist currently based at the Faculty of Arts at the Comenius University in Bratislava (Slovakia). After completing the studies of history, he had worked in a number of Czech museums as a historian and a manager. During his employment he had studied museology with doc. Z. Z. Stránský after which he completed his Ph.D. studies in archaeology. In 2002–2004 he worked as the head of UNESCO Chair of Museology and World Heritage at the Masaryk University in Brno (CZ). He specialises in theoretical museology, the theory of museum communication and presentation, as well as in collection management of museums. He also deals with the history of museology and Czech museum culture, museum management and marketing. He is often invited to give lectures both in the Czech Republic and abroad, in Europe and other continents. He is the author of more than one hundred works published in Europe, Asia and Latin America in the Czech, English, German, Portuguese, Russian, and Chinese languages. He is the co-founder of peer-reviewed journals titled *Museologica Brunensia* at the Masaryk University in Brno, and *Museology and Cultural Heritage* at the Comenius University in Bratislava. He is a member of editorial boards of six peer-reviewed journals, holds a post in expert committees, conducts research and reviews of major projects; is engaged in peer-reviewing activity. He organises scientific conferences and is a member of consultative body of Czech leading museums. For many years, he has been a member of the board of ICOFOM – International Committee for Museology, and in 2007–2010 he held the post of vice-president of this committee. Since its foundation in 1990, Jan Dolák has been an active member of the Association of Museums and Galleries of the Czech Republic (AMG), a former chair of this association now a chair of the museological committee of AMG and a member of an expert committee *Zväz muzeí na Slovensku* [Association of Museums in Slovakia]. He has participated in the education and professional training of hundreds of students.



Photo by Matěj Dolák

Petra Šobánková

*1975

Petra Šobánková is an associate professor in the field of pedagogy and her studies and expert as well as teaching practice are mostly connected to the Palacký University Olomouc (Czech Republic). After completing her studies in teacher training, she was engaged in teaching practice at various types of schools as well as in an after-school facility, Studio Experiment, mainly as an art teacher. After moving from teaching practice to working at university, she has been intensively involved in expert, research and project activities in the fields of art education methodology, museum and gallery education, and teaching in culture. At the Department of Art Education, she gives lectures mostly on disciplines related to making fine art and culture accessible to all, and museum education. Up to now, she has supervised tens of master's and Ph.D. theses while being a supervisor in a Ph.D. study program. At the Faculty of Education of the Palacký University Olomouc, she has conceived and composed a university master's field of study in Museum and Gallery Education (now Teaching in Culture) and is the guarantor of this field. She is a researcher and co-researcher of many research-based and developmental projects, she is also involved in non-profit sector and vocational organisations. She has been elected as the chair of the Czech Section of INSEA (International Society for Education through Art) and has contributed significantly to the development of this key organisation in Czechia. She has founded a peer-reviewed journal, *Kultura, umění a výchova* [Culture, Art and Education], of which she is the editor-in-chief, she is also the lead editor of *Listy České sekce INSEA* [Czech Section of INSEA Newsletter]. She is a member of editorial boards of several scientific journals. She has realised a number of research trips abroad, regularly gives lectures at conferences, is frequently invited to expert panels and committees (Ministry of Culture CZ, National Institute for Education, National Accreditation Bureau), has published many articles, expert chapters and individual monographs. Since 2018, she holds the post of Vice-Dean for Development and External Relations at the Faculty of Education. Petra Šobánková has received a number of awards for her expert and organisational activities.



Photo by Alžběta Šobánková

Jan Dolák & Petra Šobáňová

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