Luise Reitstätter, Carla-Marinka Schorr (eds.)

Methods of Exhibition Analysis

[transcript] → Museum

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Luise Reitstätter (PhD) is a cultural scientist. Her fields of work include practices of modern and contemporary art, critical museum and exhibition studies, as well as method development for visual and material analysis. She is serving as a Co-Principal Investigator in the FWF-DFG research project "The Museum Gaze" at the University of Vienna.

Carla-Marinka Schorr (PhD) is a museum researcher. She specialises in exhibition analysis and the development of research methods, and studies processes of authenticity and value attribution, as well as the relationship between museums and democracy. She is working as a research associate and project manager on the AHRC-DFG research project "Cultural Dynamics: Museums and Democracy in Motion" at the University of Würzburg.

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Introduction

Analyzing exhibitions
An introductory overview

Carla-Marinka Schorr and Luise Reitstätter

Exhibitions are constructed cultural dispositions. They organize the world or at least the world view of a specific group. At the same time, they discover and find structures for transmitting and appropriating narratives about this world and thus create structures of inclusion and exclusion. Presenting world views, creating and exhibiting arrangements are potent gestures that usually take place with good intentions, but often still remain too unreflected or at least uncommented from a critical cultural studies perspective. Exhibitions are part of the social discourse, they deal with topics that are assumed to be of importance to the public. They are made by people who are part of society and act publicly. Exhibiting is therefore not an end in itself. The 'gestures of showing' (Muttenthaler and Wonisch 2015) are aimed at visitors as users of the exhibition. In the interpretation of the 'constative speech act' (Bal 2006: 77), exhibitions are dependent on visitors. Well-known museums, regular large-scale exhibitions and new immersive environments attract flocks of visitors, while other cultural institutions maintain close contact with people in the neighbourhood, are local meeting places and talk of the town. Exhibitions therefore reach people directly and indirectly and often do so, at least in part, with public funding. This comes with certain responsibilities.

Being able to analyze exhibitions as constructed cultural dispositions as well as places of public exchange is a necessary competence in cultural studies. There is thus no lack of theoretical approaches and implicit applications. Frequently referenced publications provide helpful suggestions and interesting examples of how exhibitions can be critically examined as cultural phenomena (Haraway 2004), as a statement of the 'expository actor' (Bal 2006: 77), powerful stagings (Stanizewski 1998) or art-historical positings (Klonk 2009). In his book *Museumsanalyse* (2010), Joachim Baur has presented more explicit methodological approaches that analyze exhibitions using cultural semiotics (Scholze 2010), narrative theory (Buschmann 2010) or visitor research (Kirchberg 2010). Angeli Jannelli and Thomas Hammacher have in turn compiled a special issue on questions, hypotheses, approaches, examples of application, and field reports on exhibition analysis (Vokus 2008). There are also individual practical guides that encourage the analysis of exhibitions with a focus

on evaluation and criticism (Kavanagh 1994, Moser and Wyss 2016), gender (Ebeling 2016) or accessibility (Nolte and Kinzler 2012). It is in particular at the interface between theory and practice that DASA Working World Exhibition Dortmund and the Chair of Museum Studies at the University of Würzburg have made an outstanding contribution to methods of exhibition analysis via workshops, the blog *ausstellungskritik.de* and the recent publication *Besser ausstellen* (2024). It cannot therefore be argued that exhibitions are not already being analyzed. However, such efforts in practical application often tend to be experimental in nature, as they are based on intuitive approaches or individual case studies. To some extent, there is also a lack of visibility of methodological approaches when guidelines are published informally in a wide variety of sources or sophisticated methods of exhibition analysis are hidden away in the corresponding sub-chapters of monographs and dissertations.

What is lacking is therefore not the analysis of exhibitions but rather a collection of "ready-to-use" methods (Thiemeyer 2010: 32). To date, no single dedicated methods book for exhibition analysis exists, at least in the German-speaking countries. By compiling different perspectives on exhibitions and developing existing approaches into replicable methods, our book aims to deliberately promote the further development of this field and render these methods productive for various contexts of use. Our understanding of methods of exhibition analysis is based on the premise that these need to be categorized theoretically, specified via concrete procedures and transferable to different settings in order to be characterized as dedicated methods. In doing so, we assume a desire for scientific systematization as well as a necessary diversity of methods, bearing in mind that exhibitions are examined from different perspectives and with different motivations. Analyzers study exhibitions for reasons of research, as well as for reasons of professional training and development, of coverage, of evaluation of their own curatorial work or that of their colleagues. In this sense, the methods book addresses users from the realms of research (in the expanding field of museum and exhibition studies), of teaching (e.g. in exercises, excursions or qualifying papers) as well as museum praxis (as a tool of self-evaluation and ongoing exhibition development).

In its aim to close the methodological gap in exhibition analysis with a methods compendium, this book already has a fairly lengthy history. Its origins go back to the closed conference *Ausstellungen analysieren* (Analyzing Exhibitions) in September 2019, organized by the DASA Working World Exhibition Dortmund and the Chair of Museum Studies at the University of Würzburg, where we, the editors of this volume, first met and forged plans for such a methods book. From the very outset this project was based on the model of a *Book in Progress*, which was to develop organically in the process of a systematic inventory of current approaches, the collaborative contribution and elaboration of specific methods in an early exchange with users. With this strategy, we wanted to create an example of how *slow science* can function as a decelerated, methodically developing, cooperative and open form of knowledge pro-

duction. This processual approach was supported by a grant from the University of Vienna in the *Aktiv Studieren* programme, which we received for the year 2022 to collect the first basic body of methodological texts and subject them to a feasibility test in an interconnected seminar and workshop. Travelling expenses for the 2022 workshop in Vienna as well as for the follow-up workshop in Nuremberg in 2023 were funded by Erasmus+. Publication funding from the Austrian Science Fund (FWF) as part of the *The Museum Gaze* project enabled the final production of the book and its open access publication in German and English. Additional funds for the translation were kindly provided by the Faculty of Historical and Cultural Studies at the University of Vienna. Our special thanks go to Matthias Müller for his careful editing and consistent translation. For the cover design and typesetting, we would like to thank Stefanie Muther and Emanuel Mauthe from Extraplan.

In processual terms, our *Book in Progress* did not imply embarking into the realization of the book with a predetermined table of contents and a definitive number of contributions, but rather gradually inviting authors for particular methodological foci, in order to explore and develop the field and also the need for different approaches on a step-by-step basis. Based on our knowledge of existing studies and structured research, we invited experts involved with methods of exhibition analysis in the most diverse (trans-)disciplinary contexts and fields of application to submit contributions. With the structured communication of methodological knowledge in mind that we were aiming for, we asked all authors in a comprehensive briefing to systematize their respective approaches and present their methods with regard to the theoretical background, the key questions and focus, a step-by-step guideline, a brief case study and a final method reflection. In the ensuing intensive feedback process involving us editors and early users, the text versions were able to evolve from an initial version to the final contributions in this book.

In concrete terms, the *Book in Progress* meant that all methodological texts underwent multiple revisions from the text's initial version to the final one. To this end, as already mentioned above, a five-day workshop was held in the framework of a seminar with students of art history, critical friends and the authors of the method texts at the University of Vienna in the summer semester 2022. Prior to the event, the authors' texts, as yet in a draft stage, were read by the participants who subsequently provided feedback regarding comprehensibility with the help of a feedback form. During the workshop, the methods were put to the test in selected Vienna exhibitions, with the text as a guideline and with additional input from the authors. Afterwards, the participants again gave feedback on the method text. We forwarded both feedback forms to the authors with the request to incorporate this response and their own experiences from the workshop into the revision of their texts. In the winter semester 2022/2023, in a seminar at the Chair of Museum Studies at the University of Würzburg, we repeated the method tests in a three-day workshop in Nuremberg museums, but this time with different texts. Further methods and their

respective texts were tested in a similar setting at Merseburg University of Applied Sciences in the summer semester of 2023.

The method tests proved to be a valuable tool for the circular text development intended for the *Book in Progress*. Our thanks go to Elena Blum for her collaboration in realizing the workshop at the University of Vienna, to Guido Fackler from the University of Würzburg for supporting our work and for his collaboration at the Nuremberg seminar, to Daniela Döring for adopting our concept in her teaching at the Merseburg University of Applied Sciences – as well as to all workshop participants for their comprehensive feedback. We would also like to specifically thank all the authors for unreservedly embracing this process of sharing their texts at an early stage and subjecting the methods to practical testing together with the users' feedback. Just to illustrate the additional work load this principle involves: the texts underwent at least three rounds of revision, some even more. In this way, the final texts gradually took shape, partly over a period of two years, happily without losing their individuality in the process, despite the rigid specifications. The numerous feedback loops allowed the texts to mature and gave the authors the chance to take a step back and revisit their work several times. We as editors also benefitted from the *Book in Progress* format: it enabled us to engage in-depth with the diversity of exhibition analysis and gave us time to establish and develop international and cross-disciplinary contacts with the overall thirty-four authors.

In its final design, the book approaches exhibition analysis from a cultural analysis, perception studies and practice-oriented perspective and precedes these three parts with a short introductory section: this contribution dealing with the genesis, contents and aim of this book is next followed by a fictional conversation between Gottfried Fliedl, Roswitha Muttenthaler, Anika Reichwald and Regina Wonisch. They are all involved in the *museumdenken* network and have, partly already since decades, been working with various forms of exhibition analysis in theory and practice. We asked them six questions and their answers indicate what we might consider as the purpose as well as the application contexts and ranges of impact of exhibition analyses. The contributions in *Part I Cultural Analysis Methods* address open questions in the critical-reflexive examination of the relationship between exhibition, institution and society. *Part II Perception Analysis Methods* unifies approaches concerned with the broad range of visitor perception based on the understanding of exhibitions as public places and social appropriation. *Part III Practice-Oriented Methods* focusses on the practicalities of the exhibition by examining how exhibitions can be configured in a concrete context, but also critically questioned and changed regarding their various uses and impact potential. Our breakdown of these three areas of exhibition analysis is further differentiated by the individual methodological contributions.

The seven contributions subsumed in the part *Cultural Analysis Methods* are concerned with the exhibition as a cultural phenomenon in different spatial, institutional and medial contexts. Kali Tzortzi employs the method of *Space Syntax* to map

exhibitions via their spatial organization and analyzes architectural predispositions of physical and social experience through the interplay of units. Daniela Döring uses *Knowledge Analysis* to examine exhibitions from the perspective of critique of representation and power and pursues the question what kind of knowledge is generated here under what sort of conditions. In *Context Analysis*, Angeli Sachs focusses on logics of collection, presentation, institutional embedding and public perception, in order to interpret exhibitions also as phenomena of time. The method of *Artefact Analysis* that Luise Reitstätter has borrowed from organizational research enables an understanding of the exhibition as a superordinate system through the reconstructive interpretation of production and reception contexts of a central artefact. With *Exhibition Photograph Analysis,* Ute Famulla offers an approach to the exhibition via its primary medium of documentation, photography, by examining the context of the photograph and the presentation from the perspective of media criticism. Maria Bremer raises the question of how exhibitions contribute to art historiography and links in her *Art-Historiographical Exhibition Analysis* the history of the exhibition and the history of exhibited art with curatorial studies. In *Affect-Reflexive Exhibition Analysis*, Carla-Marinka Schorr presents a method for capturing the holistic overall picture of the complex structure of an exhibition by using one's own perception as an instrument of investigation.

The part *Perception Analysis Methods* comprises six contributions that determine the public medium of the exhibition through the exhibition's appropriation by visitors. Eva Specker and Helmut Leder have reviewed the classic method of the *Questionnaire* for exhibition analysis and show how to formulate good questions in order to obtain concise information from visitors about their perceptions. With *Observation*, Carola Korhummel presents another classic of exhibition research and advocates observation as a qualitative method for understanding the exhibition as an experiential space by identifying patterns of behaviour. Dimitra Christidou gives an introduction into the interview method of *Social Meaning Mapping,* supported by illustrated exhibition plans, which lends itself particularly to the multimodal reconstruction of the exhibition experience of groups. In *Video-Based Ethnomethodological Conversation Analysis*, Dirk vom Lehn presents a sophisticated and also perceptive method to map the interaction with exhibits and between exhibition visitors. With *Go-Alongs*, Luise Reitstätter and Karolin Galter suggest exploring exhibitions via a joint walk and engaging in situative conversation in the mode of attentive listening. Luise Reitstätter, Seda Pesen, Enkelejda Kasneci and Raphael Rosenberg employ the method of *Mobile Eye Tracking* to explain how the exhibition can be grasped as a visual medium via detailed analyses of visitors' eye movements.

The book's third section presents six *Practice-Oriented Methods* which draw on practical work with exhibitions as well as attempt to shape exhibition praxis. Tabea Schmid has transferred the *AttrakDiff* method, originally developed for design processes, from user experience design to the exhibition, in order to assess its

pragmatic and hedonic qualities. In *Judging Exhibitions*, Jana Hawig and Ria Glaue offer for the first time a German translation of the method developed by Beverly Serrell, in which a group of experts substantiates the qualities of an exhibition from a visitor-centered perspective via individual evaluations as well as a comparative sharing of assessments. Simon Schütz shows in *Talkback Boards* how visitors can provide written feedback about their experience and suggestions for subsequent modifications via feedback stations integrated in the exhibition. In *ExhibitionScorecard*, Sabine Fauland presents a catalogue of indicators (from behind-the-scenes collection work to inclusion to climate awareness) that allows the success of an exhibition to be comprehensively evaluated beyond visitor numbers. Felix Koberstein and Lívia Nolasco-Rózsás use the method of *Digital Models* to emphasize the analytical and informative value of reconstructing past exhibitions with the tools of collecting, mapping and contextualizing archive materials. With its contribution *Narratives – Structures – Contradictions* the *schnittpunkt* collective presents a question-based tool for a power-critical exhibition analysis which was further developed together with participants of the / ecm Master's program for exhibition theory and practice with regard to current critical debates in the exhibition field and the desire for institutional changes.

Content-wise, the contributions on cultural analysis, perception analysis and practice-oriented methods interlink with each other and connect the book's application contexts in exhibition-related research, teaching and praxis that we are aiming for. Since epistemological interests often relate to a variety of perspectives, we explicitly encourage combining methods. In addition, it will sometimes be necessary to adjust a method to your own application context. Such adaptations are expressly encouraged, even though this is not proposed explicitly in all method texts. After all, analyzing exhibitions also means positioning yourself personally and putting yourself into a critical and reflective relationship to the exhibition and its analysis. In the spirit of an empathetic culture of criticism and ethical work approach, it is also necessary to treat exhibitions – as results of personal endeavors of exhibition creators in their specific working contexts – with care and circumspection and to find a way to examine them in a factually sound, methodically reflected way, and with transparent conclusions.

For, just like exhibitions, methods of analysis and methods books are also subject to mechanisms of potent, structural disposition. They include some approaches and leave others unconsidered. The remarks here and in the respective method texts reflect the immediate context of the genesis of our *Book in Progress* and show the viewpoints of both us editors and the authors. We open up the field of exhibition analysis and at the same time confine it with a limited number of texts and perspectives. We are, in this respect, also aware of the lacunae of our book, for example, by not explicitly addressing the exhibition's educational or design aspects with specific methods or by limiting ourselves methodically to analogue exhibition formats. In this sense,

the principle of the *Book in Progress* also means that this book does not see itself as a definitive compendium. It has to be continuously updated – and we see this as an opportunity – in a process of adopting methods and suggestions for expansion. We are banking here on collective thinking and action by all those who are enthusiastic about analyzing exhibitions as an epistemological tool. The development of the *Book in Progress* does therefore not end with its publication, but rather begins a new chapter in the extended community of its users.

Fig. 1–3: Workshop on Methods of Exhibition Analysis, *17–22 May 2022,* Video-Based Ethnomethodological Conversation Analysis *in the exhibition* Avantgarde and the Present *at Belvedere 21, © Photos: Karl Pani, Department of Art History, University of Vienna.*

Fig. 4–7: Workshop on Methods of Exhibition Analysis, *17–22 May 2022,* Judging Exhibitions *in the exhibition* Hot Questions – Cold Storage *at the Architekturzentrum Wien, © Photos: Karl Pani, Department of Art History, University of Vienna.*

Fig. 8–9: Workshop on Methods of Exhibition Analysis, *17–22 May 2022,* Judging Exhibitions *in the exhibition* Hot Questions – Cold Storage *at the Architekturzentrum Wien, © Photos: Karl Pani, Department of Art History, University of Vienna.*

Fig. 10–13: Workshop on Methods of Exhibition Analysis, *17–22 May 2022,* Social Meaning Mapping *in the exhibition* Enjoy. The mumok Collection in Change *at mumok, © Photos: Karl Pani, Department of Art History, University of Vienna.*

Fig. 14–15: Workshop on Methods of Exhibition Analysis, *17–22 May 2022,* Social Meaning Mapping *in the exhibition* Enjoy. The mumok Collection in Change *at mumok, © Photos: Karl Pani, Department of Art History, University of Vienna.*

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On the relevance of exhibition analysis

Six questions for *museumdenken*

Gottfried Fliedl, Roswitha Muttenthaler, Anika Reichwald and Regina Wonisch

The *museumdenken* network was established in 2021 as a loose association of individuals and institutions with the aim to reflect on the future of the museum as an institution against the backdrop of the crisis of its public evaluation. The website www.museumdenken.eu/ and dialogue-based event formats, also on exhibition analysis, serve as a platform for providing and sharing information. As editors of this methods book, we queried four members of this network by email regarding their viewpoint on, their experience with and their recommendations for exhibition analyses. We have compiled their responses into a fictional conversation.

Why do you think it is important to analyze exhibitions at all?

Roswitha Muttenthaler: I'll start off with a counter-question: Why should a well-founded analysis of the medium's inherent resources and positionings not be relevant with regard to exhibitions? For other cultural manifestations – literature, music, film, art, theater – it is common practice to research and teach the techniques and forms of expression of the respective medium and their applications in the framework of the corresponding academically institutionalized disciplines, to examine works analytically and critically, to debate them discursively.

Regina Wonisch: The only difference is that these fields are recognized and their representatives never need to justify their activities. Only when the question of the purpose of exhibition analysis has finally become obsolete, will museology have found its place in the academic and cultural establishment. Particularly in a world in which visual content is ubiquitous, but where there is a lack of visual literacy and critical competence, analytical skills could be helpful in the perception of exhibitions.

Anika Reichwald: Even if the thought that others could analyze your own exhibition might meet with some reluctance, I consider it an important, if not essential tool to apply specific methods in order to understand exhibitions.

Gottfried Fliedl: Also considering that hegemonial, disciplinary and emancipatory potentials come together in a museum. As a publicly funded and operated cultural institution, the museum participates in the goal of all government measures aimed at promoting the wellbeing of society. This goal must stand up to scrutiny and be subjected to permanent critical revision and transformation.

What specific fields of application do you see for exhibition analysis?

Gottfried Fliedl: Unlimited ones. Exhibition analysis has to continuously evolve with the medium of the exhibition in order to do justice to established forms as well as pioneering new practices of exhibiting.

Anika Reichwald: I believe that exhibition analyses can be a wonderful moment of bonding, be it in a team, among like-minded or just interested parties. The shared experience of observing, exchanging and discussing in an often "different space" offers the opportunity to open up to other perspectives and opinions more readily. This is of inconceivable value for the communication between different departments but also between different institutions. What do the others look at? What is important to them? And what isn't? By experiencing other perspectives, I also learn something about the way my partners or colleagues work. Ideally, this could lead to a new way of working together in the exhibition process.

In your experience, what principal challenges do you face when analyzing exhibitions?

Regina Wonisch: For me, the biggest challenge are the methodological approaches that are often borrowed from other disciplines and have to be applied to exhibitions. But without institutionalized museology combined with professional training, it is impossible for a vibrant discourse on methods and praxis of specific exhibition analysis to develop and also find its way into the museum environment.

Roswitha Muttenthaler: An analysis is based on the challenge of a systematic, planned and methodical approach that attempts to incorporate all building blocks of an exhibition and their interconnection to form a holistic whole. So we need suitable methods, which I see as an aid, as a comprehensible set of tools, in order to train the eye through a planned course of action, to elaborate as many interpretative assumptions as possible and put them up for discussion. The challenges inherent to the format of the exhibition are the freedom to reflect on the sequence of reception – films, books and music have a predetermined course, while in exhibitions, everyone decides for

themselves – and the possible complexity of the resources that are employed. The location, a multiplicity of material and immaterial exhibits, texts, media and countless options ranging from the design of rooms to displays each offer their own interpretations which, in their interaction, can reinforce or compete with each other. A further challenge is the range of exhibitions in terms of locations, contents, forms and approaches. For instance, exhibition conventions in art museums differ considerably from those in cultural or natural history museums.

Gottfried Fliedl: I agree that the semantic openness of the medium of the exhibition makes it difficult to arrive at unambiguous judgements regarding the attribution of meaning and narrative forms. I therefore can't see that there is such a thing as a theoretical basis for analyzing exhibitions.

How can independent, critical thinking be encouraged in exhibition analyses?

Regina Wonisch: Independent thinking is a prerequisite for any kind of analysis. The more often you embark on such an enterprise, without knowing in advance where it will lead you, the more flexible your thinking may remain. A well-founded analysis forms the basis for a differentiated critique of an exhibition that thrives on a comprehensible argumentation and does not preclude a dissenting opinion.

Anika Reichwald: Thinking critically also means, above all, being open to trying to see beyond the obvious, not being led by preconceptions, but instead engaging with the exhibition.

Can you tell us about specific 'aha' moments in your own exhibition analyses?

Anika Reichwald: Long before I became interested in the topic, I visited the National Gallery of Modern Art in Rome. There they had decided to remove the factor of time as a constant structure in the permanent display of their collection – *time is out of joint*: artworks were thus no longer exhibited in chronological order, instead, other factors, such as colour combinations, themes or formal analogies were found for grouping artworks together. I think it was there that I realized for the first time how much we as observers are led by structure and how much more imagination, freedom, joy, even adventurousness can at times emerge without standardized structures. But also confusion, the feeling of being lost, of things not quite matching and so on. The exhibition therefore demanded that I analyze it, without formulating this

explicitly. But by closely observing the space, display, staging and object, it was possible to understand (or sometimes simply not) what it was all about. A wonderful exhibition experience and I wonder how much fun the curators must have had.[1]

Gottfried Fliedl: My 'aha' moment was that, for me, the basis of criticism is the precise and thick description, and the best tool for this is not a written description or photograph, but rather to capture and record the subject by drawing it – as completely as possible. So, pencil and sketchbook instead of mobile phone or camera.

To what extent can exhibition analyses also have consequences?

Regina Wonisch: In any case, exhibition analyses have consequences for the person who conducts them. The deeper insights that unfold in the process also affect the way other exhibitions or visualizations are perceived. But it's like the exhibition itself, the stories are produced in the minds of the recipients. The consequences of an exhibition analysis that has yet to find its audience are equally unpredictable.

Anika Reichwald: In future, exhibition analysis should be regarded as a benefit rather than a punishment for exhibition creators. Only then can the creators and the analyzers work together. But that means that prejudices against analysis and critique need to be dismantled, but above all, that the way errors and mistakes are dealt with in museum operations would have to be reconsidered.

Gottfried Fliedl: Yes, exhibition analysis and critique would convey a sensitivity for the different working methods, objectives and qualities of museums and soften the predominantly affirmative stance towards the museum as an institution. Ultimately, this would enable us to address the political role of the museum and facilitate a debate on which societal demands should be placed on museums. This would give civil society, which is at the moment almost completely detached from the museum, an active and intervening role that would go far beyond the current small-scale participation and towards a genuine democratization. For exhibition analyses should not attempt to control or disambiguate the open and associative nature of the medium. It is the best thing about exhibiting.

1 Website of the Galleria Nazionale: https://lagallerianazionale.com/mostra/time-is-out-of-joint (05.08.2024).

Part I Cultural Analyses Methods

Space Syntax

Analyzing the design of exhibition space and display

Kali Tzortzi

Introduction

A key issue in museology, theoretical as well as practical, is how visitor experience is shaped by the interaction between building and display. Both the design of the building and the design of the display have in common the creation of some kind of spatial order. Space, in this sense, is the common language of both building and display and so forms a key link between architecture and museology, between the architect and the curator.

The importance of space in museums and its effects on the way in which we approach and perceive displays has been increasingly acknowledged by museum studies (Duncan and Wallach 1978, Falk and Dierking 1992, Mason, Robinson and Coffield 2018, Whitehead 2009, Witcomb 2003) and architectural (Basso Peressut 2014, Brawne 1982, Markus 1993, Pallaasma 2014) literatures. Within architecture, and more specifically in the theory and methodology known as *space syntax*, there has been a more analytic approach to museums through space, which is the focus of this chapter. This approach facilitates the empirical study of museums, enables us to bridge between the two layers of organization – of space and objects – and allows the spatial properties of museum layouts to be systematically related to observed aspects of space use, so linking our knowledge of the functioning of museums to their morphology.

Since the first published syntactic studies on museums (Hillier, Peponis, and Simpson 1982, Peponis and Hedin 1982), a body of studies of museums has accumulated which use space syntax concepts and techniques to explore, amongst other themes, the relation between the layout of space and the communication of knowledge, the role of movement in the exploration of the content of the museum and the production of meaning, and museum space as a symbolic system.[1] More recent

1 For a review of syntactic studies of museums, see Tzortzi (2015). Recent studies include Lazaridou and Psarra (2021), Li and Psarra (2022), Lu and Peponis (2014), Tzortzi (2017, 2022), Tzortzi and Hillier (2016), Peponis et al. (2021), Peponis (2024). For a wide selection of papers us-

studies explore how the experiential and 'sensory turn' in museum displays and exhibitions affect museum space (Tzortzi 2017, Tzortzi and Hillier 2016). This research approach and methodology is seen as a key perspective on museums, as reflected in the especially dedicated chapters in key books in museum studies (Macdonald 2006, Mason 2020).

Aim of the method

Space syntax is a theory of space and a set of analytical, quantitative and descriptive tools for analyzing the layout of space in buildings and cities (Hillier 1996, Hillier and Hanson 1984). Space syntax is a way of trying to answer the question: Does spatial layout make a difference? And if so, what kind of difference? One of the fields to which it has been applied is the museum. For museums and galleries, it asks: What dimensions of our experience of museums are affected by the way galleries and objects are organized spatially? Does spatial design influence how people move through the layout? Does it make any difference to how a gallery works as a social space? How does it relate to curatorial intent? Can curators use spatial layout to enhance the experience of exhibits?

The fundamental idea of space syntax is that the way museum buildings are used and function is not only about the properties of individual spaces but about the complex relations between spaces and how they affect each other by co-existing simultaneously – defined as *configuration* in syntax (Hillier 1996, Hillier and Hanson 1984). In contrast to the metric or geometric properties of space which can be perceived directly (for example, the size or shape), the *configurational* properties (for instance, the overall location of a space in the layout) are more abstractly comprehended. This is the reason why we need techniques of configurational analysis that allow us to analyze buildings as systems of relations, that is, in terms of the relationships between each space in a layout and all others.

In space syntax, relational concepts, such as *integration* (which is a measure of spatial accessibility – see below), are applied to representations of space, such as rooms, axes and fields of view, and this allows us to describe and quantify the *spatial* and *visual configuration* of the museum as experienced by the visitor in a more analytic way and to make comparisons with its observed function. In this chapter, I outline some key syntactic concepts and techniques for the analysis of space[2] and use the analysis of the layout of the *National Museum of Modern Art, Centre Pompidou,*

ing Space Syntax, see the Space Syntax Symposia at https://www.spacesyntax.net/symposia / (05.08.2024).

2 For a detailed discussion on the theory and method of space syntax, see Tzortzi (2015) and Hillier and Tzortzi (2006).

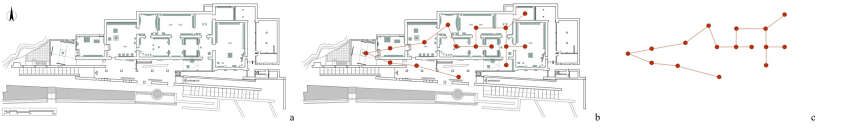
Paris, to show how the way the architectural layout is *configured* has a crucial effect on the visitor's experience of the museum and its exhibitions.

Step-by-step-guideline

1. The graph and justified graph representation

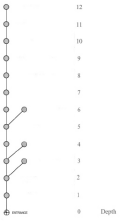
The overall spatial organization of the museum can be first clarified by representing the plan as a *graph* of connections, in which the spatial elements (that is, rooms or spaces) are the nodes and the spatial links between them the lines (Fig. 1). To draw the graph of the layout we can use a 'layer' overlaid on the museum plan and draw a circle (node) in the centre of each room. If two rooms are adjacent and it is possible to walk unhindered from one room to the other, then we join the two nodes, representing those spaces with a single unbroken line (link). This brings to the fore the way the museum is designed to structure the visitor's journey.

Fig. 1: Plan of the Archaeological Museum of Delphi (a), with the graph superimposed (b) and the graph (c), © Kali Tzortzi.



Once we have the graph, we can do two things which bring to light the *structure* of the layout. We can justify the graph from a particular space (the museum entrance in Fig. 2) – that is, treat the space under consideration as a root and align all the other spaces above that in layers according to how many spaces deep they are from the root space (for the concept of depth see below). Comparing the *justified graphs* of different museums/exhibitions can clarify their different spatial structures.

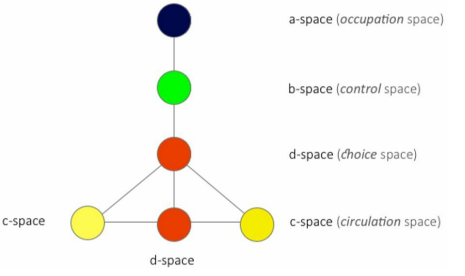
Fig. 2: The "justified graph" of the Archaeological Museum of Delphi, showing the "depth" of spaces from the museum entrance, © Kali Tzortzi.



2. The analysis of 'space types'

We can also identify each space as a type *a*, *b*, *c* or *d* in terms of how it is embedded in the graph and so in the layout of the museum (for their definitions see Fig. 3.1 and 3.2). While some museum layouts make use of *a-* (or occupation) *spaces*[3] (*b-* or control spaces are rare), most museum layouts are made up of *c-* (or circulation) *spaces* and *d-* (or choice) *spaces*. It is the ratio between this pair of space types and the way they are arranged that critically affects the experience of the visitor. The more *c-spaces*, the more constrained the visitor will be to particular sequences, while the more *d-spaces*, the more there is choice and potential for exploration.

Fig. 3.1: Visual representation of the space type definitions, © Kali Tzortzi.



3 See for example cases analyzed in Tzortzi and Hillier (2016) and Tzortzi (2017) where *a-spaces* are seen as the experiential type of space par excellence for the 'sensory turn' in contemporary museums.

Fig. 3.2: Detailed table of the space type definitions, © Kali Tzortzi.

SPACE TYPE		DEFINITION
a	*occupation* space	a-spaces are dead-ends, so cannot be passed through
b	*control* space	b-spaces control access to a-spaces (or other b-spaces) and so offer only the same way back
c	*circulation* space	c-spaces form rings, so offer one alternative way back
d	*choice* space	d-spaces offer more than one alternative way back, so present route choices

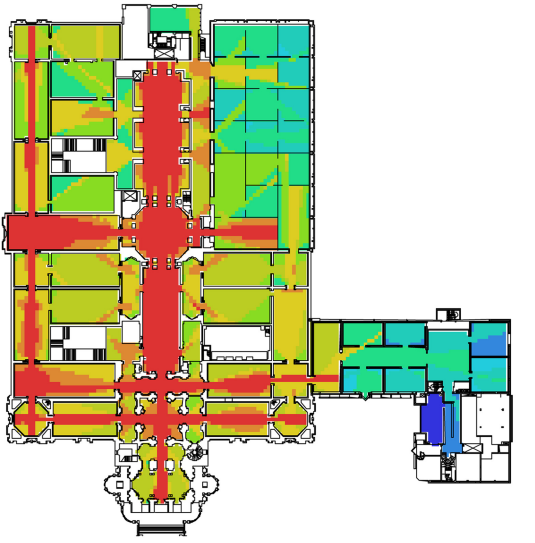
3. The concept of 'depth' and the related property of 'integration'

Looking at the graph, a key configurational concept can be defined, that of *depth* (Fig. 2). It is a function of how many spaces must be passed through to go from each space to all others and so characterizes the relationship of each node to the graph as a whole. It can be thought of as the syntactic measure of distance, which is accordingly topological rather than metric. Here, depth is used conceptually rather than numerically. But it should be noted that the lower the total depth of a space, the more *integrated* (or easily accessible) the space is in the spatial system, that is, the closer to all the other spaces. The higher the total depth, the more *segregated* the space. The justified graph representation itself shows very clearly the pattern of depth and so of *integration*.

Integration can also be made clear visually by assigning colours to spaces according to their depth from all others – from red for most integrated through to blue for least. The colours allow us to see at a glance the pattern of integration values in the system (Fig. 4). For all but the simplest systems, these calculations require the use of the open access space syntax software called *Depthmap*.[4] Computer-based configurational analysis allows us to bring the *integration core* of the building to the surface, meaning the syntactically central spaces of the museum, in the sense that they are more directly accessible to all the spaces in the layout. As suggested by syntactic studies, for instance the study of Tate Britain (Hillier et al. 1996, Tzortzi 2015), the syntactically central spaces of the museum tend to be those to which visitors' movements converge.

4 The computer software, accompanied by a 'building spatial analysis' tutorial, is freely available at https://www.spacesyntax.online/software-and-manuals/depthmap/ (05.08.2024), see also Turner (2001).

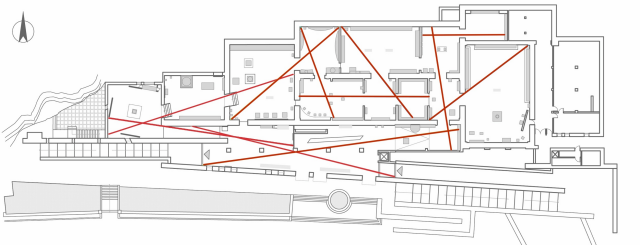
Fig. 4: The red pattern or "integration core" of Tate Britain. The distribution of the integration core along its main axis and the way it is linked to other parts of the museum affects key dimensions of experience, for example the way visitors become co-present and aware of each other, © Kali Tzortzi.



4. The techniques of 'axes' (or lines of sight) and 'isovists' (or visual polygons)

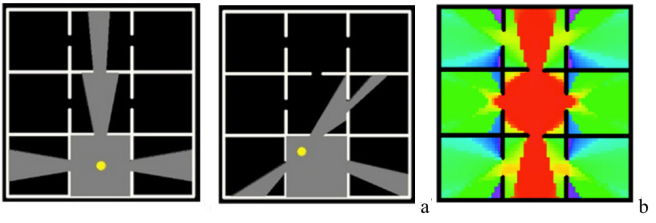
The museum layout can also be represented as an *axial map*, that is, as the simplest network of lines that characterize the possibilities of linear movement that we see when moving around (Fig. 5). Axes show how the visitor can move from one space to the other and so help us understand the layout as a whole, as in the conventional museum layout that consists of linear sequences of rooms, with strong visual and permeable interconnections.

Fig. 5: "Axial map" (lines of potential movement) of the Archaeological Museum of Delphi, © Kali Tzortzi.



In contrast, to describe the limits of visibility which are formed by the building around the located visitor and change as she:he moves, we use the *visual polygon* or *isovist* (Benedict 1979). The isovist defines the area that is visible around a point in the layout and offers us a way to study plans in terms of visual fields (Fig. 6a). We can use the succession of isovists to describe how the spatial perception of the visitor changes as she:he moves about in the layout. The isovists from all points (that are drawn and analyzed using *Depthmap*) can be used to calculate *visual integration* in the layout in the same way we use the rooms to calculate *spatial integration* (Fig. 6b).

Fig. 6: Visual fields (in grey) from two different points in space (a); the pattern of "visual integration" in the layout (from red for most integrated though to blue for least) (b), © Kali Tzortzi.



The above concepts and methods bring coherence and rigour to the study of museums and exhibitions and allow us both to differentiate one space from another within the same layout and to formulate clear distinctions between one kind of spatial layout and another. Being able to describe spaces according to their position in the layout in a systematic way also allows us to analyze exhibition designs: are the key works of the collection placed in integrated or segregated spaces? At the end of the axis or along it? And what are the consequences for the experience of the visitor and the way they perceive them? How do patterns of movement interact with pat-

terns of viewing, and do we find strategic differences between different cases? How does their interaction contribute to constructing meanings complementing the exhibition narrative?

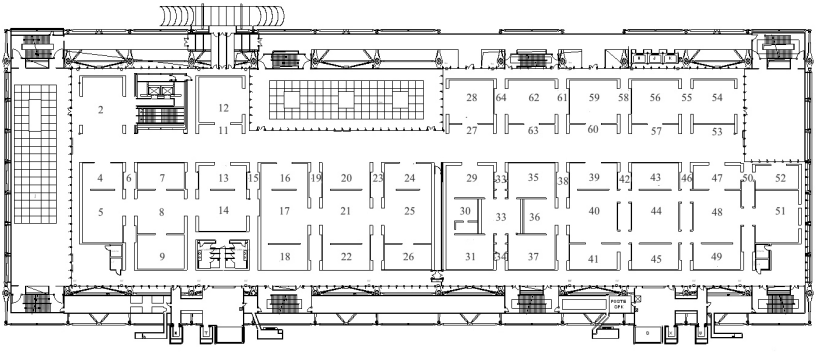
Case study

Moving to our illustrative example, the National Museum of Modern Art, Centre Pompidou, is a big-scale museum, extending over two floors, with a long history and influential evolution that made it a landmark in the history of architecture in general and in museum design in particular.

Morphology of space

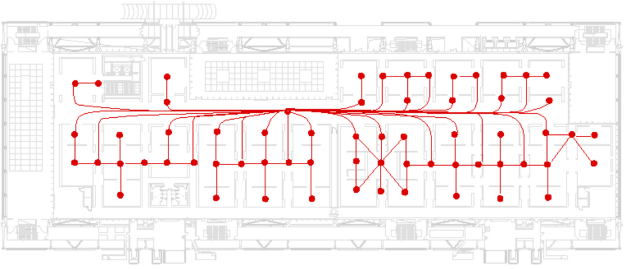
The layout of the museum (specifically the fifth floor which interests us in this chapter) is organized around a long axis, often referred to as the 'grande avenue', running the length of the building, giving physical and visual access to the galleries on both sides (Fig. 7).

Fig. 7: The layout of Pompidou (fifth floor), with spaces numbered, © Kali Tzortzi.



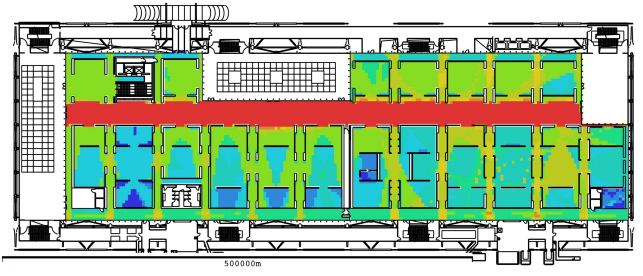
If we represent the layout as a graph (Fig. 8), we see that there is a consistent pattern: spaces are organized in small *rings* (circuits) along the axis with many points of route choice so that visitors can make choices and change direction.

Fig. 8: The graph of the layout of Pompidou (fifth floor), making visually clear the rings of movement linked to the main axis, © Kali Tzortzi.



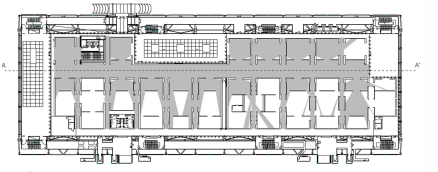
By using computer-based configurational analysis to examine the layout, we find that the axis constitutes its integration core (Fig. 9). It interrelates the gallery spaces with frequent visual and spatial links into the complex and links them to the entrance, meaning that the visitor can grasp the global structure of the building by moving about in it.

Fig. 9: The main axis in Pompidou which constitutes the "integration core" of the layout, © Kali Tzortzi.

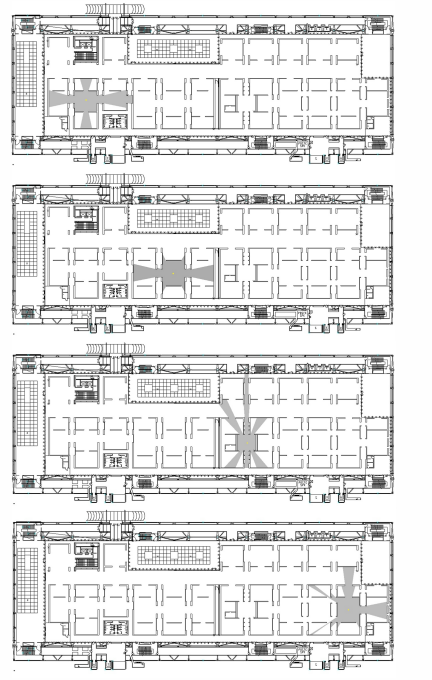


If we draw the visual fields that can be seen as one moves along the axis (in grey in Figure 10a), we see that it enhances *information stability* (Peponis 1997), that is, visual information that remains relatively stable. But as the viewer goes deeper into the gallery, axes become more fragmented and views shortened, which imposes a different rhythm of progression, slows down the viewer's physical rhythm and creates a 'process' of discovery. As shown in Figure 10b, the variety in the disposition of openings forms isovists of extremely heterogeneous shapes. The characteristic of the Pompidou Centre is rich visibility: the dense links between spaces in different directions create for the visitor constantly changing visual relations and emphasize a dynamic sense of space.

Fig. 10: Line isovist drawn from the main axis of Pompidou that constantly gives clues about its global structure (a) and isovists taken at central points of the galleries, showing the dense and multi-directional spatial connections between them (b), © Kali Tzortzi.



a



b

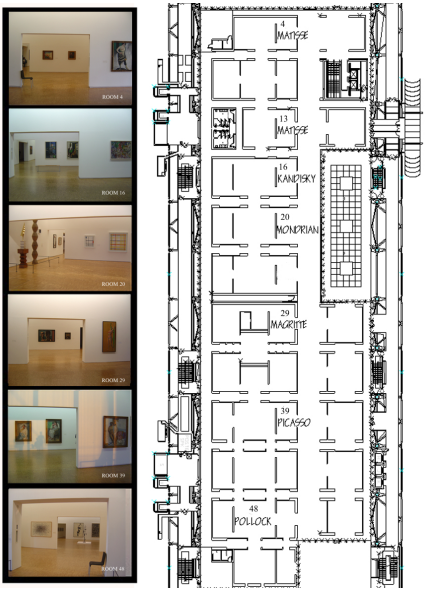
Morphology of display

How does the spatial design of the museum relate to the presentation of its collections? The display is devoted to the period from the early twentieth century to the 1960s, and its general organization follows the art-historical scheme of hanging by movements and artists in a chronological framework.[5] One of its defining features is that the arrangement of the collection consistently makes use of configurational properties of the layout and spatial decisions are systematically related to the positioning and categorization of objects. Key works which attract visitors' attention (Fig. 11) are hung in the most accessible spaces – in the galleries opening onto the central circulation space or those structuring the continuous interior axis – and placed in strategic locations in relation to door openings or on the axes of the viewer's passage, while the deeper and more secluded spaces are devoted to monographic displays or parts of the collection of a more specialized interest. It could be argued that over and above the content of the objects, the articulation of space and spatial hierarchy (realized according to how the structure of space privileges certain galleries over others, through direct accessibility, ample or distant visibility, rich network of connections) convey meaning and serve a display that aims at emphasizing "the major movements and artists from that period" (Centre Pompidou 2022).

But the arrangement is neither prescriptive nor hermetic. The axial dispositions of rooms and the proliferation of openings which allow works to be seen from a variety of distances and angles of sight engage visitors both physically and intellectually. Looking at a specific object means discovering new relationships, seeing the same work in different combinations and perceiving simultaneously surrounding visual realities. It could therefore be argued that space is systematically used as a narrative device and mediates additional relationships between exhibits. The connection network seems to suggest that modern art is a composition of individual achievements, the product of the mutual influence between artists, movements and styles.

5 It should be noted that though the analysis of the fifth floor of Pompidou is based on an earlier arrangement of space, the underlying organizing principles and spatial themes discussed here still remain the same.

Fig. 11: The arrangement of the collection along the main axis in Pompidou, showing the location of works of key artists. The numbered views on the left correspond to rooms in the plan. Source: K. Tzortzi, courtesy of Centre Pompidou, © Kali Tzortzi.



Paths of exploration and patterns of co-presence

So the question that arises next is: What are the implications to be drawn from the particular ways of organizing space and objects for the visitor experience, as manifested in observable patterns of visiting in each museum?[6] Recording visitors' routes during their whole visit (Fig. 12) showed that each followed a different path, taking advantage of the dense network of connections and exploring the variety of possible combinations – with half of the people tracked skipping half of the galleries. So their routes tend to be individual and exploratory. But, despite the heterogeneity of their itineraries, there is a strong tendency for visitors to get to the 'pre-determined' key spaces that structure the main route. The higher rates – with the exception of

6 Visitor behaviour was analyzed using established techniques (traces of paths of visitors recorded for their whole visit to the gallery, 'gate counts' of flows across the thresholds of spaces and 'snapshots' in which the observer records on a plan the location of people in each space viewing exhibits). For the full study of Pompidou, see Tzortzi (2015), Chapter 6.

the central axis where all the diverging paths necessarily converge – are found in the right complex and, more specifically, the central spaces which structure the first and the last part of the internal circulation path, while the spaces with low movement are consistently located at the end of the sequence or in the *deepest* spaces of the gallery that are visually segregated and not directly accessible from the main axis (Fig. 13).

Fig. 12: The routes and stopping points of visitors observed at Pompidou, making visually clear the heterogeneity of their paths and the strong bias of space use towards the main axis and the galleries located at the beginning of the itinerary, © Kali Tzortzi.

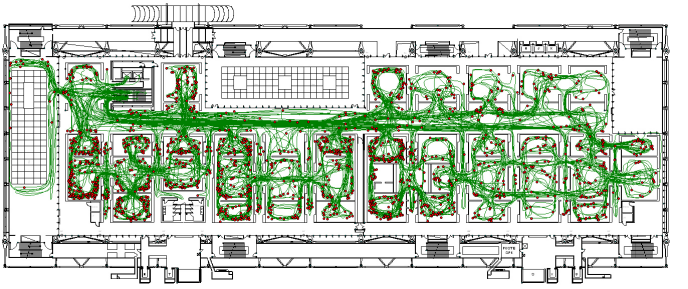
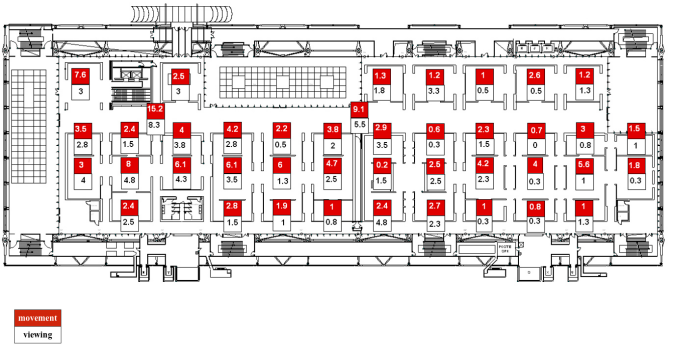


Fig. 13: The rates of movement (in red) and viewing (in white) on the fifth floor of Pompidou, © Kali Tzortzi.



At the same time, it is clear that the spaces with high viewing are also those with the key attractors (Fig. 13). These parallel effects clearly reflect a curatorial strategy to place the highlights of the collection in striking positions, in the spaces that have

more movement than others, so rendering them the most intensively occupied galleries of the museum.

But there is also a by-product effect of the way people move and explore museum space, and that is a social effect created by the spatial design. Visitors that split in different directions, re-encounter each other in the axis at different points of their visit. The urban-like spatial design of the museum (many spaces can work as both starting points and points of aim that are diffused in the layout) maximizes opportunities for encounter and intensifies the sense of being together with other people, which is central to our experience of museums.

Method reflection

As the preceding sections suggest, this analytic approach allows us to show that space affects our experience of exhibitions by the way it organizes three kinds of spatial relationships: among *galleries*, determining the way they are explored and used, among *objects*, affecting the way they are perceived and appreciated, and among *visitors*, through the possibilities for co-presence and encounter created by the first two acting together.

It could be said in conclusion that this way of seeing exhibitions can bring to the surface things we understand intuitively when we design an exhibition but find difficult to describe and represent (for example, how the informal educational role of the exhibition can be structured through movement in space and how patterns of visibility interact with ways of seeing and understanding), give some account of the experiential differences between exhibitions and explain why each has its own distinctive spatial, intellectual, and social character.

In this sense, it might be hoped that the theoretical ideas and research findings set out here could be useful in the design of exhibitions, not by offering design guidance, but by suggesting a deeper understanding of the likely consequences of strategic design decisions. This understanding could both inform design choices and facilitate evaluation of alternative solutions in relation to specific requirements and intentions. More importantly perhaps, it could also lead to the generation of ideas and open up new ways of handling spatial and display considerations.

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Knowledge Analysis

Examining exhibitions critically in terms of representation and power

Daniela Döring

Introduction

Knowledge is a paradoxical term: the harder one attempts to grasp it in a definitional way, the more it eludes definition (Füssel 2021: 7). Knowledge cannot be defined conclusively, but is constantly renegotiated within cultural and historical contexts. Exhibitions in particular are central venues for these negotiations.[1] They make knowledge both visible and invisible, they represent, popularize, discard, generate new insights and put these up for debate at the same time. Ever since Michel Foucault pointed out the inseparable connection between knowledge and power, an analysis of knowledge can no longer be conceived without the question of power relations: power generates knowledge and knowledge constitutes power (Foucault 1977). Exhibitions operate at this interface and are characterized by relations of power and domination. They are closely linked to historically evolved institutions such as museums, archives, collections and universities, which often retain bodies of knowledge from colonial, patriarchal and hegemonic contexts (Paul 2019: 174).

Contrary to what is often assumed, the knowledge presented in exhibitions is not evident, but provisional and contestable. According to Beatrice von Bismarck (2021: 13, 63), exhibitions can be understood as curatorial situations that can abandon established forms of knowledge and multiply und process other knowledge. Their rationalizing and simultaneously aesthetic arrangements in space enable both affirmative and critical reflections of the respective knowledge culture. It is precisely

1 The Research Training Group *Wissen | Ausstellen. Eine Wissensgeschichte von Ausstellungen in der zweiten Hälfte des 20. Jahrhunderts* (Knowledge | Exhibiting. A History of Knowledge of Exhibitions in the Second Half of the 20th Century) based at the Georg-August University of Göttingen explored this reciprocal relationship (2018–2023). The following reflections benefit greatly from the joint discussions and collective work processes, which is why I would like to sincerely thank all the PhD students and colleagues involved.

here that the dual function of knowledge – as a power-stabilizing and emancipatory instrument (Kroll 2002: 403) – can become productive. A knowledge analysis of exhibitions addresses this ambivalent relationship between the re-production, new production and de-production of knowledge.

Aim of the method

An analysis of knowledge that is based on a critique of representation and power aims at describing exhibitions as places where purportedly valid knowledge and its production processes are negotiated. It enquires who produces what knowledge and by what means, and incorporates the analyzer's own position and situatedness into the analysis. It takes a subjective, interpretive approach and in doing so, produces new, relational and particular knowledge. On the one hand, it is necessary to follow the curatorial narrative, on the other, to look for disruptions, unrest, resistance or conflicts in the display. By placing various bodies of knowledge in relation to one another, both the knowledge that has become evident through exhibitions and that which is contingent and inconclusive can be addressed.

In order to explore various dimensions of knowledge in an exhibition complex, I propose a combination of various approaches. My method is guided by a cultural analysis that, following Mieke Bal (2002), examines exhibitions as cultural processes with the aid of feminist, post-colonial and representation-oriented critical perspectives. The frequently raised question "Who is speaking in particular?" allows to analyze epistemic inequalities regarding gender, race, class, ethnicity, sexuality etc. in exhibition and museum practice (e.g. Adair and Levin 2020, Döring and Fitsch 2016, Kazeem-Kamiński and Martinz-Turek 2009, Muttenthaler and Wonisch 2006). This raises the need to inquire not only into which and whose knowledge is represented, but also how and under what structural conditions it is presented. The spatial, architectural and medial parameters (Hoffmann 2014, 38) come into focus, because these conditions of display either enable or restrict specific forms of use, exploration and discovery.

In exhibitions – understood as "a complex of coded sign relations" (Scholze 2010: 137) – particular meanings, interpretations and attributions of knowledge production are constantly negotiated. Cultural and implicit bodies of knowledge are embedded in curatorial practice, the exhibition itself and its perception. This tacit dimension of knowledge (Polanyi 1967) can be elaborated through an ethnographic approach. In examining exhibitions and their diverse practices, we can identify which cultural premises, which subjects, positions and actions are addressed and which are made impossible. The basis of such an investigation is Donna Haraway's (1991) long-standing feminist demand for an embodied and situated knowledge that makes one's own situatedness and privilege the point of departure for a (self-)criti-

cal and reflective production of knowledge and thereby makes alternatives visible. A power-critical analysis of knowledge thus not only aims to critically reflect exhibitions in terms of process, as potent venues of performance and negotiation of knowledge, but at the same time to participate in them and contribute to shaping them with one's own knowledge.

Step-by-step guideline

Even though the tools of knowledge analysis were initially situated theoretically, the method proposed here was developed from my practice (Döring 2020, 2021, Döring and Strunge 2021). Exhibition analyses can hardly be designed at the drawing board; they are always embedded in overarching questions as well as epistemic interests and can generally be understood as a constant oscillation between a theoretical approach and framing and mapping the subject matter. The following guideline is therefore not conceived as a rigid procedure, but rather as a working mode that isolates separate, often interlocking stages from one another and at the same time invites reflection and, if necessary, divergence.

1. Explore, perceive, let yourself be guided

Where does an exhibition begin? The very approach to the exhibition, its accessibility and the history of the museum or the exhibiting institution, its embeddedness in the urban space, its architectural and global forms of representation or the cultural-political framework already point to the structural preconditions of the exhibited knowledge. Determine a point of departure and let your interest and intuition guide you. Look for introductory or explanatory curatorial information in order to get a general idea of what to expect: How is the exhibition designed, is there a suggested tour, what story is it meant to tell, what knowledge to convey? The mode in which you move through the exhibition rooms is twofold: On the one hand, it is about exploring, immersing yourself and discovering, but digressing and getting side-tracked is welcome. On the other hand, it also involves observing your observation, i.e. a detached perception of your own exploration. Because the question why you have, for instance, digressed from a designated path or what exactly has attracted your attention can therefore be a valuable instrument to uncover your own epistemic interest. Reflecting the question "What do you want to know?" is one of the keys to and a precondition for a power-critical knowledge analysis.

2. Note, sketch, draw

Record selected exhibition contents during or at the end of your tour by taking notes, photographs or making sketches. I often take a first step towards abstraction when leaving the exhibition – in the last room of the exhibition, a reading or activity corner or in the museum café. Make a note of key words, sentences or outlines of individual exhibition scenes, exhibits or architectures – it's about saving your first immediate impressions in a medium that you are comfortable with. It is also in moments like this that your attention may wander: How do you perceive the exhibition venue? What attracts you? Are other visitors present and how do they conduct themselves? What happens in the spaces in between? Where and how does the exhibiting institution present itself to you? Who participates (and how)? Your notes about the exhibition constitute a first level of reflection, they should be as unfiltered as possible and not yet aim for a particular outcome, giving you the opportunity to gather contingent and implicit bodies of knowledge.

3. Search, question, analyze

Before tackling the actual production of text, it is advisable to identify your epistemic interest more accurately and analytically frame various forms of knowledge. The aim of this work step is to create your own catalogue of questions in which you (can) incorporate the parameters listed below. From this, you generate key concepts and a leading question that you want to think about with and in the exhibition. This allows you to structure and focus what you want to know. The approaches address different levels of a power-critical knowledge analysis.[2]

a) Subject

Subjective experience and observation constitute, in a cultural-anthropological sense, a significant source of knowledge production that needs to be reflected and operationalized. Exhibitions, in particular, are spaces that are read, physically experienced and negotiated by subjects (Reitstätter 2015). What emotions, associations or memories does the exhibition trigger in you? Where do you feel that it appeals to you – or not – and why? Explore your own epistemic processes, interactions and entanglements in the field of the exhibition in order to be able to work out implicit presumptions and inscriptions. Also reflect the conditions of your own knowledge

2 Sophia Prinz and Hilmar Schäfer (2015: 290–302) undertake a similar categorization in their praxeologically oriented dispositive analysis of exhibitions, but without following a power-critical or cultural-analytical approach: They focus on the architecture of the building, the medial arrangement of the artefacts, the intersubjective relationships and finally their embedding in discursive practices.

production, for instance education, professional discipline, origin, gender and your relationship to the institution. This positioning does not necessarily need to find its way into the final text, but serves to make you aware of where you stand yourself.

b) Representation

The concept of representation serves to enquire about contents, assumptions and collections represented in the exhibition. Which canon, whose knowledge or which objects are shown? Processes of visualization are always ambivalent and at the same time linked to forms of invisibilization (Schaffer 2008). Your analysis should therefore also look for the omissions, the absent and the categorizations: which voices are not represented? Which boundaries, groupings and gaze regimes are being applied? Can gender-specific, classifying or racializing differences or hierarchies be detected? Who talks about whom – what and how?

c) Display

At this level, the ways in which the exhibition is staged come into view. How can you describe the display? In which forms and formats is knowledge organized in the room? What atmosphere do you detect? Is the exhibition design visible or does it make itself disappear? It is precisely the invisibility of the exhibition's medial setting that contributes decisively to the legitimization, naturalization and objectification of knowledge. Do the gestures of showing employ a familiar or unconventional language of signs and forms, are there surprises, irritations or fault lines? And how are evidence, credibility or, conversely, the provisional nature and conditionality of knowledge marked?

d) Institution

This focus enquires about the institutional authorship and the conditions of exhibiting, which are often concealed. How can the curatorial actor – i.e. the "long chain of subjects" (Bal 2002: 77) that produce the exhibition – be described? Beyond concrete statements by the curators, it is the institution itself that demands critical attention: Can you find institutional aims, a stance or implicit preconceptions regarding the exhibited bodies of knowledge? What aims are pursued? Who is addressed and imagined by the exhibition? Who benefits from the knowledge?

e) Contexts

Finally, one has to work out the various contexts in which the exhibition is embedded. Against what background was the exhibition curated? Which discourses, theories, problematics and which historical or current debates are "processed"? What broader societal issues or diagnoses does the exhibition react to? Are there references, precursors or analogies? Which cultural concepts or terms appear to be materialized and (re)negotiated here?

4. Read, describe, produce

The next step is to write a first draft against the background of your own questions. Choose a few central exhibition scenes – three to a maximum of five specific exhibition units, an ensemble of objects, a display case, installation or hands-on station – and create a thick description (Geertz 1973).[3] Choose a key scene that forms the beginning of your narrative. This first exhibition unit has a particular significance for your emerging text. Because with this scene you clarify the question(s) that accompany you through the exhibition, you elucidate and exemplify your own epistemic interest and open your analysis. Here, writing is exploratory research with which you associatively 'read' and narrate the exhibition. By arranging the selected exhibition scenes, you create your own tour and narrative, your own knowledge.

5. Structure, edit, criticize

You have now produced a first draft of your text. Check whether your original epistemic interest is 'supported' by your analysis or whether the material and your subject suggest other approaches. For this, you repeatedly read your draft once again, crystallize the terms and questions addressed therein and devise subheadings. With the help of the analytic parameters of your question catalogue, you can flesh out, elaborate and systematize individual descriptions. Once you have developed an outline and dramaturgy for your text, proceed to the editorial revision stage, trimming, deleting, expanding and reorganizing your material. Your personal perception of the exhibition must now be viewed at a greater distance from itself and in relation to other bodies of knowledge, exhibitions, academic discourses or debates, in this way contextualizing it in societal issues and diagnoses.

The method of knowledge analysis lends itself to the observation by a single person, but can be also be expanded through group discussions, interviews with the actors involved in the exhibition, in-depth archive or collection research as in *Context Analysis*, *Go-Alongs* or *Questionnaires*. The time frame depends on the subject matter, available resources, the writing genre and the publication medium. It is recommended to visit the exhibition several times as well as to allow for multiple writing and editing phases. Peer editing is particularly beneficial for the challenging, subjective approach of this method of analysis in order to ensure the necessary critical distance and intersubjectivity.

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3 Although thick description is, according to Clifford Geertz, not a method, but rather an epistemic and interpretative approach, it has found its way into numerous empirical studies. It assumes that a description and observation of cultural phenomena is not possible without explaining and producing them (Egger 2014: 401–414).

Case study

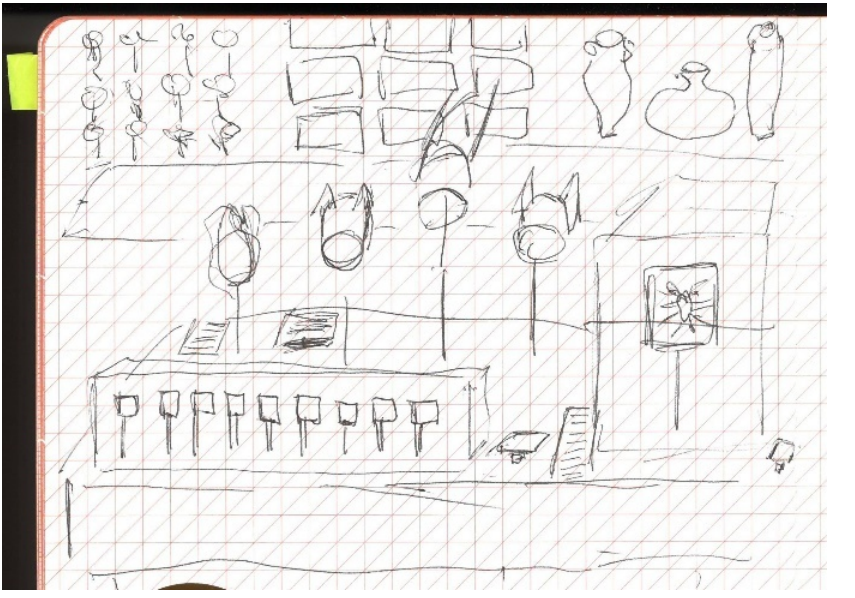
For quite some time I had wanted to visit the Gent University Museum (GUM) which opened at the beginning of the 2020 pandemic. It wasn't until a year later that I stood at the museum's ticket desk and received a sticker with the phrase "I am not sure". This unusual slogan points to the museum's programmatic policy: the subtitle *Forum for Science, Doubt and Art* signals a shift towards a distinctive kind of curatorial approach. Science should not longer be shown as a finished result or achievement of individual people, but as work in progress, as human and collaborative processes together with doubts and detours. The museum 'for everyone who dares to think' not only wants to look behind the scenes of the academic world, but also design a new and unconventional science museum – "The Museum of Doubt" (Doom 2020).[4] A museum guard welcomes me at the entrance and wishes me to have more questions than answers by the end of the exhibition. I'm curious!

1. First impressions: The exhibition captivates me. Already in the first section I linger for quite some time. In the beginning there was chaos: that seems to be the primal scene of the idea of a Western, rational and enlightened science. However, it is immediately questioned why we order and classify the chaotic world. Does this order really exist? Or is it imposed on reality? The key objects on display illustrate the logic of classification systems and emphasize their production process, their contingency and changeability. I find this to be an unusual number of questions for an exhibition. I like it. I'm particularly interested in the tensions and contradictions that are presented for classification systems, for example: on the one hand they promise to be universal and precise, on the other, they are in constant flux.

2. Notes: I make a sketch of the first section of the exhibition (Fig. 1). Later I notice with the help of my sketch that the staging of chaos is organized in an orderly fashion. The display is characterized by a clear layout of the objects and an unambiguous arrangement. Classification systems may be changeable, sometimes perhaps even 'wrong', but their necessity, their evidential and persuasive power is not open to scrutiny. Science endeavours – this is how I read the subtext of the exhibition – to overcome chaos and come as close as possible to the 'right' order.

4 Museum director Marjan Doom describes her curatorial concept in her book The *Museum of Doubt. A Modest Manifesto by a Science Curator* (2020), for more details see Döring and Lessing (2021).

Fig. 1: Sketch of the exhibition unit Chaos, © D. Döring.



3. Question catalogue: With this mixed bag, I rather welcome the next section of the exhibition: It is about doubt (Fig. 2). Here, the question is not only what role doubt plays in the production of knowledge, but also how errors can be avoided and how reliable, objective knowledge can be generated. I'm fascinated by the fact that that errors and wrong paths play such a central role in the exhibition. Because this is contrary to the conventional narratives of a story of progress and success in the sciences. And so my questions to the exhibition crystallize: (a): What image of science is being conveyed and how does it relate to my own ideas?
(b) How are scientists (re-)presented? Who is speaking – and who isn't? What is academic knowledge? (c) By what means is this knowledge staged and put up for discussion in the exhibition? (d) What does this say about the exhibiting institution, Gent University? (e) And in what broader contexts and discourses can the exhibition be positioned?

Fig. 2: Exhibition display Doubt, © D. Döring.

4. Draft: I quickly find many key scenes: the arrangement in the Chaos section, an interview with a scientist in the Doubt exhibition space and selected objects in various places. Seven theme islands highlight various key scientific concepts, with the exhibition architecture relying on a strong aestheticization and cinematic atmosphere. Here, people marvel, admire, celebrate, but also act – there is a large, even young audience in the exhibition. I produce thick descriptions of individual scenes and, among other things, focus on a large and artfully crafted tree fern sculpture which the Swiss Felix Speiser brought to the university collection from a former British-French colony in Oceania at the beginning of the 20th century. The object text for the so-called Nenna sculpture emphasizes that the ethnologist breaks with the hitherto held assumption that non-Western cultures are "backward civilizations". I'm confused: After all, already the ennoblement to art follows a Western logic and it is precisely this power of definition that remains unquestioned here. Neither is the colonial context of appropriation and research addressed, nor the indigenous use, provenance or the ownership relationships. Instead, the object is used for the narrative of the scientist's clever foresight.

5. Critique & Context: After reading my draft, I'm rather surprised that I'm levelling such harsh criticism at the exhibition that appealed to me so much in the room. Even though it certainly criticizes power and domination relationships in science, it also

emphasizes a history of progress. So what conclusions can we draw? The final step is to take greater account of the contexts within which such an exhibition is created. I had already seen several other current science exhibitions in the German-speaking countries and worked in the curatorial team of a university museum that was created in Göttingen at the same time, the Forum Wissen. What the young institutions have in common is a balancing act: on the one hand, representation-critical debates have found their way into the exhibition, calling for a critical and reflective treatment of science. On the other, universities and museums face increasing pressure in the post-factual age to legitimize the relevance and reliability of scientific knowledge. Taking these ambivalent challenges and political appeals into account, the Museum of Doubt can be criticized *and* appreciated as a courageous and exciting attempt that provides an excellent opportunity to discuss precisely these questions.

Method reflection

A representation- and power-critical knowledge analysis enquires whether and how exhibitions take on power-stabilizing or canonizing functions or enable emancipatory new productions of knowledge. It represents neither a purely subjective nor a supposedly objective reading, but is rather a reflexive, situated analysis that can be tested for consistency and plausibility of interpretation. The aim is not to evaluate the representation of knowledge (as good or sufficient), but to contextualize it within the institutional and cultural conditions. Here it is necessary to describe the genesis of knowledge – in its ambiguities, negotiations, conflicts, tensions and contradictions. As writers and describers, we participate in these knowledge processes and can critically examine their validity and set it into motion.

The challenge of this approach is to not remain on a descriptive, explanatory or judgemental level. The danger of misunderstanding the exploration of a cultural and implicit knowledge embedded in the exhibition as a potent gesture of 'extracting' and 'discovering' a truth should not be underestimated. In order to avoid a superior observer position in knowledge-historical analyses, Achim Landwehr (2018: 810) remarks that it is necessary to question one's own certainties, self-perceptions, habits of thought and naturalization effects. This requires a high degree of self-reflection, in-depth knowledge of cultural contexts, professional discourses, societal debates and – if possible – curatorial empirical knowledge. It is also necessary to combat the skepticism, still widespread today, towards subjective, situated research. Particularly in the exhibition, museum and education sector it is always a matter of critically illuminating institutional and epistemic power and domination relationships. In an exhibition analysis as a knowledge analysis, we see ourselves as part of these relations and can thus practice involved and productive, situative and comprehensible critique.

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Artefact Analysis

Interpreting exhibitions from an organizational logic perspective

Luise Reitstätter

Introduction

Already for over 20 years, the sociologists Ulrike Froschauer and Manfred Lueger have been investigating the development and application of artefact analysis as a method of organizational research (Froschauer 2009, Froschauer and Lueger 2020, Lueger 2000, Lueger and Froschauer 2018). Due to the omnipresence of artefacts in our everyday lives (from door signs to smartphones) and the concomitant greater need for interpretation (in the hermeneutic tradition), artefact analysis has so far led a rather marginal existence (Froschauer 2009: 327–329, Froschauer and Lueger 2020: 20–26). However, the understanding of artefacts as man-made things that, via the materialization of communication and the representation of decision processes, provide information about the context of their origin as well as organize future activities of use, reveals the potential of artefact analysis. On the one hand, artefacts are not created through social activities alone but are also symbolic for them. On the other hand, artefacts are not only determined via their context of creation, but also by their context of use, in that they induce particular forms of follow-up communication (Lueger 2000: 141, Froschauer 2009: 329). We also find this multidimensional approach to artefacts in the exhibition, when artefacts are the result of communication and decision-making processes of the exhibition makers and at the same time pre-structure the potential uses by exhibition visitors (Reitstätter 2015: 122).

My approach of transferring artefact analysis from organizational research to exhibition studies thus aims, through the reconstructive interpretation of a significant artefact, to reveal the logics of the exhibition's production and perception. Assuming a fundamental epistemic problem, this means that artefacts do not merely reflect reality, but are accessed and interpreted both in everyday life and in research based on prior knowledge (Froschauer and Lueger 2020: 36–44). In terms of methodology, artefact analyses can be grouped into visual and material cultural analyses, so that we can consider the following approaches as precursors and references: cul-

tural-sociological image analysis (e.g. Breckner 2015), text-oriented content analysis (e.g. Froschauer and Lueger 2020a), historical source analysis (e.g. Wolff 2019) or also qualitative video analysis (e.g. Reichertz and Englert 2021). Artefact analysis in the exhibition context shows, via the source-based point of departure, similarities to *Art-Historiographical Exhibition Analysis* as well as *Exhibition Photograph Analysis*. Since artefacts also function as essential material arguments for assessing the characteristics of an exhibition, artefact analysis also evinces a proximity to *Knowledge Analysis* and *Affect-Reflexive Exhibition Analysis*.

Aim of the method

The aim of the method is to place the specific appearance of the artefact into a plausible context of meaning and in this way develop an understanding of the logic of an organization (Froschauer 2009: 327). With regard to the exhibition, the artefact can be a single object, an ensemble of objects or a spatial constellation, as artefact analysis has already explained with observations on special cases ranging from two-dimensional artefacts to spatial design and technical devices (Lueger and Froschauer 2018: 93–127). In our case, organization refers to the exhibition, even though some research questions are aimed more at an organizational-logic assessment of the institution in which the exhibition takes place, or also a broader cultural and historical context, as we will see in our case study below. In any event, artefact analyses focus on "objects made by humans and attempt, on the basis of their social embedment, to reveal information about their meaning, production and operation, and, ultimately, about the social world." (Froschauer and Lueger 2020: 22) While an artefact is subjected to a focused analysis, the method attempts to gain an understanding of the associated system. Consequently, artefact analysis is particularly well suited for in-depth detailed analyses that in exhibitions with contemporary themes enable a precise focus, and in historical exhibitions, a comprehensive evaluation of the still extant source material.

Fundamentally and independent of the particular research interest, artefact analysis is guided by four key questions that help to explore the wide range of possible frameworks of meaning (Froschauer and Lueger 2020: 27–31, Lueger and Froschauer 2018: 52–58): 1. Why does the artefact exist at all? 2. How do people make the artefact? 3. What do people do with the artefact? And: 4. What does the artefact do to people and society?[1] These four questions lend themselves as a warm-up exercise to sensitize oneself to the method and create a first analytical framework. Specifically, this enables an initial reflection on the logic that occasions the artefact,

1 This question, which is perhaps the most difficult one to answer, can also be put in reverse: What would change for human beings and society, if we didn't have the artefact?

its production, use and social and societal practice, before embarking on the process of concrete artefact analysis.

Step-by-step guideline

Artefact analysis is a "very general procedure that needs to be adjusted to the specific materials in question" (Froschauer 2009: 329). The step-by-step guideline below already includes an adjustment to the exhibition context by tailoring questions guiding the research process to this field of application. The basic principle in artefact analysis is to approach the organization under scrutiny via three key moments: first, deconstruction of the artefact; second, integration into a framework of meaning as a social recontextualization; and, thirdly, a process of translation into an argumentative context (Froschauer 2009: 331–332). In the preparatory stage, artefact analysis is structured via general quality assurance measures and the selection of the artefact, and in the implementation phase, via seven levels of interpretation (Froschauer and Lueger 2020b: 51–70, Lueger and Froschauer 2018: 59–92).

Preparing an artefact analysis

In artefact analysis, quality assurance measures are recommended in the sense of interpretative social research, which, on the one hand, theoretically sensitize researchers to the procedure, and on the other, should be practically incorporated into the research process. Team interpretation sessions are essential for quality assurance, as they promote an opening of perspectives as well as critical reflection. In addition, one should pay attention to carrying out an extensive interpretation of meaning and subjecting it to a careful examination within a generously allotted time frame. This is because, unlike in everyday life, scientific interpretation is not about arriving at the most plausible interpretation as rapidly as possible. Rather, "permanent doubt" enables us to fathom potential meanings inherent in the artefact and examine them for their viability (Lueger and Froschauer 2018: 48). In the circular research process, one needs to include reflection loops so that argumentations can also be corrected. In case the chosen artefact is not transportable or no longer exists, it is necessary to create the most detailed documentation possible in form of photographs, video recordings, sketches and descriptions, and perhaps also to collect explanatory material such as texts, manuals or instructions concerning the artefact.

The selection and necessary documentation of the artefact represent the usually not so laborious act of data collection. The great advantage of artefacts is that they are, as a rule, easily accessible, even though their potential disadvantage is the omnipresence of possible artefacts to choose from. The selection of an adequate artefact is thus critical for the research process. How I want to limit the options depends

on my research interest, that is, the focus on how I want to 'read' the exhibition. In principle, it always makes sense to select an artefact that plays a significant role in the exhibition.[2] When selecting the artefact, one can take recourse to the actors involved (from exhibition makers to visitors) so that their focus can be incorporated into the artefact analysis. Archival materials from past exhibitions also reveal this kind of structured selection, as their documentary value already predestines them for an artefact analysis. On the other hand, it can make sense to select the artefact as a researcher yourself, in order to preclude any blind spots of the actors involved or critical aspects that can lead to a potential exclusion of artefacts.[3]

Carrying out the artefact analysis

In the following, seven levels lead through the interpretation of the data, still leaving enough leeway to make prioritizations and adjustments in the sense of artefact analysis as a heuristic art form.

1. Research contexts of artefact analysis

This level is about formulating the epistemic interest in the exhibition and integrating artefact analysis into the research process. For this, we determine both the role as the main or supplementary method, as well as possible adjustments to the artefact.

Exemplary questions:

- How do the artefacts of the examined exhibition differ?
- Which specific artefacts are suitable for developing the research interest?
- Which criteria are decisive for the final selection of the artefact?
- Does the artefact have any specifics that require an adjustment of the procedure?
- To what extent does a complementary application of other methods make sense?

2 In an exhibition, this can be the main introductory text as well as the artwork presented in the central room or the innovative guide that was specially developed for the exhibition.

3 This can be the case with a flyer, for example, which is self-evident for the exhibition makers, while for the visitors, it provides an initial access to the exhibition. Another example would be an artwork-label combination that, in a critical reading, lacks gender-theoretical framings, for example, and thus highlights a topic that was apparently not a priority for the exhibition makers.

2. The artefact's conditions of existence

Since artefacts are not brought into the world by chance nor exist without preconditions, this level concerns the questions of what conditions must be met for the artefact to exist and in what specific environment or situation we encounter the artefact.

Exemplary questions:

- What materials, techniques etc. are required to produce the artefact?
- What are the interests and intentions behind the production of the artefact?
- In which context of an exhibition can the artefact usually be found?
- Which context does the artefact need in the exhibition for a meaningful use?

3. Descriptive analysis

The descriptive analysis aims to locate the object under investigation in the social world. Here, the artefact is described by its characteristics such as materiality, its internal structure and context characteristics as a basis for the subsequent analysis. As an alternative to this open approach, it is also possible to resort to established forms of object or work description.

Exemplary questions:

- What does the artefact consist of and which sensory characteristics does it have?
- What are the artefact's components and how are they related?
- Which material properties can fulfill which functions in the exhibition?
- What is the significance of the spatial, temporal and social context of the artefact?

4. Everyday contextual embedding of meaning

Based on the descriptive analysis, the everyday contextual embedding of meaning locates the selected artefact in settings of everyday life. Positioning oneself in the role of an observer with everyday competence, the aim is to examine the artefact for possible social meanings (attributions), involved actors (at the interface to the artefact) and a situated context analysis (concrete environment).

Exemplary questions:

- What concepts and meanings is the artefact associated with?
- What stimuli and signals can the artefact send to different addressees?

- Which groups of actors are involved with the artefact in the exhibition, when and how?
- To what extent is the artefact part of the everyday or the extraordinary of an exhibition?
- In what other contexts beyond the exhibition could the artefact appear?
- What role do sensory/emotional qualities of the artefact play in the respective context?

5. Detached-structural analysis

The detached-structural analysis broadens the analytical focus by going beyond formal characteristics and concrete meanings, in the attempt to locate the artefact within social practices and macro-structural relationships. This includes production, usage, effects and functions, as well as staged and social integration of the artefact.

Exemplary questions:

- How can we characterize the production context?
- What interests are associated with the production of the artefact and by whom?
- What are the artefact's contexts of use within the exhibition?
- In how far does the interaction with the artefact change or does it itself bear traces of it?
- What effects does the artefact have on the actors confronted with it?
- What happens if the artefact's functions fail?
- What is the overall impression created by the specific arrangement of the artefact?
- In how far does the artefact structure social situations?

6. Comparative analyses

At the comparative analysis level, the selected artefact is compared with other artefacts. While a comparison with similar artefacts serves to review the validity of the findings, a comparison with different artefacts is suitable for examining its scope. This approach can be carried out both inside and outside of the concrete exhibition context. Theoretical saturation is reached "when it is highly unlikely that the inclusion of new materials can contribute to a further development of the findings gained." (Lueger and Froschauer 2018: 63)

Fig. 1: Seven levels of artefact analysis, © Representation according to Lueger and Froschauer (2018: 65).

Levels of artefact analysis

1	**Research contexts of artefact analysis**	Epistemic interest Integration into the research process Specification of artefact analysis
2	**The artefact's conditions of existence**	Reasons for existence Conditions for existence
3	**Descriptive analysis**	Materiality Internal structure Context characteristics
4	**Everyday contextual embedding of meaning**	Social meanings Involved actors Situated context analysis
5	**Detached-structural analysis**	Production Artefact usage Effects and functions Staged and social integration
6	**Comparative analysis**	Comparable artefacts Typical artefact contexts Linking with other analysis methods
7	**Summary of the artefact analysis**	(Re-)Construktion of the artefact context regarding the research interest

Core area of interpretation

Exemplary questions:

- Which artefacts are similar or fulfill comparable functions?
- Which differences to other artefacts can we identify?
- What are typical exhibition contexts for the artefact and where else does it appear?
- What meanings are associated with the different contexts?

7. Summary of the artefact analysis

The aim of this level is the conclusive summary of all findings, even though this synthesis has been pursued from the very beginning in the circular research process. This is achieved by a constant structuring of results that records, for instance, recurring aspects, contradictions or also additional information in research memos. Finally, the aim is to evaluate the artefact analysis with regard to the epistemic interest in the exhibition. In order to ensure a replication of the results, it is important to communicate the specific approach of the artefact analysis as well as the applied modes of quality assurance in a transparent manner.

Case Study

I came across my case study on Instagram in the run-up to the workshop *Methodology of Researching Historical Exhibitions*.[4] There, the Wien Museum published an exhibition view of the Austrian Pavilion at the 1937 World's Fair in Paris. My interest was piqued by the attractive black-and-white illustration of the exhibition in the chique 1930s style as well as by the caption to the huge photomontage that focused on "the new Grossglockner high alpine road, a prestige project of Austrofascism". In addition to my professional interest, there was also a biographical aspect, the fact that I grew up in Fusch, a village by the Grossglockner high alpine road. The photomontage by Robert Haas was described as "the leitmotif of the Austrian Pavilion", so that with this textual reference the selection of the artefact was straightforward. The organizational context is defined by the exhibition of the Austrian Pavilion at the so-called

4 The workshop was organized as part of the exhibition project *Matter. Non Matter. Anti Matter*, in which two historical exhibitions (*Les Immatériaux*, Centre Georges Pompidou 1985, and *Iconoclash*, ZKM 2002) were digitally modeled, organized by the ZKM | Zentrum für Kunst und Medien Karlsruhe (Center for Art and Media Karlsruhe) and the Leuphana University of Lüneburg, Department of Philosophy and Art Studies, from March 16–17, 2023. I decided to use my invitation as an incentive for the long-planned transfer of artefact analysis to the exhibition context. My thanks go to the workshop participants for their feedback on this methodological premiere.

Exposition Internationale des Arts et Techniques dans la Vie Moderne (1937). Today, essential sources concerning this artefact (documentary photographs, model, correspondence) can be found in the Wien Museum, which took over the estate of Robert Haas from his family in 2015. For further information, I consulted literature on international world exhibitions, the Austrian contributions and the actors involved in the 1937 exhibition.

Fig. 2: Instagram Post, Wien Museum, 31 January 2023, © Screenshot: Luise Reitstätter.

We will now, in a brief outline, play through all seven levels of the artefact analysis, with this preparation as a point of departure. The research context of this artefact analysis (1) is, as already explained, a professional-biographical interest in the Austrian Pavilion at the 1937 Paris World's Fair, with its central exhibit, the photomontage. The conditions of existence of the artefact (2) result from Austria's contribution, funded and organized by the Federal Ministry of Trade and Transport, in a pavilion designed by Oswaldt Haerdtl. He in turn commissioned Robert Haas to create a photomontage. The descriptive analysis (3) reveals, with 8,66 x 30,35 m, the gigantic dimensions of the photomontage, presented elevated on the curved rear wall inside the pavilion. The 147 square image panels of the photomontage, already clearly visible from the outside, correspond with the gridded façade of the Haerdtl building. With the curved ends of the wall, the photomontage marks a vertical tripartite division that corresponds with the three roads depicted: Pack road, Grossglockner high alpine road and Gesäuse road. The otherwise monochrome photomontage is divided horizontally by a blue, textile stretch of sky, with white-sprayed clouds, while at the bottom of the picture we see greatly enlarged flower meadows with crocuses and edelweiss. Precisely in the center, in pride of place, the Grossglockner with its

glacier, the Pasterze. Summing up the composition, Haas writes: "Many things are completely wrong, parts shifted from left to right, copied in reverse etc., but a good overall impression."[5]

Fig. 3: Model of the photo wallpaper, produced for the MAK exhibition in 1983, © Photo: Birgit and Peter Kainz, Wien Museum.

The everyday contextual embedding of meaning (4) refers to the Grossglockner as the highest mountain and national symbol of Austria, 'the land of mountains', as the first line of the national anthem declares. The Alpine roads symbolize technological progress, which is staged in a visually stunning way in the combination of impressive nature with innovative engineering. Besides Haerdtl and Haas, the actors involved include numerous collaborators – from employees of the Foto Leutner company to bookbinders and colleagues from the Hagenbund artists' association. However, the detached-structured analysis (5) already reveals the very manifest anti-Semitic work environment, with Haas, as a Jew, being obliged to hire an Aryan assistant.[6] At the same time, the elaborate production of the photo wallpaper (as the largest produced hitherto) with its nature-technology topos (preservation and conquest of the high Alpine landscape) was instrumentalized for propaganda purposes by the Austrofascist government as well as by the national tourism agency. Press coverage documents for the most part positive reactions. In March 1938, Haas is also awarded the Grand Prix of the International World Exhibition. However, due to the Nazi takeover of power and the large number of Jewish prizewinners, Haas never

5 Letter from Robert Haas to his brother in the midst of preparations on April 19, 1937.

6 In an interview years later, Haas recalls a phone call from Haerdtl, who said to him: "*Herr Ingenieur*, I don't know how to tell you this, but they found out that you are Jewish. But I don't want that to become public knowledge. Would you be prepared to take on an Aryan assistant?" Under pressure, Haas complied, with the result that he was excluded from setting up the photomontage, never saw his work completed in Paris and his assistant Günther Baszel was prominently mentioned in the catalogue.

got to receive his prize. Worse still, the takeover made it impossible for Haas to continue his work and his emigration, which only succeeded at the last minute, led to a cultural loss for Austria.[7]

Fig. 4-6: Entrance area, Austrian pavilion with sculpture and cable car support, and side view with Viennese coffee house, © Photos: Julius Scherb/Wien Museum.

Possible comparative analyses (6) of the photomontage can be found within the exhibition in revisiting the nature-technology theme with the sculpture and cable car support erected in the outdoor area. And a further comparison suggests itself between the urban-rural contrast of Alpine Austria and its capital Vienna with the Viennese coffee house, adjacent to the outside wall. Looking at the national presentations at the 1937 World's Fair, we can see that these already reflected the looming confrontation (Kretschmer 1999: 197–204). This conflict was especially conspicuous in the pavilions of the German Reich and the Soviet Union that faced each other.[8] Comparisons with other Austrian presentations at other world exhibitions or Biennales illustrate the continuity of Alpine mountainscapes (from touristically branded to artistically reflected) and large-scale visual presentations (from painted dioramas to photo wallpapers and video installations). In the summative analysis (7), various research foci thus unfold, ranging from a media-theoretical exhibition history of the panorama image to the examination of national stereotypes in the stimulation of the touristic gaze and to an inquiry into cultural politics and exhibition practices before the Second World War. Via these extensions one could not only explore the exhibition in the Austrian Pavilion as a closely-framed organization, but also the 1937 World's Fair in Paris or, in even broader terms, contemporary cultural policies, in accordance

7 Robert Haas emigrated to New York via London in September 1938 and, over the course of his life from 1898–1938 in Vienna and from 1939–1997 in New York, looked at *Two Worlds*, as the title of the 2016 exhibition at the Wien Museum aptly sums up. Efforts to make amends can be found in the title of professor awarded to Robert Haas by the Austrian Ministry of Education in 1972, and in the two exhibitions at the MAK (1983) and the Wien Museum (2016).

8 While the pavilion of the German Reich was designed by Albert Speer and crowned by an imperial eagle with a swastika, the pavilion designed by Boris Iofan for the Soviet Union displayed the monumental sculpture *Worker and Kolkhoz Peasant* by Vera Mukhina.

with the theoretical concept of artefact analysis as social analysis (Froschauer and Lueger 2020b: 183–187).

Method reflection

In summary, the benefits of artefact analysis include that artefacts represent an omnipresent and easily accessible 'natural' source of data that exists independently of research activities. Originating from the field of research, artefacts are authentic testimonies of organizational decisions. Artefacts can be described as a form of social memory, sometimes also with a reference to conflictual aspects of the organization that hardly ever come to light in interviews, for instance. Another advantage, one that is particularly relevant for the analysis of past exhibitions, is that artefacts are relatively stable and often endure the test of time. The challenges of artefact analysis, by contrast, include that in principle all materialized products of an organization lend themselves to analysis. However, artefact analysis not only presupposes a selection, but also a translation, when artefacts do not speak out of themselves, but only reveal their significance for the organization in an interpretation process. Also, scientific interpretation not only requires experience, but also elaborate quality assurance strategies such as analysis in a team, which can result in an increased work load in comparison with other methods (Froschauer 2009: 344–345).

My experience from the case study presented above has shown me that, due to its development since 2009 and the clear explanations in subsequent publications, artefact analysis is easy to replicate and apply. Particularly helpful for understanding artefact analysis were, in my view, the newly added four key questions and the seven levels of interpretation with exemplary questions as a guideline. On the other hand, I was surprised to see how many levels of meaning can be accessed in an artefact and the organization behind it through a broad interpretation of meaning, in-depth analysis and a collaborative approach. In my opinion, the charm of artefact analysis can be found precisely in this interpretative approach. In this way, exhibitions can be seen – in contrast to the dominant interpretative sovereignty of exhibition makers – as cultural and social constructs that need to be deciphered in the everyday of the exhibition as well as in analytical observation. In artefact analysis and its understanding of polysemy, plural personal and situational possibilities for interpretation are present in both contexts of production and use.

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Context Analysis

Exploring exhibitions in their contexts

Angeli Sachs

Introduction

What is the original context of an object or work of art[1], and in what contexts do they become part of collections and exhibits in exhibitions, where they are again placed in different contexts? What contexts do exhibitions open up through their thematic focus, structures, exhibits, texts, media and staging? And in what contexts do museums, exhibiting institutions, galleries, off-spaces or the public space find themselves? Context analysis aims to analyze different possibilities of contextualization that are relevant for better understanding the medium of the exhibition as a space of representation, action and negotiation.

But first of all: What do we actually mean by the word context? It comes from the Latin *contextus*, meaning 'connection' or 'link'. In an article on "Function and Context", Tristan Weddigen writes: "The art-historical and cultural-historical term context could be defined, with recourse to literary theory, as the set of references relevant to the explanation of an artwork, painting or object […]. 'Art in context' is understood to mean a cultural-historical and interdisciplinary examination of also non-artistic conditions of production and perception of visual arts works." (Weddigen 2011: 132) The aim of this paper is to expand the context analysis presented here beyond the objects themselves to include their function and role as exhibits in the context of an exhibition. In a further step, on the level of the exhibition it considers the relevant references in the context of thematic approaches and societal issues, the exhibiting institution and its programme, as well as the general discourse on exhibiting and art education.

Important references are here two older, but still relevant texts by Krzysztof Pomian and Mieke Bal. Pomian writes about "the visible and the invisible" of collections: "groups of natural or artificial objects kept temporarily or permanently out of the circuit of economic activities, afforded special protection in an enclosed place

1 In the interest of readability, we will, in the further course of this paper, use the term object to denote both objects and works of art, except when referring to specific examples.

adapted specifically for that purpose and put on display." (Pomian 1990:65). For these objects, which from this point on are no longer "*things, useful objects*", Pomian introduces the concept of "semiophores, objects which were of absolutely no use", which, "being endowed with meaning, represented the invisible." (Pomian 1990: 30). According to Muttenthaler and Wonisch, he therefore "differentiates between a material and a semiotic side of an object, which he attributes to a connection between the visible and invisible" (Muttenthaler and Wonisch 2006: 53–54). And museums are in Pomian's view those institutions "whose role is to form a consensus of opinion around the technique of opposing the visible and the invisible […] and consequently around new social hierarchies, where a place at the top required the enjoyment of a privileged relationship with the invisible in its new definition." (Pomian 1990: 43).

In her essay *Telling, Showing, Showing Off*, Mieke Bal analyzes the privileged or also hegemonic position of the museum and how it deals with its possibilities to create meaning and contexts of meaning using the American Museum of Natural History in New York as an example (Bal 1996: 18–20). Bal however here also makes a number of basic observations in her speech act theory that are helpful for a context analysis that also includes institutional critique. Bal examines the rhetoric of "where 'I' says to 'you' what 'they' are like." So the museum speaks to the visitors about the objects and their meaning (in the context of this exhibition). Here she focuses on "the display as a sign system working in the realm between visual and verbal, and between information and persuasion" and argues for a disclosure of the museum's speaker position: "Putting forward the 'I,' the expository agent who is 'speaking' this text, means transforming the interaction between visual and verbal representation so as to provide the one with a commentary on the other. The displays can then point at their own discourse as not natural, but as a sign system put forward by a subject" (Bal 1996: 20).

Aim of the method

The method of context analysis proposed in this paper is therefore based on the concept of the object as a sign and carrier of meaning(s). The central question we shall deal with here concerns the shifts, occurring concomitantly with contextual changes, in the meaning of objects with regard to their collection and presentation: the aim is to examine from what contexts exhibits originate and which contextual shifts take place in the way objects are perceived and in the way they exert their effect by collecting and exhibiting these objects, which by this process become exhibits. The goal is a conscious and reflected curatorial approach to objects, the history or histories they come with and the stories they might tell in the present and the future.

Provided they are not stored in a collection depot, these objects become, as exhibits, part of exhibitions in which they are placed into different contexts. If we

imagine an exhibition as a narrative, then this narrative unfolds on various levels: through the basic concept and structure of the exhibition – its thematic areas or chapters, through the exhibits and their presentation in the exhibition on the basis of the concept, the staging and in the interrelation with other exhibits, through the texts that accompany them, and the way in which they are referred to or interact with in the art education.

This also corresponds to the notion of exhibitions as a "hybrid medium" in which "diverse forms of visualization intersect", as Muttenthaler and Wonisch describe it: "Objects, (moving) images, texts as well as the exhibition architecture are contextualized in a space and woven into a dense texture. Every exhibit interacts with the surrounding exhibits, texts and elements of the exhibition architecture and is perceived in their context. […] Since perception is structured by the process of establishing relationships, it is necessary to consider the aggregate interaction of all exhibition elements and explore the contexts of meaning produced in the process." (Muttenthaler and Wonisch 2006: 37–38) Context analysis aims to complement and expand other methods of exhibition analysis by focusing on the possible relationships and connections between the exhibition and its various elements, examining and subjecting them to scrutiny.

Step-by-step guideline

Literary theory constitutes an important basis for context analysis. Transferring methods applied there to the exhibition enables a systematic strategy in context analysis. We replace what would be a textual element in literature by an object that functions as an exhibit in the context of the exhibition. In doing so, we also consider its relation to other exhibits, either via visual connections or the creation of ensembles, as well as its relationship or that of individual ensembles to the exhibition as a whole.

In addition, we examine contexts of classification, production or reception. Classification contexts can be artistic periods such as the Renaissance, movements such as colour field painting or genres such as arts and crafts. Contexts of production or origin point to biographical, cultural, intellectual, philosophical, political, socio-historical or economic contexts. Such issues are currently the focus of the discussion around ethnological museums, the creation of their collections in colonial contexts, the way objects are displayed and talked about, as well as new approaches to working with and restituting objects to communities of origin. Contexts of reception are contexts within which an artwork is "mediated, understood or processed". This could, for example, refer to the exhibiting institution, the collection and exhibition context or the "current political situation which influences its perception". (Burdorf, Fasbender and Moenninghoff 2007: 398) A current example would be the

2022 documenta fifteen in Kassel and the related discussion about anti-Semitic contents triggered by the *People's Justice* banner by the Indonesian collective Taring Padi on the Friedrichsplatz.

The context analysis is developed through a structured analysis of the exhibition, with the individual steps of the analysis consistently focusing on content in connection with contexts (Geertz 1987, Muttenthaler and Wonisch 2006: 49–53). A written checklist, which can be adapted to the respective research interest, is helpful as a framework for a systematic approach. Its structure is as follows:

To begin with, we consider the exhibiting institution and its significance and societal context, because it matters whether it is a high-profile state-run art museum, a biennale or an off-space.

Next, the exhibition is analyzed in the context of the institution, its relationship to the programme, its setting etc. This sheds a light on the function and the significance of the exhibition within the exhibiting institution.

Now, the focus is directed to the exhibition itself: its approach to the topic, its structure and criteria of arrangement, e.g. chronological, thematic, by regions etc. This is an essential basis for every content-oriented exhibition analysis.

After this, we turn our attention to the exhibits: What types of exhibits are on display, how are they exhibited, and are they contextualized? This should be examined from the individual example, to ensembles and rooms right up to the entire exhibition.

Texts and captions play an important role here. We analyze their volume, structure and levels, location and content, examine how the institution speaks and whether they are in any way contextualized. For contextualization is not only evident in the way something is shown, but also in the way it is spoken about.

All of this is embedded in a scenography in which the way how the exhibition's message is presented and how possible contexts are shown plays an important role. One should consider the exhibition itinerary, atmosphere, staging, colour, lighting etc.

Now, we turn to the use of audiovisual media, interactive and participative elements: Which ones are there and how are they used, what are their contents and contexts?

A context analysis would not be complete without the educational and accompanying programme of the exhibition: What content and contexts do we find here? Are they directly linked to the exhibition and do they complement it? It frequently hap-

pens that critical content and contexts are relegated to art education, while the exhibition itself remains relatively unaffected.

Here it is also worth taking a look at the exhibition's analogue and digital communication, e.g. handouts, leaflets, homepage, press releases etc. and how content and contexts are presented there. And if there is one or more accompanying publications, content and contexts should also be examined in the light of the exhibition.

It is recommended to do several walkthroughs of the exhibition you want to analyze, each time adopting a different perspective following the question catalogue to be modified in line with your particular analytical purpose. For working out the individual aspects of the analysis and being able to track them in the course of the investigation, the findings are best documented in writing and images. The summarized review of the individual aspects with the help of the previously described context categories yields the following results: Which contents and contexts can be identified? How do they become visible, readable and perceivable? Or is a contextualization missing and which contexts are omitted? From the range of existing or missing contexts, you should now make a meaningful and target-oriented selection according to your specific epistemic interest. This selection is subsequently further analyzed with regard to the exhibition, its education and communication, and complemented by consulting literature, archive material, press reports, conversations with curators etc.

Context analysis can be conducted alone or in a team. The workload depends on the specific research interest and the design of the analysis connected with it, which also takes the time invested into account.

Case study

Following the analysis guideline described above, I will now apply context analysis to an exhibition that has been the subject of heated debate in Switzerland and beyond. In October 2021, the Kunsthaus Zürich, one of Switzerland's most renowned art museums, opened an extension building designed by the English architect David Chipperfield that significantly increased the museum's exhibition space. The presentation centred on the collection of the Swiss arms manufacturer of German origin, Emil Georg Bührle (1890–1956) [2], who had acquired the important works of "Impressionism, early modernism and Old Masters" (Zürcher Kunstgesellschaft and Kunsthaus Zürich 2021: 19) with the profits from the arms production of his machine tool factory Oerlikon and the associated, partly also illegal, arms trade. With these purchases he also profited in many cases from the seizure of Jewish property, the disen-

2 This context analysis refers to the first version of the exhibition without any subsequent revisions, which was shown at the Kunsthaus Zürich from October 2021.

franchisement, forced expulsion and murder of many Jewish collectors during the Nazi period. Already at this point important ethical questions arise: Should a collection of this provenance be shown at all? And if so, how does one make its historical burden comprehensible and open it up to critical debate? An added challenge in this case was the fact that Emil Bührle had for a long time been one of the most important patrons of the Kunsthaus Zürich and had, besides making numerous donations, financed the Bührle Hall, opened in 1958. The Bührle Collection was not handed over to the Kunsthaus Zürich as a gift, but as a twenty-year permanent loan – which meant that the museum could not act independently, because the Bührle Foundation was involved in the conception of the exhibition and in the associated sovereignty of interpretation.

The Bührle Collection was given the pride of place in twelve rooms on the second floor of the Chipperfield building. The Kunsthaus Zürich's own collection was displayed in just four rooms along the window front facing Heimplatz. Across from the Bührle collection, separated from it by the central stairway, are two rooms for temporary exhibitions. The exhibition was arranged according to the preferences of the collector Bührle in groups of works such as "Old masters of the Netherlands" or "Vincent Van Gogh and the *École de Paris*". The exhibition texts constantly established this connection, for instance: "Emil Bührle was always looking for early works by the artists that interested him. This highlights the major steps that were necessary to move from traditional beginnings to new and modern forms."[3] Both the architecture of the extension building, with its many shimmering bronze details in its interior design and also the design of the exhibition lent the Bührle Collection an air of prestige and value (Fig. 1). In the aura of these rooms, it was easy to forget that a considerable number of these artworks were purchased under circumstances that meet the criteria applied today to describe them as "looted art" or "cultural property seized as a result of Nazi persecution".[4]

3 Exhibition text "Vincent van Gogh and the *École de Paris*", in: The Emil Bührle Collection, first version, Kunsthaus Zürich.

4 This is based on the Washington Conference Principles on Nazi-Confiscated Art (Washington Principles). Published in connection with the Washington Conference on Holocaust-Era Assets, Washington, D.C., 3 December 1998. And the subsequent Terezin Declaration on Holocaust-Era Assets and Related Issues, 30 June 2009.

Fig. 1: The Emil Bührle Collection, exhibition space in the extension building, Kunsthaus Zürich, 2021, © Photo: Angeli Sachs.

The problematic contexts surrounding the collector and the collection were relegated to a documentation room under the trivializing title "Emil Georg Bührle – Industrieller, Kunstsammler, Mäzen" ("Emil Georg Bührle – Industrialist, Art Collector, Patron of the Arts") at the periphery of the collection exhibition, where Emil Bührle's career was described on ten panels, crammed with text and accompanied by few illustrations, arranged according to periods of his life (Fig. 2). In its invitation to a panel discussion, the IG Transparenz (Transparency interest group) wrote: "The documentation room designed to present the collector and arms manufacturer in line with the most recent historical findings does not offer false information, but it largely glosses over Bührle's activities and is conspicuous by its omissions." Overall, the unidirectional, affirmative mediation of the collection exhibition and the documentation room insufficiently reflected the role of the collector, of the Kunsthaus Zürich and of Swiss society, which combined to form a kind of "Kunsthaus-Bührle complex",[5] and perspectives beyond this spectrum – for instance, the previous owners of the paintings – as well as critical voices, were largely disregarded.

5 "Der Kunsthaus-Bührle-Komplex: Geschönt und verschwiegen. Für einen lebendigen Dokumentationsort und eine unabhängige Provenienzforschung" ('The Kunsthaus Bührle Complex: Whitewashed and Hushed up. For a vibrant documentation centre and independent provenance research") was the title of a panel discussion organized by the IG Transparenz for

Fig. 2: The Emil Bührle Collection, documentation room in the extension building, Kunsthaus Zürich, 2021. Both images show the first version of the exhibition prior to the subsequent revisions. © Photo: Angeli Sachs.

After the exhibition opened, fierce criticism ignited in the public, among experts and the press: "How well does artwashing work in the 21st century?" (*Monopol*, November 2021), "Looted art behind a noble façade" (*Süddeutsche Zeitung*, 15 November 2021) or "Controversy over the Bührle Collection: 'Those in charge in Zurich have underestimated the historical context'" (*Neue Zürcher Zeitung*, 3 December 2021). The flood of articles has not abated to this day. Panel discussions were held and the activist group KKKK offered "Looted art tours" at the Kunsthaus Zürich. [6] "The contaminated museum" (Buomberger and Magnaguagno 2015, Keller 2021,) first improved some details and in 2023 produced a revised presentation of the Bührle Collection under the new director Ann Demeester, which will be shown until autumn 2025 (Sachs 2024, 165–199). At the same time, the Bührle Foundation's provenance research was reviewed by external experts.

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the reappraisal of the Kunsthaus Bührle Complex at the Volkshaus Zürich on 09.12.2021. The author was one of the panel participants.

6 Website of KKKK.partners: Komitee Kunstraub Konfiskation Kommunikation (KKKK) (Committee on Art Theft Confiscation Communication), which constantly adapts the Ks to current requirements: https://kkkk.partners/weristKKKK (05.08.2024).

The example of a context analysis described above is necessarily compressed, due to the limited scope of this paper. Besides the basic exhibition analysis with a focus on existing or non-represented contexts, classification contexts, contexts of origin and reception play a crucial role here. In this example, we are dealing with a collection exhibition that raises the following questions: In what political, social and economic environment was this collection by Emil Bührle assembled and under what terms can it be presented and viewed today? Without a context analysis, it would have been impossible to form a comprehensive picture of the exhibition of Emil G. Bührle's collection in the Kunsthaus Zürich in which the paintings were separated from their, in this case, necessary collection contexts. Since I was not able to find all the relevant information within the exhibition and its education, I supplemented it by talking to experts and drawing on research reports, publications, recordings and evaluations of panel discussions, press conferences and press articles.

Method reflection

"Contextualization is a necessary precondition for interpretation" (Burdorf, Fasbender and Moenninghoff 2007: 398) could serve as a leitmotif for the purpose and the necessity of a context analysis. Context analysis opens up the possibility to not simply accept exhibitions as the given narratives of an institution and thus as factual statements, but to analyze them in the complexity of their interrelations and to interpret them in terms of their attitude and their contemporaneity. They can be contexts that are visible or retrievable as subtexts, but also omissions, contexts that are not shown or narrated.

Context analysis is a complex enterprise. It requires a careful disposition and structure, moving back and forth between significant details, partial connections and the exhibition's overall context and its education, communication and publication, as well as its context with regard to the institution and broader societal and discursive issues. In this complexity, however, context analysis enables to reveal the agenda of an exhibition and the institution representing it, its intentions and programme. With this broader view, the exhibition can be placed in the context of the state-of-the-art discourses around exhibiting and communication as well as societal issues. In this way, context analysis opens up possibilities for a comparative debate and forward-looking perspectives which are relevant in particular for museologists, curators and educators in the field. It is primarily these professionals that this method is aimed at, as well as at students in these fields.

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Exhibition Photograph Analysis

Taking a look at past exhibitions from a critical media studies perspective

Ute Famulla

Introduction

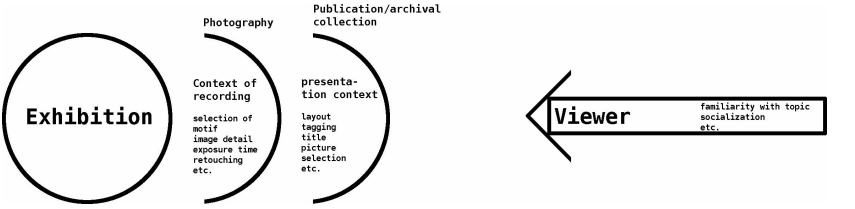
When we look at exhibitions by means of photographs, we take the photograph to be a sign or trace of the exhibition and assume the two are linked in some way. The method presented here is thus based on a semiotic notion of the image (Wiesing 2005). However, photographs are not only signs, but also symbols. The indexical character of the medium is a direct reference to the reality depicted, while its iconic quality draws attention to the fact that it is artificially produced (Walton 2012). The iconic moment allows research to access the medium via cultural codes and thus to interpret it (Paul 2009).

Such an approach is grounded in the context of the photograph (Ruchatz 2012). This comprises the way in which the medium of photography influences what is depicted and can be divided into three levels: the decision as to what is to be depicted, the moment the photograph is taken, and the processing of the photograph. The next thing to consider is the context of the photograph's presentation, i.e. the setting in which it is exhibited and which impacts its meaning. Here again, decisions are made through selection, choice of detail and placement. For photographs where the indexical moment predominates, Lars Blunk has coined the term of documentary photograph. It shows, reports and reproduces (Blunck 2010: 14). The documentation of architectural monuments can serve as an example here. He describes photographs that are more iconic in nature as staged photography; they convey statements (Blunck 2010: 19). Examples where the iconic character is manifestly evident are found above all in advertising photography.

The method presented here is an image and context analysis rooted in visual studies (Belting 2007, Ruchartz 2012: 12, 21) and includes reflection on the medial properties of a photograph. It makes use of both the indexical and the iconic moment. The sign aspect provides information about the image's frame of reference. However, the iconic moment modifies the photographic view of the exhibition, i.e.

the influences of the representation are not random, but are subject to conscious actions, production processes, their structures and the power relations embedded therein. For the viewers of an exhibition photograph, this means that they never look at the exhibition directly, but always see it through the filter of the contexts in which the photograph was shot and presented (Fig. 1).

Fig. 1: Schematic representation of the layers of perception when viewing an exhibition photograph, © Ute Famulla.



Aim of the method

Exhibition photograph analysis first emerged as a reaction to the widespread practice of treating exhibition photographs as candid representations of their subject matter. It calls for a critical approach to the photographic material that does justice to the medial character of photography and sees it as an intended information item. It also aims to contextualize it historically.

The theoretical realization that the photograph does not provide an unmediated image of the subject it depicts at first appears as a detachment from the events portrayed. However, a critical media studies approach to the photographs enables us, by analyzing the context, to gain an understanding of the actors involved and an awareness of the possibilities of visualization that existed in that particular period. Besides addressing, in this manner, specific questions about individual exhibition projects, we can also gain insights about how art, museums, fairs, visitors, curators etc. were prevalently perceived at the time the photos were taken or published. The photographic material here always forms the starting point and indicates which questions can be asked.

Step-by-step guideline

The method focuses on the contextualization of the photographs utilized. The following analytical steps can serve as an example:

A detailed description of the object should be the ***first step*** in the research project. Here, we identify the elements of the image and note their placement in the composition.

In a ***second step***, it is necessary to establish whether the object provides any further information based on a label or its location. Do we, for example, get to know the name of the exhibition, the location of the shot, are the objects or persons shown identified in any way? Do we know the name of the photographer or the photo agency? Are there other pictures that were taken in the same context? Is there a numbering that determines a particular sequence? Do we know where this additional information comes from? Are there any notes that accompanied the picture-taking process? What were the technical circumstances the photographer worked in and which principles did the publication of the pictures follow? When comparing a photo series, we ought to pay attention to whether there are any differences between the various shots or whether things were photographed in a consistent way. It is not uncommon for the works even in an exhibition hall to be re-arranged for the photo; for instance, objects are moved, additional utensils are added, visitors are shown – or not – and the lighting is changed.

In a ***third step***, one should start searching for meta data. These can be found, for instance, in the context of the photographers (self-image, working method, technical equipment, networks), the publication (collaborators, guidelines regarding the content, layout, archiving practice, collaboration with picture agencies) or the exhibition (catalogue, press reports, statements, opening speech, accompanying programme). This step differs from the previous one in that before, the object and its current location were considered, i.e. data was collected that is directly relevant to the object of investigation and allows conclusions to be drawn about the context of the image and its presentation. In this third, subsequent step, building on the previous one, information is collected to better understand the photographs and their context.

The ***fourth step*** is about making a connection between the aspects of the exhibition and the meta data. What is conspicuous here, is that the reproductions of a series usually offer a wide range of aspects that cannot be reduced to a common denominator. There are photographs that expand on the arguments presented in the exhibition catalogue, but there are also others that are difficult to classify. Experience shows that cases that reveal discontinuities between different pictures or between pictures and the materials consulted are particularly interesting. The layers of meaning emerge from the material as a whole. If, for example, your enquiry wants to look into the intentions pursued by the exhibition makers, it is often intriguing to look at the photographs they have authorized for publication. The selection, placement and

editing of the photographs can provide insights into how they wanted the exhibition to be seen or which aspects were given particular emphasis.

What is needed besides the photographic source material is, in particular, additional archive material. Depending on the context, one can here draw on secondary literature or sources. A further resource are the objects shown in the photograph; it makes sense to collect meta data about these as well. Due to the extensive research involved, the method is time-consuming, but its scope corresponds to most art-historical analyses based on the principle of viewing and comparing images. The personnel and time required depend heavily on the source material. If you are processing a photographic estate that includes, besides photographs, also documents concerning the commission as well as examples of publication, the analysis can begin almost immediately. In other instances, the various documents first have to be collected or may not have survived. In the majority of cases, the information on the production processes of a particular period has been well researched, yet nevertheless requires an examination that extends beyond one's own professional discipline.[1]

Case study

The application steps presented below refer to the case study of the *First International Dada Fair*, which was held in 1920 in Berlin (Fig. 2). In a first inspection of the photograph, we recorded some of its motivic elements:

- artworks,
- the room,
- furniture,
- people.

These were linked to initial associations: artworks: critical of the military, Petersburg hanging, paintings, sculpture, text etc.; room: stucco, high-class, unclear layout etc.; furniture: chairs placed back-to-back/ similar to museum furniture etc.; people: H. Höch, G. Grosz, unusual, rigid postures, appears staged etc.

With the help of the information from the context of the Berlinische Galerie collection, where the photograph is kept, it was possible to identify the photo agency (Bildagentur Internationaler Illustrations-Verlag, Robert Sennecke), the exhibition title (Erste Internationale Dada-Messe, Berlin 1920), the venue (Kunsthandlung Bur-

1 The magazine *Fotogeschichte. Beiträge zur Geschichte und Ästhetik der Fotografie* often offers a good introduction to various specialized areas.

chard), the context in the form of a photo series (eleven photographs), and the people present (the Dadaists and the gallery owner).

Fig. 2: Collection title of the photograph in the archive of the Berlinische Galerie: "Opening of the first major Dada exhibition in the rooms of the art dealer Dr. Burchard, Berlin, on June 5, 1920. From left to right: Hausmann, Hannah Höch, Dr. Burchard, Baader, W. Herzfelde, his wife, Dr. Oz, Georg Grosz, John Heartfield, © Photo: Robert Sennecke."

In the course of reviewing the secondary literature and the sources on the subject matter of Dada, many elements of the picture have become clearer and more comprehensible. The topic here is criticism of bourgeois culture, the significance of Salomo Friedlaender for Dada Berlin, the Dadaists' approach to artworks, their antimilitarist stance and the significance of their attire. What still needs clarification are the observations regarding the room and the furniture as well as the gestures of the individuals depicted. For this purpose, we consulted secondary literature from the research field of exhibition and museum history, with the help of which it was possible to reveal the allusions of the room's interior to the bourgeois ways of exhibiting and the habitus of the visitors generally found there. A comparison with the other photographs in the series reveals major differences in the way the Dadaists were

photographed and leads to the conclusion that they consciously posed for the camera. The fact that the exhibiting artists are at the same time also the organizers of the exhibition, the depicted subjects of the photographs and the people that commissioned them reinforces the iconic moment of the photographs.

In a further inspection of the photograph, the findings gained were applied to questions that arose while looking at the picture. We asked, for instance: Which function do the depicted persons have and what image content is evoked in the context of the examined field of meaning? What conclusions does this allow us to draw on the exhibition and the group of artists?

In summary, we can say that the people in the photograph portray a visitor type preformed in representations of museums and collections: silent visitors engrossed in the contemplation of an artwork. If we broaden our view to include the representation of art viewers, we can distinguish various types. Hubert Locher (2006: 314–315) distinguishes between admiration, visual and haptic appreciation and discussion. These archetypes were also vividly staged in the 17th century gallery works. If you look at, for instance, the painting *The Gallery of Cornelis van der Geest*, completed by Willem van Haecht in 1628, the artworks are contemplated reverently, but also touched, moved into the right light, measured, and discussed in groups. Schmalhausen (Dr. Oz), Grosz and Heartfield, who gaze in wonder at the artworks, as well as Hausmann, Burchard and Baader, who discuss them, are thus engaging in the usual forms of traditional art appreciation.

The couple refers to bourgeois rules of etiquette that allowed unmarried couples to meet only in the public space. Höch's musing, pensive pose differs from that of Schmalhausen, Grosz and Heartfield and approaches the limits of the standardized visitor habitus, as her look here not only resonates with admiration, but also with a sense of enquiry. Höch occupies a special position here as her gaze does not rest explicitly on an artwork or on an interlocutor, but leads out of the frame into the unknown. If one compares the photograph with the layout of the house, then also Schmalhausen, Grosz and Heartfield are not looking at artworks, but out of the window. To put it bluntly, you could say that, in the Dadaists' reading, the conventional exhibition or museum visitor does not look at anything at all, but merely adopts the habitus of the beholder.

In contrast to the visitors staged by the artists, the artworks differ from those of the comparative examples. Even though the placement quotes the Petersburg hanging and, like the room and its furnishings, is aligned with the conventions of the bourgeois art world, the explicitly anti-military character is clearly directed against the conventions prevailing in the bourgeois milieu and is supported in this positioning by the accompanying text messages. "Dilettantes rise up against art", "DADA is political" and "ANYONE can do DADA" are just a few of the statements made here. In this way, a dissonance is created in the photograph between the works, which, in the definition of their producers, do not want to be seen as art but as "products" (Ad-

kins 1988: 164–165), and the form of visitor perception adopted by the artists, which, together with the framing room and furnishing, makes a clear reference to the bourgeois art world.

A conspicuous feature in the examples used by way of comparison, in addition to what has already been said, is the uniformity of the depicted visitors. What becomes visible here is that participation in the perception of art was linked to social status and reflected in the clothing. There is probably no one today who finds anything directly remarkable in the way the Dadaists dressed.[2] However, clothing was an important part of the artistic self-staging and was featured by the Dadaists in self-portraits, paintings, photographs and newspaper articles (Burmeister 2022, and Söll 2022). It was neither tailored to the fashion ideal of the "proper gentleman" still common in bourgeois circles, nor did it take its cue from the working class, with which the artists sympathized, or from the habitus of the Bohemians, still common prior to the Second World War, who seemingly tended to neglect their outer appearance. With the flexible gentleman and the dandy, two fashion ideals emerged with which men presented themselves as suave and modern (Söll 2022).

Höch associated this style with Dada in her collage *Da-Dandy* (1919). Without further dwelling on this work, suffice it to say that Höch places the term next to the silhouette of Salomo Friedlaender. Friedlaender's observations on "creative indifference" had a significant influence on Berlin Dadaism and sought to "emancipate by absorbing polarities … One has to understand, says Friedlaender, that 'heaven and hell, good and evil, light and darkness, beauty and ugliness, indeed, all the differences of the world of experiences' can only be judged properly, if 'they are seen together'. This idea of the explicit demonstration of opposites and, at the same time, a creative dissolution of antagonisms was taken up by the Dadaists and implemented creatively in many different ways." (Burmeister 2022: 99). Consequently, Burmeister interprets the clothing style as a Dadaist positioning, in which the bourgeoisie was confronted with a lint-free suit. In the photograph, too, two opposites confront each other.

These are the bourgeois art business and the products of the Dadaists. Dadaist art was intended to enable something new by bringing things together through collage or assemblage that could otherwise not be viewed together (Burmeister 2022: 102). Like the collage, the *First International Dada Fair* in the photograph discussed is a medium that makes the impossible possible and connects the poles. This connection extended also beyond the photograph in that the exhibition was noticed by the bourgeois public via criticism in the press, even if it was poorly attended.[3] With

2 It should be noted here that Ralf Burmeister has already pointed out the significance of Hannah Höch's walking stick in her hands for the gender question (Burmeister 2022: 100).

3 The analysis focuses only on one of the eleven surviving photographs and does not address the different places of publication. In these extensions, further possibilities of the method

their self-staging in Sennecke's photograph, the Dadaists created an image of their exhibition idea. The First international Dada Fair was intended to bring together the opposing poles of the bourgeois art world and Dadaism and in this way create a space for encounters that would produce something novel. Here, the exhibition is conceived performatively as a place of encounter (Bismarck 2021: 53).

Method reflection

Very generally, the method trains media competence by requiring a media-critical stance and creates an awareness for the power exercised by the media. Photographs, in particular, are omnipresent in our everyday lives and shape our actions. The benefits of consciously engaging with them therefore go far beyond scientific interest alone. For researchers in the field, the method provides access to past exhibitions and thus offers insights into curatorial practices (Bismarck 2021: 21–23). By incorporating not only individual archive materials, but a broad selection of sources, it allows for a view on various elements of the research field and the exhibition context. By considering the context, the perception, the working method and the organization around the photograph and the photographed exhibition also come into view alongside the content. This makes it possible to gain insights into the system behind the objects and to draw conclusions about power relations, allowing us to observe socially conditioned normalizations and categories of the field of the exhibition, the visitor, the institution and more.

The method has its limits set by the accessibility of the material. As researchers, we never experience the exhibition directly, but always mediated and only as a detail of the overall event. But it is precisely this narrowing of the perspective that offers the opportunity to reveal categories or to gain insight into how creators positioned themselves individually. In broader studies on the various categories of the research field of exhibitions, detailed archival work that inquires into the background of the production processes can be abandoned for a comparative examination of larger image corpora. In the framework of an analysis of current exhibition websites, one could, for instance, examine the image of the visitor visualized here and in this way draw conclusions about the self-understanding of exhibitions.

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can be found (depending on the case study). It is important to note that if the method is extended to include publications, their media properties should also be considered. There are a number of further questions that could be discussed on the basis of this photograph. For example, this paper makes only passing reference to the exhibition catalogue. The role of the Dadaists could also be further explained and a connection established with the other photographs that have survived.

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Art-Historiographical Exhibition Analysis

Assessing the role of exhibitions in the historiography of art

Maria Bremer

Introduction

Art exhibitions showcase selected exhibits in temporary, unique constellations for the public, enabling new approaches to the art on display. When the exhibitionary propositions convey art-historical contexts, exhibitions contribute to the historiography of art. If we wish to determine the contribution of exhibitions to the development of art history as a discipline more precisely, we can do this by employing a specific method, defined in the present text as art-historiographical exhibition analysis. This qualitative method is informed by an equally historical and theoretical research interest. Approaches to the history of exhibitions, hitherto treated separately – the history of the *exhibition as a form or practice* and the history of *exhibited art* – are combined and expanded to include findings from curatorial studies informed by cultural studies.

Since the 1990s, the history of exhibitions has emerged as a field of art-historical study in its own right (Bogdanovic and Bremer 2016, Gleadowe 2011, Myers 2011, Rattemeyer 2011, Vogel 2017, Ziaja 2013) that either focuses on the historical features of exhibitions or considers these insofar as they carry art into the public sphere.[1] One of the precursors of the historical interest in the art exhibition as a form is a study by Georg Friedrich Koch (1967), who was the first to address the history of temporary exhibitions, from their "preliminary and early forms" in antiquity up to their increasing popularity in the 19th century. The seminal essay *Inside the White Cube* by the critic and artist Brian O'Doherty (1976/1986) is considered a further significant

1 The much-cited 1996 anthology *Thinking About Exhibitions* by Reesa Greenberg, Bruce Ferguson, and Sandy Nairne is considered an inventory of what was then a newly emerging interdisciplinary field of research (Greenberg, Ferguson, and Nairne 1996). Since then, at the interface between art history, museum history and research, as well as the more recent field of curatorial studies, art history has increasingly broadened its scope to also include exhibition history.

mover, with its critical focus on the white exhibition cell as the standard of modern exhibition practice. In line with this tradition, numerous studies devoted themselves to the history of exhibition architecture and display in the field of art (Celant 1982, Klonk 2009, Klüser and Hegewisch 1991, Staniszewski 1998). Later, initiatives followed to systematize and historically explore specific exhibition genres and practices. Here too, the focus is less on the exhibited art works and more on the respective types of exhibitions.[2]

A further research approach, by contrast, addresses the exhibited art. Here, exhibition contexts take centre stage as authorities of public approval of artistic propositions and movements, allowing art-historical narratives to be retrospectively retraced or examined as to their genesis. Walter Grasskamp (1982) was the first to take an interest in the exhibitionary consecration of art and its historiographic effects in a compelling essay about the documenta. In the publication and exhibition *Stationen der Moderne. Die bedeutenden Kunstausstellungen des 20. Jahrhunderts in Deutschland* (Bollé and Adkins 1988), his research perspective was applied to a wide range of case studies and subsequently prominently advanced by Bruce Altshuler. In programmatic publications on the public presentation of the avantgarde (Altshuler 1996) and the exhibitions that "made art history" (Altshuler 2013, Altshuler 2008), the American art historian outlined an exhibitionary canon of modern and contemporary art in the global North, which has since been further elaborated (Foster et al. 2012). The series *Exhibition Histories*[3], issued by Afterall Publishing and established in 2010, has meanwhile expanded the Western focus of this strand of research to the global level. Nevertheless, the series remains committed to the logic of acknowledging art-historical shifts in their connection with exhibition events.[4]

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2 These range from Francis Haskell's overview of travelling exhibitions of works by Old Masters starting in the 17th century (Haskell 2000) to the reappraisal of the history of biennials (Jones 2016) or photography exhibitions, and to empirical research projects mapping exhibitions in private galleries during the period of the neo-avantgardes or aiming to achieve a comprehensive cataloguing of exhibitions by women artists since the 19th century. See the conference *Mostre fotografiche in Italia negli anni Settanta: spazi, dialoghi, narrazioni*, https://arthist.net/archive/37896 (05.08.2024); the database Maconda | Le Mostre d'Arte Moderna nelle Gallerie private in Italia: i due decenni cruciali 1960 – 1980, https://www.maconda. it/ (05.08.2024); the collaboration between Artl@s and AWARE 'Women Artists Shows·Salons·Societies: Towards a Global History of All-Women Exhibitions', since 2017; or Agata Jakubowska's research project at the University of Warsaw, *Globalizing the History of Women's Art Exhibitions*, 2021–2025.

3 https://www.afterall.org/publications/exhibition.histories/about-exhbition-histories/ (05.08.2024).

4 The author's PhD thesis examined the exhibitionary establishment of 'individual mythologies' and Spurensicherung ['securing of evidence'], a subject-related tendency of the 1970s, on the basis of its most influential exhibition platforms, documenta 5, 1972, and documenta 6, 1977 (Bremer 2019).

The historical interest for such exhibitions that have left a mark on art history was revived thanks to the popularity of the *contemporary*, a recent term of periodization with a global claim. The widely debated term *contemporary* identifies art as contemporary that links heterogenous dimensions of time and space, purportedly embodying the global-transnational era since 1989 (Alberro 2009, Groys 2010, Osborne 2018, Smith 2009). Around 2010, as the term *contemporary* became more popular, it was examined by means of relevant exhibitionary examples. These include in particular biennials, triennials and the documenta, i.e. periodically recurring 'glocally' networked exhibitions (Buurman and Richter 2017, Green and Gardner 2016) as well as museums of modern and contemporary art, whose presentation formats and contents are increasingly adopting a temporary, flexible and topical approach (Bishop 2013, Vest Hansen und Handberg 2023). Examining the defining content of the *contemporary* by means of selected exhibitions, as the studies mentioned above do, constitutes a turning point in that the introduction of an art-historical concept of periodization is no longer merely sought to be understood, but is put forward to critical and ongoing debate on the merits of its exhibitionary genealogies.[5]

The art-historiographical exhibition analysis considers both of the aforementioned approaches – the interest in the *exhibition as a form or practice* and in the *exhibited art* – in their interdependencies. In order to determine how exhibitions produce their own art-historical propositions, the method also draws on findings from curatorial studies informed by cultural studies. This field of research dedicated to developing theories about curating and the curatorial (Bismarck 2022, Journal of Curatorial Studies 2012–2025, Martinon 2013) enables an understanding of exhibitionary production of meaning beyond prefabricated interpretations. Accordingly, exhibitions are not considered to be static representations of pre-existing meanings, but rather curatorial statements about exhibits on display for an attending audience. Their distinctive narrative mode resulting from the tension between the time references of the art works, the curatorial narrativization, the temporality of the exhibition and the reception of these relationships (Bal 2002: 36–39, Bismarck et al. 2014, Frank and Bismarck 2019) is crucial for constituting new meanings in a processual fashion. Art-historiographical exhibition analysis examines the narrativity of exhibitions specifically for propositions that establish content-related references to art history.

5 These developments should be seen as effects of a vigorous critique of the canon, which, in addition to expanding the spectrum of investigations into the history of exhibitions, also calls for an examination of implicit categories of analysis (Sheikh 2010/2011).

Aim of the method

This method assumes that art exhibitions participate in art historiography, even though strictly speaking they are not located within the academic field nor primarily organize their discourse in written form (Haxthausen 2002). Considering both approaches to the history of the *exhibition as a form or practice* and as *exhibited art*, hitherto treated separately, as well as the genuine narrativity of exhibition contexts, the objects of investigation will serve to show how exhibitions achieve art-historiographical significance. The method thus relates to the wider research question of how art history as a discipline – including fundamental concepts, propositions and narratives – develops, changes and maintains itself. The research question is answered by looking at exhibitions and not, as is usually the case, from the perspective of a history of ideas and institutions or the myriad ways in which art history is *written*. The method can be applied within the historical period in which academic art history and exhibitions have existed in parallel, that is, from the 19th century to the present day.

Step-by-step guideline

The art-historiographical exhibition analysis is applied processually in five stages, each building on the former.

1. Formulating the question and identifying the object of investigation

First of all, the method requires the development of an appropriate research question. Usually, an established art-historical narrative is linked to an exhibition that engages with it content-wise. The aim is to reveal how the art-historical account was shaped, cemented or refuted by the exhibition. For instance, West-German art history of the 1970s seldom regarded artistic practices from the GDR worthy of investigation. The 6th edition of the periodic major exhibition documenta, which for the first time included and showed art from the GDR in Kassel in 1977, took a stance on this marginalization (Bremer 2017). In a way, documenta 6 had, as an institution, an art-historiographical claim enshrined in it, as the high-profile event saw itself at the time as a regular appraisal of contemporary art. It is therefore fair to ask to what extent documenta 6 played a role in framing art from the GDR in West Germany.

However, art-historiographical exhibition analysis does not need to be applied exclusively to assess established art-historical narratives on the basis of large-scale exhibitions with a high public profile. Art history has also been made in particular in and through exhibitions that opposed universalistic contexts of interpretation. A counter-hegemonic claim to art-historiographical authority can be convinc-

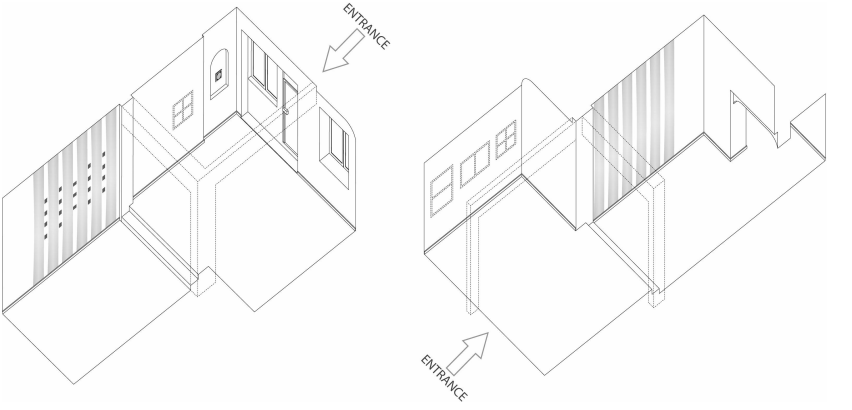
ingly demonstrated, for example, in exhibitions by women artists: because traditional gender asymmetries and male-biased analytic criteria impeded the inscription of women artists into art-historical narratives, exhibitions were often organized independently and used as a corrective to expand the art-historical canon or question its foundations.

2. Securing historical sources

The analysis of the art-historical initial narrative and the selected exhibition is subsequently substantiated through primary and secondary sources. On the one hand, it is necessary to evidence the art-historical assumption under investigation in academic publications of the time. On the other, the sources for the identified exhibition are examined in the relevant archives and, if necessary, further insights are gained through exchanges with contemporary witnesses – artists, curators, art critics (*oral history*).

3. Reconstructing the object of investigation

Fig. 1: Reconstruction of Carla Accardi's solo exhibition, Origine, *1976, interior of the Cooperativa Beato Angelico, Rome, © Luca Longagnani.*



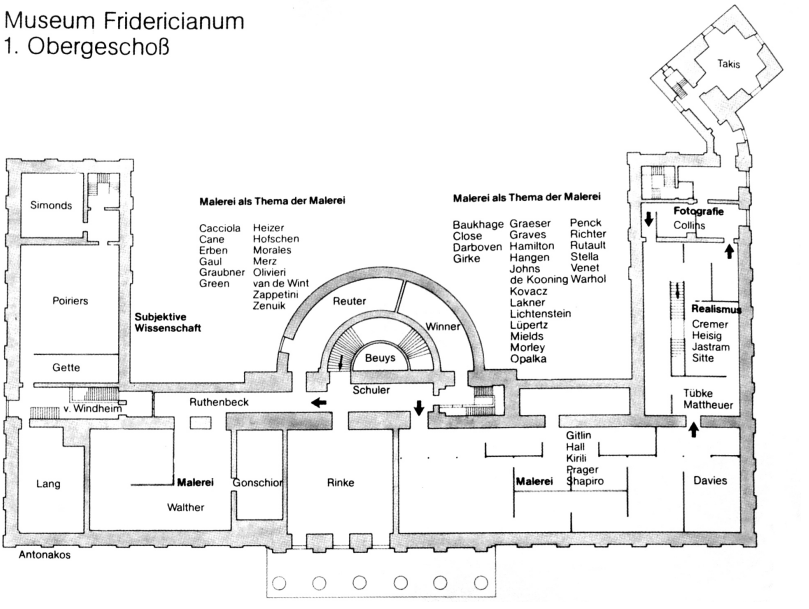
Thirdly, the selected exhibition is reconstructed in its entirety or in part. This can be done by means of an analogue or digital sketch (Fig. 1) or with a spatial model, which can be created without too much effort, for instance with the help of a shoe box, cardboard, glue, pencil and ruler or also a software programme. The basis for this is provided not only by surviving installation views and video recordings, but also by exhibition floor plans and testimonials. This makes it possible to visually and haptically recreate the selection of works and their hanging in the original spatial

situation, including, as far as possible, the lighting, displays, labels and wall texts, as well as the designated route through the exhibition. The aim here is not to be overly faithful to detail, but rather to focus on those elements that were significant for the curatorial narrative.

4. Interpreting the art-historiographical arguments of the exhibition

Once the reconstruction is accomplished, the art-historiographical propositions of the exhibition are interpreted. Taking into account the form and practice of the exhibition as well as the displayed art, exhibition historians identify the specific narrativity of the exhibition context. From these they deduce the art-historiographical statements of the exhibition, while always bearing in mind its partiality. Returning to the example of documenta 6, the art from the GDR was exhibited in the prestigious museum Fridericianum, but in rooms that had been claustrophobically cramped by a temporary mezzanin floor, which had an oppressive effect on the large-format paintings. Conceived as a self-contained unit, the section could only be visited after the 'Western' exhibition segments in the Fridericianum (Fig. 2).

Fig. 2: Floor plan of documenta 6, 1st floor of the Museum Fridericianum, from Informationen, special edition documenta 6. 1977: X.



Thus, the figurative-expressive character of the state-sanctioned art from the GDR must have seemed even more unusual in the Kassel international comparison, as if it referred to conventions of a different time. In this way, the exhibition constituted, also in interrelation with the discursive contributions in press reports and the catalogue, an art-historical special status of the GDR contribution.[6]

5. Establishing the historical context of the art-historiographical arguments of the exhibition

The art-historiographical proposition of the examined exhibition is elaborated via an interpretative process that, in principle, remains open-ended. Even though the exhibitionary argument cannot be evidenced 'mathematically', it should at least appear plausible within the corresponding historical period. The validity of the interpretation is ensured by a final contextualization of the findings to avoid inconsistent readings. On the one hand, the art-historiographical proposition of the exhibition analyzed can be linked back to the afore-mentioned art-historical narrative in academic publications, and on the other, it can be related to the corresponding reviews of the exhibition. In this way, it is possible to identify repetitions, deviations or counter-arguments of and to dominant art-historical topoi produced at certain points by the exhibition.

Case study

The inaugural exhibition at the Cooperativa Beato Angelico in Rome, entitled *Un quadro di Artemisia Gentileschi* (A painting by Artemisia Gentileschi) (1976), serves as a pertinent example for illustrating the methodology of art-historiographical exhibition analysis. Until the 1970s, a progressivist and geographically centred art-historiographical model fashioned on the principle of Giorgio Vasari's *Le Vite* prevailed in Italian art history, which insisted on artistic 'descent' and the competition between artists conceived as male. Here, the work of women artists was barely considered (Iamurri 2007). This raises the question of how female-identified producers of art and culture reacted to this imbalance in and through self-organized exhibitions. As a case in point, we can consider the example of eleven women who, as a cooperative, organized various women artists' exhibitions in a self-managed gallery in a street named after Beato Angelico in the centre of Rome from 1976 to 1978 (Bremer 2020, 2022). The cooperative's exhibitionary activity is particularly suitable as an object of

6 Conversely, this does not preclude, as testimonials show, that encounters with the exhibited objects, despite adverse exhibitionary conditions, have in some cases generated more far-reaching meanings.

investigation because its self-declared goal to exclusively "present, study, collect and document works by women artists who work or have worked in the field of the visual arts" formulates a partisan art-historiographical claim.[7] Archive material is accessible in the shape of exhibition views, announcements, press reviews and correspondence in the Fondo Suzanne Santoro, Archivia, Casa internazionale delle donne in Rome. Former members were able to provide personal information about the cooperative.

If we reconstruct the opening exhibition on 8 April 1976 on this basis, we can see that a large-format historical oil-on-canvas painting was installed on an easel in the bare, low-ceilinged exhibition room on the ground floor of an early modern building, diagonally across from the only entrance door, and a leaflet was laid out next to it. The four-page body of text provided a biography and a catalogue of works by the Roman artist Artemisia Gentileschi, establishing a production context for the work on display: an *Aurora* from approx. 1627 from a private collection.

To include a representation of the goddess of dawn, painted by the historical artist Gentileschi, in the inaugural exhibition of the feminist space suggested an art-historical new beginning under the banner of 'woman'. The curatorial narration assigned the work via the text apparatus to the Baroque period, but at the same time anchored it in the present: the painting on the easel appeared in an unfinished process of coming into being. The unconventional installation of the life-size female subject – not on the wall, but in the room and facing the incoming visitor at eye level without the usual museum-style barriers – underscored its relational potential (Fig. 3). Instead of resorting to historistic periodization, the women's cooperative followed the criterion of an inter-periodic acknowledgement of women artists by women artists. The inaugural exhibition was therefore instrumental in exposing as arbitrary not only the male dominance in art history, but also the underlying premise of a linear historicization and undermining it in the process. Surviving exhibition reviews emphasize this revisionist aspect. The counter-hegemonic art-historiographical interpretation also seems plausible in the light of radical-separatist views of the time. Feminists like Carla Lonzi explicitly sought to break away from linear – chronological or dialectical – philosophies of history as being implicitly male (Zapperi 2017: 178–188).

7 Original text: "presentare il lavoro di donne artiste, che operano e hanno operato nel campo delle arti visive […] studiare, raccogliere e documentare tale lavoro". Declaration of the Cooperative in self-designed postcard format, 1976, Fondo Suzanne Santoro, Archivia, Casa internazionale delle donne in Rome.

Fig. 3: View of the inaugural exhibition of the Cooperativa Beato Angelico, Rom, 8 April 1976, from Bremer 2020: 487.

Method reflection

The art-historiographical exhibition analysis proves to be particularly effective with regard to a certain "[m]od[e] of making exhibitionary meaning" (Smith 2021: 47), namely when the curatorial proposition is implicitly or explicitly grounded in art historiography. This art-historiographical, usually revisionist mode can appear in various, but not in all exhibition genres, for instance in thematic, period- or media-related overview exhibitions, retrospectives on artists or movements, art-historical thematic exhibitions or temporary presentations of collections. For analyzing such topics, the art-historiographical method depends on the availability of sufficient sources, which limits the range of the material to be examined in both historical and institutional aspects. The simultaneous investigation of academic and exhibitionary art-historiographical narratives and the reconstruction of the selected exhibitions also requires a time-consuming review of primary and secondary literature, possibly also particular social and linguistic skills, a steady eye and hand coordination as well as spatial thinking.

Besides these research premises, it should be kept in mind that the method primarily responds to a self-referential spectrum of questions concerning the discipline of art history. Its added value lies in the fact that it connects areas of exhibition history and curatorial studies in order to expand our understanding of how art

history is constructed and of the circumstances that prompt the assumptions and foundations of the field to be renegotiated. This method takes a fresh look at art-historiographical approaches that have emerged in exhibitions, neither explicitly in written form nor necessarily completely congruent with academic art history. It is not the long-term transmission or broad impact of the exhibitionary propositions that makes them worthy of investigation, but rather their quality. This helps to counteract notions of a uniform development of the discipline. It is in and through exhibitions that we can retrace established narratives of art history and also bring to light untapped and resistive art-historiographical potentials.

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Affect-Reflexive Exhibition Analysis

Using one's own perception as an analytical tool

Carla-Marinka Schorr

Introduction

The way we perceive exhibitions, what we see in them and how we understand them, changes from one *turn* to the next in the social sciences and humanities and differs depending on the academic discipline. The interpretive turn, for instance, focused its analysis on the semiotic nature of things (Scholze 2004), while the spatial turn generated an interest in the exhibition space (Hillier and Tzortzi 2011, Reitstätter 2015). The long-neglected enquiry into the ways exhibitions are perceived in relation to curatorial practices and education garnered much attention from the affective turn as well as the educational turn (Jaschke and Sternfeld 2012, O'Neill et al. 2010). The reflexive turn, hitherto the most consequential one, led, together with the post-colonial turn, to a fundamental (power-)critical re-evaluation of the way exhibitions are designed and organized (Bennett 2018, Lidchi 2013). Looking at an exhibition through the lens of these and other cultural turns is to follow certain premises: the exhibition becomes, for instance, a semiotic system, a relational space, a meshwork, a place of representation or a possibility of self-assurance and requires specific detailed analyses such as those included in this volume under the titles of *Space Syntax*, *Knowledge Analysis* or *Context Analysis* among others.

The method of affect-reflexive exhibition analysis[1] is based on a synthesis of these premises and various perspectives of the *cultural turns* on exhibitions and follows three principles: Firstly, as a subject of enquiry, the exhibition is considered with a holistic mindset. That means we view the exhibition as a coherent whole. The term 'exhibition' here comprises more than merely the exhibits and is not to be understood exclusively in a tangible, material sense. All the elements of the exhibition are therefore examined holistically in their interplay. This is grounded in

1 The method is the result of my dissertation project at the Chair of Museum Studies at the University of Würzburg. For a detailed explanation of the background, aims and application of this method see Schorr 2025 as well as Fackler and Schorr 2024.

the assumption "that the things that are parts of the whole have the features characteristic of them only in their aggregate" (Elsfeld 2003: 3). Secondly, the analysis is conducted in an integrative manner by including all relevant exhibition elements in the analysis rather than focusing on them separately. An essential component of integrative analysis is the analyzers themselves, because before, during and after the visit to the exhibition connections or associations (through seeing, walking etc.) arise between all human and non-human participants in the exhibition situation (Bismarck 2021, Ingold 2015, Latour 2019, Pekarik and Schreiber 2012, Rana et al. 2017, Siepmann 2001). The third principle is based on the realization that the analyzer merges with the exhibition and is, in one way or another, affected by it: one's own, subjective perception of the exhibition serves as a point of departure for the analysis. In the implementation, the body itself, as it reacts to the exhibition, becomes an analysis tool.

In terms of content, these three principles build upon not only the various perspectives of the cultural turns, but also to a significant degree on Tim Ingold's theory of lines and Bruno Latour's actor-network theory, in conjunction with positions from curatorial studies. In keeping with Tim Ingold, the interplay of the exhibition elements can be described as an interweavement of individual threads that together form a meshwork – the exhibition. Meanwhile, the actor-network theory assumes that all exhibition elements are connected to each other as potential actors in an exhibition, in a network-like manner (Bismarck 2021, Ingold 2015, Latour 2019). The exhibition elements affect each other during their interaction and in this sense one can understand the exhibition as an interactional web. All the exhibition elements participating in this web, meshwork or network are integrated into the analysis accordingly. While it is self-evident to describe the objects on display in an exhibition as exhibition elements, as well as lighting, colour choices, room temperature, surfaces, etc., there are also other, less obvious or tangible exhibition elements that can have an indirect impact on the exhibition as a whole, such as the history of the institution, the physical itinerary to the exhibition, the zeitgeist, local, societal and thematic references or current events etc. The personal background of the analyzers is also taken into account, since, according to this theoretical approach, the analyzers themselves are part of the interaction of the exhibition elements. In other words, everything that impacts the analyzers is incorporated in the analysis.

It is crucial that the reflection of the exhibition's affect is, on the one hand, always linked back to the exhibition in a reflective process to ensure observations are made about the exhibition and not about the analyzers themselves. On the other hand, it is part of the method to reason the situational affect in an intersubjectively comprehensible way. Here, straightforward language, and a reflection on one's own situatedness can be helpful, but also recourse to possible methods of interpreting the significance of the exhibition elements for the exhibition, as suggested by the cultural turns. The method of affect-reflexive exhibition analysis supports this epony-

mous process of reflecting on affects by means of so-called loop-back and follow-on-questions, thus facilitating the successful transition from the initially important perception of the exhibition to scientific analysis.

Aim of the method

The aim of affect-reflexive analysis is to understand how the exhibition being analyzed – considered from one's personal, situated perspective (Haraway 1988) – functions in its contingent way of being. For this, it is necessary to establish how the elements of this exhibition interact, with what means it operates and what, also implicit, messages are conveyed. For this purpose, individual, subjective impressions are collected. But these can only ever be situational impressions, and on no account can they be used to make a general observation that reaches beyond the moment and one's own analysis. The answers to this open research interest are formulated after conducting the analysis as propositions about the exhibition that must be substantiated with arguments (How do I arrive at this statement?) and backed up with concrete examples from the exhibition (exhibition elements). The aim of the analysis can be specified beforehand, for example, if you want to examine the tenets an exhibition follows or how certain topics or groups of people are presented. For this particular focus, the analysis questions need to be modified ("focused analysis", Schorr 2025).

Step-by-step guideline

The analysis is usually conducted by one person. If several people analyze the same exhibition, results can be contrasted and compared, which would yield a more comprehensive picture of how the exhibition works.[2] Notes can be taken manually or digitally. In addition, a mobile phone camera or a traditional camera can be helpful, providing taking photographs is allowed. Depending on how well the method has been assimilated, it may be helpful to note down the analysis questions as well. The time required for the analysis depends on the size of the exhibition and the precision of the analysis. When planning, it is important to keep in mind that the exhibition should be visited several times. At least two days should be allocated to data collection and evaluation. The time needed for drafting the analysis report depends on the

2 By combining the results of a method test with non-museum professionals and from the application of the method by students, it became clear that despite the fundamentally subjective results, similar findings were formulated again and again, so that individual results may also be more intersubjective than one would initially assume (Schorr 2025).

chosen format and your own level of experience. You should plan at least two working days for a detailed analysis report in written form with a length of around seven pages. All in all, a time investment of four to five working days should be included in the initial planning.

The analysis is always conducted retrospectively, after visiting the exhibition, and it is an iterative process, i.e. you work in constantly repeating loops. The individual steps can be grouped into the typical phases of a qualitative study as follows: Step 1 defines the research question as the point of departure. Steps 2 and 3 correspond to the first data collection. Step 4 corresponds to the first data evaluation, steps 5 and 6 to the second collection and evaluation phase, which can be repeated several times, and step 7 to drafting an analysis report that should provide an answer to the research question.

Step 1: Clarifying the requirements

First of all, the research interest has to be formulated and put down in writing as a leading question. Next, an exhibition is selected as the object of investigation that matches this leading question.

Step 2: Visiting the exhibition

The next step is an initial visit to the exhibition. This visit differs from a recreational visit in that the exhibition has to be perceived with greater awareness, in order to be able, in the next step, to note down the impressions gained in the exhibition.

Step 3: Noting down your impressions and assigning them to the analysis questions

After allowing some time to elapse after your visit to the exhibition (e.g. after a break or the next day), you first of all note down all the impressions that you remember.[3] These memories are first written down in no particular order. This avoids leaving out impressions that do not correspond to the analysis questions. These notes are then assigned to the analysis questions. There are seven analysis questions that are explained below in some detail for better comprehension.

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3 Of course, it is possible to take notes digitally (e.g. using a smartphone or tablet). However, the method tests have shown that working with analogue tools makes it easier to process sensory impressions and leaves a more lasting impression. The advantage of digital notes (e.g. miro board or similar) is that it is easier to move and assign impressions to the analysis questions. Using large sticky notes is an elegant compromise, but it can also lead to a chaotic mess of notes.

a) What did I perceive (sensuously)?

This question explores primarily visual impressions, due to the visual impact of exhibitions, but may also refer to other sensory impressions. The point is to record, after visiting the exhibition, which sensory impressions are particularly present. If you want to first work descriptively for an easier start, it may be a good idea to begin with this analysis question. Once you have noted down your impressions, you ask yourself, looping back why it is that you remember precisely these impressions (e.g. spatial position, style of presentation, your own interest, physical / narrative path, curiosities etc.). As a follow-on question, you ask yourself: What is the consequence of what you have perceived or how you have perceived something?

b) What did I learn?

This question serves to analyze the main statements of the exhibition and its narratives (Bal 2006), so the answer may be quite expansive. This question addresses the tenets of the exhibition, not about what one has understood in terms of content or learned cognitively. The answers are often connected to the title of the exhibition, but the narratives can also be more subtle and usually become more visible toward the final part of the exhibition. Here, neither what was announced nor what was literally mentioned in the accompanying texts, nor what might have been meant is important. So our work here is not evaluation-based. The subsequent loop-back question is then: On what do I base my impression? Here, or in a follow-on question, you can start searching for details for broader contexts, in order to collect evidence for the impressions that led to the answer of the analysis question. In addition to the overall narrative, the analysis can be expanded to include sub-narratives to enable an even more detailed argumentation. It is advisable to begin with this analysis question if you want to find initial answers to the overall research interest (How does this exhibition work?) as directly as possible, as it frequently yields rather analytical answers.

c) How did I react?

Reactions to exhibitions can vary in many ways: physically (How did I feel where?), but also in terms of time (immediately, after some time), silently (in my thoughts) or in a conversation with others etc. The first task in this analysis step is recording, following your visit to the exhibition, your reactions at different points of your visit. You could use a floor plan of the exhibition room to note these down. Next, you examine these reactions with loop-back questions and search for the underlying causes. At the same time, you draw conclusions with follow-on questions, because reactions can provide an indication of disruptions, controversies and contradictions, but also flows, points of contact and affirmation. You can also examine passages in the exhibition that you didn't react to in order to find out why a reaction apparently failed to materialize. Reactions are highly dependent on the person and situation involved, and this needs to be very consciously factored when research-

ing the causes and drawing conclusions, and their relevance and validity have to be reflected accordingly.

d) What did I recognize?

This analysis question is concerned, on the one hand, with identifying what you recognize and, on the other, identifying *with* what you recognize. This can relate to anything in an exhibition context, from exhibits to mindsets or forms of presentation. Ultimately, the underlying question here is whether the exhibition has anything to do with yourself and your own life, and if so, what, and if not, why not and with whom possibly otherwise. The answers to the subsequent loop-back and follow-on questions can provide clues as to the exhibition's target groups, relevance and multiperspectivity.

e) What / whom did I miss?

This analysis question is about searching for who or what is missing, i.e. is not represented, but is missed. There is thus a close link between this question about representation and the previous one about identification. Detecting gaps is no easy task, particularly if you are not an expert on the subject of the exhibition or feel sufficiently represented yourself. Nevertheless, your own unfulfilled expectations or aspects of the exhibition that raise questions can provide clues. This can be the case at content level as well as at design or didactic level and also regarding the context (loop-back questions). This analysis question deliberately emphasizes the aspect of missing, not that of non-existence. This is because missing something or someone inherently implies that it or that person should, by rights, be present, because it is justifiably relevant to something or someone (these justifying reasons have to be elaborated in a second step). This aims to guard against the temptation to add random items. From a theoretical viewpoint, the focus here is therefore more on ethics than on comprehensiveness, in recognition of the fact that an exhibition, which is always a result of a selective process, can never be complete, but it can be ethically reflected (McClusky 2011).

f) How was I addressed in my role as visitor?

The focus of this analysis question is on how visitors feel about being involved in the exhibition. You can, for instance, consider whether you feel addressed as an equal, or under-challenged or lectured to. You need to bear in mind that, as an analyzing visitor, you are in a somewhat different role than, say, during a recreational or group visit. The sources for the impressions gained can be found in very different exhibition elements and elaborated accordingly with the help of loop-back questions in a second analytical step (formulations in the texts, proposals for interaction/ participation, placement and visibility of the exhibits and additional information, accessibility etc.) In a follow-on question you ask yourself what are the implications of

the way one was addressed as a visitor. The results of the analysis can reveal something about the self-image of the exhibition makers, about the importance of visitor friendliness, about target groups or political agendas.

g) Leaving room for the unexpected and contradictory

Room must be kept free in your mind and on paper. Every exhibition and every analyzer is different, so there are always aspects that do not cover the analysis questions presented above, but should and must be considered without fail. However, just as with all other questions, it is crucial to always ask 'why?' when examining the causes, in order to arrive at well-substantiated analysis results.

Step 4: Making preliminary observations

Looking at the overall picture of the answers to our analysis questions and to the loop-back and follow-on questions enables us to draw certain conclusions. Often, in this step, apparently already forgotten impressions suddenly come to mind and can now be added. In this way, preliminary observations regarding the exhibition can be made from the synthesis. Here it is important not to lose sight of the research interest. The concrete examples from the exhibition evidence your own interpretation and support your argumentation.

Step 5: Revisiting the exhibition

Next, you should plan a second visit to the exhibition. This serves to verify impressions and conclusions. You can now specifically re-examine memories and collect further evidence, such as photographs, but also revise conclusions made in step 4 and draw up new ones. If you notice something that you hadn't remembered before, you can ask yourself why it was forgotten or why you are noticing it now and draw conclusions from it.

Step 6: Specifying observations

You now need to refine the line of reasoning of your analysis. If necessary, steps five and six can be repeated several times until your research interest is saturated.

Step 7: Drawing up an analysis report

Finally, you draw up the analysis report. The analysis can, but does not need to be, a written text. Other formats are also possible, such as a collage, mind maps, podcast etc. Like the exhibition you are analyzing, your analysis report is also a product of numerous decisions about what is and what is not expressed in which form. It

is an "act of exposure" (Bal 1996: 5–6), which is accompanied by the same questions of authority and authorship as an exhibition. It is therefore important to be transparent about how you arrived at the observations in your analysis report. Here it is helpful to proceed according to the pattern 'assertion, substantiation, example', or to orientate yourself on what factual descriptions, your own productions of meaning and structures that convey observations actually are. The aim is to make your own impressions and conclusions intersubjectively comprehensible, that is, to process them in such a way that they can become the basis for a broader discussion about the exhibition and the exhibited objects.

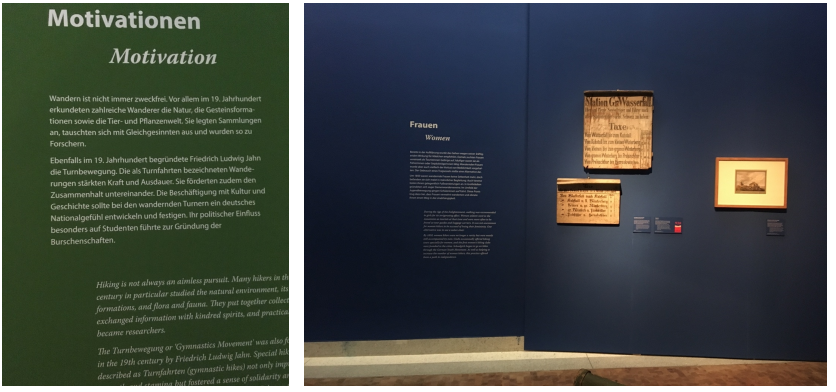
Case study

The special exhibition *Wanderland. Eine Reise durch die Geschichte des Wanderns* (Wanderland. A Journey Through the History of Hiking) in the *Germanisches Nationalmuseum* in Nuremberg will serve as a case study to illustrate the individual points of the step-by-step guideline.[4] I visited the exhibition for the first time on 9 February 2019 and took pictures (Fig. 1–3) of details but also of views of the rooms:

Fig. 1: Impression of the exhibition Wanderland, *© Photo: Carla-Marinka Schorr.*

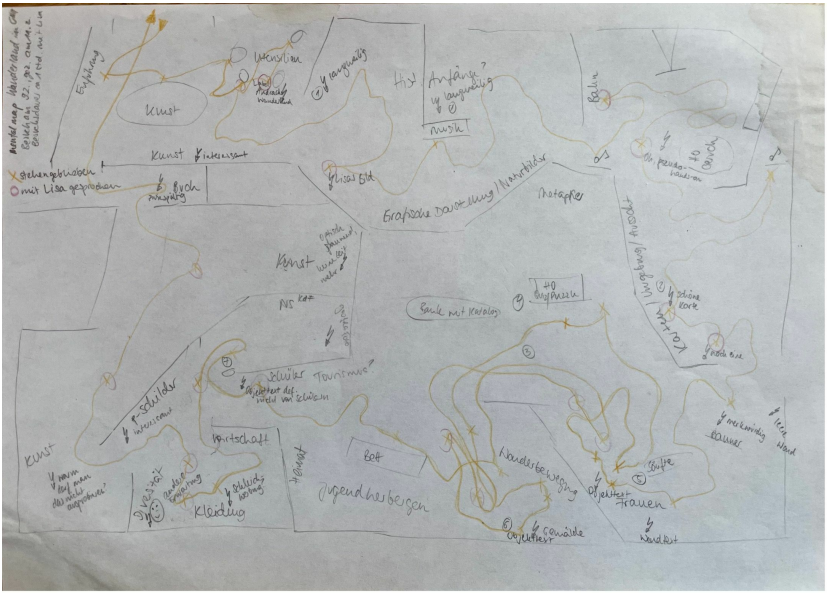
4 For an overview of the topics of the exhibition held from 29 November 2018 to 28 April 2019, see the homepage of the Germanisches Nationalmuseum Nuremberg: https://www.gnm.de/ausstellungen/sonderausstellungen-rueckblick/wanderland/ (05.08.2024).

Fig. 2–3: Impression of the exhibition Wanderland, *© Photos: Carla-Marinka Schorr.*



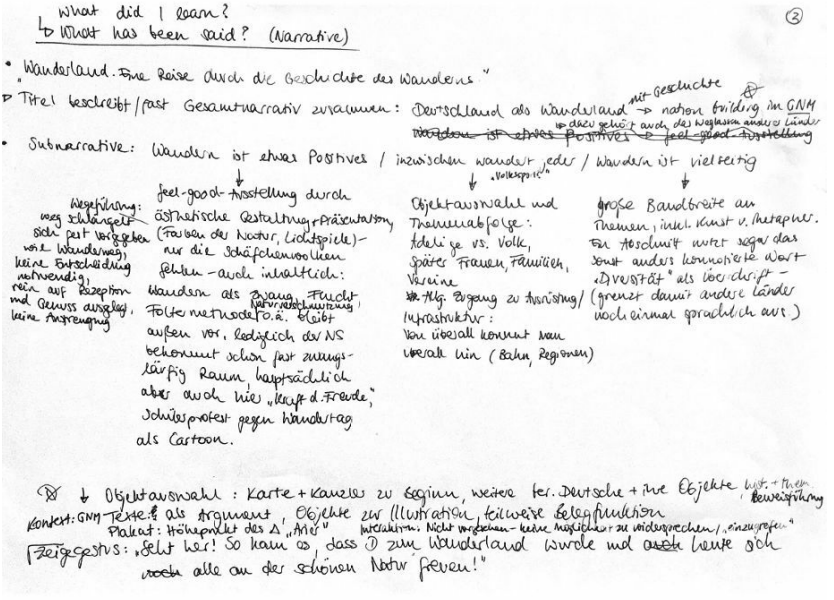
After the visit, I took numerous notes and drew the following map from memory (Fig. 4), marking my tour and my reactions:

Fig. 4: Reaction map. Lines mark itineraries, crosses points of pause, at points marked by circles I spoke to an accompanying person, flashes of lighting symbolize areas where I reacted particularly strongly, © Carla-Marinka Schorr.



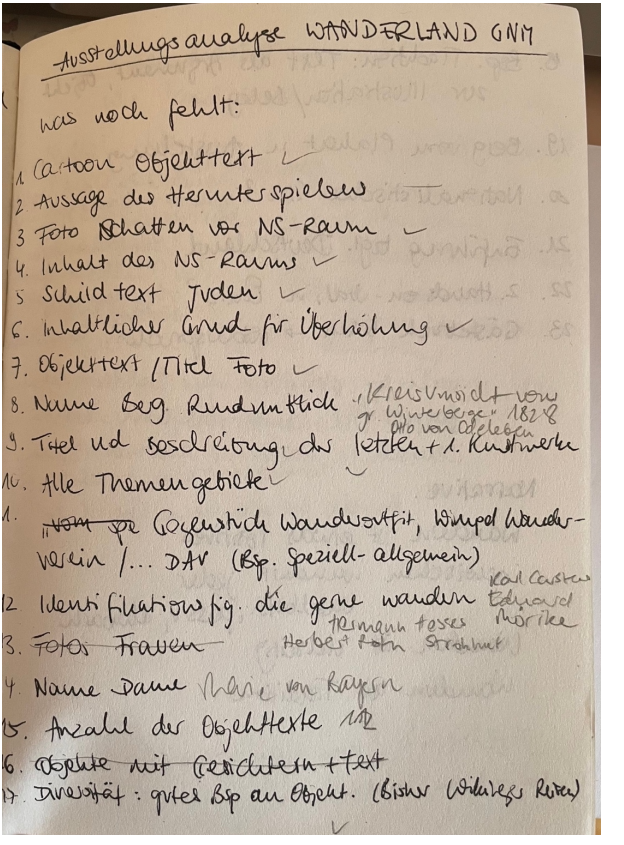
I then arranged the notes according to the analysis questions and began to develop initial propositions as an answer to my general research interest: How does the exhibition work? Here (Fig. 5), for instance, are the notes for analysis question "What did I learn?"

Fig. 5: Notes for the analysis question "What did I learn?" Propositions regarding the overall narrative and sub-narratives were listed as handwritten notes and linked with arrows to impressions of the exhibition and backed up with examples (spatial design, exhibition contents, selection of exhibits). Crossed-out passages, additions and brackets illustrate the process-oriented nature of the analytical work, © Carla-Marinka Schorr.



As I gathered more and more concrete evidence to support my propositions, I noticed gaps in the data I collected and I took appropriate notes (Fig. 6), so that I could fill them in during a second visit to the exhibition:

Fig. 6: Notebook. Points 1 to 17 represent a list of details that should be looked at more closely during the second visit to the exhibition because gaps in the data already collected became apparent here. During the second visit, the points were ticked off in pencil or new data was added by hand, © Carla-Marinka Schorr.



After my second visit I added the new data to the already existing ones, refined the evaluation and developed a 'common thread' for the analysis report. The following passage was created from the notes shown above (Schorr 2019):

> **"A further narrative […] is the observation that meanwhile everyone is hiking. *This is conveyed primarily through the sequence of topics:* The exhibition begins by looking at hiking as a leisure activity and how it allowed the bourgeoisie to set themselves apart from the common people, who went on foot for lack of alternatives and certainly not for their own sake. In the course of the tour, the bourgeoisie's hiking is supplemented by the topics of 'Vereine' (associations), 'Frauen' (women), and 'Wanderbewegung' (the hiking**

movement), thus conveying that hiking enjoyed ever-greater popularity and that walking in the great outdoors not only became socially acceptable, but also a popular sport. ***In addition, the selection of exhibits, which seems to follow the principle of 'from the particular to the general', supports this narrative:*** *There is a lot to see – from Hermann Hesse's private hat to a hiking outfit by Vaude, from the self-carved walking stick to the commercially available designer hiking staff, from pennants of hiking associations that are only open to particular groups to advertising posters from travel companies."*

To illustrate for the sake of practice what was meant above with orientating yourself on *descriptions of what is there (factual)*, **your own productions of meaning (interpretative),** and ***structures that convey observations (exhibition elements),*** these are highlighted correspondingly (italic, bold, italic and bold).

Method reflection

The affect-reflexive method of exhibition analysis operates by taking the analyzer's impressions as a starting point. Accordingly, this promotes the tendency to formulate personal feelings in the analysis report instead of scientific analytical results. It is decidedly not about whether you 'like' an exhibition. Instead, you need to reflect on the implications of being attracted by the aesthetics of an exhibition. Does it, for instance, make it easier for you to find your way around and focus on the content, since it helps you concentrate? Or does it detract your attention to superficialities and makes you forget that, in actual fact, you are confronted with controversial issues? Proceeding from personal impressions and transposing these into intersubjectively comprehensible arguments is not (yet) standard practice and not accepted in all professional disciplines. Instead, things are often phrased in general or absolute terms, suggesting a universality that does not allow for other perspectives. For better transparency, here one can use the first-person form, not widely used in German-speaking countries, but frequently employed internationally ('In the last room I see…' instead of 'in the last room one sees …').

While other methods are better suited than affect-reflexive exhibition analysis for evaluating and critiquing exhibitions, for audience research or generating swift results, the strength of this method lies in the analysis questions that structure individual impressions. It initiates a reflection on exhibitions and exhibits in a way that integrates all relevant exhibition elements into the analysis and thus does justice to the complexity of the exhibition medium. In this way it arrives at analysis results that are based on transparent intersubjectively comprehensible arguments and enable an understanding of how a particular exhibition works from a particular perspective. This is important to initiate a discourse not only – but primarily – on a professional level about the effect and the affect of exhibitions.

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Part II Perception Analysis Methods

Questionnaire

Investigating subjective exhibition experiences via appropriate questions

Eva Specker and Helmut Leder

Introduction

Questionnaires are a classic method in psychology, museum studies, and other (related) disciplines. The major benefit of questionnaires is that they allow for a direct assessment of subjective experiences, which can be harder to assess with other methods. For example, if we want to know if a museum visitor likes an artwork, asking them if they like the artwork seems a straightforward and valid measurement (assuming the viewer does not lie in their response). This doesn't mean that other methods are not available. For example, we could also assess viewing time (Leder, Mitrovic, and Goller 2016) or bigger pupil size (Kuchinke et al. 2009), which are also associated with liking. However, many other factors (apart from liking) may influence viewing time, meaning this can only be an indirect measure. This is true for many physiological measures. Moreover, collecting data about people's experiences by employing questionnaires also allows for more differentiated information than any other measure. For example, we can assess positive and negative emotional responses by measuring facial muscles, smiles and frowns (Gerger et al. 2011). A questionnaire however enables us to distinguish and map many dozens of different emotional responses (Schindler et al. 2017). As far as we are interested in assessing aesthetic experiences, questionnaires generally allow the most direct assessment of these experiences. When thinking specifically about the implementation in an exhibition setting, questionnaires also have the benefit of being cost-effective (no expensive apparatus is required), time-effective, and relatively easy to implement.

However, in many ways, questionnaires can seem deceptively simple (e.g. Simms 2008). As most of us use language every day, making a questionnaire can appear as simple as typing a few questions on a page. In this chapter, we explain that it is worth spending time on developing the questionnaires used in research to ensure measurement validity. We will focus on quantitative measurement. Though questionnaires are flexible and can include open questions that will allow for qual-

itative analyses, this will not be our focus. In addition, questionnaires can be used in the form of tests (where we can answer questions correctly or incorrectly), for example when testing art knowledge (e.g. Specker 2021, Specker, Cotter & Kim 2023, Specker, Forster, et al. 2020). Though this is an option frequently used, this chapter focuses on questionnaires assessing the subjective experience (in the broadest sense) of exhibitions.

For the purpose of this chapter, we mainly focus on item development (i.e. developing your own questions) rather than other aspects of scale/questionnaire development (see e.g. Gehlbach and Brinkworth 2011 for a more extensive overview). This focus was chosen as we aim to enable researchers to develop items/questions that fit specific needs for their individual study rather than enable readers to get in-depth knowledge about scale/questionnaire development. What is worth noting here is that for single questions (e.g. 'How much do you like this artwork?') statistical validity evidence cannot be given and thus assessment of single questions relies mainly on face validity (Does the question seem to measure what we aim to measure?). Nonetheless, the validity of such single-item measurements can be improved by how these items are phrased, hence our focus on item development in the current chapter.

Aim of the method

In most cases, questionnaires are used as a measure of the dependent variable. What is crucial here is that in (quasi-)experimental design, we have an independent variable (or a 'cause') and a dependent variable (or 'the effect'). As noted above, this chapter focuses on questionnaires assessing subjective experience (in the broadest sense) as a dependent variable in a museum study. But questionnaires can also be used to measure other dependent variables as well as independent variables. In all cases, what is crucial is that the measurement is valid, which means that we measure what we want to measure. This is often easier said than done, and testing the validity of a questionnaire generally takes a lot of time and effort (e.g. Specker 2021, Specker, Cotter, and Kim 2023, Specker, Forster et al. 2020).

Step-by-step guideline

To use questionnaires, the first step would be to consider if your theoretical construct can be measured by a questionnaire and if there already exists a questionnaire that you could use (step 1 below). If this is the case, then steps 2–4 can be followed to construct the questionnaire.

Step 1: First you need to define the theoretical construct that you want to measure (Gehlbach and Brinkworth 2011). What is it that you want to measure? Liking? Beauty? Stress? After this has been decided, you can then consult the literature to see if there are any validated scales. Using a validated scale will ensure that your measurement is valid and make your work more comparable to other research. If no validated scale exists, you can assess how others have measured this in the past. In sum: why reinvent the wheel (Clark and Watson 1995)? That said, you may not find anything suitable, for example, because you want to ask something about the specific exhibition or museum that you are testing in.

Therefore, we will now turn our focus to item development. Some advice may seem intuitive in principle but tends to be hard in practice. In general, these practices have been empirically studied and are based on best-practice advice (e.g. Gehlbach and Brinkworth 2011, Simms 2008, for short overviews). Furthermore, we focus here on a description in easy-to-follow, jargon-free language with examples focused towards museum and exhibition studies.

Step 2: After you have decided what you want to measure, you have to make decisions on how to measure it. When writing questions yourself, the first thing to decide is the format of your questions. Should they be in the form of declarative statements, i.e. will you ask 'How much do you like this artwork?' or will you ask 'To what extent do you agree with the following statement: I like this artwork'? Please be aware that in principle, it is advised to avoid agree/disagree response formats (e.g. Krosnick 1999). This is because this is a cognitively demanding task that therefore can increases both error and effort on the side of the participant (Gehlbach and Brinkworth 2011), especially in the cases of item reversal or linguistic negation (i.e. double-negatives; Swain, Weathers and Niedrich 2008). For the same reason, it is advisable to stick to one question format if you plan to ask multiple questions about the same construct. If you switch, i.e. you use a question for artwork 1 and a declarative statement for artwork 2, this will be confusing to the participant of your study. It will be easier (and quicker) for participants to fill out your scale (accurately) when the structure of the questions is consistent.

For this reason, it is also advisable to keep the answering pattern the same. For example, say you use a 7-point scale, then it is much clearer if 1 always means e.g. 'not at all' and 7 always means 'very much'. Sometimes, changes in the format are chosen in order to "make the participant pay attention" or "keep participants honest", i.e. to avoid having participants respond to all questions the same (Gehlbach and Brinkworth 2011). But, in practice, changing scales, such as reversed scored items, reduces reliability (e.g. Benson and Hocevar 1985) and causes issues of "misresponse" (Swain, Weathers, and Niedrich 2008). Note that this applies to both how the items are formulated as well as the actual way the response is formulated. Specifically, items should be formulated in a way that a high rating, for instance, ('very much')

always indicates a positive response (e.g. liking an exhibition) rather than that the meaning switches.

Step 3: When starting to formulate your questions the main goal should be to be clear in how you phrase them (Clark & Watson 1995, Gehlbach & Brinkworth 2011, Simms 2008). This is easier said than done. We advise to

1. deal with only one central thought in each item
2. be precise
3. be brief
4. avoid awkward wording or dangling constructs
5. avoid irrelevant information
6. present items in positive language and avoid double negatives
7. avoid items like 'all' and 'none'
8. avoid items like 'frequently' and 'sometimes'

Why? Many of these rules adhere to how humans comprehend language. For example, double negation is hard to understand (e.g. Benson and Hocevar 1985). In other words, unclear questions make it harder for participants to accurately respond to your questions and for you as a researcher to interpret the resulting data. This is also the main aspect that point 7 and 8 are focused on. For example, 'I was mainly interested in the paintings'. This is a classic example of a question that is double-barreled: a question that assesses more than one thing (i.e. does not follow recommendation 1 above). Another example would be if we ask the participant to respond to the statement 'my museum experience was informative and pleasurable'. The participant may be at a loss as to what to answer when the experience was only informative or only pleasurable but not both.

What is relevant is: What do you want to measure? (see also step 1). If you are interested in knowing if participants are relatively more interested in paintings or sculptures, then it may make sense to ask this directly, "Where you more interested in paintings or in sculptures?" (like Reitstätter et al. 2020) with, for instance, scale points of 1 "more paintings" to 7 "more sculptures". If you want to know how interested participants were in paintings and sculptures individually, then it makes sense to split this into two questions and leave the "mainly" out. What we aim to illustrate here is that improving a question can be done in different ways and that this should be informed by step 1, the question what is it that I want to measure?

Furthermore, though we should aim to be brief we need to be precise. To provide a positive example (also from Reitstätter et al. 2020): "With how many people (excluding you) have you visited the museum today?" Here the inclusion of "excluding you" is essential, as otherwise the question is unclear. This then leads to issues for

the researcher as they will not know in the end if 'two' means the participant visited the exhibition with one or two other people.

Step 4: In a final step, consider your response options. Generally, there are three types of options: dichotomous (e.g. yes/no, true/false), categorical (e.g. nationality) or continuous (e.g. a 7-point scale). Categorical responses can be hard to analyze as a dependent variable and thus are generally used for questions that are focused on descriptive aspects of the sample (e.g. nationality). When using more than two answer options, it is important that response categories are evenly distributed. Not doing this, for example, in a 4-point scale where 1 is 'disagree', 2 is 'agree', 3 is 'strongly agree' and 4 'extremely agree', means that you are able to measure agreement well (with high measurement precision), but you are not able to measure disagreement well. Of course, the aim is to have as complete a measurement as possible, so this is suboptimal (Wenig 2004). As a heuristic, at least 5- or 7-point scales are recommended to be able to treat the data as continuous (Wenig 2004). That said, more scale points are not necessarily better. In fact, it may actually reduce the validity as participants are unable to make the subtler distinctions that are required (Clark and Watson 1995, Symonds 1924, Wenig 2004). Finally, sometimes an even number of scale points is preferred to avoid the potentially tricky interpretation of the midpoint value. However, this may force respondents to give answers that do not reflect their true opinion/feelings, which may be problematic (Clark and Watson 1995).

Regarding equipment, there are several ways to implement questionnaires. You can use pen and paper (e.g. Pelowski et al. 2022), tablets (e.g. Reitstätter et al. 2020) or participants can use their own phone (e.g. Specker et al. 2020). In the latter case, participants can scan a QR-code that will then open the questionnaire/link on their phone. A downside of pen and paper is the need to manually enter the responses in, for example, an Excel file in order to analyze the data. This can be rather time-consuming and may also lead to errors in the data by simple human mistakes. That said, it is easy to use and does not require technical infrastructure (ability to recharge the devices, software licenses and so on) nor any programming knowledge that the others may require.

Regarding human resources, in principle, all steps can be done by one single researcher who designs the study, selects or creates the used questions, collects the data, and then analyzes them. What would be required is to have expertise in experimental design for quantitative studies as well as statistical data analysis. Depending on the expertise and experience of the researcher(s) with quantitative methods, and the relative complexity of the study design, the time it will cost to complete each step will vary. In addition, if a validated scale can be found in step 1, then step 2–4 do not have to be completed, which would save time.

The duration of data collection would likely not depend on the researcher but on other factors such as the sample size aimed for (how many people you want to

test) as well as how many people would be able to participate. For example, when testing in a large museum like the Albertina in Vienna, you may be able to test a 100 people in only a few days (e.g. Specker et al. 2020), whereas in smaller museums with fewer visitors per day, you may need a longer time period. Depending on how long the questionnaire would be, participation can generally be relatively short. One thing to consider here is whether you're testing regular museum visitors or whether you're bringing people to the museum. In the first case, you need to remember that participants are there to visit the museum rather than to participate in your study, so the shorter you can keep the questionnaire the better. In the second case, you can generally ask more of your participants, as they came to the museum specifically to participate in your study.

Case study

An example of a study that used questionnaires in an exhibition setting is Specker, et al. (2020). In this study, we were interested in the curatorial narrative – i.e. the embedding of artworks or an entire exhibition inside a wider context of meaning and significance. In the study, half of our participants attended the Monet retrospective at the Albertina Museum in Vienna and the other half visited the *Monet to Picasso* permanent exhibition. In both exhibitions, people were asked to look at *The Water Lily Pond* (1917–1919) by Claude Monet. In the retrospective, this painting was hung in the room which marked the stylistic change in Monet's work towards more abstract(ed) painting. In the permanent exhibition, this work was hung in a room with other impressionist artworks. While there was a stylistic deviance in the first setting of the retrospective, this was not the case for the permanent exhibition. Previous research (e.g. Stamkou, van Kleef, and Homan 2018) had shown that viewers judge artists as more influential if their work is presented in a context of stylistic deviance, and we found the same in our exhibition study. That is, Monet was perceived as more influential in the retrospective exhibition than in the permanent exhibition. In this case, perceived influence as well as deviance was measured by a questionnaire. As we based our study on Stamkou et al. (2018), we could use the same questions and only had to adapt their questions to our exhibition context. For example, instead of asking: "What do you think of this artist?", we asked specifically: "What do you think of Monet as a painter?" Followed by the same four statements that Stamkou et al. (2018) used, but again changing "artist" to "Monet": e.g. "I think that [Monet] will continue to make a great contribution to art even after many generations of painters".

This study led to several insights: Firstly, this study supports a long-held assumption in curatorial practice – that the decision of the curator when composing an overall narrative for an exhibition (specifically, the ordering in which pieces are seen) does, in fact, lead to measurable differences. Secondly, these curatorial

narratives can shape our view of artists – even for very well-known and famous artists such as Monet. It seems even likely that the effects may be bigger for lesser-known artists. Overall, studies like this could provide a basis for an evidence-based approach to curation wherein curators can use empirical findings to achieve or modify curatorial goals and shape visitor experience.

Method reflection

As mentioned in the introduction and discussed above, questionnaires have the benefit that they allow us to assess subjective experiences of exhibitions in a direct way, are cost- and time-effective, flexible in the types of questions that can be asked, and relatively easy to implement (Simms 2008). When focusing on quantitative measurement, one benefit is that questionnaires allow for statistical analysis and relatively straightforward interpretations – an average score is a concise summary of the responses of various respondents. It would be much harder to create such a short summary of phenomenological interviews or other qualitative responses.

That said, these methods (both questionnaires as well as qualitative methods) rely on introspection. The underlying assumption is that participants have insight into their subjective experiences and can report on them accurately by responding to the questions asked. Nonetheless, one benefit of using more quantitative-oriented questionnaires is that it's generally easier for participants to respond to 'How beautiful do you think this artwork is?' on a designated scale e.g. from 1 ('not at all beautiful') to 7 ('very beautiful') rather than as an open question which would require participants being able to verbalize their thoughts which – depending on what and who is being asked – may be hard for them. However, a downside is that respondents are not flexible in their answers. We will only get answers to the questions we have asked, which inherently leads to a limited focus. In addition, as the questions are short and answer options are restricted, we will not get as rich a dataset as we could obtain with qualitative methods. For example, we may find out if things are liked, but not necessarily why they are liked, at least not on an individual level.

Furthermore, questionnaires (or other methods where participants are directly asked) can lose validity due to different kinds of response biases that may occur. For example, people may be motivated to not be completely honest if topics are e.g. socially sensitive – asking someone 'Are you racist?' or even 'Are you interested in art?' (for example, when this is asked in an art-related setting such as a museum) may not be the best method. That said, McKibben and Silvia (2017) report to have found no evidence for social desirability in responses to creativity and arts scales.

Finally, after having discussed all these aspects of questionnaires in art research, we want to stress that the benefit of using quantitative questionnaires is the highest when researchers have clear ideas regarding hypotheses that they want to test. And

despite the temptation to add various components, that it is always important to decide which statistical analyses they want to do, in order to test these in confirmatory research. With these two demands in mind, the reader can start to make good questions for a meaningful, scientific exhibition analysis.

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Observation

Understanding exhibitions as spaces of experience

Carola Korhummel

Introduction

"His gaze wanders along the queue of people lined up in front of them. She repeatedly runs one hand over his coat-covered back, while the other checks the neat fit of her hair-do. After a while of mutual silence she retrieves a mobile from her black handbag and starts to read out the Wikipedia article on *The Kiss (Klimt)*. He shuffles across the gravel in his shiny loafers, sighs and draws closer to her until they are cheek to cheek, gazing together at the glowing screen. Behind them, the contours of the Upper Belvedere shimmer in muted shades of gold." This is the beginning of an observation protocol of a pilot study conducted on Valentine's Day 2023 on the romantic potential of museums. The method of exhibition analysis applied here was observation, which is as straightforward as it is effective.

Observation looks back on a more than hundred-year tradition in exhibition research. Benjamin Gilman is considered a pioneer in the field. In the early 20th century he documented a total of thirty guided situations of a single museum visitor in black-and-white photographs to illustrate the visitor's exertion under the catchphrase of *Museum Fatigue* (Gilman 1916). Later studies with regular visitors focused on patterns of behaviour such as the attraction of exits or the *right turn bias* (Robinson 1928, Melton 1935, 1936, Porter 1938). Further studies explored orientation and circulation in museum spaces (Falk et al. 1985, Cohen, Winkel and Olsen 1977, Parsons and Loomis 1973, Peart 1984, Rosenfeld and Turkel 1982).

Stephen Bitgood and colleagues in particular (Bitgood 1988, 2003, Bitgood et al. 1985, Bitgood and Richardson 1986) employed observation to analyze economies of movement and developed proposals for an appropriate exhibition design based on their findings. Beverly Serrell (1993, 1995, 1997, 1998) compiled the results of more than hundred exhibitions in zoos, aquariums and museums in a meta study and compared the dwell time per square meter, now a frequently referenced metric known as the 'sweep rate index'. This approach, established as tracking & timing, is a reduced form of observation that assesses an exhibition in terms of its exhibits'

capacity to attract and detain. Finally, in the light of ongoing digitalization, the tools of observation are changing: new recording technologies and software solutions are replacing traditional pen-and-paper techniques (Yalowitz and Bronnenkant 2009).

In the current application of observation as a method of exhibition analysis, quantitative approaches dominate, providing a competitive indicator for the success or failure of an exhibition, for instance, in comparing intensity of use. Here, a rigorous observation regime often limits the amount of knowledge gained beyond statistics. However, some research projects indicate what observation, as a well-founded method of recording of what is taking place, is methodically capable of: Inequality researcher Nicole Burzan (2022), for instance, examined changing social distinction behaviour in experiential museums as well as situations of interaction between service personnel and visitors, in order to explore their ambivalent function as a hinge between enforcing a set of rules and creating a welcoming atmosphere. In turn, cultural manager Ina Ross (2018) conducted studies on postcolonial appropriations of the museum as a picnic spot and a hang-out place, as a backdrop for photos and selfies for the social media feed or as a meeting place for unmarried couples at the Tribal Museum Bhopal. This potential of observation as an open-ended, qualitative method for analyzing exhibitions will be outlined below. The exhibition should be considered as part of a growing experience economy in the 21st century that replaces useful and material goods with experiences that are as emotionally intense as possible (Illouz 2018). The exhibition as a space of experience is neither a static store of knowledge nor a purely aesthetic act, but rather an affective proposition that visitors can appropriate in multiple ways and continuously redefine through their actions.

Aim of the method

The method of observation aims to gather knowledge about visible actions and behaviours. When applied in exhibitions, observation can produce unpredictable findings, for instance regarding social role structures or modes of use, that cannot be captured with more structured methods. In this way, the special nature of everyday phenomena can reveal itself in minimal clues – such as a glance through a window or a casual touch of a companion: the in-between, the unspectacular, the authentic interstices that make up a visit to an exhibition beyond taking in collection highlights. The method doesn't end with merely recording the observed phenomena, but goes further in attempting to make sense of their potential relationships and meanings.

Step-by-step guideline

Observation as a method of exhibition analysis is just as multi-layered as are exhibitions themselves as spatial constructs, physical experiences or social events (Reitstätter 2015). Aspects of an exhibition that can be examined via observation include, for instance, orientation and circulation in the architectonic space, the reception of specific exhibits, the use of educational tools as well as any form of interpersonal interaction. It is thus in the broadest of terms that the following guideline aims to do justice to this pool of observable possibilities.

1. Setting and self-positioning

The primary research instrument of observation is the researcher themselves, who notices interactions in the exhibition space and puts them into writing by resorting to simple tools. Before embarking on the field research, it is therefore necessary to reflect on the setting: what is the context of the exhibition venue, the exhibition theme, the exhibition visit as a culturally framed practice? This is followed by a self-positioning that takes into account individual influences and expectations: Where do I locate myself within or outside of this system? What do I consider as normal? This overarching last question is best answered antonymously by imagining a situation within the exhibition that would be considered unusual from one's own perspective (Goffman 1963).

Both the setting and the corresponding self-positioning are conducive to gaining an advanced awareness of one's own role in the field. Accordingly, one can choose between various variants of observation: structured or unstructured, participatory or non-participatory, overt or covert (Lamnek 2016, Lüders 2013). Structured observation collects data based on predefined categories, while unstructured observation merely sets out flexible guidelines. In contrast to non-participatory observation, which maintains a distance from events and can also be conducted via video recording, the researcher is directly present in the research field during participatory observation. Depending on the social emphasis of one's role, a further distinction is made between active and passive. Finally, overt observation reveals the researcher as such, while covert observation withholds this knowledge.

For exhibition analysis, the entire range of structured to partially structured to entirely unstructured observation is applicable, depending on the research stage and research interest. Researchers in the role of regular exhibition visitors would, according to this model, perform a passive, participatory observation. Covert observation combined with an anonymized data collection is ethically acceptable in the context of the public exhibition space.

2. Data collection tools

Point of departure for data collection is a preliminary research question that is allowed to further develop organically in the research field and in the follow-up. After clarifying the details of the spatial, temporal and thematic scope of the field research in terms of the preliminary research question, the next step is to prepare the tools of data collection. Field notes play an essential role here and it much benefits the observation to clearly subdivide them in a detailed protocol and a short memo. The protocol is purely descriptive and records the observations in chronological order in a continuous text in the present tense. The memo written directly after the protocol is, in turn, a useful tool for formulating preliminary interpretations or possible hypotheses for the observed behaviour. Sketches of specific scenes or movements can serve as visual aids for recalling spatial circumstances and special moments. In case of recurring observations, it is helpful to mark them with self-defined symbols that should be noted in a legend for effective reconstruction. Depending on whether you decide to go for a structured or an unstructured observation, the field notes should be prepared accordingly with or without fixed categories. Nevertheless, observation is a flexible study design that can and should always be adapted to the actual circumstances on the ground.

3. Descriptive observation

After preparing the tools of data collection, the actual research in the field can begin. In exhibition analysis, as in other fields of observation as a method, it is recommended to follow a chronological, fluid sequence of three levels of observation, progressing from descriptive to focused to selective observation (Lüders 2012). In the first phase of descriptive observation, the researchers explore the circumstances of the exhibition and assess its complexity. Initial questions that can support the descriptive observation in the exhibition space are: What can be perceived? What are the contextual conditions – from the entrance fee to architectural aspects and the specific situation of the visit? On the strength of this initial description, the preliminary research question can already be further specified. The duration of this phase varies, depending on the exhibition and the researcher: as soon as actions are repeated and specific processes emerge, one can continue to the next phase.

4. Focused observation

Following the first comprehensive inventory, the second phase of focused observation concentrates on behaviours that are relevant to the specific research interest. The focus in the exhibition analysis can, for instance, concern how visitors approach an exhibit or how they take breaks. It is now advisable to divide the field research into

smaller, more tailored units of action, which is reflected in the way the field notes are organized. Here, two questions are helpful: Which elements define the behaviours I have observed? When or how does an action begin and what does it end with? For this purpose, the data collected in the protocol can be compared with each other and any observable patterns of behaviour can be noted down in the memo. As soon as a representative accumulation of these patterns emerges, one can continue to the next phase.

5. Selective observation

In the third and last phase of data collection, the researcher collects further evidence and examples for the behavioural patterns found in the course of the focused observation and recorded in the memos. When visitors approach an exhibit, selective observations concerning the amount of space, position and neighbourhood of the exhibit could, for instance, serve as evidence for typical behaviours. The selective observation is completed as soon as a sufficiently diverse set of evidence for the previously identified behavioural patterns is available.

6. Data analysis

The three-layered data collection is followed by the process of data analysis. In effect, this is not a unique sequence of two operations, but rather an iterative research process of data collection and analysis: the constant re-evaluation of collected data in turn impacts every new observation in the research field (Lueger 2000). In the process, memos and protocols are collated and their ideas collected, hypotheses are generated and discarded. The solid basis for such data loops consists in the comprehensiveness and the predefined formats of the field notes as a tool of data collection. Based on the overall impression of these field notes, categories are first derived in the data analysis in order to annotate the data in the next detailed run. Even though the data collection can be carried out by one single person, general quality assurance measures in qualitative research should be observed during data analysis, and the data should be reviewed and analyzed by several independent persons (Bohnsack 2005, Flick 2018).

7. Contextualization

Finally, the observations are confronted and contextualized with existing theories and historical evidence. Depending on the research interest, this contextualized knowledge can be used in two ways. On the one hand, it is possible to derive general rules for exhibition research from the accumulated observations. On the other, it is

conceivable to put forward practical and specific suggestions for adjustments to the examined exhibition space.

The resources required for the observation comprise the researcher as well as a notepad and pen or a suitable digital device for data collection. If the annotation during data analysis is performed using chargeable software, this should be factored into the budget or covered by the research institution's licences. While personnel requirements are minimal, observation tends to be a rather time-consuming method, both in terms of data collection and analysis.

Case study

The pilot study conducted by the Laboratory for Cognitive Research in Art History at the University of Vienna on Valentine's Day 2023 marked the start of the larger research project *Dating in Museums (DiM)*. The aim was to examine selected Vienna art museums as experiential spaces for love relations using an explorative format. The preliminary research question was: To what extent is the art museum used as a space for romantic rendezvous? Ahead of the project, the five-person research team discussed the semantic field of 'dating' in general terms and in relation to museums. First, we defined the setting of the art museum with its specific behavioural conventions of keeping one's distance and viewing exhibits in a contemplative mode. With regard to self-positioning, we verbalized personal attitudes towards dating as a practice both outside and inside the museum. Which forms of dating or romantic love do we consider (not) normal? Which attitudes do we follow or correspond to ourselves in this respect? Subsequently, we decided on a partially structured, passively participating, covert observation in the role of museum visitors. This allowed us to observe situations in the public exhibition space in a non-invasive way as well as relate to specific museum experiences from a closer internal perspective.

When determining the framing details, we timed the study to coincide with Valentine's Day in order to ensure as high a concentration of dating visitors as possible. In terms of location, our radius was limited to Viennese art museums, and in terms of content, we shortlisted events that explicitly dealt with the concept of romantic love. For this purpose, we first reviewed the range of offers in all Viennese museums via desktop research and subsequently contacted selected institutions for the research project. Ultimately, we chose four museums with completely different events: The Kunsthistorische Museum Wien (KHM) with a brief art-historical tour; the Museum für moderne Kunst (mumok) with 1+1 admission and a queer photoshoot in an installation; the Museum für angewandte Kunst (MAK) with nude drawing and a lecture; and the Upper Belvedere with free admission and a professional photoshoot for kissing couples in front of Klimt's most famous painting. Methodically, we opted for a combination of observation and interviews, where we

explicitly revisited and approached people we had previously observed (hide and seek). A briefing preceding the field research was devoted to the practical approach in the field, which determined field notes consisting of a protocol and a memo as well as sketches as tools of data collection.

In a first, descriptive phase of observation, we noted the relatively high number of presumed couples in the museum audience, distinguishing themselves from other visitors through specific, repetitive forms of interaction such as eye contact and physical proximity. The contextual conditions – admission fee, architecture, suggested experiential format for Valentine's Day – differed greatly between the examined museums. We therefore assumed, on the one hand, a specific form of how dating couples experience museums that applies to all four museums, and on the other, significantly varying visitors' interests depending on the suggested experience format. The second, focused phase of observation concentrated on the previously identified couples among the visitors. Here, beginning and end of joint activities and their interruptions within an exhibition space were recorded. The following patterns emerged: silently standing together before art works in close physical proximity; taking time out together on seats with or without conversation; and actively heading for less crowded places of retreat within the exhibition. In a third, selective phase of observation, the researchers collected further supporting evidence and examples of the previously identified behaviours, paying particular attention to the exhibition architecture as well as specific features of the exhibits.

In the course of data analysis, we studied the field notes together and derived suitable categories – intimacy, focus on exhibits, focus on the event, contact with other visitors – before subjecting them to a further reading. For quality assurance purposes, these data loops were carried out independently by several researchers and subsequently contrasted with each other and discussed in group analysis sessions. Two fundamental assumptions were consolidated: firstly, it was possible to identify both general and specific behavioural patterns of dating persons who knew how to deliberately use certain parts of the exhibition as an experiential space for intimate acts. Here, in particular the exhibition architecture seemed to be correlated with the degree of intimacy: while displays of intimacy were relatively rare in the open spatial constellation in mumok, affording little privacy, these were quite frequent in the small, concealed cabinet layout of the KHM. Secondly, the visitor interests varied considerably depending on the suggested experiential format in the four examined museums: in the mumok, for example, the behaviour of the visiting couples showed a pronounced focus on the exhibits, and thus a concentration on the exhibits with a concomitant neglecting of the accompanying person, while in the KHM, the exhibition tended to serve as a kind of resonance chamber for intimate acts. The Belvedere, in turn, was able to attract the largest crowds in terms of numbers – in part owing to the contextual condition of free admission – with the event offered as a unique and shared museum experience being the focus of interest.

Finally, the observations of dating couples in the museum, made in the context of this particular pilot study, were placed in the context of social conventions of visiting and historical concepts of museum use. In the light of an increasingly emotional eventization of cultural practices, the accumulated observations could contribute to acknowledging the practice of dating as a relevant exhibition experience and to actively enabling the observed needs of dating visitors by providing appropriate offers in the exhibition space.

Method reflection

Observation is a timeless and long-standing method. The advantages are obvious: firstly, it is an easily accessible method that can be implemented with just one researcher and with little to none financial means. Secondly, it ensures a minimally invasive approach to the field, which, depending on the implementation, enables an undisturbed visit to the exhibition for the observed persons. Thirdly, it constitutes an open-ended and hypothesis-generating approach that makes it possible to record unpredictable forms of behaviour. It is particularly advisable in combination with other methods because it can reveal the blind spots of other, hypothesis-driven methods. For example, visitor self-assessments and opinions obtained through a survey can be enriched by observing unconscious or concealed behaviour, such as different degrees of intimacy.

One should always bear in mind the limitations of observation as a human-based method: even with careful preparation and execution, selective and subjective processes of perception cannot be completely avoided, but they can be made intersubjectively comprehensible through data-based argumentation. Therefore, methods such as *Video-Based Ethnomethodological Conversation Analysis* or *Mobile Eye Tracking* can be used as a complement or as an alternative. Ultimately, the maxim of observation is unattainable in a twofold sense: neither is it possible to set up an all-encompassing observation, nor can the difference between participants and researchers be completely eliminated. The observation process is after all as fleeting as the material that it aims to capture, and the methodical solidification of ephemeral states is always an artificial process.

When applied to exhibition analysis, observation can draw conclusions about architectural or curatorial advantages or disadvantages, as well as about needs of the visitors that are met or denied. The sum of these observations yields appropriations of the exhibition as an individually designable space of experience, where interactions with exhibits can explicitly serve to bring visitor and companion closer together, or where the ambience of the exhibition feeds the romance of a rendezvous. Understanding exhibitions as spaces of experience could bring hitherto less documented, affective exchanges in the network of visitors, architecture and exhibits

into focus and emphasize the social relevance of exhibitions against the backdrop of a late-capitalist society built on experience economies.

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Social Meaning Mapping

Reflecting on exhibition experiences with digital maps

Dimitra Christidou

Introduction

Maps and floor plans of exhibition spaces are being used both in visitors' navigational processes in museums and in curatorial designing processes. Moreover, spatial representation is not only important when curatorial teams are negotiating the making of an exhibition, but also when evaluating it. In evaluation processes, floor plans serve, for instance, as a tool to conduct unobtrusive observation of visitors, also known as timing and tracking (e.g. Chiozzi and Andreotti 2001, Yalowitz and Bronnenkant 2009). Floor plans are used to note visitors' circulation and orientation in the museum space, their use of objects and interpretive resources, as well as their stops and dwell time in the exhibition space. However, maps and floor plans have not only been used in timing and tracking studies. Researchers also implemented the use of these visual representations to include visitors in an active discussion about their exhibition experience and acknowledge their agency in meaning-making (Prosser and Loxley 2008, Weber 2008). In contrast to interviews which are highly linguistic, using visual methods allows us also to include participants in data collection whose linguistic skills may not have developed or who might find it difficult or challenging to articulate themselves verbally (Christidou 2020, Prosser and Loxley 2008, Weber 2008). Examples of using such visual methods include the Personal Meaning Mapping for which individuals are asked to write their associations with a target word or phrase, such as the title of the exhibition (Adams, Falk, and Dierking 2003, Falk, Moussouri, and Coulson 1998), visitor recall maps or self-reported pathway maps (Nurse Rainbolt, Benfield, and Loomis 2012), and visitors' drawings (Diamantopoulou, Insulander, and Lindstrand 2012, Insulander and Selander 2009).

Aim of the method

Following the shift in using visual methods in the evaluation of exhibitions, this chapter introduces the digital method called Social Meaning Mapping (SMM). SMM is embedded in Visitracker, a tablet-based app designed to conduct timing and tracking, and surveys (Pierroux and Steier 2016).[1] Its design has been informed by relevant methods used in visitor studies drawing upon sociocultural theories of learning, foregrounding the social and interactional nature of the exhibition experience. Specifically, SMM was designed to allow visitors' representations and reflections to come into the foreground of data collection. During SMM, visitors are prompted to use the digital floor plan from one gallery room onto which they are invited to mark not only their personal but also their collective accounts of their exhibition experience. As visitors verbally and visually highlight aspects of their visit on the surface of the tablet, they create their own maps of their experiences. Thus, when collecting data with SMM, both the final product with the drawn map and the process of marking and thinking aloud are essential resources for evaluating their exhibition experience.

Step-by-step guideline

To use SMM, one might have a tablet with the Visitracker app installed on it or alternatively use an ordinary paint software along with screen recording. The app provides a step-by-step guide for setting up a study.

1. An image of the floor plan from one gallery room needs to be prepared in advance. This image needs to be a detailed visual representation of the objects on display and its available interpretive resources. Once provided, it needs to be uploaded to the app.
2. Visitors are to be recruited before entering the gallery room under investigation. After visiting the gallery room, visitors are invited to operate the tablet during a researcher-led interview session.
3. The researcher asks for their consent to be audio recorded by letting the participants click the consent box on the tablet's screen.

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1 The Visitracker app was designed to collect data on groups of no more than four visitors, as it is often very time-consuming to conduct studies with larger groups. SMM was developed as part of my postdoctoral fellowship at the Department of Education, University of Oslo. Both Visitracker and SMM were developed during a ten-year long collaboration between the Department of Education, University of Oslo; Engage Lab, University of Oslo; and the National Museum of Norway. Visitracker has been relaunched under the name SEEZ.

4. The illustrated version of the gallery room is then projected on the tablet's screen, along with a digital paint toolbox. The researcher instructs visitors on how to use the tablet and the toolbox to mark aspects of their exhibition experience digitally (Fig. 1a, 1b). Depending on the research interests and questions, different prompts can be given to visitors regarding the marking on the digital floor plan. Interviewers can explore specific aspects in detail, such as the use of the objects on display and the available interpretive resources, while allowing visitors to document their movement patterns and to share their reflections on what they encountered in this room, and what they chose to explore further or ignore altogether.
5. Additional verbal prompts can be offered by the researcher inviting visitors to clarify or elaborate further on their meaning-making, both verbally and visually. It is important to remember here that the interviewer should remain as open and flexible as possible during data collection. Potential intervening can prove detrimental to the ways visitors choose to represent and recount their exhibition experience.

The average time for data collection is fifteen minutes per group of two visitors.

Fig. 1a: An example of the SMM tool on the Visitracker app, © Screenshot: Dimitra Christidou.

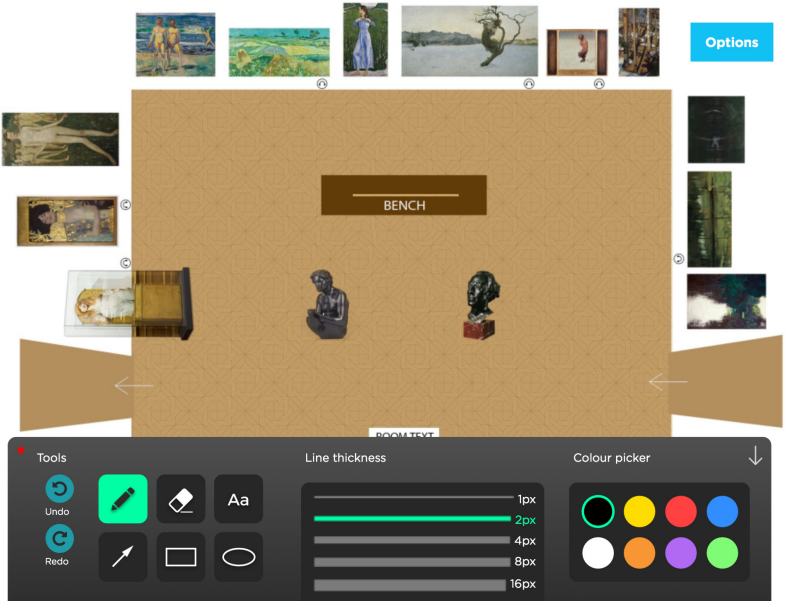
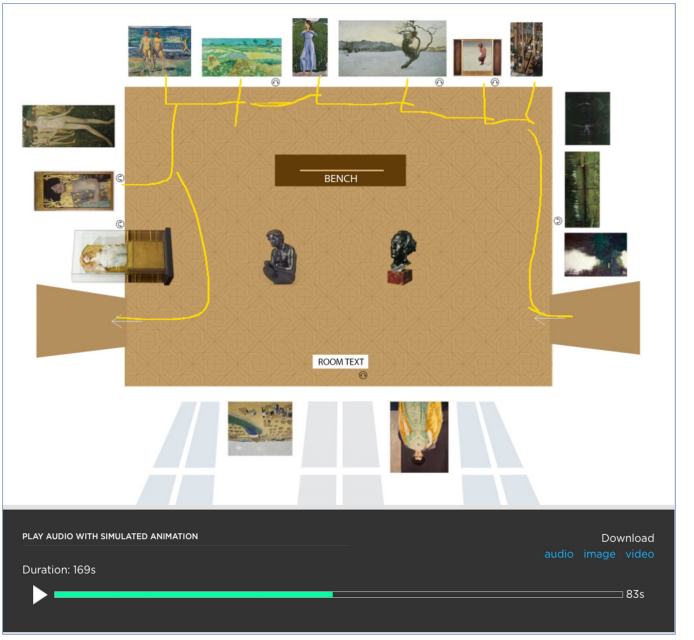


Fig. 1b: Data collection through SMM, using the Visitracker app, © Photo: Department of Art History, University of Vienna.

To access and analyze the data, one needs to log in to the dedicated Visitracker portal. During the SMM data collection, the app records both visitors' digital markings on the tablet's screen and the conversation unfolding during the interview as a video file. These videos can be accessed on the app's portal and allow for the synchronized re-creation of visitors' markings and their verbal descriptions associated with each marking (Fig. 2). As visitors are invited to collaborate on their SMM, they are communicating their experience with each other, the researcher and themselves. Depending on the quality of interactions unfolding during data collection, SMM can capture aspects of visitors' socio-cultural background, previous cultural experiences and potential areas of interest in the gallery room. Of special interest is visitors' own reasoning why they choose to further explore certain exhibition areas or objects or not. Data from SMM can then inform an analysis how visitors responded to the curatorial design of the exhibition space, object displays and interpretive resources.

Fig. 2: Synchronised replay of a Social Meaning Map, © Screenshot: Dimitra Christidou.



Case study

In the *Belvedere Visitracker* study, we explored how visitors in groups of two experienced the redisplayed collection in the Secession room at the Upper Belvedere in Vienna, Austria in Autumn 2018. The team consisted of five researchers, all equipped with a tablet on which the Visitracker app was installed. Each researcher approached visitors arriving in pairs at the first floor of the building and invited them to participate in the study. If visitors agreed and were over 18 years old, they were asked to fill in a consent form and continue their exhibition visit on this floor. The data collection occurred in three consecutive stages, with a different method used during each stage: (1) timing and tracking at the Secession room, (2) a short survey consisting of twelve questions on visitors' sociodemographic background and visiting practices, and (3) an SMM created by each pair. Timing and tracking (stage 1) started upon visitors arriving at the Secession room. Stages 2 and 3 took place immediately after visitors exited the gallery room.

During SMM, visitors operated the tablet. The researcher instructed visitors to "[p]lease mark the way you took through this room by using the toolbox available. As

you can see, there are different shapes, colours, and an eraser for you to use. While drawing, please also share your thoughts on your visit. Everything that comes to mind is of interest to us." Once visitors finished marking their trails, the researcher asked them to assign the artworks they have seen before (as an original or reproduction) with an "x" and their personal highlight with an "→", while reasoning their selections. During the whole SMM process, the researcher continued to prompt visitors with questions to elaborate on their markings and thoughts. The average duration for filling out the survey and taking part in the SMM was approximately 25 minutes. During one week of data collection, the team gathered data from 73 pairs of visitors.

When analyzing the data collected through timing and tracking, we were able to find out the time visitors stayed in the room, the most frequent movement patterns, and the focus on some specific artworks and interpretive resources. Coupling this data with the data collected through SMM, we were able to learn more about visitors' motivations, choices and behavioural patterns. By combining our own observations with the visitors' perspective, we were able to create a more holistic picture of their visit to the exhibition and link the what of their actions with the why. In a focused data analysis on the specificities of accompanied museum visits in the art museum, the 7:3 ratio of solitary versus shared interactions demonstrated that, on average, visitors in pairs acted more on their own than together in the art museum. Yet, frequencies differed widely among pairs. Pairs who showed more social intimacy in talk, also were more willing or better able to share their art experience with each other in the exhibition space (Reitstätter and Christidou 2024).

Method reflection

Based on the feedback from team members, other researchers, museum practitioners and my own personal experience, potential users might find it useful to take into consideration the following non-exhaustive list of the advantages and pitfalls of the SMM method.

The main strength of SMM is its design as a participatory and collaborative method. The maps are created by visitors in collaboration with each other and can document both aspects of visitors' personal experience (what they individually experience) and aspects of their social experience (how they engage with one another). Moreover, in their attempts to account for the social aspects of their visit, visitors can use SMM to refer to the wider ongoing situational context that unfolded during their museum visit, including other visitors who happened to be in the same room at the same time. When doing so, the maps created represent not only relationships between visitors and the museum space, the objects displayed, the interpretive resources, but also relationships between them and other visitors on site. Addition-

ally, as the digital map is being shared simultaneously with all participants, it can be further used to encourage and facilitate a collaborative reflection of the exhibition experience. The map provides the researcher also with a record that can be further interrogated while it is being made, as well as after it is completed, allowing to return to features of the exhibition and elaborate on what has been marked out. A useful piece of advice here to consider when collecting data is to have a very detailed floor plan: when the floor plan depicts the architecture of the gallery room, the objects on display and the available interpretive resources, it allows visitors to refer to these by marking them out, without requiring them to recall any concrete names or specific information.

By enabling ways of data collection that are responsive to participants' own meanings and associations and do not rely heavily on the use of language (Gauntlett 2007), SMM creates and collects visitors' own maps, which are dialectical and socially shared artefacts created by themselves (Christidou 2020, Stahl, Ludvigsen, Law, and Cress 2014). Asking visitors to use and reconfigure a spatial representation of their exhibition experience constitutes a form of place- and sense-making within a series of "embodied and imaginative practices" (Pink 2008: 176). SMM prompts visitors to reimagine themselves *being* in this specific gallery room sharing their personal and social memories in a process of immersion (Christidou and Reitstätter 2021). This is "a requirement for creating a sensation of presence" (Newbury et al. 2021: 419) that is "the subjective experience of being in one place or environment even when physically situated in another" (Witmer and Singer 1998: 225). By engaging with the marking of their experience on the digital floor plans, visitors are additionally invited to experience the museum space "as a dynamic entity or process" (Frith and Kalin 2016: 46) in which some of the available objects and resources become relevant, or not, as their visit to the exhibition unfolded. In this light, the maps made and shared by visitors can be seen as a form of 'counter-mapping' since they rewrite official versions of the curatorial space and design. Visitors' counter maps thus provide valuable information about lived exhibition experience and can inform the evaluation of curatorial settings.

A number of researchers and practitioners have criticized SMM for focusing on one exhibition or gallery room. In this respect, an important limitation of the SMM method is that it captures only a glimpse of a particular point in time of the museum visit. To address this limitation, SMM was used in a later study (Qatar, spring 2020) to collect data on an entire museum visit. However, even when limited to one gallery room, both the data collection and the analysis of the video created through SMM are particularly time-consuming processes. For example, one must recruit participants at the exhibition entrance and wait for them to finish exploring the gallery room where the data collection takes place. As with all research, reflexivity should be a central part of the process during which we should critically reflect not only on our role and assumptions during data collection, but also on the choice of methods

and their application (Davis 1998). For instance, when analyzing the data, we must remain reflective regarding the ways in which verbal instructions and prompts were offered to visitors, as these might have unintentionally foregrounded certain visual aspects of the exhibition and triggered specific verbal responses. Similarly, the representation of the gallery room as a digital floorplan should be considered, as the design might pose certain limitations to the degree of visitors' immersion and spatial understanding. Additionally, one must remain aware of the guidelines regarding the ethical conduct of research, especially those related to the collection of personal data (voices), data storage and data processing.

Nonetheless, despite the potential limitations and time-consuming processes for data analysis, the multidisciplinary combination of research traditions in SMM allows for multimodal analysis of the exhibition based on visitors' visual and oral accounts. In consequence, researchers are able to capture aspects of visitors' personal experience and spatial practices, as well as aspects of the social realms of their exhibition visit.

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Video-Based Ethnomethodological Conversation Analysis

Capturing the sequential organization of social interaction in exhibitions

Dirk vom Lehn

Introduction

Video-based ethnomethodological conversation analysis (EMCA) investigates how museum visitors look at and examine exhibits in interaction with each other. It is concerned with the moment-by-moment social organization of visitors' actions. The term 'ethnomethodological' indicates that the method requires the researchers to change perspective to understand how visitors orient themselves towards the exhibition and each other from their point of view. The method originated in the ethnomethodologically informed workplace studies (Luff, Hindmarsh and Heath 2000) where researchers analyzed the organization of social interaction at technologically rich workplaces. For a few years now, this method has increasingly also been used to analyze interaction between museum visitors. As findings made by researchers in workplace studies have influenced the design of technology, so the analyses of interaction in museums have been used to inform the development of exhibits and exhibitions as well as the design of interpretation resources like labels and technologies deployed to help visitors make sense of exhibits.

EMCA researchers use video and audio recordings as principal data complemented by ethnographic observations. The researchers inspect their recordings and fieldnotes to reveal how participants create activities or contexts of action through the production and design of their actions. Their analysis does not consider aspects of the visual and material environment to be external to participants' actions, but it examines how features and aspects of the material and visual environment are systematically embedded within their action and interaction (Heath, Hindmarsh, and Luff 2010; vom Lehn 2018). Thus, in referring to context, ethnomethodologists do not liken it to a container wherein actions arise, but conceive context as dynamic and continually renewed through actions that are simultaneously being shaped by the context in which they are produced. They, therefore, describe the relationship

between action and context as "reflexive" and aim to unpack how it is produced in and through social interaction. For this purpose, they analyze the production and design of action and address the question of why a particular action has been produced at a particular moment in a particular way. They observe how an action ensues in orientation to a prior action, and how its production and design are influenced by this prior action. At the same time, they show how each action provides the context for subsequent actions. This concept of actions that at the same time have retro- and prospective orientation is called 'sequential organization'. The ethnomethodological conversation analysis unpacks sequences of actions and explicates how the actions are temporally organized and gain their sense and significance in particular, concrete situations.

Aim of the method

Research concerned with visitors' interaction is interested in the ways in which visitors of exhibitions examine and make sense of exhibits in interaction with each other. The video-based EMCA thereby aims to reveal in detail how the engagement with and experience of exhibits is produced in, and through, interaction between visitors. Therefore, the socially produced experience of exhibitions is first based on the observation that visiting museums is a social activity; people say they come to museums because they would like to socialize with others (Jafari, Taheri, and vom Lehn 2013). And second, even people who visit exhibitions on their own encounter others whose actions they have to take into account when approaching and engaging with exhibits. For example, they can approach a painting only when the space is not already taken up by other people, and can only interact with hands-on or interactive exhibits if these are available and not occupied by others. EMCA reveals how people monitor the actions of others at neighboring exhibits and use their observations to organize their departure from and approach to exhibits as well as their engagement with exhibits in social interaction by examining in detail video-recorded sequences of interaction in exhibitions.

Step-by-step guideline

In this part of the chapter, I discuss the most important practicalities of data collection and analysis undertaken by EMCA researchers. It is important to preface this discussion by saying that in this approach, data collection and analysis are conducted in an iterative manner; the researcher begins with a few days of fieldwork in an exhibition and gathers initial data before returning to their desk for a preliminary analysis. This allows them to check the quality of the data and make necessary ad-

justments to the camera position and perspective or use a different microphone to improve the sound quality. The researcher then returns to the field to collect further, better quality data, before again returning to their desk for analysis, which in turn informs another phase of data collection. The process of data collection is completed when the researcher is satisfied with the quality of the data and observations from the data analysis become repetitive. Data saturation has been achieved. Although in EMCA data analysis always begins with the examination of field notes produced from observations in exhibitions, in this chapter I will focus, for reasons of space, on the collection and analysis of video recordings of interactions in exhibitions.

1. Collecting video data

The data can usually be collected by an individual researcher. However, gathering data in pairs can sometimes be beneficial, particularly when using more than one camera. Data collection begins with ethnographic field observations and note-taking in the exhibitions as well as with discussions with curators, managers and museum educators. The observations and discussions help to make decisions about the practicalities of data collection, including decisions about the number and positions of the camera(s). Camera positions are decided by taking into account research questions as well as practical considerations.[1]

For ethical reasons, visitors are informed about the ongoing recordings with signage positioned at all entrances and exits of the exhibition where data collection is taking place. The precise text and its design are agreed upon with the museum management. In the museums where I gathered data for my own research, visitors have been informed that audio/video recordings were being made in this exhibition for research and teaching purposes, allowing me to use video-clips and images from the videos in presentations and publications. The signage also informs visitors exploring the exhibition that at any point during their visit they can approach the researcher or a member of museum staff to ask for cameras to be switched off or to wipe recordings should they feel they have already been filmed against their will; in such cases I offer visitors the option of deleting recordings. Once the signage is in place, the researcher begins to gather video data with cameras mounted on tripods and positioned near exhibits, often in corners of exhibitions so that they are out of visitors' navigation paths. I use conventional digital camcorders that allow the researcher to attach an external microphone. Because visitors often talk quietly in ex-

1 For example, the researchers need to ensure that emergency exists are not obstructed and that visitors' exploration of an exhibition is not disturbed by cameras and tripods standing in their way.

hibitions, it has proven useful to deploy small, wireless microphones that selected visitors carry with them as they explore an exhibition.[2]

To avoid drawing undue attention to the camera, the researcher switches the red camera light off while data collection is in progress. For the same reason, the researcher does not stand behind the camera and only returns to it to check whether it is functioning properly. Thus, they are able to continue to observe visitors in the exhibition and take field notes while the recordings are ongoing, to organize the handover of microphones between visitors, and to conduct informal conversations with visitors and museum staff. The amount of time expended on data collection varies depending on the research question pursued, the number of visitors occupying an exhibition, and the quality of the data generated through the recordings. It is advisable to gather data on different days of the week and at different times of the day, as this will ensure that a wide variety of visitors is included in the data corpus, reflecting different age groups and socio-economic backgrounds.[3]

2. Analysis of video recordings

The analysis focuses on the inspection of the interaction recorded by the video camera(s). The field notes taken while observing events in the exhibitions as well as the notes from informal discussions with visitors and museum staff complement the analysis. Compared to observations, video recordings have the advantage that researchers are able to view situations repeatedly, in slow-motion, and frame-by-frame. This makes it possible to examine sequences of interaction in detail, i.e. action-by-action. The analysis begins with screening and indexing the recordings. The researcher views the recordings in the spirit of an ethnographic observer and makes notes of events they consider to be noteworthy and relevant for their analysis. This initial analysis is used to develop research questions that they may pursue as the analysis progresses. It also serves to create a collection of fragments of interaction that show 'interesting' phenomena related to the research questions.

The data corpus is often very voluminous. Recording visitors' interaction over the course of a week can generate more than 30 hours of recordings that need to be screened and indexed. It is therefore impossible to inspect the entire corpus in detail. Such an intensive analysis of the entire corpus is also not required because each individual data fragment reveals an organization of actions the researcher can

2 I can say from experience that visitors tend to forget they are carrying microphones around the exhibition, even when they hold them in their hands. Often, I had to go off searching for visitors in a museum because they had left the exhibition where data were collected without returning the microphone.

3 Further practical suggestions on data collection can be found in Heath, Hindmarsh, and Luff's (2010) book on "Video in Qualitative Research".

examine. This observation is based on the ethnomethodological assumption that actions are not produced by accident, but they are always organized in themselves and in relationship to prior and subsequent actions; they always arise within an interactionally produced and organized context.[4] The detailed analysis of actions, therefore, is concerned with unpacking the practical and interactional organization of the context of actions and revealing the actions that make up this context. For this purpose, it is crucial that the researcher transcribes the recordings of fragments of interaction in which the phenomena of interest to the researcher were observed. Examples of such phenomena that have interested me in my research include departing from paintings (vom Lehn 2013), the revealing of surprising aspects of exhibits (Heath et al. 2012) and the reading of labels and text panels aloud in science centres (vom Lehn and Heath 2006). Transcripts are immensely helpful in unpacking the organization of actions. For the analysis of participants' vocal utterances, the researcher uses a transcription system developed in the 1960s (Hepburn and Bolden 2017). As the transcription of participants' bodily actions has long lacked such a transcription system, I have developed a technique for my own research that draws on recent developments in the ethnomethodological analysis of interaction (Heath, Hindmarsh, and Luff 2010; Mondada 2018).

Although the researcher remains responsible for the analysis, it is helpful to discuss fragments from the data corpus in small groups.[5] In such data workshops, the researcher shows one or two short video fragments to evoke responses and suggestions for analysis from the group. The discussions serve to enhance the analysis, improve transcripts and possibly also develop new research questions. It can also be helpful to invite not only colleagues to participate in data workshops but also practitioners, such as curators, managers and museum educators as well as visitors. Despite the importance of group discussions and data sessions for research, it is important to note that the analysis remains the responsibility of the researcher; the discussion only serves as an "aid for sluggish imagination" (Garfinkel 1967).

Case study

The fragment of interaction that I examine here to illustrate the process and practicalities of the analysis has been drawn from a larger data corpus of video recordings

4 Explanations of ethnomethodology and its premises can be found in (vom Lehn 2014, 2019) as well as in Heritage (1984). Readers who would like to consult the original text, can be referred to Garfinkel (1967, 2002).

5 Data workshops and group discussions of video data are explored also in Tuma, Schnettler und Knoblauch (2014), who have developed "Videography". The origin of data workshops, however, probably can be traced back to conversation analysis, critical literature studies and maybe also Talmud and Bible studies.

gathered at an exhibition of Rembrandt paintings shown at the National Gallery in London. When screening the data corpus, I became interested in how visitors come to look at particular aspects of a painting together. Therefore, I created a collection of fragments of interaction that show moments at which the phenomenon of 'looking together' can be observed. In the following, I discuss one such fragment that exhibits this phenomenon particularly clearly.

The interaction was recorded at a painting titled *A Man seated reading at a Table in a Lofty Room*[6] that was painted probably by a follower of Rembrandt. It shows a large room where a man is sitting at a table positioned in front of a big fireplace. The scene has been illuminated from a window behind the man. In the situation captured by my camera, two women approach the painting from the left, where they stand for a considerable length of time looking at the work. In the following I will refer to the two women, whose real names I do not know, as Jo and Paula. When entering the exhibition, they have agreed to participate in my research and to wear a wireless microphone that captures their exchange (referred to in the transcript format as 'talk') while they explore the gallery. A moment after Jo and Paula come to stand in front of the painting, Paula, speaking and gesturing, refers to the fireplace in the painting that dominates the right-hand side of the work. My interest in analyzing the participants' interaction lies in the moment when Paula draws the attention of her friend to the fireplace, who in turn indicates that she has seen the object as well. It is in this moment, that the two participants look, at least briefly, at the same aspect of the painting. Let us first inspect the transcript of the participants' exchange.

Transcript 1[7] *– Transcript of the exchange between Jo and Paula*
National Gallery – Rembrandt 400
Jo (Jo) and Paula (Pa)
A Man seated at a Table in a Lofty Room (1628–30)

```
1     Pa:  .hhhh (.)
2           look at all that (.) porcelain thats a fireplace
          isnt it (.)  >-1
4          theres a tall fireplace >-1
5                       [             ] >-1
6     Jo:             quite difficult to see::? isnt it?
```

6 A photograph of the painting can be found on the website of the National Gallery https://www.nationalgallery.org.uk/paintings/follower-of-rembrandt-a-man-seated-reading-at-a-table-in-a-lofty-room (23.7.2024).

7 For an explanation of the transcription symbols see footnote 1. As the transcript captures spoken language it does not use grammatical notations like apostrophes or full stops at the end of sentences. Question marks do not mark the end of an utterance and define it as a question, but indicate a rising intonation.

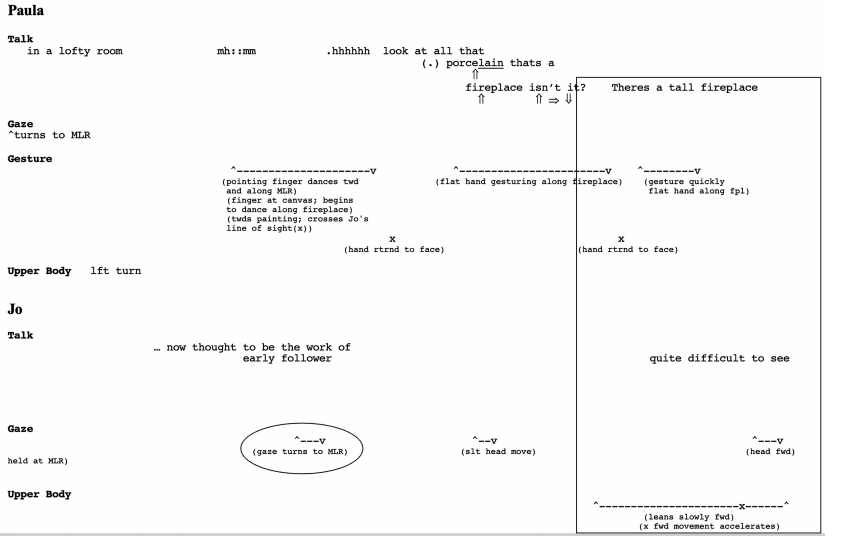
```
6     Pa:  =yes
7     Jo:  thats the sort of darkness
8     Pa:  =yea::h
```

What interests me in the analysis is how Jo and Paula look at the fireplace together and make this shared orientation towards this aspect of the exhibit observable for each other. The moment is captured in *Transcript 1*. The interaction begins with Paula inhaling audibly (line 1), followed by a description of the fireplace, which she believes is made of porcelain (line 2). This part of Paula's utterance is followed by a brief pause (.) (line 2) before she produces a further description of the fireplace, emphasizing the object's size, "theres a tall fireplace" (line 3). Jo begins to produce an utterance, "quite difficult to see" (line 5), overlapping with Paula's description of the fireplace. Paula's second description of the fireplace after the brief pause is prompted by Jo's lack of response to her friend's initial description of the object. While Paula's brief pause (line 2) encourages Jo to produce a response, Jo does not take the opportunity to speak. Only when Paula gives her second description does her friend follow up by reporting her own impression of the fireplace. Based on the exchange between the two visitors, we can argue that they are looking at the painting together when they produce utterances by which they make observable to each other that they are both directing their attention to the fireplace in the painting. Moreover, by saying that the fireplace is "difficult to see", Jo provides an explanation why she did not pay attention to her friend's description of the object in the painting earlier.

Transcript 2 – Visual Transcript to Support the Analysis
National Gallery – Rembrandt 400
Jo and Paula
A Man seated at a Table in a Lofty Room (1628–30)

-
---– 1Sec
↑ Gesture in the proximity of the painting
→ Begins to complete gesture
↓ Gesturing hand is retracted

Fig. 1: Visual transcript to support the analysis, © Dirk vom Lehn.



When we turn from the analysis of the participants' exchange to include also their bodily action, transcript 2 helps to recognize how speech and bodily actions intertwine, and how the participants embed particular aspects of the painting within the organization of their actions. As yet, we do not have a standardized transcription system that represents non-vocal actions.[8] For my research of visitors' action and interaction in museums, I have developed a transcription technique that is practical and effective to help me pursue my research questions. In doing so, I draw on the available conventions developed for transcribing conversation[9] (Jefferson 1984) and the systematics for transcribing bodily action and speech used by scholars who have conducted similar studies at workplaces (Heath, Hindmarsh, and Luff, 2010).

Transcript 2 captures vertically the participants' actions, i.e. their exchange, direction of their gaze, and the orientation of their upper bodies, and horizontally the progression of the actions over time. If the reader focuses on a particular action, the transcript allows them to identify the interactional context in which this action has taken place; i.e. the action produced immediately prior to the action of interest, and the action produced immediately following.

The box on the right side of the transcript and the oval shape on the bottom left highlight for the reader particular actions that are relevant for my analysis. The oval

8 Mondada (2018) has developed a transcription system for multimodal, i.e. vocal and non-vocal actions that is increasingly adapted by scholars undertaking ethnomethodological analyses of interaction.

9 See footnote 1.

shape shows that Jo shifts her visual orientation just before Paula begins to describe the fireplace. A moment earlier, Jo audibly reads a part of the label on the wall to the right of the painting; now, she has turned to the painting itself. However, we cannot be sure which part of the painting she is looking at. A moment later, her head moves again, prompted by Paula's audible inhalation, ".hhhhh", and her description of the fireplace, "look at all that porcelain that's a fireplace isn't it?", which she accompanies with gestures with her left hand that distinguish the shape of the object from the other parts of the painting. A moment later, both visitors orient themselves towards the painting and produce overlapping utterances, "P: tall fireplace", "J: difficult to see" (Transcript 1, line 3 to 5). Jo again moves her head by stretching slightly but noticeably forward, indicating that some effort is required to identify the fireplace in the painting.

The analysis of this brief fragment of interaction reveals the moment when the two visitors, through their exchange, orient themselves towards the fireplace in the painting (Transcript 1, lines 2 to 5). Paula refers to the size of the fireplace, while Jo, through her utterance and shift in head orientation and posture, indicates that she now sees the object as well, and why she initially had trouble seeing the object and had therefore failed to respond to her friend's actions (Transcript 1, line 5). A moment later, Paula agrees with Jo's assessment that the fireplace is difficult to see ("yes"), before Jo refers to another aspect of the painting, "thats the sort of darkness" (Transcript 1, line 7).

Transcript 3 – Visual Transcript used in Publications

Fig. 2: Visual transcript used in publications, © Dirk vom Lehn.

While transcripts 1 and 2 support the researcher in their analysis of the organization of sequences of interaction, readers will find them difficult to read and understand. In publications, I therefore tend to refrain from using such transcriptions and

instead add transcripts that combine images from the video recordings and simplified transcriptions of the exchange. Transcript 3 illustrates the course of the interaction between Jo and Paula in a way that is (hopefully) easier to read than transcript 2. This type of transcription includes elements of the conversation between the visitors and annotated images from the original data that visualize the bodily actions.

It is worthwhile emphasizing that transcripts used when analyzing video data do not replace the recorded interaction but are only tools that help researchers inspect and unpack the organization of actions. The representation of sequences of action in transcripts allows them to reveal their temporal sequence. Only by examining the interaction as captured in the recordings can the researcher see how participants orient themselves towards each other's actions, i.e. why an action is produced in a particular moment. Therefore, the analysis of interaction does not rely on transcription but on a detailed inspection of the video-recorded interaction, as far as it is visible and audible.

In the case of the analysis of the interaction in the National Gallery, I was interested in how visitors create situations when they look, at least for a moment, at the same aspects of a painting and how through their actions they create joint experiences. While it is often assumed that when two people stand next to each other in front of a painting they are looking at the same object and seeing it in the same way, the analysis of the fragment discussed here for illustrative purposes reveals that a joint experience of a work of art emerges in and through the interaction between the participants.

Method reflection

Video-based EMCA is a research method that can help to reveal the organization of actions. Its analytical perspective and methodological tools provide means to make observable the details of the production – the 'when' – and design – the 'how' – of actions and their orientation towards immediately preceding and following actions. Researchers with an interest in analyzing interaction in museums and exhibitions can use the video-based EMCA to investigate, for example, why visitors engage with particular aspects of exhibits, how they render their experience of exhibits observable for each other through vocal exchange and bodily actions, and how they organize their actions to create a shared experience of aspects of exhibits. This kind of research contributes to the analysis of the perception of artworks and to the analysis of action and interaction in museums, including art museums, science centres and science museums (Heath, and vom Lehn 2008). The ethnomethodological analysis of interaction using video-recordings as principal data can also be augmented by combining it with other kinds of data, such as experimental and interview-based studies. For example, video-based EMCA can be combined with *Mobile Eye Tracking*

and *Questionnaire* to reveal what aspects of paintings visitors look at when interacting with each other, or which parts of labels visitors read and how they embed parts of label text in their interaction with each other (Reitstätter, Pesen, and vom Lehn 2025).

In addition to contributing to social-science debates about social interaction, observations derived from studies using video-based EMCA in exhibitions can also inform the work of curators, museum educators and designers. So far, the work of these museum professionals is often based on "professional theories" (vom Lehn, Sang, Glassborow, and King 2017; cf. Kreplak 2018) about visitors' exploration of exhibitions and their examination of and interaction with (interactive) exhibits. The ethnomethodological analysis of interaction in exhibitions compares and contrasts sequences of interaction at the face of the exhibit, allowing the researcher to identify patterns in the organization of actions. Examples of such interaction patterns include the creation of body formations at interactive exhibits, through which visitors differentiate themselves into users and observers (Heath and vom Lehn 2008). We have also investigated the organization of actions to uncover how visitors jointly leave paintings and move on to the next exhibit (vom Lehn 2013), how reading out labels encourages companions to inspect particular aspects of paintings (Heath, and vom Lehn 2004), or how visitors draw on and bring to life memories of experience when encountering exhibits (Meechan and vom Lehn 2024). Observations produced by the ethnomethodological analysis of interaction can also have practical implications. For example, curators, designers and museum educators can use the observations of the organization of actions at exhibits to inform the layout of exhibitions or the design of label text that is meant to be read out rather than being read in silence.

Studies using the video-based EMCA are work- and time-intensive. They require resources to purchase the appropriate technical equipment, such as cameras and microphones, as well as software to review the video data and edit images taken from the recordings. Researchers interested in using this method also need to be willing to invest time in acquiring the knowledge and technical skills to use cameras, microphones and software. They will also have to spend time analyzing video-recorded interaction in order to develop analytical research questions that are of interest to academic debates as well as to museum professionals. The selection and transcription of interaction fragments can take many hours. I therefore recommend the video-based EMCA as a method of analysis to researchers interested in understanding the practical organization of looking at and interacting with exhibits, and to practitioners who want to use detailed observations of action and interaction in exhibitions for the design, development and deployment of exhibitions. I also point out to researchers and professionals that it can be very useful to organize data workshops where they meet in small groups to discuss selected video recordings of interactions. Researchers and professionals who are mainly interested in the impact exhibits have on visitors' experience and behaviour are advised to use other research

methods, such as *Affect-Reflexive Exhibition Analysis or AttrakDiff*. At the same time, the contribution visitors themselves make, through the organization of their actions, to the impact of exhibits on their experience and behaviour should not be ignored.

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Go-Alongs

Exploring the exhibition together as we walk

Luise Reitstätter and Karolin Galter

Introduction

The method of go-alongs is variously referred to as go-along interviews (Zahner 2021), walk-alongs (Skov, Lykke and Jantzen 2018) or accompanied visits (Haywood 2018). In go-alongs, the two established methods of observation and interview are combined in the setting of a joint visit to an exhibition. Originally, the method was located in spatial ethnographic research. Margarethe Kusenbach (2003, 2008) coined the term go-alongs to register material and social environments in the moment. As go-alongs involve experiencing the exhibition in the act of walking together, the approach also falls into the category of so-called mobile methods (Büscher and Urry 2009) or, more specifically, of "mobile interviews in the field" (Keding and Weith 2014). The focus on the shared experience *in situ* also offers a participatory research approach (Unger 2014) as well as a valorization of everyday and practical knowledge (Hörning 2001). Other methodological references found in go-alongs are thinking aloud (Bilandzic 2005, Boren and Ramey 2000), listening conversations (Leinhardt, Crowley and Knutson 2002, Leinhardt and Knutson 2004), and object elicitation (Banks and Zeitlyn 2015, Iltanen and Topo 2015, Willig 2017), in the sense of utilizing the exhibition to stimulate verbal statements and active listening.

Aim of the method

Irrespective of the different methodological frameworks, the overarching aim of a go-along is to record the exhibition experience in situ. Thus, the benefit of this method is that it captures the exhibition experience exactly at the specific time and place when and where it actually occurs. This focus on the concrete experience of the exhibition is the feature that distinguishes the method from other cultural studies methods such as *Knowledge Analysis* or *Context Analysis*, which derive implicit modes

of viewing from the analysis of exhibition settings, for example, as well as from empirical methods such as *Questionnaires* or *Social Meaning Mapping*, which collect data on the exhibition experience retrospectively through visitors' re-narration. Rather, responding to a methodological research gap, go-alongs foreground the actual perceptual practices of the exhibition visit in the specific socio-material situation by producing the experience of viewing and touring exhibitions together (Hanquinet and Savage 2016: 11–12).

In terms of research paradigms, this corresponds to the focus of the spatial turn and its interest in the perception of the spatial environment (Döring and Thielmann 2015), as well as to a sensory approach, with its focus on physical and sensory experiences (Pink 2015). With their interest in individual construction and production of meaning, go-alongs also reference the "turn to understanding" in exhibition and visitor studies (Hooper-Greenhill 2006: 371–374). In summary, it is precisely the combined analysis of spatially structured scenarios of perception and visitors' biographically guided processes of production of meaning that constitute the unique feature of go-alongs in the exhibition setting.

Step-by-step guideline

But how can go-alongs be applied in a specific research context? The 6-step guideline described here follows the preparatory phases of selecting the exhibition (1) and the participants (2), conducting the go-alongs (3) including documentation (4) and the follow-up work comprising data preparation (5) and data analysis (6). At the same time, it should be noted that there is room for phases to interlink and overlap, if we understand go-alongs not so much as a strictly linear, but as a potentially circular research process. For instance, participants could be selected in parallel with the go-alongs to see which backgrounds and perspectives have not yet been represented. Processing the data of the go-alongs while they are being conducted would also make sense, so that any necessary adjustments can be made during the documentation, for instance, to improve audio quality, or to accommodate new emerging research interests.

1. Selecting the exhibition

When selecting the exhibition, or a section of it, it is necessary to determine the unit of analysis for the go-alongs. While choosing a limited section of an exhibition certainly benefits an in-depth examination, one should bear in mind that exhibitions in particular are about the interplay between the multiplicity of objects and spaces. Furthermore, as Jeffrey K. and Lisa F. Smith (2001: 235) note, "the thing" for visitors is not engaging with individual objects of an exhibition, but rather the museum as

an overarching spatial and institutional unit. With this in mind when conducting go-alongs for an analysis of a particular exhibition, it can make perfect sense to cover all the stations of a typical museum visit – including passing through the entrance area to the ticket counter, the cloakroom, and ending with a visit to the museum café – in this way reflecting the comprehensiveness of an exhibition visit, but also acting as a joint warming-up and rounding-off.

2. Selecting the participants

Selecting a balanced sample of participants is crucial, as findings from exhibition go-alongs show that 'perceptual filters' shape the specific experience and assessment of the exhibition (Zahner 2021). In museum studies, these influences and also the desire for certain exhibition experiences have already been extensively researched in 'entrance narratives' (Pekarik and Schreiber 2012). The exhibition can be visited either with just one person or a natural group, such as a couple or family constellation (Skov, Lykke and Jantzen 2018). Besides recruiting participants in advance according to certain criteria such as age or previous affinity to museums, it is, of course, also possible to approach exhibition visitors on site and invite them spontaneously to participate in a go-along.

3. Conducting the go-alongs

The go-alongs take place during the opening hours of the exhibition. First of all, it is necessary to determine the allotted roles and tasks of participants and the accompanying person. While the participant is clearly expected to provide information and to structure the exhibition visit with their individual modes of perception, the contribution of the accompanying researcher is somewhat more flexible. For example, the latter can say a few introductory words at the beginning of an exhibition ("Today we will visit the permanent exhibition of the *House of Austrian History*, which opened in 2018."), suggest a certain path through the exhibition ("We will take a look at section X and section Y."), ask specific questions after viewing a part of the exhibition ("How did you perceive the presentation of topic Z?"), or alternatively embark on the tour totally unscripted without providing any framings, routes or questions.

In general, we consider a low-key and cautious contribution by the accompanying researchers to be more productive, because it is precisely the visitors' own efforts at structuring their experience within the prescribed script that is a defining feature of exhibition visits (Reitstätter 2015). In this way, evaluating the participants' own structuring – specifically, for example, what they (do not) observe when and for how long, and what they (do not) want to comment on and why – already yields initial insights regarding focuses, omissions or potential difficulties in comprehension. Conversely, if researchers remain primarily silent and contribute little during

the joint visit, this mode of accompaniment can appear equally strange and far removed from a natural shared visiting situation. During the go-alongs, affirmative gestures (such as nodding) and approving comments (such as "I understand.") by the researchers are useful in showing that they are listening actively and participating in the tour. In case of non-verbal or fragmentary reactions by the participants – such as shaking their heads or giving cursory comments – we advise researchers to solicit further explanations while the tour is still in progress. This is because a shake of the head can signify both a lack of understanding and rejection, the word 'interesting' can serve as a stopgap and as an expression of genuine interest in a conversation.

4. Documenting go-alongs

Documenting go-alongs can vary in the level of detail from writing a protocol after concluding the visit to an audio documentation (with a mobile phone, dictaphone or wireless microphone) to a video documentation (with a mobile phone, mini camera in hand, camera(s) in the exhibition space or even *Mobile Eye Tracking*). In all cases, one has to strike a balance between the accuracy of the data documentation and the amount of influence the participants are subjected to as well as the time and effort required for data collection. For an internal exhibition evaluation, it may, for instance, suffice to conduct go-alongs with a small number of carefully selected people and to subsequently document these systematically in a protocol – e.g. according to (un)appealing objects, specific interpretations of objects, chosen routes, usability problems etc. For a scientific analysis, the documentation should be more detailed and include at least an audio recording. Doing an audio-only documentation in a more complex exhibition setting is not advisable, as it is much more difficult to later assign comments to individual objects. Instead of a video documentation, this can be remedied by drawing a route on an exhibition floor plan after concluding the go-along.

5. Preparing the data of the go-alongs

Depending on the documentation, the data from the go-alongs need to be prepared differently in each case. If there is no digital documentation, it is necessary to draw up a detailed observation protocol after concluding the go-alongs. This can be carried out in the manner of an ethnographic observation in a running text or, for specific research interests (e.g. comprehensibility of the museum's wayfinding system, dealing with hands-on stations, questions about particularly discussion-stimulating objects or areas that receive little attention) this can be also done in a table. In case of an audio documentation, everything that has been said is transcribed. Referenced or also illustrated transcripts, which indicate in brackets the exhibits discussed or show them in the exhibition environment to facilitate attribution, are

helpful (but also more time-consuming). For this purpose, it makes sense to create illustrated plans of the exhibition in advance, with brief descriptions of the objects, so that they can be assigned more efficiently and systematically. Documenting what has been observed on video serves to attribute comments to objects, but if the participants are filmed (and not only the common field of vision), it can also be employed as a multimodal supplement to the discourse situation, showing body postures, gestures, facial expressions etc.

6. Analyzing the data of the go-alongs

Depending on the documentation and data preparation, different analytical procedures can be used for analyzing the data of the go-alongs. According to the different ways of interpreting qualitative interviews set out by Ulrike Froschauer and Manfred Lueger (2020), a topic analysis would, for instance, be suitable for observation protocols. It can record and contextualize content and opinions that were touched on during the go-along and relate them to specific stimuli triggered by the exhibition. For transcripts, one could apply a system analysis, where content is paraphrased and interpreted based on the context of statements and affect; or also a fine-structure analysis, where particularly salient statements of the conversation are broken down into semantic units and examined for both manifest and latent meanings. With video files, additional analyses of viewing patterns are possible when using *Mobile Eye Tracking*, and in the *Video-Based Ethnomethodological Conversation Analysis*, additional multimodal data analyses can be employed in combination with the analysis of talk.

One should not underestimate the amount of work involved in data analysis, but it is difficult to generalize because it also requires circular processes of interpretative analysis that are ideally conducted in a group for quality assurance purposes. In our opinion, it is essential to pay attention to diversity both when determining the participants and the analyzing researchers, since different perspectives do more justice to the multidimensionality of the material.

Case study

This case study is taken from the research project *Right to the Museum?*, in which we examined the changes in museum concepts of the public and their perception in the population using a combination of archival and field research (Reitstätter and Galter 2023). While the archival research collected and analyzed documents of institutional self-description, our field research worked with independent and accompanied go-alongs. The subsequent interview consisted of an online questionnaire and a vignette commentary/interview on excerpts of museums' self-description, in

order to contrast museum missions with the visitor's freshly acquired experience. Before embarking on the field research, key sections of the permanent exhibitions were selected together with representatives of the participating museums. This was done in order to cover the respective museum's range of content when selecting the exhibition area. At the same time, our tour, which started with a meeting point in the museum's foyer and ended with an interview in a lounge area, took us through all the stages of a normal exhibition visit (Fig. 1–3).

Fig. 1–3: Go-along from the museum entrance to a selected area of the permanent exhibition at the House of Austrian History, © Photos: Karl Pani, Department of Art History, University of Vienna.


We conducted the go-alongs through the selected sections of the permanent exhibitions together with the twenty members of the so-called citizen board. The aim was not to reproduce the typical museum audience in the course of the study. Rather, we wanted to examine the relevance of museums and the experience of exhibitions not only from the perspective of visitors, but also from the perspective of citizens. We ensured that the group of the citizen board was representative of the population living in Vienna by taking into account the six aspects of diversity – gender, age, education, migration background, disability and previous museum affinity. The go-alongs were audio- and video-documented using an audio recording device that participants carried around their necks as well as a GoPro camera that us researchers held in our hands and used to film the exhibits we were looking at (Fig. 4). In our video documentation, the focus was on our common field of vision and not on the participants and their physical reactions. This affords a more discrete documentation, even though, with the video focus on the field of vision and not on the participants, their nonverbal reactions are lost and this can result in a predominance of language in the further processing of the data. After the tour we also documented its particularities in a protocol.

Fig. 4: Documentation of the go-along in the House of Austrian History with an audio recording device and a GoPro camera. © Photo: Karl Pani, Department of Art History, University of Vienna.

Due to the high number of a hundred go-alongs (twenty people who each visited five partner museums) with an average duration of one hour and twenty-one minutes, we decided on a mixed approach to data preparation. We transcribed thirty of all go-alongs with references to the discussed objects and excerpted another twenty by summarizing the engagement with the exhibition and transcribing key statements verbatim. We summarized the remaining fifty go-alongs in a structured protocol after watching the videos and listening to the audios. A transcription of a one-hour go-along requires about ten hours of work. For an excerpt with a partial transcription, the time investment is reduced to around six hours, and for a protocol to about three hours. After the first rounds of data preparation, we began with group analysis sessions to identify inherent themes, patterns and specifics of the go-alongs and to combine these with our explicit research interest in the characteristics of the local museum audience in their perception of 'their' museums and permanent collections that they had visited. These group analysis sessions led to a preliminary coding template, which we applied in the program Atlas.ti and expanded with further relevant codes in the process.

The crucial point for us when conducting the go-alongs in the *Right to the Museum?* project was engaging in active listening in the exhibition space, in order to understand how vastly different people experience and interpret the same museums and exhibitions for themselves. What was remarkable in this process was that

the repeated visits to the exhibitions led to a changed understanding of the museum as an institution and also to an emergence of individual visiting strategies, particularly among participants that had little previous affinity to museums. Specifically, it was mostly after the third visit that we saw changes in the way the exhibition was appropriated – for instance by setting priorities for particular object categories or recognizing cross-references. Furthermore, the majority of the members of the citizen board stated after participating in the project that in the future they would visit museums more often or that they have greater appreciation of their own cultural heritage. Another result was that visiting exhibitions together was extremely enlightening in the object-based discussion of topics, interests and values, and that it had a strong relationship-building effect in the joint research situation. In this way, go-alongs are not only suited for analyzing exhibitions but also as an interview method for exploring the topics presented in the exhibition (Fineder and Reitstätter 2021). Furthermore, they can be used as an interactive way of getting to know each other, for example, in the case of dating in museums or participatory education offers.

Method reflection

As already mentioned at the outset, empirical studies with go-alongs in the field of exhibition studies are still relatively rare, particularly in comparison to other forms of data collection such as a quantitative *Questionnaire*. This article is an effort to make the method of go-alongs both better known and also more comprehensible in order to explore possible meaningful future applications in exhibition analyses. In this context, we see the benefits and limitations of the method in the following areas:

One of the main advantages of the method is the natural setting for data collection, since exhibitions are interpreted via the go-along exactly in the same way they are typically visited: together and while walking. Firstly, this type of inquiry requires little or easily accessible technical equipment. Secondly, when using this method in exhibition evaluation, it immediately reveals strengths and weaknesses, for instance, when a section is consistently ignored and another object generates intensive interaction. Thirdly, by carefully selecting the participants, different types of visitors can be given a voice through active listening, so that the method encourages varied perspectives on the exhibition and cultural participation. This points to the possibility of using go-alongs not only for exhibition analysis but also as a tool for raising curatorial awareness for a wide range of visitor needs or also as a way of empowering visitors by articulating and appreciating their perceptions.

A drawback of the method of go-along is, first of all, the often considerable amount of time needed to prepare the data for scientific use. Secondly, data analyses requiring background knowledge and practice in interpretative social research

come with more prerequisites – for instance, in comparison to standardized questionnaires that often have automated data analysis integrated in the programme they run on. A third limitation of the method results from the difficulty to do justice to a multisensory exhibition tour in a data analysis when the documentation reduces the exhibition experience primarily back to text. However, this limitation can be mitigated by an initial data analysis that is carried out shortly after collecting the data, as well as by repeated listening to the audios and viewing the videos at a later point in time. It is all the more relevant for the go-along to emphasize sensory and atmospheric aspects beyond the spoken word if one wants to fully capture the charm of the method of analytically recording the physical and social practice of visiting an exhibition.

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Mobile Eye Tracking

Visualizing eye movements in exhibitions

Luise Reitstätter, Seda Pesen, Raphael Rosenberg, and Enkelejda Kasneci

Introduction

The medium of the exhibition is intrinsically connected to the gaze. The exhibition is organized by the curators' gaze and it is through the gaze of the visitors that it is explored. Being visual systems, exhibitions use their selective mode of presentation to show certain things, while omitting others. Furthermore, specific regimes of vision have come to be embodied in exhibitions, when Tony Bennett (2006), for example, speaks of the requirement of a *civic seeing* in the course of the establishment of modern museums as civilizing institutions. For centuries, the *male gaze* was also the status quo, with women appearing in museums almost exclusively as subjects of male artists (Nochlin 1971). Within the historical distinction made by the West between art and ethnographic museums, as well as the 'other' framing of non-European cultural artefacts, criticism was also voiced against the Eurocentric gaze (Bal 2002, Schade and Wenk 2011). Nowadays, museum studies are intricately involved with the deconstruction of regimes of vision and apparatuses of representation through discrimination-critical and decolonial discourses (Kravagna 2013, Morawek 2017, Mulvey 1996, Rito 2017).

While critical academic discourses locate the gaze as an abstract concept in a specifically temporal way, the question arises what the real viewing behaviour is about. For a long time, the compositional logic of buildings, spaces, objects and paintings was used to explain the focus and sequence of the gaze (Rosenberg 2011, Rosenberg and Klein 2015). In exhibition research, too, there are a number of studies that examine inherent visiting and visual regimes through the way displays are presented (Klonk 2009, Muttenthaler and Wonisch 2003, Staniszewski 1998). It was only since the invention of eye tracking at the beginning of the 20th century and first experiments in art and image viewing (Buswell 1935, Stratton 1902, 1906, Yarbus 1967) that it was possible to trace eye movements empirically (Wade 2010). For a long time, however, experiments on viewing behaviour were conducted almost exclusively in the laboratory and with digital image reproductions. However, com-

parative studies have shown that the context is crucial for the aesthetic experience since art viewed in a museum, for instance, sparks more interest and appeal than in a laboratory setting (Grüner, Specker and Leder 2019).

First attempts to record the viewing behaviour in museums and exhibitions in situ have been carried out since the 2010s. Even though Milekic (2010) already then postulated that "eye tracking may prove to be the most powerful tool for museum studies", the first eye tracking studies in exhibitions were frequently designed on similar lines as an experimental set-up in a laboratory due to technical challenges: in the beginning, standardized settings with few works of art, static viewers, a limited number of participants or insufficiently precise viewing data were characteristic in museum studies with stationary as well as mobile eye tracking devices. Heidenreich and Turano (2011), for example, were only able to record four participants looking at abstract and figurative paintings at the Baltimore Museum of Art with mobile eye tracking (henceforth MET). Quiroga, Dudley and Binnie (2011) conducted a MET study at Tate Britain with just six participants who viewed only one painting, *Ophelia* by John Everett Millais. Bachta et al. (2012) instructed twenty-two employees at the Indianapolis Museum of Art to sit in front of a stationary eye tracker to map eye movements to an Edward Hopper painting, unfortunately with insufficient data quality.

In more recent MET studies, both the technical set-up and the thematic range of applications in the exhibition context have been further refined and expanded. Various art genres were examined (Pelowski et al. 2018, Reitstätter et al. 2020, Stein, Jossberger and Gruber 2022), as were the influence of the display (Rainoldi, Yu and Neuhofer 2020, Reitstätter et al. 2020), orientation and colour perception (Fontoura and Menu 2021, Linden and Wagemans 2021), engagement with interactive and digital media (Al-Baddai et al. 2017, Eghbal-Azar 2016, Eghbal-Azar et al. 2016, Mokatren, Kuflik and Shimshoni 2018), the use of exhibition texts (Garbutt et al. 2020, Reitstätter, Galter and Bakondi 2022) as well as differences between spectators based on age (Mesmoudi, Hommet and Peschanski 2020, Walker et al. 2017), expertise (Stein, Jossberger and Gruber 2022) and disabilities (Tymkiw and Foulsham 2020). While to date, traditional art exhibitions and various art genres have been the focus of eye tracking studies, in recent years, (natural) history, ethnographic, science and technology museums have also increasingly gained attention (Greenslit, Price and Malone 2021, Krogh-Jespersen et al. 2020, Parra Morantes et al. 2016, Raffi 2017, Sherman, Cupo and Mithlo 2020).

A methodological comparison of the most recent MET studies shows that technological advances and the resulting simplified application procedures now make it possible to ask more specific research questions (from aesthetic experience to usability) in more natural exhibition settings (without prescribed paths or viewing times) and to examine far bigger samples (with up to several hundred participants). Owing to the still high equipment costs and the relatively large amount of time re-

quired for data collection and, in particular, data analysis, MET studies have so far been conducted almost exclusively in university-based basic research and have made few inroads into practice-oriented exhibition or evaluation research.

Aim of the method

When using MET in exhibition research, the primary aim of the method is to record the behaviour of visitors at the level of their eye movements. Where do they look, when, for how long, in what sequence and in what rhythm? The eye is in constant motion, and gazes result from the alternation of fixations and saccades. Fixations, which have a duration of around 100 to 500 milliseconds, describe the gaze that lingers on a point where we see something (Groner and Groner 1989). Saccades are leaps between fixations in which the eye is blind. They usually last twenty to forty milliseconds (Ditchburn 1973). The temporal and spatial sequence of fixations and saccades form eye movement paths, so-called scan paths (Kübler, Kasneci and Rosenstiel 2014). Due to their complexity, eye movements can only be assumed from body and head posture in free observation, but not assessed with any accuracy. While the general aim of using MET is to obtain detailed eye movement data, the specific aim in exhibition analysis is geared towards a specific research interest, as illustrated in the following step-by-step guideline and in the case study of the *True to Life* study.

Step-by-step guideline

The following guideline is arranged based on the typical phases of an empirical investigation, from defining the research questions to data analysis, which in practice also overlap or can be applied repeatedly:

1. Defining the research questions

Research questions that can be answered with MET examine the viewing behaviour in exhibitions in relation to different visitors, spatial constellations, exhibits, presentation formats, media resources etc. In terms of their objective, these questions can be both basic research-oriented (for instance, examining general viewing patterns in exhibitions) and practice-oriented (for example, evaluating particular exhibition displays).

2. Choosing methods

If you are interested in viewing behaviour in exhibitions, it is possible to use MET exclusively. If you are also interested in exhibition contexts (institution, space, presentation etc.), visitors' background (socio-demographics, motivation for visiting, opinions etc.) or the social and sensory exhibition experience (visiting conditions, interaction, multimodality etc.), a combination of methods is recommended (Eghbal-Azar and Widlok 2013, Mayr, Knipfer and Wessel 2009). More specifically: Say you want to examine the connection between institutional framings and viewing patterns, you can, for instance, choose a method combination with *Context Analysis*. If you want to uncover individual processes of meaning-making, a combination with *Social Meaning Mapping* would be an option. For recording physical practices and social interactions, a combination with *Video-Based Ethnomethodological Conversation Analysis* is well-suited (Reitstätter, Pesen and vom Lehn 2025).

3. Data collection

When preparing for data collection, it is necessary to determine the hardware and software, depending on available equipment and financial resources. At present, there are several providers of MET equipment that differ considerably in pricing, accuracy and usability (Holmqvist et al. 2023, MacInnes et al. 2018, Onkhar, Dodou and de Winter 2023). MET glasses usually function according to the same principle: a scene camera films the environment in the viewing direction, while the eye movements are recorded by infrared sensors that track the pupils. Once the participants have been recruited, informed about the study including filling out a consent form,[1] and the equipment has been customized, the glasses are calibrated while the participant is wearing them (Fig 1). This involves the participants fixating one or more points, so that the software can align the position of the pupil with the point targeted. Participants can visit the exhibition according to their own preferences, while their eye movements are registered using the provided recording device and corresponding software (Fig. 2). When the MET equipment is returned afterwards, it is advisable, in the interest of a comprehensive documentation, to enquire about usability experiences and to document the accuracy of the collected data, technical

1 If necessary, the MET glasses must also be adjusted to the user's vision in this step. Most manufacturers offer a small selection of corrective lenses that can be inserted into the MET glasses. However, most of them are limited to a maximum diopter of +5/-5, which means that visitors with a more severe visual impairment are automatically excluded. Furthermore, there are practical difficulties for visitors who have strabism or drooping eyelids that partially cover the pupils.

anomalies, or also contextual information from the conversations with the participants.

Fig. 1–2: Calibration of the MET glasses and participants on their self-guided tour of the exhibition, © Photos: Karl Pani, Department of Art History, University of Vienna.

4. Preparing the data

After recording the data, it is necessary to prepare the data in order to analyze them. In a first step, the collected MET data can be exported as a standard video format. These videos show the shots of the scene camera and a visualization of the viewpoint (Fig. 3). Such a video can already suffice for qualitative analyses. In a second step, however, it is necessary to identify the objects in the exhibition space in the raw video data. This is a highly labour-intensive step. While AI-supported image recognition procedures can already be applied, they still require extensive manual corrections as well as powerful computers in the current state of art. After the annotation, individual objects such as artworks or labels that are part of the research interest can be further processed, for instance, by dividing them into smaller areas of interest (AoI), such as particular figures or sections of text (Fig. 6–7). In case of method combinations, it is necessary to prepare further data in order to enable complementary data analyses.

Fig. 3–5: From the visualization of a person's point of view to cumulative heat maps and scan paths of a participant's sample, © Screenshots: Tobii Pro Lab, Seda Pesen.

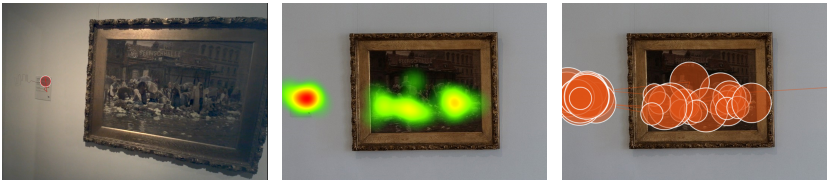
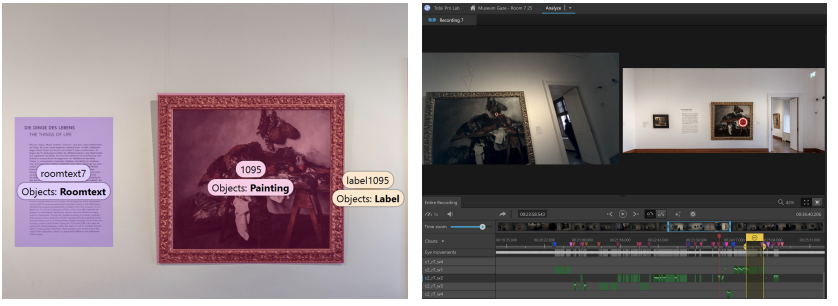


Fig. 6–7: Selection of AoIs (Areas of Interest), automated annotation of fixations from the video to the respective snapshots, © Photos: Screenshots: Tobii Pro Lab, Seda Pesen.



5. Analyzing the data

The transitions from data preparation to data analysis are fluid and partly take place in alternation, for instance when initial findings during data preparation trigger more in-depth data analysis. Using analysis software (from the hardware provider or as an external programme), it is possible to calculate and visualize, among other things, heat maps of fixations (Fuhl et al. 2018, Kübler et al. 2015, Fig. 4) or scan paths of individual or cumulated viewers (Kübler et al. 2017, Fig. 5), as well as produce statistical data such as, for instance, the duration of fixations or the length of saccades. These enable numerous conclusions to be drawn about the distribution of visual attention, viewing sequences of exhibits and other elements such as texts or also the focus and paths of gazes within an individual object (Rosenberg and Groner 2022). From a humanities perspective, it is also desirable to aim for qualitative-interpretative analyses of the video data, for instance, in order to analytically document phenomena such as habitual viewing or joint meaning-making in the exploration of gaze patterns (and of further data) when conducting in-depth individual case studies.

Considering all five phases of an MET study presented here, it becomes clear that the greatest time and personnel investment is required for data preparation. Data collection lasting a few days is generally followed by data preparation lasting several months, while data analysis can be either relatively brief or very detailed, depending on the research interest. In addition to assigning at least one, but preferably several field researchers to collect the data, one should ideally allow for a larger team and a longer turnaround time for data preparation. Data analysis, too, should be conducted in a team, in order to make use of different technical and content-related expertise as well as perspectives when engaging with the material.

Case study

The transdisciplinary research project *The Museum Gaze* (2022–2026) conducts basic research on seeing in the museum, combining the expertise of the University of Vienna (Laboratory for Cognitive Research in Art History), the Technical University of Munich (Human-Centered Technologies for Learning) and the Austrian Gallery Belvedere (with the four collection departments of Medieval, Baroque, 19th and 20th Century and Contemporary Art). The first study *True to Life* (2022), which here serves as a case study, took place in the eponymous collection exhibition which highlighted the style of realism with works from the middle of the 19th to the middle of the 20th century. The study focused on research questions regarding the influence of hanging practices and the relational gaze between works and exhibition texts (labels). While the first part of the study (condition 1) examined the exhibition in its original setting, the following interventions were carried out before the second part of the study (condition 2): works of condition 1 were exchanged with works by popular artists (Gustav Klimt, Vincent van Gogh), replaced with contemporary art (Lisl Ponger), rehung within the room, or completely removed from the exhibition. Labels were expanded by increasing the number of words, rewritten following different narratives or supplemented for all the works in the room.

To assess viewing behaviour and visitor experience, we employed a method combination of MET, *Video-Based Ethnomethodological Conversation Analysis* (in collaboration with researchers from King's College London), *Questionnaires* and interviews. This combination of methods allowed us to contextualize the focal points of attention visible in the MET, video recordings of the interaction in the room, interview responses and background information from the questionnaire. Data collection took place in both conditions for one week each in October 2022 and entailed the following procedure: after inviting regular museum visitors to participate in the study and letting them fill out a consent form, the participants were fitted with MET glasses, given a small shoulder bag for carrying the recording device, and had their glasses calibrated. The participants were free to tour the exhibition

according to their own preferences. Afterwards, the MET recording was terminated, the equipment returned, and the participants were given a questionnaire on a tablet. The final step was to conduct a stimulus-based interview to reconstruct the exhibition experience and record it on video.

Initial findings from data evaluation (N=212, c1 n=108, c2 n=104) show that the usability of the MET equipment as well as the validity of the MET data can be considered relatively high. 85,4% of the participants stated that the glasses did not obstruct their vision, 79,7% stated that they did not find the glasses uncomfortable. Nevertheless, 50,5% stated that at no time had they not forgotten about the glasses, 43,4% that they had forgotten about them after one to ten minutes, and 6,1% that they had forgotten about them immediately, indicating that the participants' awareness that they were taking part in a study has to be taken into account, as in every non-covert survey situation. The evaluation of the exhibition's hanging practices revealed that the participants – following the conventional display of paintings hung mainly in a single row – exhibited a linear viewing behaviour and oriented themselves from one centre of a painting to the next. However, it was possible to interrupt this linear viewing behaviour by curatorial interventions: exchanging the landscape painting *Herbstsonne am Attersee* (Autumn Sun at the Attersee) (1917) by Olga Micheli with Lisl Ponger's photograph *Out of Austria 2000* (2000), which criticizes colonialism, prompted participants to stop abruptly and dwell in front of the work for a longer period of time, stimulated interaction between couples, and generated a strong response in the interviews. The evaluation of the use of labels revealed that with more text available in the room, both reading times and art viewing times increased on average. While participants with a high affinity for reading also perceived longer object descriptions in full length, there was a continuous decline in readers across all participants. Around half of the participants read labels with hundred words and only a quarter read labels with 200 words to the end.

Method reflection

In summary, MET is a novel and currently still complex method of exhibition analysis. However, the following potentials argue in favour of its utilization: by examining the exhibition from the perspective of the person experiencing it, understood as a spatiotemporal event, the application of MET literally achieves a methodological integration of the visitor's view. The exhibition is accessed through the gaze, individually and processually and thus materializes itself as an ephemeral medium through the activity of viewing. Another strength of MET is its use as a mobile method (Büscher and Urry 2009), since viewing in exhibitions often does not take place while standing, but in motion, and objects are viewed via repeated gazes from different vantage points (Carbon 2017, Reitstätter 2015: 129–139, Reitstätter, Galter

and Bakondi 2022). In this visually complex appropriation behaviour of exhibition visitors, MET provides comprehensive, accurate and valid data, with MET data already being able to be recorded with an accuracy of 0.1° (Schneider et al. 2009). Sufficient data validity is also supported by the fact that the MET equipment tends to impair the exhibition experience only minimally (Mayr, Knipfer and Wessel 2009, Santini, Fuhl and Kasneci 2018). In addition, recordings of over one hour are meanwhile possible, enabling the analysis of an entire exhibition visit, including potential changes of gaze patterns over time.

At the same time, the recording of viewing behaviour with MET is subject to limitations: too expensive, technically complex and thus poorly accessible – would be a brief summary of the major current constraints. Thus, in the further development of MET, the affordability of hardware and software must be ensured, and data preparation, particularly in automatic image recognition, needs to be optimized to simplify the method's use. MET provides an accurate measurement of viewing behaviour via physiological parameters such as fixation and saccades. However, whether and to what extent these parameters shed light on the production of insights and meaning in the viewers is not an objective conclusion but depends on the interpretation of researchers (Doering and Pekarik 2010, Garbutt et al. 2020, Mayr, Knipfer and Wessel 2009). To avoid being accused of taking a behaviourist approach, it is essential to undertake a theoretically sensitive data interpretation that considers the complexity of cultural artefacts and practices. Combining methods also helps to counteract the limitation of MET as a means of collecting eye movement data in isolation from the viewing body and without insights into introspective processes of meaning-making. MET generates products of viewing (in long export tables and visualizations such as heat maps or scan paths) that need to be integrated into the process of *embodied seeing* and also further decoded in the context of meaning-making, also in the interaction with other persons on site.

Besides further technological development, the combinations of methods and the theoretical sensibility are crucial to preclude simplified conclusions by means of a reflected interpretation of eye movement data with contextual embedding. In particular, the multimodal, sensory significance of MET can be considerably expanded when linked with additional methods, allowing the gaze to be also located in space, on the body and in social interaction. A theoretically sensitive approach with reference to current critical discourses on discrimination and decolonization, in turn, can open MET to the critical social sciences and situate ways of seeing in exhibitions in their respective cultural contexts. We see the potential in using MET as a method of exhibition analysis – beyond the current focus on art museums and individual aesthetic experience – in taking a closer look at other exhibition venues, cultural artefacts as well as sensory and social modes of perception.

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Part III Practice-oriented Methods

AttrakDiff

Determining the attractiveness of exhibitions via pairs of opposites

Tabea Schmid

Introduction

The standardized AttrakDiff questionnaire is an empirical tool for measuring how individuals assess the overall attractiveness of a product (Hassenzahl, Burmester and Koller 2003).[1] It was developed to support the design process and improve results. In the context of exhibitions, AttrakDiff can be recommended for analyzing how exhibitions or their prototypical versions affect visitors. Results may reveal the need for specific analyses (summative evaluation) or be a guide for conceptual decisions (formative evaluation).[2]

Using this questionnaire for an exhibition analysis constitutes a twofold transfer: AttrakDiff (= attractivity differential) was developed in the specialist field of user experience design to evaluate interactive products, for instance office applications, logistics, and accounting systems.[3] It thus originates from other professional con-

1 Questionnaire and instructions for use are available from Diefenbach, Lenz, and Hassenzahl (2014). The evaluation graphics shown here were created using the online version of AttrakDiff, which was discontinued at the end of 2024 (see www.attrakdiff.de).

2 Summative evaluations have the function of assessing how an exhibition performs overall and monitoring the extent to which it fulfils predefined objectives. They are the most frequently used type of evaluation (Wegner 2011: 245). Formative evaluations are carried out during the design process.

3 AttrakDiff is widely used for this application; it is "one of the most widely used tools amongst researchers to assess the global perceived quality of interactive systems" (Lallemand 2015: 19). AttrakDiff is one of the three most recognized standardized questionnaires for ubiquitous computing and ambient intelligence to evaluate user experience and among these three, the most widely used, as Díaz-Oreiro et al. (2021) summarize in their systematic literature review. Diefenbach, Kolb and Hassenzahl (2014: 305–314) examined scientific publications that explicitly address the hedonic aspect of human-machine interaction. Of the 150 papers examined, 74 used scales to analyze perceived hedonic quality. Of these, forty-three papers (58%) used the AttrakDiff as a measuring tool.

texts than the pertinent disciplines that concern themselves with exhibition evaluation such as museology, cultural studies, semiotics and anthropology. And it was designed for products other than exhibitions.[4] The question in how far this unaltered transfer of AttrakDiff is nevertheless productive was tested in the research project *Exhibiting Design – Exhibiting through Design* (2015–2017), which the author conducted together with Dagmar Rinker at the University of Design Schwäbisch Gmünd and provides the case study discussed below.[5]

AttrakDiff is designed as a semantic differential, [6] i.e. as a question methodology with twenty-eight pairs of opposites, such as *simple–complicated* or *confusing–clear* (Fig. 1). [7] These opposing adjectives describe product features that partly overlap semantically in order to psychometrically capture the different facets of a quality (for instance, the pairs *isolating–connecting* and *separates me–brings me closer*). The respondents can choose from seven levels between these opposites; they do not necessarily need to opt for one tendency or the other, or need to choose per se for a tendency, but can give a neutral or middle rating precisely between two pairs of opposites. The individual pairs of opposites are divided into four areas, which in the evaluation represent different product qualities: pragmatic qualities (PQ), hedonic qualities – stimulation (HQ-S), hedonic qualities – identity (HQ-I), and attractiveness (ATT). Attractiveness as an overall evaluation is a dimension in its own right; the categories are explained below.

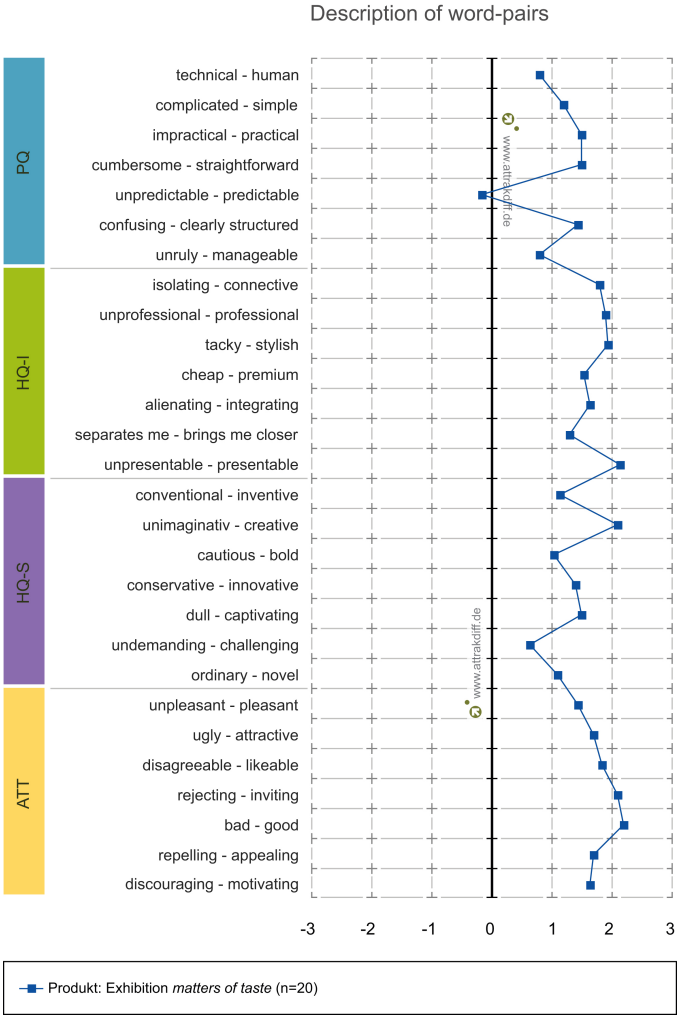
4 Until the end of 2024, it was possible to create the questionnaire online. The options for 'product type' and 'product industry' suggest that the developers had not intended this questionnaire for the cultural sector or for exhibitions. This was confirmed by the author's enquiry to Michael Burmester, one of the three developers.

5 See the German project documentation of *Design ausstellen – Ausstellen durch Design* at www.hfg-gmuend.de/forschung/design-ausstellen-ausstellen-durch-design (31.03.2025). The present method description also benefits from valuable feedback from students: Students in the BA program Museology and Material Culture at the University of Würzburg commented on the text as part of their seminar *Reflecting on and trying out methods of exhibition analysis* in the winter semester 2022/23 and tested the methodology in the Deutsches Museum Nürnberg – das Zukunftsmuseum (German Museum Nuremberg – the Future Museum) in a joint workshop with the editors Carla-Marinka Schorr and Luise Reitstätter and myself.

6 The semantic differential is a Likert scale developed by Charles Osgood and colleagues (Osgood, Suci, and Tannenbaum 1957) that can be used to empirically determine the semantic content of a term.

7 There is also a short version called 'AttrakDiff mini' with ten pairs of opposites (Diefenbach, Lenz, and Hassenzahl 2014, 46; Hassenzahl and Monk 2010).

Fig. 1: The figure shows the AttrakDiff "profile of word pairs", here with results from the Geschmackssachen – Formen, Normen, Kaffeekanne (Matters of taste – Forms, Norms, Coffee Pot) *exhibition, which is explained below. Twenty visitors evaluated the exhibition on the basis of twenty-eight pairs of opposites. The underlying model of the AttrakDiff differentiates between the pragmatic quality or usability (PQ), the hedonic quality – identity (HQI), the hedonic quality – stimulation (HQS) and the overall attractiveness (ATT) of the exhibition. Source: Automated evaluation of results via the website www.attrakdiff.de, which was still active at the time (own translation).*



Pragmatic qualities (PQ) refer to usability, that means, in how far a person considers the product effective and efficient for their purpose (see footnote 8; Hassenzahl, Burmester and Koller 2000, 202). A plane, for instance, that is blunt and does not have a good grip has few pragmatic qualities. Similarly, an exhibition is rated as not very pragmatic if its wayfinding system is confusing and the object texts are poorly illuminated. Hedonic qualities (HQ) – sometimes also referred to as hedonistic[8] – relate to non-utilitarian features of a product, i.e. attributes such as exclusive, beautiful, modern, cool or original (ibid.). The reason one should aim for hedonic qualities is because they are associated with enjoyment and well-being, and generally the avoidance of displeasure. They are differentiated according to the two dimensions of "stimulation" and "identity" (Hassenzahl, Burmester and Koller 2003): some product qualities appeal to human needs for stimulation because they offer sufficient novelty and variety without being overwhelming (HQ-S). A well-thought-out dramaturgy, varying the depth of information provided by individual exhibits, using light-dark contrasts in the room, combining exhibits from different categories and using a multimedia mix could all be used to stimulate exhibition visitors in a balanced way. The second hedonic dimension (HQ-I) refers to the need for identity and is fulfilled when users identify with the product and it helps them to emphasize their own image in the desired way. Exhibitions could, for instance, meet this need by highlighting connections between their topics and the everyday reality of the visitors' lives or by giving visitors the opportunity to communicate, via smartphone, their exhibition visit in a manner that suits them.

Pragmatic and hedonic qualities contribute in equal measure to the perceived attractiveness of a product (ATT); a low hedonic quality can be compensated for by a high pragmatic quality – and vice versa (Burmester 2002, 34). For instance, if an exhibition is perceived as sensually appealing due to its high visual aesthetics, an innovative design and interesting possibilities for interaction (high hedonic quality), but at the same time its information content is relatively limited (low pragmatic quality), then it will be perceived on average as relatively attractive. Both dimensions can trigger emotional responses such as frustration and annoyance or satisfaction and joy (Hassenzahl, Burmester and Koller 2003). Pragmatic and hedonic qualities together impact the experiences of exhibition visitors.

Design and development processes were further developed to take both aspects of this subjective visitor and/or user experience into account in the planning as best

8 The Ancient Greek word *hēdonē* (ἡδονή) means 'pleasure', 'enjoyment' or 'delight'. Hedonism also refers to the philosophical tradition of Epicureanism, co-founded by Epicurus (c. 341–271/270 BCE), whose highest goal is the maximization of pleasure – not found in opulence and luxury, but leading to a pleasurable peace of mind and the avoidance of pain precisely through inner liberation from such fleeting circumstances and sources of pleasure (Arnold 2016, 43–45).

as possible: While the user centered design (UCD)[9] primarily only refers to pragmatic qualities – here referred to as usability[10] – the user experience design (UXD) also incorporates hedonic qualities, thus continuing the UCD approach in a holistic way.[11] With the aid of AttrakDiff, which was developed under the premises of user experience design, it is possible to carry out evaluations that foreground the subjective perceptions and emotions of users. AttrakDiff thus ties in with the increasing museological attention paid to emotions and subjective production of meaning which is referred to as the "didactic turn" (Fackler and Pellengahr 2019: 36) or the "affective turn in museum studies" (Varutti 2022: 63) and which attempts to evoke the emotional participation of visitors through specifically participatory, process-oriented, multisensory or immersive exhibition formats.[12]

Aim of the method

AttrakDiff is a tool for visitor-centered evaluations. It is designed for exhibition makers[13] who are interested in their audience and want to know how visitors evaluate an exhibition or its prototype in its entirety in retrospect. As a questionnaire, it is

9 This term was coined by Donald Norman and Stephen Draper in the 1980s and describes a design process that is centered on the user (Chow 2005, 19). It aims to improve the usability of design (Erlhoff and Marshall 2007, 425).

10 Usability is the extent to which users can use a product in a specific context to achieve their goals effectively, efficiently and satisfactorily (DIN EN ISO 9241–11). If an exhibition text is difficult to understand or a multimedia guide does not work, the usability of the exhibition is compromised, that is, its pragmatic qualities.

11 The methodology and practical application of user experience design overlap with service design and design thinking. Three characteristics distinguish the approach of user experience design: a holistic understanding of the user experience, a focus on subjective perceptions and positive experiences instead of just avoiding usage problems (Burmester 2015, 1). In the context of exhibitions, the term "visitor experience" is operationalized as a triad of museum, visitor and social context (Falk and Dierking 1992), from which John F. Falk and Lynn D. Dierking developed the "interactive experience model" (Falk and Dierking 2013); this seems to be associated with a similar notion as in UXD.

12 While curatorial practice takes visitors' subjective experiences into account, these experiences are not sufficiently considered in evaluations (Reitstätter 2015, 31). One counterexample is the project *Hauptsache Publikum!? Das besucherorientierte Museum* (The Audience-Oriented Museum) by the German Museums Association. Its guidelines are available at https://www.museumsbund.de/publikationen/hauptsache-publikum-besucherforschung-fuer-die-museumspraxis/ (31.03.2025).

13 Exhibition makers are understood here to mean all groups of people involved in the conceptual work of an exhibition, that is, in addition to curators, also designers who, depending on their training and approach to their work, also call themselves scenographers, interior architects or exhibition designers.

able to record what people say – but not what they do. It provides exhibition makers with feedback on the extent to which the exhibition is functional and comprehensible, and also to what extent it is enjoyable. This is because AttrakDiff differentiates whether an exhibition needs to be optimized in a pragmatic or a hedonic regard. In addition, exhibition makers can see how much the audience agrees, i.e. whether multiple visitors evaluate the exhibition similarly or very differently. The results can serve as feedback to improve the evaluated exhibition or to inform the planning of future exhibitions.

Step-by-step guideline

AttrakDiff is a user-friendly tool that requires neither a lot of prior knowledge nor extensive practice. It is recommended if you wish to obtain a pattern of opinions about an exhibition and is well-suited for the initial phase of an exhibition analysis, which can be followed up with further methods to gain more specific insights.[14]

One person-day should be allocated for preparing the AttrakDiff questionnaire. The evaluation can be carried out using your own spreadsheet and, depending on the number of completed questionnaires, can take up to half a person-day. One should schedule a further half person-day to prepare and document the results for downstream processes. However, this calculation does not include the amount of time needed for interpreting the results, planning follow-up analyses based on specific research questions, or for perhaps even determining potential measures such as improvements.

1. Before conducting the survey

The AttrakDiff questionnaire is taken from Diefenbach, Lenz, and Hassenzahl (2014, 49). The survey can be designed as an individual project, as a comparison between two exhibitions or as a before-and-after comparison of an exhibition modification. You should refrain from making any changes to the questionnaire; the pairs of opposites were specifically selected and validated in studies. If necessary, sociodemographic categories such as age group, place of residence and level of education can be additionally queried.

14 As Díaz-Oreiro et al. (2021) show, the AttrakDiff and its related questionnaires meCUE and UEQ (User Experience Questionnaire) are used in 61.5% of the 553 evaluated studies in combination with one or more other methods, including, in order of frequency, the SUS questionnaire (System Usability Scale) for subjective assessment of user-friendliness, self-developed questionnaires, semi-structured interviews, the PANAS (Positive and Negative Affect Schedule) questionnaire to record feelings and emotions, and other methods.

2. Conducting the survey

The supervisory staff involved in conducting the survey or any other designated person can invite visitors leaving the exhibition to participate in the survey, so that as many visitors as possible evaluate the exhibition. In addition, due to the limited number of people and the available staff, guided tour groups can be expected to be particularly willing to participate. Five to ten completed questionnaires can indicate trends, but fifteen or more people are better. A small give-away could help to encourage visitors to participate. It takes around ten minutes to answer the AttrakDiff questionnaire.

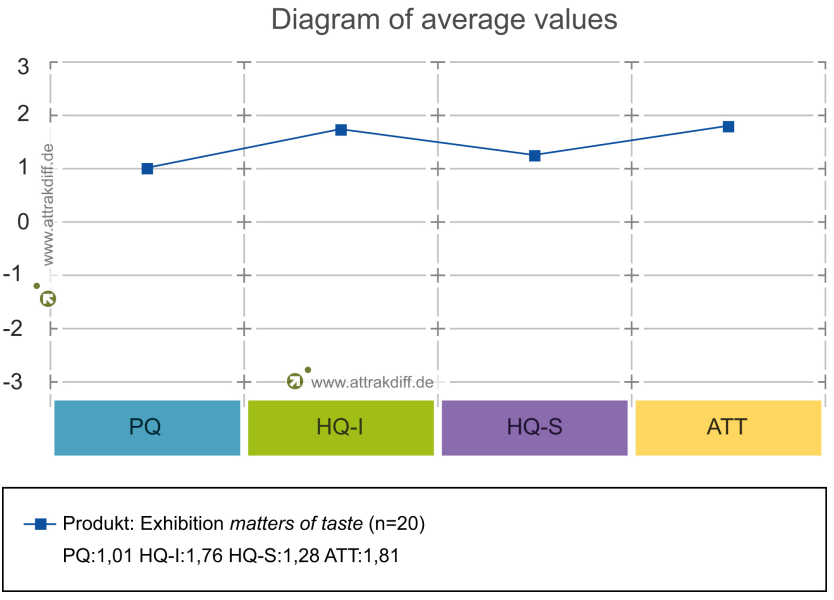
3. After conducting the survey

The results are evaluated by means of three diagrams: the profile with the word pairs (Fig. 1), a diagram of the mean values (Fig. 2) and the portfolio view (Fig. 3). In addition, it is possible to view individual data sets in toto as well as assess the interpersonal distribution of answers to specific questions. These latter data are enlightening in that they show to what extent visitors agree on a specific pair of opposites.

The *description of word pairs* (Fig. 1) displays the mean expressions of the individual word pairs. A score is calculated for the four different dimensions measured by AttrakDiff, which can range between a very negative rating (here -3, in the manual template 1) and a very positive one (here +3, in the manual template 7). In this case, attention should be paid to the outlying values, which indicate particularly characteristic properties of the exhibition being evaluated and show which properties were assessed as being above average in terms of criticism or praise. For example, if an exhibition is rated as very negative on the opposing pair *conservative – innovative* with -3 and thus receives an overall low score in the dimension of hedonic quality, this is also reflected in the portfolio view. Or vice versa: if an exhibition is ranked as *too task-oriented* in the portfolio view and thus lacks hedonic qualities, this can be more thoroughly tracked in the profile of word pairs. An exhibition that has been rated as *conservative* in a negative sense can thus be improved towards a more *innovative* presentation.

The diagram of the average values (Fig. 2) represents the mean expressions of the four examined dimensions. The evaluations in the four dimensions can be conveniently compared with this representation, so that, for instance, different average values of hedonic quality – stimulation (HQ-S) and hedonic quality – identity (HQ-I) become visible.

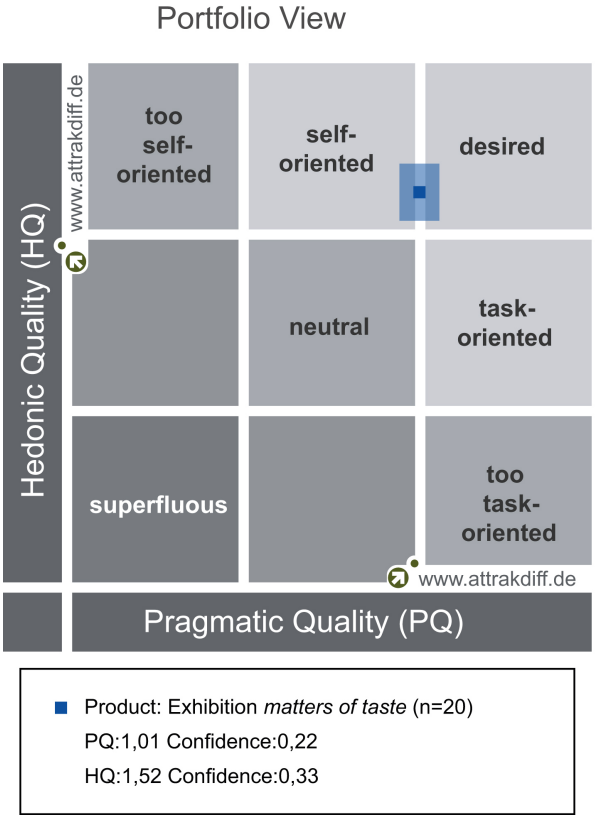
Fig. 2: The diagram of the mean values shows the mean scale values for PQ, HQ-I, HQ-S and ATT. With regard to the exhibition Geschmackssachen – Formen, Normen, Kaffeekanne (Matters of taste – Forms, Norms, Coffee Pot), *this diagram clearly shows that visitors have rated its pragmatic quality the lowest, with a value of 1.01 just above the threshold of the average to above-average range. Source: Automated evaluation of results via the website www.attrakdiff.de, (own translation).*



The portfolio (Fig. 3) shows the average expression of pragmatic quality in the vertical (bottom = low expression) and of hedonic quality in the horizontal (left = low expression). The combination of the two qualities can result in different types of exhibitions, which are summarized here in nine different fields and partly named: *superfluous, neutral, desired, task-oriented, too task-oriented, self-oriented* and *too self-oriented*. A disproportionately high pragmatic quality is referred to here as *too task-oriented*. This means that the exhibition can be used effectively and efficiently; the emotional response is satisfaction – but without creating a strong bond (Hassenzahl, Burmester and Koller 2003, 189). If visitors are also satisfied with the hedonic aspects, the evaluation indicates a *self-oriented* exhibition that binds visitors and triggers enjoyment, "because self-related goals are usually more persistent and personally relevant" (ibid.). Whether an exhibition collects more approval in pragmatic or hedonic terms is not a matter of better or worse but depends on the intentions of the exhibition organizers. If AttrakDiff is used as a basis for exhibition optimization, the portfolio shows the dimension in which improvements can be made depending on

the goal. The portfolio also indicates via the confidence rectangle how homogeneous the feedback from visitors is. The smaller the rectangle, the more visitors agree.

Fig. 3: The "Portfolio View" shows the relative expression of hedonic quality (vertical axis) and pragmatic quality (horizontal axis). The position of the point indicates the mean value of all feedback, i.e. the overall tendency. The confidence rectangle represents the distribution or standard deviation. The smaller this rectangle is, the more visitors 'agree' and the more certain it is that the exhibition can be assigned to a specific area. For the exhibition Geschmackssachen – Formen, Normen, Kaffeekanne (Matters of taste – Forms, Norms, Coffee Pot) *analyzed here, which is explained below, the confidence rectangle is small; visitors agree that the exhibition has high pragmatic and high hedonic qualities. Source: Automated evaluation of results from the website www.attrakdiff.de, (own translation).*



Case study

The following description presents the testing of the AttrakDiff as part of the research project *Exhibiting Design – Exhibiting through Design*. Working from the premises of user experience design, the exhibition makers involved in the project used AttrakDiff and other methods, with the aim to understand the visitors' perspective in order to derive insights for design processes. The established methods in the range of reception-analytical exhibition evaluation were considered suboptimal by exhibition designers at least for tightly calculated processes, since they are often time-consuming and resource-intensive (e.g. *Observation*), or focus on objectivity rather than subjective experience (e.g. *Mobile Eye Tracking*). By contrast, the methods of user experience design seemed to be more pragmatic to work with. This needed to be tested.

Fig. 4: Prologue of the special exhibition Geschmackssachen – Formen, Normen, Kaffeekanne (Matters of taste – Forms, Norms, Coffee Pot) *on opening day (February 25, 2016), © Tabea Schmid.*

AttrakDiff was combined with the 'user camera study', a method in which visitors take photographs of the exhibition and then comment on them; it shows what visitors notice, find important and how they document it photographically (Stanford 2011, 11). As a qualitative, non-standardized method, the user camera study provides snapshots of impressions and thus complements the quantitative AttrakDiff ques-

tionnaire, which presents an overall picture. In this respect, these methods combine well, although to our knowledge no such combination has been attempted so far.[15]

Both methods were tested in the special exhibition *Geschmackssachen – Formen, Normen, Kaffeekanne (Matters of taste – Forms, Norms, Coffee Pot)*, which took place from February to May 2016 in the HfG-Archive Ulm (Fig. 4). This exhibition of cultural history showed design objects and everyday items from three collections (HfG-Archive Ulm, Collection Hans (Nick) Roericht, Archiv der Alltagskultur/Archive of Everyday Culture Tübingen). Fifty-three people participated in the AttrakDiff survey and thirty-one others in the user camera study. AttrakDiff was laid out as a printed questionnaire in the exhibition foyer and offered by the supervisory staff. For the user camera study, visitors, who had been approached prior to their visit, were asked to photograph a maximum of three moments of the exhibition that made an impression on them using a specially provided tablet and to briefly describe their selection on a form.

The AttrakDiff survey showed that the exhibition tended to be perceived as simple and clear and at the same time original rather than conventional, and innovative rather than conservative. This means that the participating visitors were able to find their way around the exhibition with ease (pragmatic quality) and at the same time felt pleasantly stimulated by novel and surprising elements (hedonic quality). The user camera study showed that visitors mainly photographed individual exhibits of the exhibition as impressive highlights to which they had an emotional connection.

Both methods could be brought together in a visual preparation of the results. A combined visualization can, for instance, show clusters in visitor perception; it facilitates the communication of the results and can therefore increase decision-makers' motivation to make improvements. It would also be possible to expand this to a user experience map that documents various facets of use in a chronological form, such as a person's actions, their emotions, attitudes and perceptions (Martin and Hanington 2013).

15 The researcher and designer Johanna Barnbeck conducted a user camera study in the Rijksmuseum in Amsterdam to capture the expectations of visitors. This formative evaluation was carried out as part of the *Augmenting Masterpieces* project, which developed exhibition media to enhance the visitor experience. See the website of the *Augmenting Masterpieces* project: https://www.uncinc.nl/en/work/rijksmuseum-augmented-masterpieces, Barnbeck's presentation *Visual Feedback Methodology in Museum Settings* at the conference *Museen verstehen* (30.10.2015) at the University of Tübingen (Barnbeck 2016). Equipping users with cameras to gain insights into their experiences is a common practice in design (research) projects and, in particular, is part of the methodology of *cultural probes* (Gaver, Dunne and Pacenti 1999).

Method reflection

The testing in the HfG Archive Ulm showed that the pairs of AttrakDiff characteristics also suit the medium of exhibitions – in contrast to those of the UX questionnaire, for example, which can also be used to record a user experience (IAO 2015). AttrakDiff helps exhibition makers sharpen their awareness of the visitor's perspective. As a method for analyzing exhibitions, AttrakDiff is valuable in that it differentiates visitors' experiences into pragmatic and hedonic aspects. In doing so, it answers to the design and curatorial challenge of addressing visitors in a balanced manner without boring them or overwhelming them – and thereby enabling a good exhibition experience. AttrakDiff can also be recommended for various practical reasons: The method is easy to learn and its implementation requires relatively little effort. The questionnaire is accessible free of charge and its use is not dependent on any proprietary software infrastructures, which ties in well with the limited resources of many exhibition venues, especially small ones. Last but not least, AttrakDiff enables a comparative evaluation of different exhibitions – for instance, several variants of the same exhibition in the conception phase.[16] In addition, AttrakDiff could be valuable for comparative feedback from different visitor groups, for example, to inform the curatorial team how school children evaluate an exhibition compared to senior citizens.

However, the method only affords an overall impression and no specific visitor perception of individual elements, because AtrakDiff only queries abstract attributes, but not specific quality features. The method therefore does not show which exhibition elements are particularly attractive or which ones present problems for visitors. For such analytical purposes, it is only suitable as an initial or follow-up survey in combination with other user-centered methods such as *Questionnaire* (or the comment function included in AttrakDiff), *Observation*, *Mobile Eye Tracking* or *Space Syntax*. Analyses of specific exhibition areas – for example hands-on elements – would increase the informative value of AttrakDiff. It should also be noted that the method can only be used with visitors who are well versed in the German language. Although AttrakDiff has been translated into English and other European languages, these linguistic transfers were often not tested for their validity (Lallemand 2015, 19).

In summary, the low-threshold application of AttrakDiff can help museum professionals start adopting a visitor-centered approach or find an introduction to ap-

16 Diefenbach, Lenz, and Hassenzahl (2014) locate the application of AttrakDiff in the design process in the selection phase, in order to reduce the design options based on the evaluation of several prototypes. It is a matter of debate whether two-dimensional designs of planned exhibitions can be analyzed in this way, even though they do not simulate physical-spatial experience.

plication-oriented visitor and audience research. By focusing on the subjective experience of visitors, AttrakDiff can expand self-referential perspectives, support reflection processes and act as a need analysis for more specific evaluations.

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"Judging Exhibitions" by Beverly Serrell

Evaluating exhibitions in a team

Jana Hawig and Ria Glaue

Introduction

Judging Exhibitions was developed in a series of workshops between 2000 and 2003 in Chicago (USA) and published in 2006 as *Judging Exhibitions. A Framework for Assessing Excellence* (Serrell 2006). This framework (Serrell 2006: 42–46) serves as a practical guide for a standardized procedure of analyzing and assessing the excellence of exhibitions from a visitor-centered perspective.[1] Exhibitions are evaluated in terms of how well they meet the 'Criteria' set down in the framework for the assessors at the moment of their visit. They explicitly refer to the overall visitor experience: "We would judge exhibitions by how it felt to be in them" (Serrell 2006: 5). The criteria are broken down into different features, here called 'Aspects'. An exhibition is not expected to meet all the aspects listed in the framework (Serrell 2006: 17); rather, they reflect individual facets of the criteria and provide supporting evidence for the evaluation. The main concern is to ensure that the criteria and aspects describe valuable visitor experiences: "[They] are related to creating comfortable, engaging, reinforcing and meaningful educational experiences for visitors" (Serrell 2006: 17).

The special feature of this approach is its implementation in a team: the framework provides the members of the group with a shared vocabulary that they can use to evaluate their personal visitor experience first on an individual level. Subsequently, they compare their results and draft joint statements regarding the quality of the exhibition. The discussion about the exhibition's quality ('Excellence') that emerges in this process is the actual goal of the analysis. Every discipline associated with museums (curatorial, design etc.) has its own ideas about what constitutes a successful exhibition. The framework and the accompanying discussion are not intended to replace the various professional viewpoints, "but to augment them with a deeper understanding of the experience itself" (Serrell 2006: 24). In its application, the framework takes into account that the judges generate subjective results

1 The framework is open access and available for download at Serrell 2025.

and brings these together in a productive way. A judge can be anyone with some degree of expertise about exhibitions (see below). What is crucial here is taking a visitor-centered perspective (see chapter 3.2 Focus). Beverly Serrell's team identified a successful visitor experience as a basis for rating an exhibition as 'excellent'. The analytical guidelines she created are designed to work in a broad range of exhibition settings.

The authors of this article adapted Serrell's framework as part of an extensive research project at the DASA Arbeitswelt Ausstellung Dortmund (DASA Working World Exhibition in Dortmund) to investigate storytelling in exhibitions (conducted from 2017 to 2023). The centerpiece of this project is the evaluation of the DASA special exhibition *Pia sagt Lebwohl. Eine Ausstellung über die Arbeit mit Tod und Trauer* (*Pia Says Goodbye: An Exhibition about Dealing with Death and Mourning*). The method described here was adapted in the context of the DASA evaluation: since the researchers themselves were involved in the curation of this exhibition, it was necessary to include an outside perspective on *Pia Says Goodbye* in the form of Judging Exhibitions. In contrast to Serrell's approach, where the judges select the case study on their own initiative, in the DASA adaptation, the framework was modified to a commission as part of a self-evaluation. The evaluators selected the judges according to their own criteria and invited them to visit the exhibition in Dortmund to evaluate its excellence.

In order to apply the method in the context of this exhibition evaluation, the evaluation team translated the framework into German.[2] The translation of the English terms was to be carried out in such a way that the original idea of the criteria would be retained, but that at the same time the German-speaking experts would have a common vocabulary at their disposal that was as comprehensible as possible. This led to some discussion within the evaluation team regarding certain finer points. Particularly, the translation of 'meaningful' (German: 'Sinnstiften') remained a compromise until the very end.[3] Some details were modified also in terms of content. For instance, the aspect 1.c) "The lighting, temperature, and sound levels were appropriate" (Serrell 2006: 44) was split into three different aspects in order to be able to evaluate lighting, temperature and sound levels separately. Semantic issues also emerged during the process of translation that prompted the members of the evaluation team to fundamentally reflect on their self-image. "Excellent judge" was translated as "(exhibition) expert". While the English word 'judge' semantically covers both the meaning of 'assessing, evaluating' and the role of, for instance, an ad-

2 The German version translated by the DASA research team (Jana Hawig, Ria Glaue, Patricia Dobrijevic, Paul Marx) is available at: https://www.dasa-dortmund.de/fileadmin/user_upload/Dokumente_pdf/DA/Anhaenge_Forschungsbericht.pdf, 62–68 (06.03.2025).

3 The alternatives discussed were 'Relevanz herstellen' (establish relevance) or 'Bedeutsamkeit' (significance).

judicator in a law court, the German word 'Richter' is more strongly associated with the latter. To avoid misunderstandings, a translation was chosen that emphasizes the role of the assessor as a knowledgeable expert, rather than giving the impression of someone passing a final judgement on the exhibition. This also aligns with how Serrell wants the term to be understood: "Judging is a process of thinking, forming an opinion, deciding on the relative value or worth, and holding up something against standards, guidelines or criteria" (Serrell 2006: 164). Another issue was the term 'excellent' that was not carried over in the translation.[4] Particular attention was paid to the translation of the four criteria (German: 'Dimensionen') as the core of the content-related engagement with the exhibition to be assessed:

Fig. 1: The four criteria from the framework. These form the core of the evaluation of an exhibition's excellence. Excerpt from Serrell 2025: 1.

1. Comfortable

An excellent exhibition helps the visitor feel comfortable—physically and psychologically. Good comfort opens the door to other positive experiences. Lack of comfort prevents them.

2. Engaging

An excellent exhibition is engaging for visitors. It entices them to pay attention. Engagement is the first step toward finding meaning.

3. Reinforcing

In an excellent exhibition, the exhibits provide visitors with abundant opportunities to be successful and to feel intellectually competent—beyond the "wow" of engagement. In addition, the exhibits reinforce each other, providing multiple means of accessing similar bits of information that are all part of a cohesive whole. Visitors are confidently on their way to having meaningful experiences.

4. Meaningful

An excellent exhibition provides personally relevant experiences for visitors. Beyond being engaged and feeling competent, visitors find themselves changed, cognitively and affectively, in immediate and long-lasting ways.

Aim of the method

Judging Exhibitions is designed to foster discussion and learning among participants with the help of a shared vocabulary to enhance their understanding of an exhibition's excellence. Agreement on a consensus is not necessarily the goal of Judging Exhibitions but rather an exchange of different opinions (Serrell 2006: 145). The target group of the analysis is therefore not a stakeholder of the exhibition's institution,

4 This had originally been developed with a certain amount of tongue-in-cheek during the many years of development in Serrell's grassroots group, see Serrell (2006, 10).

but the participants themselves.[5] The method is aimed at anyone with professional experience of exhibitions, because a certain ability to express oneself is necessary to be able to talk about an exhibition (Serrell 2006: 10).[6] Serrell mentions further fields of application of the method, including as a teaching tool for students of museum studies (Serrell 2006: 78–83) or also as "in-house exhibition development" (Serrell 2006: 73–77) with possibilities for application during the design phase of an exhibition or also in formative and summative evaluations. The latter is exemplified in the case study below.

The method can be applied to almost all (museum) exhibitions. Serrell emphasizes that exhibitions for very young children are also suited for the framework. The prerequisite is that "the target audience includes adults and the exhibition directs interpretation at them as facilitators for an educational experience", which the judges can follow-up on (Serrell 2006: 22). Serrell explicitly includes a chapter on the possibilities of using the framework with art exhibitions (Serrell 2006: 84–87). During the development of the framework, there were reservations about its use in exhibitions that focus on the aesthetics of art objects and dispense with any kind of explanatory texts. Serrell confirms this difficulty but argues that this applies independently of art exhibitions: "If there is a low diversity of formats (e.g. graphics, text, audiovisuals, models, phenomena) or sensual modalities (other than sight), Framework users would have fewer specific elements to discuss, but they'd still be able to talk about their overall experiences" (Serrell 2006: 85).

The framework is designed primarily to be used on its own, since it takes a holistic approach and defines a conclusive process from beginning to end. At the same time, it can be combined with other methods (see case study). However, the framework is not a substitute for examining visitor reactions, but can usefully complement existing visitor studies (Serrell 2006: 106).

Step-by-step guideline

The following five steps provide a structure for applying the method. Serrell does not prescribe any particular time frame, leaving it to the members of the group to organize the process themselves. She does, however, recommend allowing at least two hours for the first meeting and the second follow-up meeting. The step-by-step

5 If the analysis results are processed and published as an exhibition analysis, additional target groups can be addressed.

6 The composition of the group therefore depends on the situation, and according to Serrell, is guided only by the criterion of the language skills required for exhibitions. Expertise on the topic of the exhibition alone is not a requirement. Accordingly, whoever selects the group also defines which specific knowledge the judges need to have to be considered 'experts'.

guideline below is modelled on the specifications and wording of the framework to facilitate the transfer.

1. "First meeting"

Before visiting the exhibition, the participants come together for a first joint meeting to familiarize themselves with the framework and the concepts and to get to know each other (if they haven't met yet). Particular attention is paid to ensure that everyone is on the same page regarding the criteria and aspects. Participants should be provided with a print-out of the framework. The meeting does not necessarily have to take place at the venue of the exhibition.

2. "Personal notes (call-outs)"

The experts visit the exhibition on their own. Everyone can decide for themselves how often they want to visit the exhibition. The notes ('call-outs') are taken during and after the first exhibition tour and are spontaneous, affective statements which need to be supplemented by a reflection: "your feelings and emotional reactions to what you are experiencing – along with some analysis for why or what made you feel that way" (Serrell 2006: 52). The approach is exploratory and not guided by the framework. However, the experts are expected to explore the exhibition from the perspective of a visitor. In the process, they note their thoughts and impressions regarding the exhibition experience.

3. "Assessing the aspects"

The framework specifies a total of twenty-six different aspects for all four criteria that are assessed after visiting the exhibition. The assessment is carried out individually on the basis of the call-outs and according to the following system that does not provide for neutral ratings (Serrell 2006: 56):

Fig. 2: The judges are invited to assess the twenty-six aspects according to this rating system of the framework. Excerpt from Serrell 2025: 4.

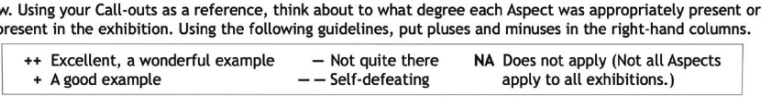
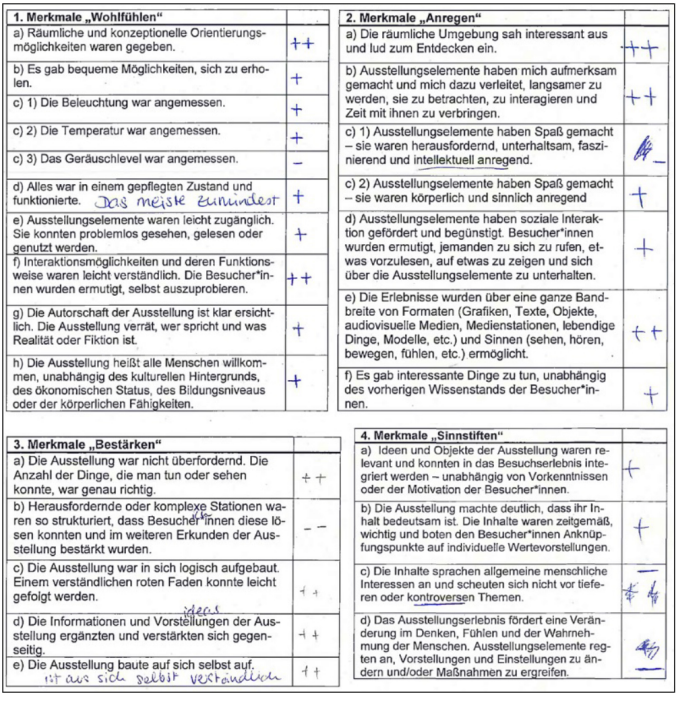


Fig. 3: The figure shows specific assessments of the aspects by three different participants regarding the exhibition Pia Says Goodbye. *The experts have added personal comments to some of the features in order to clarify them. Source: participant E, participant B, participant A, participant B, framework of the DASA research project. 2020, unpublished, 4–5.*



1. Merkmale „Wohlfühlen“	
a) Räumliche und konzeptionelle Orientierungsmöglichkeiten waren gegeben.	++
b) Es gab bequeme Möglichkeiten, sich zu erholen.	+
c) 1) Die Beleuchtung war angemessen.	+
c) 2) Die Temperatur war angemessen.	+
c) 3) Das Geräuschlevel war angemessen.	–
d) Alles war in einem gepflegten Zustand und funktionierte. Das meiste zumindest	+
e) Ausstellungselemente waren leicht zugänglich. Sie konnten problemlos gesehen, gelesen oder genutzt werden.	+
f) Interaktionsmöglichkeiten und deren Funktionsweise waren leicht verständlich. Die Besucher*innen wurden ermutigt, selbst auszuprobieren.	++
g) Die Autorschaft der Ausstellung ist klar ersichtlich. Die Ausstellung verrät, wer spricht und was Realität oder Fiktion ist.	+
h) Die Ausstellung heißt alle Menschen willkommen, unabhängig des kulturellen Hintergrunds, des ökonomischen Status, des Bildungsniveaus oder der körperlichen Fähigkeiten.	+

2. Merkmale „Anregen“	
a) Die räumliche Umgebung sah interessant aus und lud zum Entdecken ein.	+++
b) Ausstellungselemente haben mich aufmerksam gemacht und mich dazu verleitet, langsamer zu werden, sie zu betrachten, zu interagieren und Zeit mit ihnen zu verbringen.	++
c) 1) Ausstellungselemente haben Spaß gemacht – sie waren herausfordernd, unterhaltsam, faszinierend und intellektuell anregend.	+/–
c) 2) Ausstellungselemente haben Spaß gemacht – sie waren körperlich und sinnlich anregend	+
d) Ausstellungselemente haben soziale Interaktion gefördert und begünstigt. Besucher*innen wurden ermutigt, jemanden zu sich zu rufen, etwas vorzulesen, auf etwas zu zeigen und sich über die Ausstellungselemente zu unterhalten.	+
e) Die Erlebnisse wurden über eine ganze Bandbreite von Formaten (Grafiken, Texte, Objekte, audiovisuelle Medien, Medienstationen, lebendige Dinge, Modelle, etc.) und Sinnen (sehen, hören, bewegen, fühlen, etc.) ermöglicht.	++
f) Es gab interessante Dinge zu tun, unabhängig des vorherigen Wissenstands der Besucher*innen.	+

3. Merkmale „Bestärken“	
a) Die Ausstellung war nicht überfordernd. Die Anzahl der Dinge, die man tun oder sehen konnte, war genau richtig.	++
b) Herausfordernde oder komplexe Stationen waren so strukturiert, dass Besucher*innen diese lösen konnten und im weiteren Erkunden der Ausstellung bestärkt wurden.	– –
c) Die Ausstellung war in sich logisch aufgebaut. Einem verständlichen roten Faden konnte leicht gefolgt werden.	+ +
d) Die Informationen und Vorstellungen der Ausstellung ergänzten und verstärkten sich gegenseitig.	+ +
e) Die Ausstellung baute auf sich selbst auf. ist aus sich selbst verständlich	+ +

4. Merkmale „Sinnstiften“	
a) Ideen und Objekte der Ausstellung waren relevant und konnten in das Besuchserlebnis integriert werden – unabhängig von Vorkenntnissen oder der Motivation der Besucher*innen.	+
b) Die Ausstellung machte deutlich, dass ihr Inhalt bedeutsam ist. Die Inhalte waren zeitgemäß, wichtig und boten den Besucher*innen Anknüpfungspunkte auf individuelle Wertevorstellungen.	+
c) Die Inhalte sprachen allgemeine menschliche Interessen an und scheuten sich nicht vor tieferen oder kontroversen Themen.	– +
d) Das Ausstellungserlebnis fördert eine Veränderung im Denken, Fühlen und der Wahrnehmung der Menschen. Ausstellungselemente regten an, Vorstellungen und Einstellungen zu ändern und/oder Maßnahmen zu ergreifen.	+ –

4. “Rating the critera”

The assessment of the aspects then feeds into the individual rating of each of the four criteria. The ratings 1 to 6 can be given and are defined as follows:

Fig. 4: Following this rating system, the fourth step of the framework asks the judges to rate the individual criteria. Excerpt from Serrell 2025: 5.

Level 1 Excellent—Consistently good Aspects (+'s), with many excellent (++'s)

Level 2 Very Good—Consistently good Aspects (+'s) with very few or no misses (—'s)

Level 3 Good—Mostly good Aspects (+'s), but with some misses (—'s)

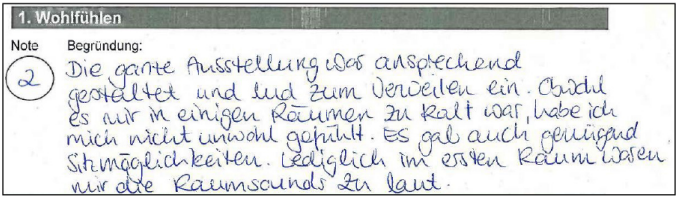
Level 4 Acceptable—A balance between good Aspects (+'s) and missed Aspects (—'s), or a few noteworthy things

Level 5 Misses Opportunities—Mostly missed Aspects (—'s), but there may be a few good Aspects (+'s)

Level 6 Counterproductive—Mostly self-defeating (— —'s), with many missed Aspects (—'s)

The ratings should be backed up by a brief freely formulated rationale.

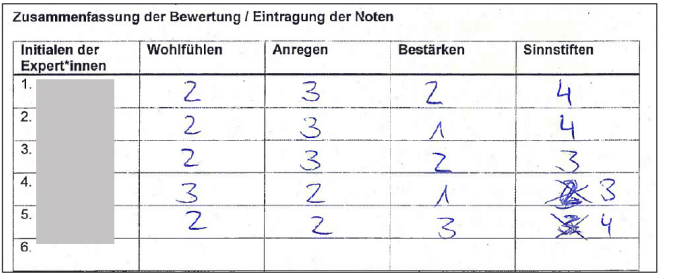
Fig. 5: Example of a judge's assessment of the criterion 'Comfortable' in Pia Says Goodbye. *The person awarded level 2 and motivated this by stating that, all in all, they felt comfortable, even though they found some rooms too cold. While there were sufficient places to sit, the sound level in one particular room was experienced as too loud. Source: Participant E, framework of the DASA research project. 2020, unpublished, 6.*



5. "Comparing the assessments – follow-up meeting"

Afterwards, the participants come together to present and discuss their individual assessments. Serrell recommends starting by all the participants filling in the ratings in the provided grid (Serrell 2006: 61) (Fig. 6) and then picking the most interesting points, for example big differences in ratings, to kick off the discussion. There is no joint rating, but listing a maximum of five positive and/or five negative features of the exhibition that everyone can agree on, helps to formulate the final result (Fig. 7). The framework is designed to emphasize positive aspects. If not many of these can be found or agreed on, there is a strong likelihood, according to Serrell, that the exhibition was not particularly 'excellent' (Serrell 2006: 63). At the end, the participants return once more to their individual ratings of the criteria and reflect on whether they would change them or not. Here one should keep in mind that "[c]onsensus is not the goal, but it is interesting to see if and why people want to change their minds about something" (Serrell 2006: 63).

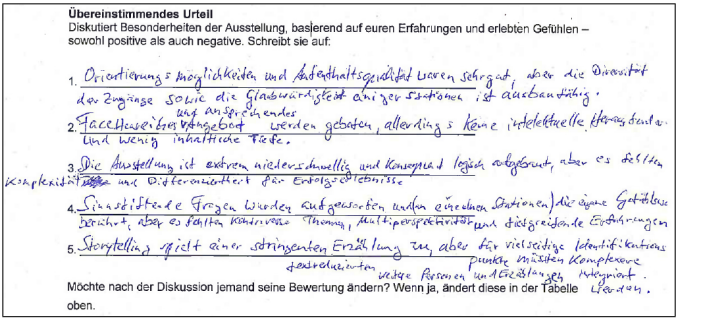
Fig. 6: In the fifth step of the framework, the judges compile their ratings and record them in this table, as shown here in the example of the exhibition Pia Says Goodbye. *Their initials have been anonymized. Source: participant B, framework of the DASA research project. 2020, unpublished, 7).*



Zusammenfassung der Bewertung / Eintragung der Noten

Initialen der Expert*innen	Wohlfühlen	Anregen	Bestärken	Sinnstiften
1. [redacted]	2	3	2	4
2.	2	3	1	4
3.	2	3	2	3
4.	3	2	1	~~3~~ 3
5.	2	2	3	~~4~~ 4
6.				

Fig. 7: The judges have to reach a unanimous decision at the end of the framework, as here in the example of Pia Says Goodbye. *They decided to assign the statements to the four criteria of the framework and the storytelling method. For each statement, they mention positive as well as negative aspects. Source: participant D, framework of the DASA research project. 2020, unpublished, 7.*



Übereinstimmendes Urteil

Diskutiert Besonderheiten der Ausstellung, basierend auf euren Erfahrungen und erlebten Gefühlen – sowohl positive als auch negative. Schreibt sie auf:

1. Orientierungsmöglichkeiten und Aufenthaltsqualität waren sehr gut, aber die Diversität der Zugänge sowie die Glaubwürdigkeit einiger Stationen ist ausbaufähig.
2. Face-to-face Angebot und ansprechendes werden geboten, allerdings keine intellektuelle Herausforderung und wenig inhaltliche Tiefe.
3. Die Ausstellung ist extrem niederschwellig und konzeptuell logisch aufgebaut, aber es fehlen Komplexität und Differenziertheit der Erzählebenen.
4. Sinnstiftende Fragen wurden aufgeworfen und einzelnen Stationen, die eigene Gefühlswelt berührt, aber es fehlte kontrastive Themen, Multiperspektivität und diskutierende Erfahrungen
5. Storytelling spielt einer stringenten Erzählung zu, aber für vielseitige Identifikationsmöglichkeiten destruierenden Punkte müssten komplexere weitere Personen und Erzählungen integriert werden.

Möchte nach der Diskussion jemand seine Bewertung ändern? Wenn ja, ändert diese in der Tabelle oben.

Two elements are essential for the focus of the method: the first is to show, as much as possible, an open mind and a willingness to compromise for a collaborative exchange of ideas, the second is adopting a visitor-centered perspective (Serrell 2006: 25–29). The visitor-centered view aims to expand the experts' professional perspective and, at the same time, reveal overlaps in the assessment. It serves to identify features that meet the visitors' needs and expectations and enable them to have "positive learning experience[s] in the exhibitions" (Serrell 2006: 164). The framework's criteria support this focus and address the exhibition's overall educational performance that comprises all aspects of one's own user behaviour, for example:

- Do I feel comfortable here as a visitor? Do I feel being spoken to?
- Does the content or the presentation enthuse me?
- Does the visit encourage me in any way or does it perhaps even generate a new sense for me?

Or in Serrell's words: "The tool asks you to be you: A person who, like most people, wants to be comfortable, wants to feel respected, wants to feel the time is well-spent. […] And, most of all, a person who, as a museum professional, can explain these responses – both the personal and the universal – in terms that your colleagues can understand and discuss" (Serrell 2006: 26).

The method does not require any technical equipment. All that is needed is:

- the framework as the central tool and guideline,
- a group of six to ten professionals,
- a suitable exhibition,
- a quiet room for discussion.

Putting the group together and selecting the exhibition are the most important preparatory steps. Serrell recommends six to ten experts as judges. In case there are plans to further use the produced material, it is necessary to obtain the consent of all participants and inform them about data protection aspects. The entire process takes one to two days not counting arrival and departure days. The exhibition can be visited independently of each other. However, the preliminary and follow-up meetings should take place as a group and be scheduled shortly before and after visiting the exhibition. The method does not provide for any particular post-processing after the second meeting. Instead, the added value of this analysis lies in the repetition: for Serrell, using the framework repeatedly is particularly effective for familiarizing oneself with the method and thus improving the experts' ability to talk about exhibitions. Already during the second meeting, a further exhibition can be selected for analysis (Serrell 2006: 64). Depending on the situation, the results can also be integrated in final or evaluation reports (Serrell 2006: 69).

Case study

The method was first applied in a German translation in March 2020. This was done as part of a research project by the DASA Working World Exhibition in Dortmund, Germany, on the effect of storytelling in the special exhibition *Pia sagt Lebwohl – Eine*

Ausstellung zur Arbeit mit Tod und Trauer (*Pia Says Goodbye: An Exhibition about Dealing with Death and Mourning*).[7] In this storytelling exhibition[8], visitors accompany the fictional protagonist Pia as she goes through the process of mourning and burial after the death of her grandmother, and in doing so, learn about professional fields in which the end of life is part of people's daily work. In order to determine the impact and the assumed effects of storytelling, the exhibition was evaluated summatively while it was running. This evaluation was carried out using a two-phase mixed methods research design on the basis of complementarity (Kuckartz 2014, 58). The aim was to identify the effectiveness of narrative for visitors' learning experience.

The explorative first part of the evaluation served to describe and assess the exhibition as well as the visitors' user and perception behaviour. For this purpose, the DASA team conducted, in addition to Judging Exhibitions, an overt, non-participatory observation of visitors and standardized written survey. In this context, Judging Exhibitions served to obtain an unbiased description of the general excellence of the exhibition that was independent from the evaluators, as well as to identify variables that might impair the effect of storytelling. In the final comparison of the different evaluation data, some findings of the Judging Exhibitions analysis overlapped with those of the written survey: both experts and visitors evaluated the exhibition's orientation and its narrative approach as essentially positive. In other instances, the results provided by the experts were able to supplement those of the non-participatory observation, as they were able to classify their own visitor behaviour, which also emerged in the observation, thanks to their expert knowledge.[9]

Care was taken to ensure that the selected experts represented a variety of specialist backgrounds in the fields of museum studies and practice (design, curation, education, research). In applying the method, the DASA research team did not primarily aim to promote the experts' professional development. Rather, it was the experts' outside perspective on the quality of the special exhibition *Pia says Goodbye* that was the focus of the research interest. Even though Serrell's method is designed to be used slightly differently, it was possible to apply it without any fundamental alteration in the evaluation. The only modification to the process was organizing an additional final discussion after the second meeting, in which the experts presented their results to the DASA team members involved in the research project.

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7 The project 'Potentials and Limits of Storytelling as an Educational Method in Exhibitions' (2017–2023) includes not only the evaluation discussed here but also a fundamental definition of exhibition narratives as part of the PhD project by Jana Hawig in museum studies at the University of Würzburg.

8 Its special feature consists in strategically incorporating suitable narrative elements that aim to enhance the visitor experience.

9 The evaluation results of Pia Says Goodbye are available at: https://www.dasa-dortmund.de/angebote-termine/angebote-fuer-fachbesucher/forschungsprojekt-pia-sagt-lebwohl (06.03.2025).

Method reflection

With its framework, Judging Exhibitions offers a tool that enables a structured assessment of exhibitions and nuanced statements about the exhibition's excellence. Implementing it in the group affords an intensive exchange on overarching exhibition standards that does not aim for consensus, but rather for reflection on the active shared change of perspectives. On the one hand, the method offers the potential to structure the exchange on exhibitions, on the other, the final joint evaluation provides nuanced statements about the excellence of an exhibition and can positively influence future exhibition planning. However, Judging Exhibitions does not claim to replace visitor studies in the form of empirical social research.

The method is easy to manage in terms of time and personnel. Beyond personnel and travel costs, no further costs arise. The latter can be reduced if the preliminary and follow-up meetings are set up as well moderated online-events. The implementation itself – in particular the meetings – is however a very intensive process that requires commitment and the ability to reflect from the participants. Especially understanding the aspects and their function is more challenging than it may seem after a first reading of the framework. At the same time, this is an opportunity to share thoughts about the quality of exhibitions via conceptual discrepancies, agree on definitions and incorporate further aspects. In addition, this kind of structured exchange about exhibitions is an unfamiliar approach for many museum practitioners that requires a certain amount of openness. If that is the case, the experts benefit from a new way of looking at exhibitions, particularly when taking the visitor-centered perspective into account.

As part of the DASA research project, Judging Exhibitions supplemented methods of empirical social research with a specific evaluation goal and supplied important and valuable findings about the exhibition excellence of *Pia Says Goodbye*, which were also correlated with visitors' assessments. For the exhibition makers of DASA their own exhibition was independently deconstructed beyond empirical research. After some initial confusion about their role (expert vs visitor), the experts arrived at five joint statements in the discussion based on the framework. The subjectivity of the individual assessments was moderated by finding compromises in the group. The implementation with only five instead of six to ten external experts, as recommended by Serrell, can be endorsed without reservation, as already a group of this size was able to embark on an intensive discussion about the assessment of exhibition excellence. One has to take into account, however, that the composition of the group also influences the atmosphere during implementation as well as the joint result, depending on the discipline and individual understanding of roles. This constant readjustment of a group, including the calibrating of concepts, is a specific feature of the method and part of the process.

It has been shown that adaptations of existing analytical approaches can be undertaken quite boldly, because in this case, Judging Exhibitions functioned as a commissioned project. The inclusion of other methods – as in this case study – also offers many possibilities for exploring the quality of exhibition visits. In addition, the format would be a conceivable tool for quality management, for generating funds or for launching a competition.[10] In contrast to Serrell's original intention, the method could also be adapted for interested visitor groups, so that exhibition education, visitors and exhibition studies would be combined. Regardless of this specific application, Judging Exhibitions manages to assess general exhibition excellence. The group-dynamic process also allows for the inclusion of individual viewpoints. This represents a sustainable way to sensitize museum practitioners to visitor-centered needs. You too can be an "excellent judge"!

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10 In Germany, structured evaluation methods such as these are particularly valuable for funding applications, as cultural institutions often have to prove that their exhibitions appeal to visitors and have educational value in order to receive financial support.

Talkback Boards

Reading exhibitions via feedback from visitors

Simon Schütz

Introduction

There are many methods for analyzing exhibitions based on visitors' opinions, for example through qualitative interviews or quantitative questionnaires. However, using talkback boards as a tool in this context is not that common (Howard 2018) and the term 'talkback board', as used by the National Museum of American History (Evans 2011), for instance, is as yet hardly known in the German-speaking world. Yet the method it describes is used in many exhibitions, such as in the project *Ostend // Ostanfang. Ein Stadtteil im Wandel* (Eastend // East Beginning. A Neighborhood in transition) at the Historical Museum Frankfurt (Piontek 2017: 271). Here – and this is a typical feature for the method – a set of questions was displayed on a wall to which visitors could supply answers. Sticky notes are usually provided for these answers, which is why the method is also called a 'sticky-note wall survey' (Deutscher Museumsbund 2019: 33, Piontek 2017: 187). In the English-speaking world, the term 'graffiti wall' is also used in the classification of possible exhibition evaluation tools. Here, graffiti walls are considered as belonging to the category of creative tools, referring to the visitors' creative process of forging responses (Foster 2008: 43, 52).

In the following, we will use the term 'talkback board' since it expresses the essential point in its application as a method of exhibition analysis: the feedback from visitors and not the interaction with the exhibit. By displaying them on the talkback board, the freely expressed opinions of the visitors become a relevant contribution to the exhibition and this appreciation in turn encourages visitors to interact (Piontek 2017: 196–197). Talkback cards are yet another method. They differ from talkback boards in that the questions are not presented centrally but are printed individually on every response card. The difference is not a significant one, but the location for the feedback can have the result that visitors' responses on the talkback board may be perceived as being more public. A further feedback format that needs to be differentiated from the talkback board is the visitor's book. Even though the format of feedback via visitors' written responses is similar, the methods are quite different,

as the feedback via the talkback board is, in contrast to the visitor's book, generated through a question prompt.

Aim of the method

Why is the method of talkback boards an attractive analytical tool for exhibitions? To answer this question, we need to take a closer look at the core of the method. The set-up of recently installed feedback walls resembles visualization tools for ideation used in innovation methods such as Design Thinking – even though this not where the method originated, as talkback methods have already been employed in many fields since the 1970s (Sieburth and Gleisner 1977: 17, Uebernickel et al. 2015: 78–80). In an office context, these sticky notes on a whiteboard stand for inventiveness and forward-thinking planning, whereas in a museum they symbolize the participatory inclusion of visitors. The audience takes part in shaping the content of the talkback board and is thus embedded in a framework of sorts that has been predetermined by the questions prepared by the museum staff. In that sense it is in essence a participatory method.

This participatory aspect has a number of implications for the use of talkback boards as a tool for analyzing exhibitions. A first implication is that the visitors enjoy giving feedback and thus participating in the analysis. That has a positive effect on the quantity of feedback. The second implication relates to quality. Feedback is not only plentiful, but a lot of it is also inconsistent. This fact, which at first glance seems to make talkback boards an unattractive tool for exhibition analysis, is actually its greatest strength: the sheer mass and diversity of the feedback captures the visitor experience in all its variety and breadth, documenting both the unexpected and surprising, but above all the visitors' manifold perspectives. This is because the talkboard gathers statements about the exhibition that result from visitors' immediate experiences and insights. The aim of the talkback board method of analysis is therefore precisely to collect the broadest possible range of impressions that visitors actually take away from the exhibition. The data collected in these circumstances can then be evaluated according to further research questions that are relevant to the museum, in order to achieve the ultimate purpose of applying this method: to obtain new knowledge about the exhibition and to make it productive for its further development.

Step-by-step guideline

The talkback board is a particularly attractive analytical tool for an exhibition if the questions to visitors are phrased accordingly and the spatial environment for the re-

sponses prepared appropriately. The design of the questions provides visitors with a guide for analytically grasping and systematically expressing their own exhibition experience. In addition, the responses are formulated both in terms of time and place directly in the context of the exhibition visit. It is therefore particularly important how the questions are phrased and how the setting for answering them is designed and staged.

1. The conception phase

The conception phase of the talkback board begins by formulating the overarching research interest, such as examining the exhibition concept, the exhibition ambience or the text design (Janelli and Hammacher 2008: 10). This reduces the great number of potential evaluation criteria for exhibitions to a few selected areas of investigation. The next step is about formulating specific questions. These questions need to be open-ended and have to be phrased in a simple and appealing way. The challenge is to find a balance: on the one hand, precision is required, as otherwise the answers' usability for the analysis would suffer. On the other, more open-ended questions also allow for off-topic answers that may nevertheless be relevant to the exhibition analysis. An example would be statements about thematic preferences of a general nature without reference to the exhibition at hand. Such comments can help to detect gaps in the exhibition content that are relevant for the exhibition analysis. One way of resolving these conflicting requirements for formulating the questions is to expand them with textual clarifications. This helps visitors understand what is expected of them and serves to prevent misunderstandings.

2. The implementation phase

Once suitable questions have been found, the next step is to determine the location and the design of the talkback board. If the aim is to conduct an exhibition analysis with the method, it may be advisable to place the talkback board within the exhibition tour rather than outside of it. The advantage in such a case is that the responses to the questions are not filtered by recall, but are reproduced directly as a part of the exhibition experience. But for this it is necessary to avoid any interruption in the performance of the exhibition visit – which refers to the spatial experience that can be described as "engaging with it" (Brandt, Ćurković and Kalinina 2008: 25–28). In order to avoid such a disconnect, the design of the talkback board is staged scenographically, like the exhibition itself, and is incorporated in the exhibition narrative. This investment pays off, because it makes participating more fun and interaction at the talkback board becomes part of the exhibition experience. Such design considerations also relate to the way in which the answers are presented on the board: an 'extra-ordinary' feedback format can increase the enjoyment of commenting.

3. The follow-up phase

Downstream, but all the more crucial, is the follow-up effort. Further resources are required for finalizing the project and evaluation: the feedback has to be analyzed and converted into applicable results. The talkback board method does not include its own particular procedure for analyzing the results, since it is a data collection tool. For the data analysis, other methods are applied that may come from empirical social research, such as theoretical coding, qualitative content analysis, or thematic coding (Flick 2011: 387–416). But many creative methods from design thinking can also be applied for this purpose, provided they are suited to processing a large amount of information (Uebernickel et al. 2015: 114–125). Which evaluation method is the most suitable also depends on the purpose for which the talkback board is used.

The effort in terms of time and personnel can be divided into preparation, implementation and follow-up. Preparations can involve as much work as setting up a small exhibition if the talkback board is to be staged in an elaborate scenographic way. The extent to which external service providers should be brought in will vary depending on the size of the project and institutional factors. The implementation effort is determined by the length of the investigation. Contrary to a common misconception, operational staff is essential (Foster 2008: 43). Depending on which forms of feedback have been chosen or scenographic ideas developed, material has to be replenished or space created for new comments. The staff can also be deployed to encourage people touring the exhibition to participate. The amount of work involved in the follow-up can vary from relatively compact to time-consuming, depending on the selected form of data analysis.

Case study

For the Museum of Industrial Culture in Nuremberg, considerations to analyze the permanent exhibition became particularly relevant when a fire protection upgrade offered the opportunity to rebalance the content of the permanent exhibition and to update the forms of presentation in keeping with the times. In order to take into account the visitors' wishes in these improvements, the museum initiated the project *The Walk-In Visitor's Book*, designed as a scenographic talkback board.

Fig. 1: Welcome to The Walk-In Visitor's Book, © Museum for Industrial Culture.

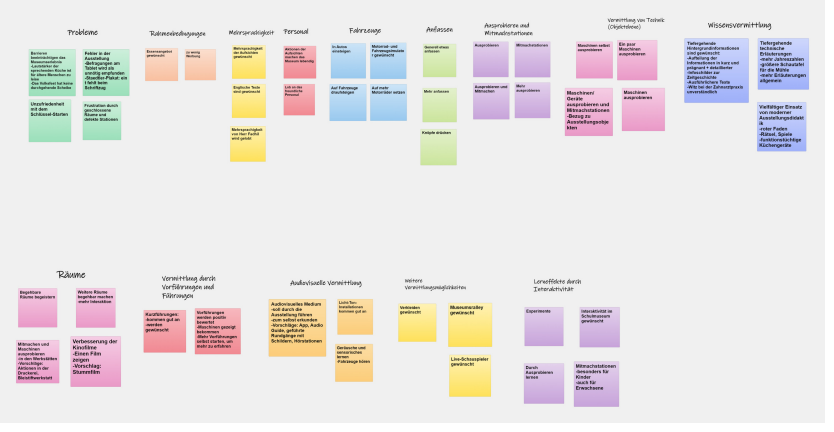
The Walk-In Visitor's Book is located in the permanent exhibition of the Museum of Industrial Culture, featuring the period from industrialization to the present. When the museum opened in 1988, the form of presentation used in the permanent exhibition was particularly innovative. Rather than being didactically patronizing, it created emotional connection, with various staged spaces, such as a workers' social clubhouse, a barbershop or a grocery store showcased along a street scene in a decommissioned factory. These pioneering spatial stagings are considered the first examples of a scenographic exhibition design (Jäger 2020: 44–45). So already for museological reasons, there is an obligation to treat the existing exhibition architecture with due care, especially since many of the displays still elicit great public delight today. The *Walk-In Visitor's Book* aimed to identify affinities of the museum audience and gather suggestions for redesigning areas in need of attention.

The research interest of the analysis focused on three areas: firstly, the motivation for the visit and thus the visitors' expectations; secondly, the thematic affinities and thus the exhibition content; and thirdly, the forms of education preferred by the audience. In considering these three areas, an attempt was made to obtain as comprehensive a picture as possible of the exhibition experience.

The appropriate questions emerged from reflecting on the motivation for the visit and the considerations of what would be the alternative to the museum visit: presumably an afternoon on the couch. This brought up the idea to ask: "What gets

you off the couch?", setting the tone and making it easy to find similar phrases for asking about the content, "What knocks your socks off?",[1] and regarding the preferred forms of education: "What gets you going?" Since all three questions permitted an object reference, there was scope for creative ideas and the theme of the fair presented itself, because a model of the Nuremberg folk festival could be seen in the immediate proximity of the location designated for the survey. Based on this, exhibition units were developed and built by the museum's technicians in collaboration with an external graphics and exhibition agency. Suitable objects were selected for the questions described above and were used, together with the respective question, to create scenographic ensembles in a style reminiscent of fairground stalls. For the question, "What gets you off the couch?", a 1950s couch was transformed into a swing boat. Visitors could insert flaglets into small holes in the beam after writing down their answers on them. The text layer with the questions appeared on wooden sandwich boards. Another setting showed two vehicles: the classic moped Mars Monza and a children's pedal car from Ferbedo, for the question: "What gets you going?" Both vehicles were mounted on a round wooden disk that represented a merry-go-round. For the question "What knocks you off your socks?" (in literal translation "What knocks you off the stool?"), three different stools were shown and staged as a lottery booth. Here too, the flaglets could be inserted in pre-drilled holes. The entire scenery was framed by a string of lights, encouraging the visitors with its appealing decoration to participate.

Fig. 2: Overview of the feedback on the question "What gets you going?" © Museum for Industrial Culture.



1 The German expression 'Was haut dich vom Hocker' literally translates to 'What knocks you off the stool?'

A creative services agency was consulted for developing the scenographic and scientific design, and the project was facilitated by the museum supervisory staff, which consisted particularly in replenishing feedback material and freeing up space for new comments.

After the phase of data collection was completed, the feedback was evaluated. The KJ method was the most suitable one for processing the heterogenous mass of data from the *Walk-In Visitor's Book* and is used in museums in an adapted form under the term 'affinity diagram' (Brüne et al. 2016, Fackler 2018). In this method, heterogenous data can be assigned equal value, as the individual feedback is interpreted and statements that relate to a research goal are identified in a bottom-up process (Iba, Yoshikawa and Munakata 2017). For the *Walk-In Visitor's Book*, this goal was to incorporate the visitors' feedback into the redesign of the permanent exhibition, so that statements about the present exhibition were extracted from each piece of feedback. However, in many cases it was also possible to draw conclusions about the characteristics of the current audience, which led to a second and separate evaluation category. In both cases, the feedback was interpreted and sorted into larger units of meaning. A summarizing statement was formulated for each of these units of meaning, so that in the final result of the analysis, different statements were able to co-exist and complement each other.

Method reflection

Reflecting the *Walk-In Visitor's Book* clearly shows the strengths and weaknesses of using talkback boards as a method of exhibition analysis. Even the ostensibly simple method of talkback boards requires a considerable effort. To achieve the goal of obtaining as comprehensive a picture as possible of visitors' impressions of an exhibition, it is necessary to keep a talkback board set up for a longer period of time. Even if the exhibition being analyzed remains the same, the visitors change and come with different expectations. School classes, for example, provide different feedback to the talkback board than families, whose feedback may differ during the summer holidays from that around Christmas. Finding out which feedback is seasonal and which is permanent is only possible with a longer runtime. A longer runtime requires a higher material and personnel effort, which increases the overall effort. This shows that the method cannot be implemented quickly, but is connected with an intensive planning and implementation effort in terms of time and personnel and also a high material consumption.

Fig. 3: Insights can be gained from any feedback. This was also the case with the artwork created by younger visitors, © Museum for Industrial Culture.

This effort is worthwhile, considering the broad range of feedback. Although not all visitors answer all the questions, the responses come from a wide variety of people. In the *Walk-In Visitor's Book*, we noted that a lot of the feedback was written with clear comments and without spelling mistakes. But we also collected flaglets that showed that the person writing their comments had trouble formulating and writing their sentences (perhaps due their age or lack of practice with this form of feedback). The fact that we received such a wide range of feedback is an asset for the data collection and a boost for the method in capturing the most diverse experiences of the exhibition. Another strength of the method is the openness – and maybe also the lack of control – in the questions and participation, as it can lead to surprising feedback. For example, in the *Walk-In Visitor's Book*, a 'freshly minted' romantic couple left a message on their flaglet about just having had their first kiss. This comment did not specifically relate to the question on the talkback board, but provides the

analysis with the information that the permanent exhibition was used as a place for (romantic) leisure pursuits. In conclusion one can say that the method can be used particularly effectively in cases when you want to use these results to alter or modify the analyzed exhibition. Here, the talkback board offers a tool for visitors to have a part in shaping future exhibitions with their suggestions.

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ExhibitionScorecard

Measuring success with metrics

Sabine Fauland

Introduction

For many years, the Austrian Museums Association has been looking into the question of what museums can use as a measure of success instead of visitor numbers, because – apart from the fact that the museum community is generally reluctant to talk about numbers – it is precisely the visitor number that is an unsatisfactory metric for making statements about the quality of an institution. Museums have an educational and research mandate they need to fulfill, but relevant topics are not always the ones that draw the crowds. It is also important to remember that what appeals to large amounts of people does not necessarily have to be of high museological quality and meet the museums' own standards. However, since the concept of visitor numbers is particularly easy to comprehend for stakeholders, especially sponsoring organizations and funding providers, it remains the most requested metric in the museum sector. It therefore comes as no surprise that museums are reluctant to present niche productions or difficult-to-sell research results on any significant scale. From a business point of view, it makes more sense to opt for cash cows and stars. The fact that museums as custodians of the artistic, cultural and natural heritage of a region, a country or state cannot per se be economically profitable[1] should actually give them enough artistic and scientific leeway to align their exhibition practice with their collection and also dare to go for experiments.

One should also bear in mind that museums as 'creative agencies' have an inherent and thus understandable aversion to measuring success – in the creative laboratory, one is keen to study and experiment and not apply the yardstick to

1 Apart from museums that are highlights for cultural tourism and often generate a significantly higher self-sustainability rate, the average self-sustainability rate of a museum is around 10 to 15 percent. This can be considerably higher with museums that operate on a volunteer basis, since there are no personnel costs.

everything.[2] Nevertheless, we can't do completely without numbers, which is why the Austrian Museums Association has developed a MuseumScorecard based on the Balanced Scorecard (BSC), the quintessential management tool (www.museums-scorecard.at). Developed by David P. Norton and Robert S. Kaplan in the late 1980s as a performance measurement system, the BSC aims to use monetary and non-monetary indicators to reflect a balanced view of corporate objectives. Typically organized in four perspectives (financial, customers, internal processes, research and development), BSC combines objectives, metrics, targets and measures that are intended to lead to the desired business success (Kaplan and Norton 1992).

Aim of the method

The idea of the BSC was further developed by the board of Austrian Museums Association as a tool for measuring the quality of institutions as well as for internal design processes and external reporting in several workshops that were organized by the ICG Integrated Consulting Group, Graz, taking into account the everyday practice of the museum. The key performance indicators considered important in the workshops were assigned to nine perspectives, which are to be understood as offers for further in-depth analysis. Not every perspective is equally relevant for individual museum or exhibition organizations.[3] The museum is considered as:

- a store of cultural memory, in which the behind-the-scenes work involved in collection activities is showcased,
- a site of non-university research, where research projects and research funds are the focus of activities,
- an extracurricular educational institution and a place of lifelong learning that focuses on the visitors,
- an inclusive place for everyone, where accessibility and measures to promote inclusion and diversity are top priorities,

2 Museum management and quality in museums have been pushed out of focus in favor of other topics such as inclusion, participation, digital transformation, and sustainability, partly because there was nothing new to add to the findings that had been published so far. Aside from various books on quality management in cultural organizations and a number of studies on the impact of museums, there is some older recommended reading (Anderson 2004, Fliedl 2011, Nowacki 2005, Reimitz 2013, Walz 2011, Weil 2002). I would also like to refer here to the EU project *MOI Museum of Impact*, in which another extensive quality discourse was launched in 2020–2022, but specific evaluation tools were not used. Website of the MOI Museum of Impact: www.museumsofimpact.eu (05.08.2024).

3 For example, if the organization behind an exhibition is not a museum or does not have its own collection, this perspective is of no relevance.

- an important place of encounter between work and home ('third place'), whose significant features include returning visitors, feedback and barrier-free access,
- a regional cultural institution whose impact is rooted in the region,
- a climate activist that puts the 'green' museum to the test,
- an employer who takes fair remuneration and employee satisfaction into account,
- an economic factor, since our deliberations could not completely ignore money.

This holistic perspective on museum practice enables all museums, regardless of their type and size, to emphasize their unique features and success factors. After all, a regional museum that has only 2,000 visitors per year can be an important regional cultural institution because 80 percent of the visitors come from the direct vicinity and tour the museum with a guided tour. A volunteer museum can be an important social meeting place because several dozen volunteers find meaningful work there. A large museum with many international visitors is a significant economic factor. A museum, no matter what size, that goes on strike for the climate every Friday is an important seismograph of society. A museum with very few staff that handles a large number of loan requests per year is an important preserver of cultural heritage and so on.

The MuseumScorecard is not only a tool to communicate the success of museum practice to external stakeholders, it can also help the team to plan strategies and put visions into practice. It can be an incentive to set up one's own indicators within one's organization as a measure of success, which support the attitude and the goals of the museum. The MuseumScorecard tool is optimized when it is accompanied by a benchmarking process, i.e. a comparison with like-minded and similar museums, in order to better gauge the collected data and to arrive at better or different results through peer consultation and shared experimentation. The best museum practice always comes as joint efforts in the form of cooperation.

Step-by-step guideline

To perform the specific task of analyzing an exhibition, the MuseumScorecard was modified on the indicator level to an ExhibitionScorecard, applying the same perspectives exclusively to the medium of the exhibition, with a clear focus on quantitative analysis. There is, of course, one thing one has to keep in mind: Without comparable data, for instance, from previous years or other projects, the figures are not so (or less) relevant, but they can always be used for setting goals in the team. These metrics are a good means of illustrating the priorities of individual exhibitions or the attitude of the museum team in question. In contrast to the MuseumScore-

card, which, besides general information about the museum organization (figures about the team, budget, visitor numbers etc.), also correlates the figures entered in the perspectives via the programmed database and explains them in graphics, the present attempt at an ExhibitionScorecard solely relies on the significance of the metrics themselves. The ExhibitionScorecard is thus an inventory for each exhibition, which can either be related to a museum mission statement[4] or compared to another exhibition.

In the operational process, the following absolute as well as relative metrics have to be entered in a table:

1. Collection (relevance and visibility of the collection)

- Proportion of the number of exhibited collection objects to the number of items on loan
- Proportion of exhibition space to depository space
- Number of collection objects processed scientifically or conservationally by the exhibition (in relation to the entire collection)
- Number of the digitized and publicly accessible objects[5]

The metrics from the area of the collections reveal the significance of special exhibitions: The smaller the surface area, the more difficult it is to communicate new topics and research results. If only a few objects from one's own collection are used, the topic is probably not one that comes from one's own collection or is not a part of its focus. In the context of exhibition productions, objects can be restored or at least undergo preventive conservation treatment. Exhibitions also offer the opportunity to make objects from the collection accessible to the public beyond the exhibition space through digitization.

2. Research (knowledge production)

- Number of research projects initiated or integrated
- Number of cooperation partners from the field of research and science

4 For example, if the mission statement focuses on inclusion or climate activism, but the ExhibitionScorecard does not show any further activity in these areas, the attitude reflected in the mission statement cannot be detected in the exhibition.

5 This metric represents the data sets provided online in the reporting year. At least the following categories of the object data sheet should be publicly accessible: inventory number, object designation/title, date of access, material/technique, dimensions, artist/maker/producer, dating.

– Number of publications[6]
– Number of hours invested by research staff (internal and external)

The research perspective shows whether and how much in-house but also external research has been included in the project. Exhibitions are also part of the research cycle, as the collections should also be part of knowledge production and the results they produce should be widely presented and discussed.

3. Education (knowledge acquisition)

– Number of analogue and digital educational programmes carried out[7] (tours, workshops, etc.)
– Number of people who participated in educational programmes in relation to the overall number of visitors
– Number of booked school programmes
– Number of cooperating educational institutions[8]

Imparting knowledge is a core task of museums. This offers the opportunity to showcase the great strength of museums – personal education on the principle of dialogue with original objects or at the original location.

4. Inclusive place (museum for everyone)

– Number of inclusive educational programmes and tools
– Number of cooperations with organizations of people with disabilities in the context of the exhibition
– Barrier-free accessible exhibition space in percent
– Number of opening hours per week, of which freely accessible

Museums and exhibitions should be accessible to as many people as possible, which is why the perspective of inclusion is a particularly important factor. All metrics aim to make visible the efforts being made to open cultural institutions to a broader public.

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6 Catalogues for permanent or special exhibitions, blog posts, articles in professional journals and publications by external publishers.

7 See: „Digitale Besuchsstatistik – Vorlage eines Zählsheets. Empfehlung der ARGE Digitales Museum im Rahmen des Museumsbunds Österreich“ (“Digital visitor statistics – Submission of a counting sheet. Recommendation of the ARGE Digital Museum as part of the Austrian Museums Association”), http://museumspraxis.at/?p=264 (05.08.2024).

8 Educational institutions include: kindergartens, schools (primary and secondary), vocational schools, colleges, academies, universities, (technical) colleges, etc.

5. Place of encounter ('third place')

- Duration of stay
- Collected feedback, thereof primarily positive
- Number of places to sit and rest (seating) and non-consumption zones[9]
- Number of visitor surveys conducted[10]

Museums are also important places of encounter. The crucial factors here are how much time visitors spend there and whether there are non-consumption zones and sufficient seats where visitors are able to process and discuss what they have seen. Feedback and visitor surveys are used to evaluate the place of encounter. Whoever gives feedback takes an interest.[11]

6. Regional cultural institution

- Visitor number, thereof, visitors from the region
- Number of artists or contributors from the region
- Number of events in the fringe programme
- Number of media reports

The perspective with figures on regional cultural institutions takes into account that museums and their exhibition activities are not only of great importance for (inter)national cultural tourism, but also have great regional cultural significance: this not only evaluates the regional audience, but also how many of the contributors come from the region and whether the exhibition is covered in the local media.

7. Climate (attitude)

- CO_2 emissions per exhibition
- Re-used exhibition furniture in percent
- Number of climate-related topics
- Number of 'green' measures as part of the exhibition[12]

Climate change is also a hot topic in the exhibition community and is reflected in the seventh perspective. While calculating the CO_2 emission is particularly complex,

9 Seats were defined as the metric here.

10 The metric used here is the number of visitors surveyed.

11 Staff from the visitor services or people who – in smaller museum spaces – work at the front desk or information desk can usually provide a very good estimate.

12 Introduction of waste separation systems, electricity and water saving measures, reusable visitor information, etc.

other metrics are easier to quantify: how many environment protection measures were implemented in the exhibition, and how many climate-related topics are included in the exhibition and the educational programme? Is a certain percentage of the exhibition materials available for re-use in-house or elsewhere? This can show a commitment to the principles of the Museums For Future (http://museumsforfuture.org/).

8. Employer (human resources deployed, learning organization)

- Number of staff hours: full-time / freelance / volunteer
- Number of internal evaluation discussions after opening of the exhibition
- Number of the cross-departmental team meetings on the development of the exhibition
- Number of sick days taken during the exhibition production compared to the average number of sick days per year

More than 10, 000 people are employed directly by museums in Austria, both full-time or as volunteers,[13] not including the numerous contractors. This makes it all the more important to take a look at the museum as an employer. In the context of exhibitions, the following questions are of interest besides the hours worked: is the museum a learning organization? Are there evaluation discussions after the opening of the exhibition? Does inter-departmental work precede the staging of an exhibition? Does the exhibition put undue pressure on the team?

9. Economic factor

- Production costs per m^2 of exhibition space
- Self-sustainability ratio for costs of exhibition production in relation to admission revenues plus third-party funds
- Total expenditure per visitor
- Total revenue per visitor

Finally, the economic factor perspective can provide insights into the classic management world of figures: production costs, self-sustainability ratio as well as revenue and expenditure per visitor. The efficient use of mostly public funds should also be relevant within the museum, and in combination with the other perspectives it can be examined whether the use of the funds has paid off (Muchitsch 2018).

13 See: Statistik Austria, „Museumsstatistik", https://www.statistik.at/web_de/statistiken/menschen_und_gesellschaft/kultur/museen_und_ausstellungen/021268.html (05.08.2024).

Constant monitoring and controlling should be a fundamental part of museum management; after all, this is not primarily about measuring success but about the responsible and transparent use of mostly public funds that the museum administers – regardless of whether a museum is run by full-time or volunteer staff, what type of museum it is and how large it is. The degree of sophistication of the systems used (data base, excel sheet etc.) is of little relevance, as long as they always ensure an overview of what has been achieved and spent. This means that a substantial majority of the figures used for the ExhibitionScorecard should be readily available or easy to collect. Many of these can be found in annual museum statistics and internal reporting (annual reports, funding reports etc.) as well as in any existing cash register and booking systems, or are automatically generated in the course of the exhibition's production (e.g. lists of the exhibited objects, restoration reports, condition reports etc.).

For the figures that are not yet available, one can set up a certain routine for collecting the data at the beginning of the exhibition project, as well as the retrograde-analytical data, such as visitor feedback. Compared to qualitative methods, quantitative methods are neither particularly time-consuming nor resource-intensive. Once the team has worked out a procedure or a counting sheet, this form of data collection can be easily and effectively integrated into the museum's daily routine or exhibition practice. One should allow twenty hours for initiating the implementation of this method, while data collection should take a maximum of one hour per perspective.

Case study

A conversation with Peter Nömaier, commercial director of the Sigmund Freud Museum in Vienna, has confirmed that the ExhibitionScorecard is generally considered interesting, since it sheds light on many aspects of exhibition practice and focuses on the core of museum work – the collection and its communication. In museum practice, however, in particular in day-to-day exhibition operations, there are a number of challenges. While visitor numbers, ticket sales, and participants of educational and fringe programmes are constantly monitored, other indicators for internal management-related performance measurement are currently not relevant. There is a lack of time and personnel resources for monitoring further indicators that have so far not been part of the collection process. As a result, Peter Nömaier rather sees the ExhibitionScorecard as a tool that can be used in strategy workshops or annual planning to define selected quantitatively measurable targets for the team already in the exhibition planning stage. The ExhibitionScorecard thus seems to him to be only partially suitable for general quality measurement in the course of the usual exhibition production and runtime, since the amount of resources required for

collecting further indicators appears to be too high in proportion to the knowledge gained. The Sigmund Freud Museum, a medium-sized establishment with around twenty employees, has less staff and infrastructure at its disposal than larger museums. In largescale institutions, which are usually required to present a broader analytical depth in their reporting, the ExhibitionScorecard can be used much more easily and efficiently in normal operation.

Method reflection

On the whole, it should be noted that this method says nothing about the intrinsic quality of the exhibition itself, about the state-of-the-art knowledge on its topic, or how it is communicated through design and storytelling. Rather, the ExhibitionScorecard can, for example, provide information about how the museum's team itself approaches the collection, to what extent it adopts a visitor-centered perspective, what significance it attaches to research and education, and much more. If the ExhibitionScorecard (as well as the more general MuseumScorecard) is regularly used and interpreted and discussed with the people involved, the method contributes sustainably to the further development of both the team and the museum.

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Digital Models

Reconstructing and understanding exhibitions spatially

Felix Koberstein and Lívia Nolasco-Rózsás

Introduction

The digital modelling of exhibitions is a new form of multidimensional reconstruction that not only serves to recreate auditive and visual dimensions but entire object-space constellations. Beyond their significance for the museology and historiography of exhibitions, digital exhibition models also offer innovative educational and structural qualities for museum practice and archival work. The range of possible applications outlined above indicates that, depending on how they are used, different functions are required, which in turn necessitate different approaches to front- and backend design. Thus, the design of digital models of past exhibitions depends on various factors, such as the data available from the archive material or the intended users.

Based on the current state of research, we can, for the sake of simplicity, differentiate three categories: firstly, there are the so-called *digital twins*, digital reconstructions that attempt to replicate as accurately as possible exhibitions that have already taken place in physical form and thus fulfill historical and archival functions. One example is the three-dimensional model of the first *documenta*, the result of the work of an art-scientific research group led by by Kai-Uwe Hemken at the Kunsthochschule Kassel (Hemken 2023: 400–406).[1] The model shows the rooms of the Fridericianum, at the time still used exclusively as an exhibition space, together with the artworks on display, according to information obtained primarily from archival material. A special feature here is that it was not developed as browser-based software, but for use with VR goggles in the museum space, offering only limited access as a result.

Secondly, digital models and modelling procedures are used, often in addition to physical reenactments or reconstructions, in hybrid constellations of digital and physical elements. An example is the project *File Under: The Work / Björn Lövin*. Lövin

1 A video walk through the application by Kai-Uwe Hemken is available here: https://www.youtube.com/playlist?list=PLGW8aXSoptPA00fsI4q5l5C97E1yaIgVM (05.08.2024).

was the first Swedish artist who created artistic environments. Three of these environments were reconstructed for the exhibition *The Surrounding Reality*, based on the research by Peo Olsson, Katarina Sjögren and Jonas Williamsson. This subsequently resulted in the book *File Under: The Work / Björn Lövin* (2018), which contains renderings of digital reconstructions of Lövin's *environments*. At first glance, these renderings resemble the photographic documentation of an actual exhibition, blurring the boundary between fact and fiction, past and present.

In the course of our research, a third way of digitally engaging with past exhibitions emerged, which we call emulation. The term originated in computer technology, where it is used for software or hardware that allows a HOST computer system to act like another GUEST computer system. The digital model of the past exhibition *Iconoclash*, which here serves as a case study for this methodological approach, can be seen as an emulation (Koberstein and Nolasco-Rózsás 2023: 205–214), as it digitally replicates the physical exhibition and, at the same time, updates its functions, like programming an outdated computer game with new software. The digital space of the exhibition is a walk-in simulation of an actual physical space. However, what happens during the virtual visit differs from an actual walk through a museum exhibition like *Iconoclash*: the exhibited objects, represented by digital models, alter their location and are constantly rearranged, according to an algorithm based on the behaviour of the visitors. Likewise, an attempt was made to emulate other phenomenological dimensions, such as the soundscape and ambience, using generative artificial intelligence.

Aim of the method

Our article focuses primarily on the methodological steps towards a specific digital model. In this context, the process of creating the digital model is to be understood as the actual methodological act of exhibition analysis. The model thus becomes the result of the analysis and can be regarded much like a research report. At the same time, however, it can also be a methodological tool: since the development of the software and the architecture of the content management system behind it is ideally processed in sync with developing the material and honing the research hypothesis, the interactive model allows us to reveal, beyond the often linearly constructed curatorial narratives, implicit thought patterns of the actors, which, among other things, can be visualized by isolating and focusing on particular groups of objects. This is made possible, for example, by using machine learning and filter algorithms, which can be used to relate the most diverse exhibition elements to each other via predefined aesthetic, content-related and context-dependent research parameters. Digital models are also helpful tools for qualitative data collection, such as surveys

of contemporary witnesses, since they permit a new walk-through of no longer accessible situations, thus allowing a different form of *Go-Alongs*.

Spatial science research in particular can benefit from the method of digital modelling of exhibitions. Digital exhibition models, insofar as they are represented in a digital 3D space, can primarily visually illustrate the spatial topographical relationships between the individual exhibition elements. They make the compositional relationship between objects, discursive and scenographic elements and the architectural specifics of the exhibition space comprehensible and, in a sense, re-experienceable. In this sense, they offer a new form of representability not only for past exhibitions, but also for any kind of temporary constellation, such as performances, happenings or concerts. One of the strengths of digital models is the ability to adjust dynamic variables, such as camera perspective, lighting, acoustics etc. Also, it is much easier to view constellations relationally, since current 3D modelling software also allows viewing several models at the same time. These new possibilities for representing and interacting with archival and research materials provide scholars with tools that will have long-term implications for methodological approaches to exhibition analysis. The following guideline is a suggestion of the methodological approach drawn from our own practice (Koberstein et al. 2023: 196–204).

Step-by-step guideline

1. Collecting material

At the beginning of the research process, the primary concern is to obtain access to the widest possible range of information about the various theoretical and sensory dimensions of the exhibition to create a comprehensive basis for further research and subsequent conversion into the concept of the model. It is not only important to know how the exhibition was developed conceptually and arranged spatially, but also how it was designed, communicated, marketed and reviewed. For this, it is helpful, besides examining the documentation archived by the institution, to get in touch with curators, advisers and members of the exhibition team in order to gain access to recollections and personal documents. Ideally, data acquisition should yield information about visual, acoustic, written and, if applicable, haptic aspects of the exhibition and its context of origin.

2. Acquisition of rights

One task that should not be underestimated and that is relatively time-consuming is clarifying image and performance rights with the respective rights holders. In case

of a publication online, it is necessary to find a suitable license agreement for the online presentation of artworks in cooperation with various collecting societies – in particular VG Bild-Kunst and its European sister organizations. Also, the rights holders have to be found and contacted if they are not represented by a collecting society. From a legal point of view, a digital exhibition model that is published online has more similarity to a website or publication than to a physical exhibition. This means that, with regard to online usage rights, one has to obtain the permission of the rights holders of the exhibits, but not necessarily the consent of the owners.

3. Data organization

It is recommended to structure the collected data in an asset management system, as used for archival data bases, for example. In this way, not only the typical meta data can be stored, but also conceptual information, such as the responsible curators or references to thematic connections; data that are particularly important for the later model development, as they provide information about the content architecture of the exhibition. Online repositories can be an equally important tool for storing and downloading historical image and video material, as well as documents. Cloud storage, which can be used both via the internet and with client applications, is another helpful organizational structure, as it can be accessed by multiple end users simultaneously. Here, the collected files can be deposited, identified and organized using a labeling system, and linked to the two already mentioned databases. The unambiguous and systematically organized labeling is an important tool for the further research process, since important information, such as the placement of the exhibits in the exhibition or the respective curator, can already be derived from the codification. The 'unique code' and the organizational structures of the respective databases can be described in a guideline document so that they can be understood by the various groups of actors involved without the need for extensive instruction.

4. Mapping

The next step is mapping the data, which is usually a graphical relational representation of information to clarify the connections between them. This is often done on the basis of the floor plan of the exhibition where the research material can be arranged in clusters. This step is primarily about closing gaps in research by linking the collected material. In particular, the spatial arrangement of the exhibition can in this way be reconstructed in relatively great detail, depending on the abundance of available material. From an (art-) historical perspective, this offers the opportunity to update the associated information as closely as possible to the final setup by comparing and re-arranging the material. The reconstruction of the spatial constellation of exhibition elements and the exhibition concept is the result of a time-con-

suming research process. Besides mapping the exhibition structure, the aim is also to achieve a better understanding of the connection between the spatial arrangement of the exhibition elements with the underlying thematic scheme. It is also by no means uncommon for the data from exhibition archives to present problems due to poor documentation, with inventories not matching the listing of artists in the catalogue or exhibition plans showing diverging scenographic layouts. For this reason, it is important to compare several sources, if available. Photographic images of the original exhibition setting have proven to be particularly helpful here.

5. Moving on to developing the concept of the digital model

Subsequently, the investigation moves on to a more conceptual work phase in which the modes of presentation and operation of the digital model are defined. Here, archival material such as early exposés, meeting minutes or correspondence between curators prove helpful in further developing the concept of the respective exhibition units. Visual information about the scenographic elements and the discursive exhibition texts should also be given due consideration in this act of conversion. It can prove beneficial to involve former collaborators at this point in order to discuss the necessary adjustments, but also the intended design interventions for the digital model. Consultation with the artists and curators is recommended, particularly in the case of complex spatial installations thar are difficult to document, or objects whose representation is difficult to visualize with digital platforms.

As mentioned in the beginning, a distinction needs to be made between the preparation of the archive material and its further processing when describing the necessary equipment. While preparing the, often analogue, documents resembles the digitization processes carried out in most of the institutional archives, the further processing – setting up the 3D scene, designing the user interface and user interaction or producing 3D objects – varies depending on the technical concept. In addition, licenses are required for software packages that are needed for production. Particular formats and quality demands may necessitate more sophisticated book or document scanners for preparing the documents. Structured storage requires data base and cloud storage systems, which are however already in use in the same or similar form in many museum institutions. Depending on the chosen digital form of the model, the visualization of the data as it were, it is very likely that the final production of the 3D scene and the other 3D assets cannot be achieved without outside assistance: often, there is a lack of appropriately skilled personnel and the necessary processor and graphics card performance.

Regarding the time and personnel required, it is difficult to make a general statement, since, as already mentioned above, the effort involved with the specific work phases of modelling can vary greatly. What can be said, though, is that the greater the amount of data to be incorporated, the more time is required, and the larger

team should be. The more interdisciplinary an exhibition is designed, the more interdisciplinary the team needs to be.

Case study

As part of the international research project *Beyond Matter* (2019–2023), the exhibition *Iconoclash. Jenseits der Bilderkriege in Wissenschaft, Religion und Kunst* (ZKM | Karlsruhe, 2002) (*Iconoclash. Beyond Image Wars in Science, Religion, and Art*), a seminal work for exhibition history, was digitally modelled. It showed art works from different periods, religious images and visual manifestations of political circumstances, but also scientific exhibits (Fig. 1).
Iconoclash was conceived by a small group of curators and scientific advisers led by Bruno Latour and Peter Weibel and produced by a large number of collaborators. In addition to archival research, the exhibition curators and other involved parties were contacted to discuss the necessary modifications, but also the intended design interventions for the digital model. Some members of the exhibition team were invited to online interviews (Fig. 2). These conversations, which were conducted on the basis of a guideline, turned out to be extremely important sources, since, having had to rely on mostly text-based archivalia, they offered a real-time reference that we had previously only been able to access via outcome reports of the planning meetings. In addition, there were materials from the institutional archive, of which the aforementioned outcome reports only constituted a fraction (Fig. 3). The archive material that had already been digitized also needs to be considered here.

Originally, *Iconoclash* was planned in a structure of cells, i.e. in areas or groupings of displays, each representing a specific thematic context. Since the exhibition was designed by several curators and consultants, the end result presented itself in a complex rhizomatic expography (Fig. 4), in which visitors could move around freely without having to follow a specific path. In addition to the discursive and educational text elements on the walls, there were banners suspended from the ceiling of the exhibition hall with declarations, quotations and questions such as "Fetishists!" or "Why are images so ambiguous?", intended to give the visitors food for thought and encourage them to adopt a critical attitude.

For the original exhibition it was essential that the visitors' path through the various thematically delimited exhibition cells was not predetermined, which is why it was decided to disregard modelling the architecture of the ZKM | Karlsruhe. This aspect was developed by implementing an algorithm that dynamically changes the layout of the exhibition based on user movement; this has the effect that not only does the visitors' path through the exhibition space change each time, but the scenography is also in motion (Fig. 5). Since this clustering algorithm, which is also used on YouTube or Spotify for personalized recommendations and suggestions, taps into

the interests of the users, the conceptual research served as a basis for the tag system that provides the parameters for setting the algorithmic dynamics in motion. For this purpose, every artwork is tagged with a series of keywords that refer, among other things, to the subject area, the curatorial selection or the original placement in the past exhibition. As a visitor, you generate, through your contact with the objects, an ever more detailed profile from one observation to the next, which is 'fed' by the interaction, i.e. entering the thematic cells and the length of time spent with the individual exhibits.

The starting point of the exhibition was originally on the first floor of the ZKM, which was reconstructed exclusively with video footage for the digital model, from the entrance door via the *sound corridor* to the iconic staircase. The texts and background information on the exhibits, originally found in the brochure, the catalogue or on the wall texts, are displayed in a HTML layer and assigned to the corresponding works (Fig. 6). Both technical and conceptual information thus contributed to transferring the curators' desired effect of an interaction with the exhibition and its elements. There was also a need for discussion with the participating artists, particularly in the case of complex spatial installations that are difficult to document, or objects that were difficult to display on digital platforms. Examples include mirrors, interactive objects or expansive artworks that depend heavily on the physical presence of the object or the viewer. Wherever possible, we attempted to adapt artworks with an interactive character in such a way that their functionality is mimicked in the digital realm. Visual information on the scenographic elements and the discursive exhibition texts were also collected and found their way into the virtual exhibition model, where they were translated into audio snippets with the aid of artificial intelligence, among other things, and thus became part of the model's soundscape.

The manner in which the various aspects of the exhibition were to be conveyed was decided in collaboration with 3D and UI designers, also taking into account how the media would be archived. In this way, the temporary scenography was translated almost entirely into digital form in its 'original' constellation, in the interest of the overall visual impression. With over 400 exhibits and an exhibition publication of more than 800 pages, *Iconoclash* was an extremely large-scale exhibition project. In our case, more than twenty people from the most diverse areas of expertise were involved in the development and production of the digital model of *Iconoclash* over a period of two and a half years. In addition to art historians, the team that collaborated on the realization included archivists, web and user interface designers and software developers. They were joined by research assistants, interns and scholarship holders, who, also coming from a range of different fields, supported practically every area of work.

Method reflection

The process of digital modelling is a new methodological approach to exhibition analysis, the results of which can be both a methodological tool and a form of research report. Through the possibilities of interactivity, filtering and relational presentation of data, it is possible to re-examine in particular past exhibitions. Programming varies here and depends on various project-specific factors, such as personnel or financial capacities, accessibility of archival material or expertise. Assembling an interdisciplinary team requires both coordinative and professional skills, the lack of which may necessitate appointing a personnel manager. In addition to the time required, contracting external labour and the associated purchase of technical equipment can be a costly undertaking. With regard to external contracting, the support and maintenance of the digital model beyond the project runtime can become a problem and cause additional costs due to necessary maintenance contracts with the external web agency. If the model is published on the internet, license fees may be incurred for temporary user rights, as 3D models of art works are still a grey zone in terms of performing rights at collecting societies such as the VG Bild-Kunst.

The great virtue of digital modelling is that it allows different dimensions of research to be combined into a holistic framework through the cross-linked representation of very diverse data material in the digital model, such as audio and video recordings, various archival materials and photographs. The virtual exhibition experience could be further expanded by combining it with digital re-stagings of accompanying events, such as artistic interventions, film programmes, workshops, conferences, keynote speeches etc. As such, they can also contribute insights into the atmosphere of an exhibition from a visitor's perspective. As museums increasingly evolve into sensory systems that are able and willing to collect more and more data from and about their visitors groups, ever richer data material is becoming available, which in the future should further increase the need for multidimensional archiving of past exhibitions using digital modelling methods.

Fig. 1: Exhibition view Iconoclash, *ZKM | Center for Art and Media Karlsruhe 2002, © Photo: ONUK.*

Fig. 2: Video interview with the curators of the Iconoclash *exhibition, Bruno Latour and Peter Weibel (screenshot), ZKM | Video Studio 2023, © Screenshot: Felix Koberstein.*

Fig. 3: View of one of the ZKM | Archive 2022 storage rooms, © Photo: Thomas Meyer.

Fig. 4: Mapping of the thematic cells on the floor plan of the Iconoclash *exhibition, ZKM | Center for Art and Media Karlsruhe, © Screenshot: Felix Koberstein.*

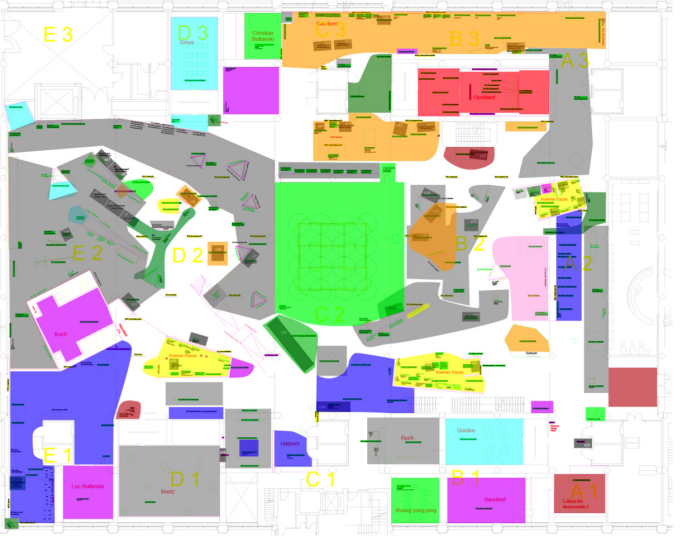

Fig. 5: The clustering algorithm in the digital model of Iconoclash *is activated, © Screenshot: Felix Koberstein.*

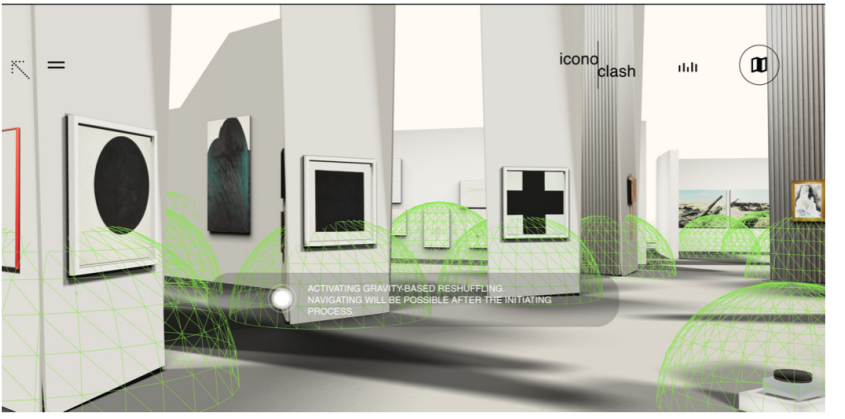

Fig. 6: HTML layer of a digital exhibit. © Screenshot: Felix Koberstein.

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Narratives – Structures – Contradictions

Subjecting exhibitions to a critical reading

schnittpunkt. ausstellungstheorie & praxis[1]

Introduction

The method narratives – structures – contradictions aims at a critical investigation of power relations and assumes that exhibitions have an agency within these power relations. This involves three essential theoretical points of departure:

Firstly, it is an analysis that first and foremost seeks to address and understand social power relations by means of a critical assessment of exhibitions. A critique of the representation of exhibitions, as formulated particularly in the last third of the 20th century in activism and in critical, artistic, museological, cultural studies and curatorial discourses, for instance, by Donna Haraway (2004) and Henrietta Lidchi (1997), aims to do more than just analyze and understand exhibitions. It is more about a critique of the forms of representation in the museum understood as a critique of power relations and forms of government, drawing on the theories of Michel Foucault and Stuart Hall.[2] Against this background, exhibitions appear as forms of action that are situated in power relations and are pervaded by them. The method we present here aims to understand both these sides: the power relations that turn exhibitions into specific spaces for meaning-making, as well as the specific actions that exhibitions generate and that are themselves based on contradictions, negotiations and compromises.

Informed by linguistic, post-structural and cultural-semiotic theories, we thus understand museum and exhibition work as a specific form of discursive behaviour

1 *schnittpunkt ausstellungstheorie & praxis* is an open, transnational network for actors and interested parties in the field of exhibitions and museums based in Vienna. *schnittpunkt* are: Martina Griesser-Stermscheg, Christine Haupt-Stummer, Renate Höllwart, Beatrice Jaschke, Monika Sommer, Nora Sternfeld and Luisa Ziaja, www.schnitt.org (05.08.2024).

2 Nora Sternfeld describes this vividly in her lecture "Museums As Spectral Infrastructures", given at the conference The Politics and Poetics of Exhibiting: Proposing New Institutional Models Through Exhibitions, February 23–24, 2023, Louisiana Museum Copenhagen, https://vimeo.com/showcase/10251788 (05.08.2024).

and exhibitions as visual-verbal sign systems, in whose narrative structures consciously constructed and culturally coded meanings take effect. In the processes of (re)coding of objects –charging them with meaning that transcends their materiality, physical presence, history and provenance – institutional effects of an apparent neutrality and objectivity, attributions of value and relevance and their embedment in specific knowledge apparatuses and canonizations play just as important a role as the fundamental entanglement of the power / knowledge nexus. In order to trace such discursive structures of macro- and micro- narratives in the sense of a decoding, a critical exhibition analysis of this kind employs a combination of semiotic, ideology-critical and deconstructivist reading strategies.

Secondly, we understand exhibitions as sites of potential (self) criticism. Here, we refer to the institutional critique that emerged in artistic and curatorial contexts in the 1960s: an artistic and theoretical practice that began to question its own social and field-specific framework against the background of feminist, postcolonial, representation- and hegemony-critical approaches (Ziaja 2013a, 2013b). Museums and exhibitions were subjected to thorough structural analyses. These comprise institutional parameters, formats and role attributions as well as overarching questions of identity politics and social differences and exclusion mechanisms. This is not just about visualizing and criticizing the specific contexts of production, presentation and perception of visual art, but also about actually intervening in them. While the artistic approaches and many of its paradigmatic actors have since found their way into the art-historical canon – the very system of values they had set out to challenge – the analytical tool of institutional critique has been increasingly applied in the sense of an institutional self-critique and re-definition. However, an analysis dedicated to structures and (self-)criticism always has to consider the risk of being co-opted.

Thirdly, it is about understanding exhibitions as the result of contradictions, conflicts and institutional forms of negotiation and reading them on the basis of their contradictoriness. The critical reflexivity of New Museology and the artistic institutional critique have meanwhile also had an effect on museum praxis: many institutions have embarked on a process of re-definition. Current forms of presentation show ruptures with approaches of the traditional museum narratives: They transcend national narratives, expand Western perspectives, address neoliberal logics of exploitation, call into question the apparent objectivity and neutrality of the White Cube and involve visitors in the exhibition. Against this background, an analysis cannot merely limit itself to examining continuities and traditions, but must equally consider the breaks with established logics. This involves looking at the potential of exhibitions to be a source of resistance, but also that of hegemonial discourses to assimilate critique. In order to get a grasp on these questions, the Italian political theorist Antonio Gramsci coined the term transformism (Marchart 2008,

Sternfeld 2009) to describe the strategy of maintaining power by co-opting critique.[3] The analytical method that investigates ruptures and this transformism assumes that discourses are never homogenous and that exhibitions are a contested terrain in which different, contradictory positions and forces leave their mark.

Aim of the method

The aim of the method narratives – structures – contradictions is to examine exhibitions as forms of discourse and actions within power relations. It seeks to make exhibitions comprehensible in their interpretative authority, in their narrative forms and against the background of their structural conditions as a contested terrain in which different discourses and interests clash. The core questions are geared towards the "poetics, politics and effects of exhibitions" (Lidchi 1997, Sternfeld 2009): The poetics refer to the grammars and narrative forms of the exhibition. This raises the question: Which narrative(s) does the exhibition present and which discourses are thereby represented? The politics address the structures, conditions and infrastructures of exhibitions. This raises the question: To what extent is the institutional framework of production, presentation and perception addressed and reflected in the exhibition? The effects relate to the results of critical questioning and possible achievements, compromises, rejections or contradictions that arise from them. This raises the following questions: In which way is the critique of national, Western forms of presentation integrated or ignored? Is the 'objectivity' and 'neutrality' of the museums and exhibitions critically addressed, are their political and economic entanglements revealed?

Step-by-step guideline

The analysis is based on a catalogue of questions that is subdivided into three sets: narratives and deconstructions, structures and resistances and ruptures and contradictions. Each of the guiding questions is deliberately formulated in such a way as to encourage participants to consider various aspects of the exhibition on their own, in small groups, or in conversation with others. The method works very well when these aspects are discussed together in small working groups. With the help of the questions, specific areas can be selected that are examined and discussed in detail (as in a close reading). In the discussion, the questions can point to a more

3 Sternfeld and Marchart apply the concept of transformism from political theory from, among others, Antonio Gramsci to the field of exhibitions, thus enabling a more differentiated analysis of tendencies and strategies in the exhibition context.

general examination of interpretative sovereignty in society. If the analysis is carried out in a seminar or workshop context, the discussion in the working groups can be expanded by sharing the findings in a plenary session. The discussion on this more collective level opens up many follow-up questions that pertain to social power relations but also present possible alternative curatorial strategies. Since these three sets of questions are closely interrelated, it is not necessary to work on them in the presented order. It can just as well be done in parallel.

1. Narratives and deconstructions. Exhibitions as systems of representation

Possible questions:

- Which narrative(s) does the exhibition present and which discourses are thereby represented?
- How are they structured and which narrative strategies does the exhibition follow?
- Are there a core message and thematic points of focus and how can these be identified?
- Does the exhibition showcase particular exhibits as key objects and does it stage highlights?
- What is the ratio of original to secondary material?
- How are texts and media employed?
- Is the collection the objects were selected from discussed?
- What do we learn about the provenance of the exhibits and the genesis and the size of the collection?
- Are gaps and desiderata addressed?
- Does the exhibition present itself as a homogenous narrative and does it adopt an objectifying perspective?
- Or is there room for ruptures, alternative perspectives and counter-narratives?
- Does it follow the Western (art-historical) canon and is the latter addressed as a frame of reference?
- Is the origin of the narrative disclosed and contextualized in relation to the institution?

2. Structures and resistances. Exhibitions as sites of (self-)critique

Possible questions:

- Is the exhibition trying to ask questions or is the focus on providing answers?
- To what extent is the institutional framework of production, presentation and perception addressed and reflected in the exhibition?

- Does it reproduce existing structures, systems of representation and value, or does it question them?
- Does the exhibition attempt to appropriate and reinterpret hegemonic structures and develop new approaches and strategies?
- Does the exhibition make it clear for whom and why it exists in the context of this institution? And does its spatial and content-related setting enable discussions and critical discourses? Are such things actively organized?
- Is the role of private, private-sector and corporate actors disclosed in the exhibition and in the institution, and if so, how?

3. Ruptures and contradictions. Exhibitions as a contested terrain

Possible questions:

- In which way is the critique of national, Western forms of presentation integrated or ignored?
- Are the 'objectivity' and 'neutrality' of museums and exhibitions critically addressed, and their political and economic entanglements revealed?
- What linguistic, architectural, interactive means and forms of staging does the exhibition use? Who is addressed? Who is excluded?
- Which world views manifest themselves in the texts and in the selection and staging of the objects? What is missing?
- Which alternative narrative would be conceivable (in a different place, in a different time)?
- What is represented in the exhibition? To what extent is it about breaking with traditional narrative forms?
- Are there post-representative elements? Can something happen?
- What are the consequences of the critique of the museum in the museum for the museum?

In recent years, critical discussions have changed markedly. Since the beginning of the 21st century, critical theories have spread like wildfire in the practice of institutional texts and contexts: feminism, anti-racism, environmental politics, institutional critique, inclusion debates, decolonial and queer theories are omnipresent – while structurally, not much has changed for the better and a hard-earned critical vocabulary often becomes a label (Griesser-Stermscheg et al. 2023). This year,

we have therefore expanded the question catalogue in collaboration with students[4] of the /ecm Master's Programme in Exhibition Theory and Practice[5] 2022–2024 to include the following questions:

- How can past injustice and stories of violence be addressed without reproducing them?
- How can the silenced voices of history, which can only be guessed at in the gaps of exhibitions and collections, be made audible?
- How can we imagine a relationship between exhibitions and institutional infrastructures that does justice to the ghostly dimension of history, which is at the same time repressed and present?
- How can different temporalities and situated archives – not only hegemonic forms of knowledge – be read together?
- What room does the exhibition leave for imaginings of possible other futures?
- And what would a different institution look like?

Case study

On 3 and 4 November 2022, we were invited to organize a think tank at the German Hygiene Museum in Dresden (DHMD). This was entitled *How can critique of the museum have consequences in the museum?* The aim was to collectively analyze the permanent exhibition *Abenteuer Mensch* (Adventure Man) and subsequently critically reflect on the self-image of the DHMD. After input presentations by exhibition theorists and practitioners, we addressed similar questions in three workshops to the ones posed above. In the documentation of the *schnittpunkt* think tank, Simon Nagy (2022) summarized some pertinent reactions:

"One participant says that only the invitation to search for gaps has led her to see gaps at all, because in her daily work she usually succumbs to the interpretative power of the permanent exhibition. The call for collective critique, however, does not only produce enthusiasm but also resistance. After all, the permanent exhibition is a visitor magnet, the collection supports the exhibition in an already well-established

4 See the profiles of the participants in the /ecm course 2022–2024 and the homepage of the /ecm Master's Program in Exhibition Theory and Practice: https://ecm.ac.at/teilnehmerinnen2022/ (05.08.2024).

5 The /ecm Master's Program in Exhibition Theory and Practice at the University of Applied Arts Vienna is a two-year postgraduate program that provides comprehensive knowledge and skills in the expanded museum and exhibition field and has been led by us, the initiators of *schnittpunkt. ausstellungstheorie & praxis*, since 2006. See the homepage of the /ecm Master's Program in Exhibition Theory and Practice: https://www.ecm.ac.at/ (05.08.2024).

dynamic, and the ongoing evaluation enables very specific optimizations and corrections. Why does everything have to be questioned now? The dynamics of enthusiasm and conflict is connected to the dynamics of 'in the museum' and 'of the museum'. Being critical of the museum is not particularly problematic, on the contrary: A certain mode of critique and deconstruction is part and parcel of 'good form' in the cultural sector. So searching for fractures together can even be something very enjoyable. By contrast, resistance is always palpable if the criticism is aimed at the very structures of the museum, in order to delve deeper from there and convey it to the museum. That's when it gets down to the nitty-gritty: namely, the day-to-day work practice in the institution, for the institution and possibly against the institution […].

The conflictual discussions produce numerous diverse proposals and visions for the future of the museum. The participants' questions, observations and ideas are collected on index cards that form the aesthetic backbone of this documentation […]. The fundamental critique of the permanent exhibition which is the focus of the final plenary session is: the spirit of [the ethno-nationalist ('völkisch') ideology rampant at] the time the museum was opened in 1930 is still present in today's exhibition. What does that mean? The ethno-nationalist division into 'healthy' and 'sick' has shaped in the most violent way imaginable the idea of which bodies are considered to be functioning, desirable and capable of participating in the community, and which ones are excluded. Even if today we no longer work with these terms, they still appear in the mechanical and binary representations of bodily functions. The exhibition *Abenteuer Mensch* presents the human being primarily on the basis of the physical functions of the body. Whether it is a 'see-though human being' or as organs and structures dismantled down to the smallest detail, human beings seem to consist of individual parts that sometimes function better or sometimes worse and at some point add up to a whole […]. A fundamental critique that does not simply seek to improve what is observed, but rather calls its very foundations into question appears in plenary as an opportunity for intensive self-reflection by the DHMD. And as an opportunity to translate this reflection into a new concept for a permanent exhibition."[6]

Method reflection

This glimpse from an intensive workshop shows that a method that considers, in a holistic way, narratives, structures and the contradictory results of critical examina-

6 Documentation of the *schnittpunkt* think tank on November 3–4, 2022 at the Deutsches Hygiene Museum Dresden (DHMD), formulated and designed by Simon Nagy, Vienna 2022: 8–14.

tions of exhibitions is able to produce insights that can certainly be described as eye-opening: often, hierarchies, exclusions and assumptions come to light that have become entrenched in the history of an institution or groups of objects and that have an impact without intending to do so. Understanding these better can not only reveal, but also challenge and shift the ways in which our own knowledge is itself embedded in power relations. In this sense, it is also less about a critique of the exhibition and more about an examination of the canon in order to understand its mechanisms and make it alterable. The result at the DHMD was very concrete: the workshop was followed by the institution seriously considering a new concept for the permanent exhibition.

We have applied this method in numerous other places over the past twenty years and have time and again found that openness and the development of perspectives of exhibitions as contested terrain are capable of promoting a profound critical engagement. The method is thus particularly interesting when it comes to understanding exhibitions as visual-spatial discourses with powers of agency. This is because exhibitions are actually always polyphonic and always show what they show always within power relations. They are the result of divergent demands, aspirations, and compromises. They always produce inclusions and exclusions. And they could always also be different. All this can be made clear and reflectable with this method.

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Annex

Short biographies of the authors

Maria Bremer is an art historian in the field of modern and contemporary art history, specializing in the history, theory, and practice of exhibitions. Since 2021, she has been working as an Academic Councillor at the Department of Art History at the Ruhr University Bochum, where she is currently conducting a research project on exhibitions by women artists in the 1970s.

Dimitra Christidou is Senior Curator for Education at the National Museum of Art, Architecture and Design in Oslo, Norway. She holds a PhD in Museum Studies from University College London (UCL). Using mainly qualitative research, Dimitra explores the multimodality of the museum experience and visitors' meaning-making in museums.

Daniela Döring is a cultural scientist. Her main areas of research include the theory and practice of curating, science exhibitions, transformations of the museum, gender and diversity, as well as cultural techniques of surveying. She has been Professor of Cultural History at the Department of Social Work.Media.Culture at Merseburg University of Applied Sciences since 2023.

Ute Famulla is an art historian. Her research focuses on the history of photography, exhibitions and architecture of modernism. After working at the Kunsthochschule Kassel, the University of Kassel and the University of Göttingen, she has been working at the Museum für Fotografie at the Staatliche Museen zu Berlin since 2025 .

Sabine Fauland studied German philology, history as well as cultural marketing and management in Graz and Merseburg. After working for Graz 2003, steirischer Herbst, Universalmuseum Joanneum, Museumsakademie Joanneum and Landesmuseum Kärnten, she has been managing director of the Museumsbund Österreich and lecturer at FH Joanneum in Graz since 2013.

Gottfried Fliedl is an art historian, museologist, museum consultant and exhibition organizer. He headed the museology working group at the Inter-University Department for Research and Continuing Education. He was also the founder and director of the Museum Academy at the Landesmuseum Joanneum in Graz and is involved in *museumdenken*. His work focuses on museum history and theoretical museology.

Karolin Galter is a literary scholar and art historian. Her research interests range from museology to the literature and art of Viennese modernism. From 2020 to 2022, she worked as a research assistant on the research project *Right to the Museum?* Since 2022, she has been working as an assistant to the director at the House of Austrian History.

Ria Marleen Glaue has been a research associate at the Oldenburg City Museum since 2020 and heads the *New Permanent Exhibition* project there. She studied sociology, European ethnology and museum and exhibition studies in Kiel and Oldenburg. Her work focuses on material culture, exhibition evaluation and modern urban history.

Jana Hawig is a museum researcher and curator. Her areas of expertise include narrative strategies in exhibitions, the impact of storytelling on visitors, and exhibition analyses. Since 2013, she has been curating and researching exhibitions at the DASA Working World Exhibition in Dortmund. She is doing her PhD in museum studies on storytelling in exhibitions at the University of Würzburg.

Enkelejda Kasneci investigates human-centered technologies, emphasizing the crossroads between AI, multimodal interaction, and cutting-edge technological tools such as VR, AR, and eye-tracking. She is a Professor of Human-Centered Technologies for Learning and Director of the Center for Educational Technologies at the Technical University of Munich.

Felix Koberstein is an art historian. His research focuses on digital transformation processes in museums and models in art. He was a research associate at the ZKM | Karlsruhe and is co-founder of the Miniaturbiennale. Since 2023, he has been working as a university assistant at the Department of Expanded Museum Studies at the University of Applied Arts Vienna.

Carola Korhummel is a museologist. Her research and teaching focuses on the intersections of everyday culture, consumer aesthetics and digital art practices. Since 2021, she has been a research associate at the Laboratory for Cognitive Research in Art History (CReA) at the Department of Art History at the University of Vienna.

Dirk vom Lehn is a sociologist and ethnomethodologist. In his research, he analyses interactions between visitors in front of artworks, which he has recorded with video cameras. Since 1998 he has worked at King's College London, where he is Professor of Organisation and Practice at the King's Business School.

Helmut Leder is Professor of Psychology and Visual Empirical Aesthetics at the University of Vienna, where he founded the research focus on Empirical Aesthetics in 2004. He was President of the International Association of Empirical Aesthetics and heads the interdisciplinary Cognitive Sciences Research Hub in Vienna.

Roswitha Muttenthaler is a museologist specialized in the analysis of exhibitions, the representation of differences in collecting and exhibiting, and interventions in museums. She was a curator and custodian at the Vienna Technical Museum and a lecturer on the Curatorial Studies programme at the ZHdK Zurich and Museum and Exhibition at the University of Oldenburg.

Lívia Nolasco-Rózsás has been active as a curator, art historian, and author. She has curated exhibitions at institutions of contemporary and media art, such as ZKM | Karlsruhe. She is a lecturer in curation and media practice at University College London and research fellow at ECAL Lausanne. Her curatorial practice focuses on hybrid forms of display.

Seda Pesen is an art historian and author. Since 2022, she has been a research associate at the Laboratory for Cognitive Research in Art History (CReA) at the Department of Art History at the University of Vienna as part of the FWF/DFG project *The Museum Gaze*. Her fields of research include class-specific practices of the gaze and aesthetic judgement, as well as colonial cultural history.

Anika Reichwald is a cultural scientist. Her main areas of interest include fantastic literature, Literary anti-Semitism and German-Jewish literature and culture as well as museum-related topics. She was working at the Jewish Museum Hohenems as head of the collection and as curator. She has been working at the Jewish Museum Berlin since 2024. She is a co-initiator of the platform *museumdenken*.

Luise Reitstätter is a cultural scientist. Her fields of work include practices of modern and contemporary art, critical museum and exhibition studies, as well as method development for visual and material analysis. Currently, she serves as a Co-Principal Investigator in the FWF-DFG research project *The Museum Gaze* at the University of Vienna.

Raphael Rosenberg is Professor of Art History at the University of Vienna, where he founded the Laboratory for Cognitive Research in Art History (CReA). His research focuses on Italian Renaissance art, the history of abstraction in art, the history of art viewing and cognitive science methods in art history.

Angeli Sachs is an art historian, curator and museologist. She specializes in the integrated understanding of exhibiting and mediating, the contexts of artworks, exhibitions and collections, and the social role and transformation of museums. Until 2022, she was head of the Master of Arts in Art Education Curatorial Studies at Zurich University of the Arts.

Tabea Schmid is a design researcher. Her research interests include theories of design, the educational history of design before Bauhaus and practices of valorization of and with design. Since 2022, she has been working as a research associate at the Department of Art and Cultural Studies at the Faculty of Design at Pforzheim University of Applied Sciences.

schnittpunkt. ausstellungstheorie & praxis has been an open, transnational network for actors and interested parties in the field of exhibitions and museums since 2001. The aim is to visualize institutional patterns of interpretation and action as culturally and socio-politically conditioned, as well as to create a critical and reflective exhibition and museum audience. Since 2006, *schnittpunkt* has formed the management team of the /ecm study programme for exhibition theory and practice /ecm – educating/curating/making. *schnittpunkt* are: Martina Griesser-Stermscheg, Christine Haupt-Stummer, Renate Höllwart, Beatrice Jaschke, Monika Sommer, Nora Sternfeld, and Luisa Ziaja.

Carla-Marinka Schorr is a museum researcher. She specialises in exhibition analysis and the development of research methods, and studies processes of authenticity and value attribution, as well as the relationship between museums and democracy. Currently, she works as a research associate and project manager on the AHRC-DFG research project *Cultural Dynamics: Museums and Democracy in Motion* at the University of Würzburg.

Simon Schütz is a historian and museum researcher. He has been working at the Museum of Industrial Culture in Nuremberg since 2019, where he has been a collection and exhibition curator since 2023. His areas of expertise include industrial and everyday history as well as issues relating to the implementation of participation and audience-centred methods in museums.

Eva Specker is a psychologist specializing in empirical aesthetics and the psychology of art. She currently leads the Everyday Aesthetics Lab, part of the EVA-Labs, at the University of Vienna. She is a board member of the International Association of Empirical Aesthetics and an associate editor at Psychology of Aesthetics, Creativity, and the Arts.

Kali Tzortzi is Assistant Professor in Museology at the Department of Architecture, University of Patras, and module leader of the Architectural Design of Museum Space and Museography in the MA Museum Studies, University of Athens. Her book *Museum Space: Where Architecture Meets Museology* (2015) presents a methodology and theoretical framework for the study of museums.

Regina Wonisch is a historian. Her fields of work include museum and exhibition analyses, minority and migration research. Since 2023, she has been Head of the District Museums department at the Wien Museum.