3 Theories of interdisciplinarity and their methodological application to museum practice

3.1 Introduction

Chapter 2 explored and defined the scope of this research and started to introduce the history of and recent research on interdisciplinarity both in academia and in museums. Apart from looking at the question whether interdisciplinarity is a desideratum in general, it also reflected on the striking similarities between the working cultures and conditions of interdisciplinary academic researchers and interdisciplinary exhibition curators. Chapter 3 will now strengthen this argument further by developing and defining an interdisciplinarity-based methodology for exhibition-making. The aim is to consider how existing theories of interdisciplinarity can be applied and further implemented to museum studies and museum practice as a potential work strategy. The specific focus will be on the production of interdisciplinary temporary exhibitions.

As established earlier in this book, I use the term interdisciplinarity in two distinct ways, following the terminology of Klein: Firstly, as a general term, and secondly, as a more specific and nuanced analytical tool (this second meaning set in italics throughout this study). Klein broadly distinguishes three types of interdisciplinarity (here serving as the general term): multidisciplinarity, *interdisciplinarity* (in a narrower sense) and transdisciplinarity, all three describing different qualities of interaction and integration (Klein 2010, p. 16). The significance for this research of Klein's fundamental theoretical work in interdisciplinarity studies has already been stated in both the introduction to this book and the literature review (chapters 1 and 2) and will now be further explained and elaborated on in this chapter, establishing the theoretical framework and methodology for my research.

As one of the most renowned experts on the history, theoretical classification, rhetoric and practice of interdisciplinarity, Klein names four main motivations for interdisciplinarity (following a definition by the National Academy of Sciences in the United States from 2004): '(1) the inherent complexity of nature and society, (2) the desire to explore problems and questions that are not confined to a single discipline, (3) the need to solve societal problems, (4) the power of new technologies' (Klein 2010, p. 26). As I have already observed in the literature review, interdisciplinarity is not confined to the realm of academia but has also become an important work and research strategy in the realm of cultural institutions and activities.[1] And it is evident that museums (and other cultural institutions) today are aiming to take part in the academic and public activities of addressing larger societal problems and questions. The present museum definition of ICOM (dating from 24 August 2022) does not literally mention the term 'interdisciplinarity', but implicitly sets the scene for it, as interdisciplinarity is essentially about integration, interaction, teamwork, communication, and outreach (see Klein 1990) with regard to research and the production of knowledge:

> A museum is a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing.[2]

1 Michael Jungert, speaking from a German perspective, discerns between internal and external (from academia) motivations for interdisciplinarity and states that the external calls for interdisciplinarity coming from politics and society are even louder and more numerous than from within the universities (Jungert 2010, p. 10). This observation still seems to be valid today.

2 https://icom.museum/en/resources/standards-guidelines/museum-definition/ (last accessed 23 August 2023).

Interestingly, the wording of the former museum definition[3] was even stronger in providing an environment for interdisciplinarity to thrive, but the controversial debates leading to a new museum definition in 2022 have shown how immensely important these aims were and still are in constituting museum identities. Most of these aims are crucial ingredients and conditions for successful interdisciplinary projects, especially the democratic openness and transparency that museums and other cultural institutions are striving for today. And both the former and the present museum definition do acknowledge the importance of research in museum work.

In addition to the four aforementioned motivations for interdisciplinarity (Klein 2010, p. 26), I would argue for them to be extended by a fifth and a sixth. These two suggested motivations are especially important for the cultural realm: *creativity* and *curiosity* (see, for example, Thomas 2016). Surprisingly, *creativity* is rarely mentioned in the literature on interdisciplinarity in academia, although interdisciplinarity has long been credited with being a motor and adequate strategy of enquiry for inspiring creativity in the sense of creating new research questions as well as new knowledge (see, for example, Moran 2010, p. 15). In the academic context, John H. Aldrich names *curiosity* as a precondition for a multidisciplinary approach which may lead to new insights simply by 'taking a break' from one's momentarily unsolvable research problems 'into the fun of exploring something new and different' (Aldrich 2014, pp. 34, 35). In a wider sense, also reaching out to the cultural realm, interdisciplinarity as a research strategy has the potential to achieve more than just new knowledge. It can also create new research and work cultures, methodologies and even art forms, to which, for example, art and science collaborations (see, for example, Arnold 2015 and Bencard et al. 2019) bear witness.

Museum studies are themselves drawing on a number of disciplines such as material culture studies, history, art history, archaeology, anthropology, philosophy, psychology, and sociology, to name but a few. This would perhaps be a reason in itself for an in-depth study of the body of literature on

3 The former museum definition, discussed in 2019, was stronger in this respect: 'Museums are democratizing, inclusive and polyphonic spaces for critical dialogue […]. They are participatory and transparent, and work in active partnership with and for diverse communities to collect, preserve, research, interpret, exhibit, and enhance understandings of the world, aiming to contribute to human dignity and social justice, global equality and planetary wellbeing' (https://icom.museum/en/news/icom-announces-the-alternative-museum-definition-that-will-be-subject-to-a-vote/, last accessed on 23 August 2023).

the research and work strategies of interdisciplinarity and all its theoretical and practical implications, for the existing literature seemingly has not been reflected on and does not yet translate well enough into the field of museum studies and the profession of museum practice. But my research will not look at the intrinsic multidisciplinarity of our own discipline. Klein calls that kind of intrinsic multidisciplinarity 'Pseudo ID' (pseudo-interdisciplinarity), arguing that a discipline's own 'wide compass alone […] does not constitute *interdisciplinarity*' (Klein 2010, p. 17, emphasis added). Instead, this research will attempt to theorize a certain practice within our discipline, namely the interdisciplinary outreach beyond our own field of working with various other disciplines on the territory of thematic temporary exhibitions. The word 'territory' is chosen on purpose, as I would like to think of such exhibitions as experimental grounds on which we are inviting other disciplines to meet in an interdisciplinary setting to work on a multifaceted perspective on a chosen theme. In a best-case scenario, such exhibitions could serve as or result in an interdisciplinary academic product. As laid out in the previous chapter, the literature review, interdisciplinarity studies are on their way to establishing themselves as a discipline in their own right (see, for example, Bammer 2013), but interdisciplinarity as such is first of all describing a *process* of interaction and integration (Klein 1990, p. 188) with regard to knowledge production. The processes that will be analysed in this study are the practical processes of interdisciplinary exhibition-making.

This chapter is devoted to a more precise discussion of the taxonomy and terminology of interdisciplinarity, starting with some general definitions and guiding principles. These general observations will lead to a more in-depth terminological discussion discerning multi-, *inter-* and transdisciplinarity, mainly based on Klein's work, followed by a closer look at what authors in interdisciplinarity studies are describing as 'bad interdisciplinarity' (see, for example Löffler 2010), in order to sharpen the understanding and criteria for best practices in interdisciplinary collaborations. The aim of this chapter is to establish the fundamental tools – a rich portfolio of terms and definition – for describing and analysing the exhibition cases in the practical part of this book (chapters 4–6) and to provide a theoretical framework for a more precise description, understanding, analysis, and critique of interdisciplinary exhibitions in general. Thus, the established tools are introduced as a useful contribution to theory building in museum studies.

3.2 General definitions: Why is it useful to classify interdisciplinarity?

In 2010 Michael Jungert wrote that 'there are only a few terms in recent debates in academia, for which the discrepancy between the usage frequency and the theoretical reflection on its meaning is as large as in the case of the term interdisciplinarity' (Jungert 2010, p. 1, transl. HP). As, at least in practice, only little seems to have changed in the past decade, I believe that it is important to improve the theoretical understanding of the term, in order to avoid a vague and meaningless application, although not all authors in interdisciplinarity studies are supporting this aim. Harvey Graff, for example, writes that the 'endless typologies, classifications, and hierarchies of multi-, inter-, and transdisciplinarities are not helpful. Most important, we must recognize that interdisciplines could not exist without disciplines; mutually and reciprocally, they shape and reshape each other' (Graff 2015, p. 215). As much as I like Graff's notion of disciplines shaping and reshaping each other like pebbles in the sea, I argue that a finer terminology and a more disciplined usage of its definitions and distinctions could not only deepen our understanding of interdisciplinarity as such both in theory and practice, but it could also avoid the current vague use of the term. This is especially important for the distinction between multidisciplinary and *interdisciplinary* projects, as the former clearly lack in integrative quality. Calling a project 'interdisciplinary' holds a promise regarding its content, namely of it involving a certain degree of interaction and dialogue between the participating disciplines. Therefore, differentiating at least these two categories is important, because the mere claim of interdisciplinarity is only too often not filled with life, that is interaction. The fact that *interdisciplinary* projects often end up as multidisciplinary has, of course, multiple reasons, an important one being the lack of resources that would be necessary to facilitate the complex process of an *interdisciplinary* or even transdisciplinary project.

Although not as sceptical as Graff, Moran also warns against an over-regulation and speaks of interdisciplinarity as 'a kind of *undisciplined* space in the interstices between disciplines' (Moran 2010, p. 14, emphasis added) that are established in successful interdisciplinary collaborations and have a potential for creativity in the production of 'new forms of knowledge' (p. 15). As opposed to Klein, Moran finds an advantage (or even a conditio sine qua non) in the 'slipperiness' and 'flexibility' of the term interdisciplinarity (p. 14), praising its openness and even its creative 'messiness' (Moran 2010, p. 180). Although ap-

proving of Klein's useful distinction between multi- and *inter*disciplinarity, he objects to further 'disciplining' or narrowing down interdisciplinarity, 'confining it within a set of theoretical and methodological orthodoxies' (p. 14). Moran cites Roland Barthes with the following words to underline this need for 'indeterminacy' (p. 14) or even insecurity in order to conduct interdisciplinarity in a meaningful and creative way, thereby also adding a political dimension:

> Interdisciplinarity is not the calm of an easy security; it begins effectively […] when the solidarity of the old disciplines breaks down […] in the interest of a new object and a new language neither of which has a place in the field of sciences that were to be brought peacefully together […] (Roland Barthes 1977, p. 155 in: Moran 2002, p. 15).[4]

As tempting as Moran's thoughts might be and as much as they appeal to me, the purpose of my research requires an attempt to at least partly overcome the terminological vagueness of interdisciplinarity which is still prevalent in museum studies and practice. I am supporting Klein's terminological accurateness not because I want to see the creative processes of interdisciplinary collaborations disciplined, but because I would like to advocate a more disciplined way of speaking and writing about these processes, hopefully resulting in a more precise way of theorizing them. The practice of interdisciplinarity would certainly also profit from a deeper understanding of its conditions and implications.

Generally speaking, interdisciplinarity involves more than one discipline or disciplinary participant in a collaborative research or work process. The German philosopher and biologist Thomas Potthast therefore calls interdisciplinary collaborations 'n>1 disciplinarities' (Potthast 2010, p. 173, transl. HP). At least until 2021, the *Oxford English Dictionary* gave the following definition: interdisciplinarity is 'the quality or fact of *involving* or *drawing on* two or more branches of knowledge' (last accessed online, 31 December 2019, emphases added). Since then, this has been replaced by a rather vague new description.[5] The *Cambridge Dictionary* just states that interdisciplinarity is 'involving two

4 Barthes, R. (1977). *Image-Music-Text*. Translated by Stephen Heath. London: Fontana.

5 The new definition of the adjective 'interdisciplinary' in the *Oxford English Dictionary* reads, 'Of or pertaining to two or more disciplines or branches of learning; contributing to or benefiting from two or more disciplines.' The old definition is, for example, still cited in this article from 2021: https://www.lis.ac.uk/stories/can-interdisciplinarity-be-quantified (last accessed 25 August 2023).

or more different subjects or areas of knowledge.'[6] The verb 'drawing on' was probably deleted from the older Oxford definition for a good reason, because the academic strategy to merely draw on two or more disciplines in a research process is not enough to constitute *interdisciplinarity* in a narrower sense which involves interaction, as defined by Klein (Klein 2010, p. 15). When speaking of interdisciplinarity in general, Klein uses 'the terms *interdisciplinary* and *integrative* interchangeably, as adjectives signifying an attempt or desire to integrate different perspectives' (Klein 1990, p. 15). It is an essential question for this research, whether these different perspectives (disciplines) are themselves part of the integrative process or not, that is, whether they are *involved* or just *drawn on*. And it is this distinction which guides Klein in her taxonomy of interdisciplinarity in describing different 'levels of integration' (p. 15). These levels are less understood in a hierarchical sense, than as different qualities of integration. These will be discussed in detail in the following sections of this chapter. Coming back to Potthast's basic definition of 'n>1 disciplinarities', it has therefore to be emphasized that the definition would have to imply that the involved disciplines are part of the decision-making processes during an *interdisciplinary* collaboration. '*Interdisciplinarity* claims that starting with defining the problem, working on it and synthesising the results, the involved disciplines are irritating each other and enter into a relationship of mutual interaction.' (Haas and Helmer 2014, p. 55, transl. HP, emphasis added). Does this mean that all interdisciplinary projects need a team of individuals willing to irritate and be irritated regarding their respective disciplines?

Not so for Liora Salter and Alison Hearn, who doubt what they call the 'myth' that 'interdisciplinary research always involves team research' stating that it is also 'possible for an individual researcher to draw upon the corpus of more than one discipline or to conduct research within a field of study characterized as interdisciplinary. […] The problems of interdisciplinarity are distinct and independent of the number of people engaged in any study' (Salter and Hearn 1996, p. 7). Klein would perhaps still subsume the case of an individual researcher working alone in an interdisciplinary field under the general use (or rhetoric) of interdisciplinarity, but in a narrower sense she would certainly characterize this academic activity as *multi-* or *pseudo-disciplinary*, because *interdisciplinarity* in a narrower sense would require teamwork (Klein 2010, p. 19)'. With regard to museum studies this perhaps seemingly pedantic distinction

6 https://dictionary.cambridge.org/dictionary/english/interdisciplinary (last accessed 25 August 2023).

has important institutional implications. Is it enough to hire one curator to conceptualize and produce an *interdisciplinary* exhibition? I will argue that it is not and will test this hypothesis in the practical part (chapters 4–6) of this book. It might result in a decent multidisciplinary exhibition conceptualized by one mind, in a worst-case scenario without ever consulting any other disciplinary experts, communities or potential audiences during the production process at all. But for breathing life into *interdisciplinary* collaborations in the context of museum studies and museum practice, this terminological difference has a clearly political dimension with significant consequences for institutional 'priorities' (general aims and strategies), 'resources' (professionals and objects), 'processes' (working procedures), and 'publics' (audiences) (McCarthy 2015, p. xxxix; as already cited in the introduction to this study).

These last observations have tried to support the idea that it is useful to classify interdisciplinarity to a certain extent. In her contribution 'A Taxonomy of Interdisciplinarity' to the *Oxford Handbook of Interdisciplinarity*, Klein offered what was at that point the most comprehensive overview of the terminological debate in interdisciplinarity studies (Klein 2010). Here, Klein draws on earlier attempts in the 1970s[7] to discern and classify 'differentiated forms of disciplinary interaction, motivations for teaching and research, degrees of integration and scope, modes of interaction, and organisational structures' leading to a 'sometimes confusing array of jargon' (Klein 2010, p. 15). Although, within the only more recently established field of interdisciplinarity studies, there is still considerable debate on the vocabulary used to describe different types of interdisciplinarity (here again serving as the general term), however, the most commonly accepted are: multidisciplinarity, *interdisciplinarity* (in a narrower sense) and transdisciplinarity. As stated above, these three types or modes of interdisciplinarity can be viewed as differing qualities of collaboration or 'degrees of disciplinary interaction' (p. 17): from 'shared' to 'cooperative', from 'complementing' to 'hybridizing', from 'bridge building' to 'restructuring', from 'partial integration' to 'full integration' (p. 16). As an example for an alternative vocabulary, Sarah Whatmore uses the terms *superficial* (corresponding to multidisciplinary), *functional* (corresponding to *interdisciplinary*) and *radical* (corresponding to transdisciplinary) interdisciplinarity, aiming at describing

7 These earliest attempts of an 'interdisciplinary typology' started with an international conference in France in 1970 which was co-funded by the OECD (Organisation for Economic Cooperation and Development). The results were published by H. Heckhausen (Heckhausen 1972).

similar degrees of gradually intensifying disciplinary interaction (Whatmore 2013, pp. 166, 167). With regard to this research, it is important, however, to understand these terminological distinctions rather as different qualities or intensities than as degrees or grades on a hierarchical scale of interdisciplinarity. There is, admittedly, a certain gradual relationship between multi- and *inter*disciplinarity, but transdisciplinarity should not be understood as the ultima ratio or highest form of interdisciplinarity, as the following explanations will show.

3.2.1 Multidisciplinarity

As briefly outlined in the introduction and literature review (chapters 1 and 2), Klein defines multidisciplinarity as sort of a 'pseudo-interdisciplinarity' (Klein 2010, p. 16) that 'is essentially additive, not integrative' (Klein 1990, p. 56). It can be characterized as 'encyclopaedic', 'juxtaposing', 'sequencing', 'coordinating, 'complementing', and 'indiscriminate' (Klein 2010, p. 16). Synonymously it could also be called 'pluridisciplinarity' (Klein 1990, p. 56). Potthast describes multidisciplinarity as a process in which disciplines are working separately but focused on the same research question, problem or topic. This could be a rather practical subject matter such as a living being, a landscape, an artefact, a historical epoch, or a theoretical term (Potthast 2010, p. 180). The results of such academic collaborations could, for example, be found in thematic compendiums (p. 180) or handbooks. On a finer level, Klein (following Boden 1999 and Heckhausen 1972) discerns between *contextualizing* and *composite* multidisciplinarity for similar academic activities, in which disciplines are respectively 'taken into account without active cooperation' or only 'integrated within a common framework' (Klein 2010, p. 18). Speaking of an academic product, the resulting thematic handbooks, for example, could translate to multidisciplinary thematic exhibitions in museum practice.

I have already started with a very brief preliminary attempt of a typology of three kinds of interdisciplinary exhibitions in the literature review (chapter 2) and would like to continue this discussion in a more in-depth way in this chapter, in this section starting with multidisciplinary exhibitions. They can be characterized as encyclopaedic, as collecting and accumulating knowledge, as often listing facts ordered by disciplines.[8] They can be very informative in

8 Examples of exhibitions in Germany that perhaps belonged to this rather additive type and were at least in their outward appearances partly reminiscent of conference pre-

providing an overview on a specific subject, and they can be of high educational value. But exhibitions of this type do only rarely have the potential to create new knowledge (or new practice) in the process of making them, because they are lacking an integrative process of interaction, dialogue, and negotiation amongst the participating disciplines. They are typically curated by a single curator or a monodisciplinary curatorial team controlling their production process in which no fundamental discourse between the participating disciplines is involved. The achieved synthesis is therefore in fact *monodisciplinary* (see Haas and Helmer 2014, p. 55) or at least developed in a non-integrative, non-collaborative process, with a curator distributing tasks to a multidisciplinary group of advisors but keeping the decision-making on the overall concept to themselves. However, it must be acknowledged that multidisciplinarity often constitutes the initial step towards *interdisciplinarity* by creating a bigger picture through breaking professional and disciplinary boundaries, which in itself requires courage.

Klein (following Rebecca C. Burns)[9] mentions another finer terminological distinction between two different modes of multidisciplinarity, discerning a *sequencing* mode from a *coordinating* mode (Klein 2010, p. 17). While a form of multidisciplinarity in which various disciplinary contributions would just be 'aligned in parallel fashion', could be described as being conducted in a sequencing mode, the 'intentional' alignment of multidisciplinary content would be conducted in a coordinating mode. Translating this into a museological context, these two modes could serve for a finer description of the quality or intensity of multidisciplinary curation, although the 'integration and interaction' of knowledge (and differing practices) would still be lacking (p. 17) in such projects. Fittingly, Klein uses the artistically charged term 'assemblage' in this

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sentations lined up by disciplines: *Pferdestärken – Das Pferd bewegt die Menschheit*, 21 April – 19 August 2012, Reiss-Engelhorn-Museen, Mannheim: http://magazin.spiegel.de/EpubDelivery/spiegel/pdf/51292091 (last accessed 23 August 2023); *Bewegte Zeiten – Archäologie in Deutschland*, 21 September 2018 – 6 January 2019, Gropius Bau, Berlin: https://www.smb.museum/ausstellungen/detail/bewegte-zeiten.html (last accessed 23 August 2023); *Das Gehirn – Intelligenz, Bewusstsein, Gefühl*, 29 June 2018 – 5 January 2020, Naturkundemuseum, Münster: https://www.facebook.com/LWL2.0/videos/10156090597357795/?locale=zh_CN (last accessed 23 August 2023).

9 Burns, R. C. (1999). *Dissolving the Boundaries: Planning for Curriculum Integration in Middle and Secondary Schools*. 2nd edition. Charleston, WV: Appalachia Educational Laboratory, pp. 8–9.

context (p. 17). The third of the case studies (chapter 6) with the title 'The mul-multidisciplinary exhibition and the political dimension of *interdisciplinarity – We Capitalists. From Zero to Turbo*' will be an example of an exhibition project to which the vocabulary in this section will aptly apply.

In the context of interdisciplinary higher education and shared responsibilities of faculty and students, Klein describes the relationships amongst the participants of multidisciplinary collaborations as 'limited and transitory' and not changing or enriching each other's disciplinary behaviour (Klein 1990, p. 56). The relationships remain 'loose and restricted' (Klein 2010, p. 17), and there is no attempt for the integration of disciplinary material in order to jointly create new knowledge, because this would demand 'an understanding of the epistemologies and methodologies of other disciplines and, in a team effort, requires building a common vocabulary' (Klein 1990, p. 57). If a synthesis still occurs in a merely additive multidisciplinary setting it happens only in one mind at a time, usually in the student's mind, being the recipient of a multidisciplinary education (p. 56). Applying this to the context of exhibitions, at best a synthesis of multidisciplinary content happens first in the curator's and then in the visitor's mind (when curated in a *coordinated* mode). In a worst-case scenario, the responsibility for achieving a synthesis of an exhibition's thematic, multidisciplinary content (merely arranged in a *sequencing* mode) is left to the visitor alone. In this event, the visitor might feel like a patient treated for an illness (the exhibition's theme) by many doctors of diverse medical subjects who do not communicate with each other about the patient's diagnosis, condition, and progress.[10] This is echoed in the work of Markus Arnold et al. who, for example, stress a comparable lack of communication in multidisciplinary research projects (Arnold et al. 2014, p. 107).

Taking Salter and Hearn's (Salter and Hearn 1996, p. 7) above mentioned claim further, Gerhard Vollmer perhaps provocatively writes, 'The best way interdisciplinarity can succeed is in a *single person*' (Vollmer 2010, p. 53, transl. HP, emphasis added). This quote by Gerhard Vollmer makes clear how misleading a vague and too general use of the term interdisciplinarity can be. As discussed above, the basic definition that *interdisciplinarity* involves more than one discipline and disciplinary participant collaborating or interacting in a research or work process provides an important question for the field of *interdisciplinary*

10 I owe this thought to Sabine Lamprecht. 'Therapieziele effektiver erreichen' (Reaching therapy goals more effectively), in: *ergopraxis* 2009, 2(10): pp. 26–28.

exhibition-making, as this criterion obviously excludes multidisciplinary exhibitions that are conceived and developed by a single curator or a monodisciplinary curatorial team that does not allow for interaction amongst the involved disciplines. Although taking on a multidisciplinary perspective, this curator or curatorial team makes decisions on their own, drawing from other disciplinary expertise only on an advisory level. Many projects that call themselves 'interdisciplinary' are in fact multidisciplinary. Curators may find themselves forced by institutional demands or sometimes decide on their own to streamline the decision-making processes of a project initially planned as being *interdisciplinary*, downsizing its work process to a multidisciplinary project. The result might seem similar, and the production process is less complex and demanding, but it is also less rewarding as the curatorial monologue is then only rarely disrupted in a creative or productive way.

These observations have a clear consequence for my research, as the exhibition cases discussed and analysed in this book, which are claiming to be *interdisciplinary* in some shape or form, are therefore necessarily involving the collaborative decision-making processes of a curatorial team.

3.2.2 *Interdisciplinarity* as a specific analytical tool

> When integration and interaction become proactive, the line between multidisciplinarity and interdisciplinarity is crossed (Klein 1996, p. 6 and Klein 2010, p. 18).

This sentence is extremely important in the context of my research as it instantly makes clear that *interdisciplinarity* in its stricter form requires much more input and intensity of collaboration and integration than multidisciplinarity. Klein (comprehensively summing up her own and other authors' previous attempts of a typology and classification) finds the following adjectives to characterize and narrow down *interdisciplinarity*: It can be understood as an 'integrating', 'interacting', 'linking', 'focusing', 'blending', 'generalizing' kind of collaboration, which enables at least a 'partial integration' (Klein 2010, p. 16). Although the purposes and scopes of such collaborations may vary considerably (p. 18), they must involve a certain quality or intensity of interaction amongst its disciplinary participants. To achieve a more precise understanding of which forms these differing qualities of interaction might take, Klein (drawing on Boden 1999) introduces a weaker form called *shared interdisciplinarity* in which the participants work separately on 'different aspects

of a complex problem' or topic like in a multidisciplinary setting, but they do 'communicate results, and monitor overall progress' together (p. 19). This form seems very useful with regard to my research when it comes to describing the production process of an interdisciplinary exhibition that might oscillate between fulfilling the criteria of multi- or *inter*disciplinarity respectively, especially regarding its decision-making processes.

As distinguished from shared interdisciplinarity, a stronger form would be *cooperative interdisciplinarity* (p. 19). This latter form definitely requires continuous and more intense teamwork. The analysis of interdisciplinary curatorial teamwork will play an important role within the practical part of this study (chapters 4–6). In this context Klein also distinguishes between two differing motivations for interdisciplinarity, the looser motivation of 'bridge building' and the more ambitious motivation of 'restructuring' and of aiming to 'form a new coherent whole' (p. 21).

In her article in the *Oxford Handbook of Interdisciplinarity*, Klein introduces other useful and finer terminological distinctions with regard to understanding *interdisciplinarity* in a narrower sense. She, for example, discerns between *methodological interdisciplinarity* and *theoretical interdisciplinarity* (Klein 2010, pp. 19–20, see also Jungert 2010, p. 8). Methodological interdisciplinarity seems to remain more superficial in the mere exchange or borrowing of methodologies amongst various disciplines, but these exchanges are yielding interesting examples such as the 1980s turn in social sciences when society started to be understood as a 'game, drama, or text, rather than a machine or quasi-organism' (Klein 2010, p. 20). I have the notion that exhibition curators can relate or are even prone to this kind of methodological interdisciplinarity applying or borrowing analogies and metaphors in a similar way, sometimes being in danger of forgetting to take into account their respective intellectual disciplinary backgrounds, for example, in interpretive or didactical approaches.[11]

Theoretical interdisciplinarity 'connotes a more comprehensive general view and epistemological form' (Klein 2010, p. 20). This again stronger form of *interdisciplinarity* leads to joint 'conceptual frameworks' and the 'integration of propositions across disciplines', aiming at nothing less than 'to develop an interdisciplinary theory' (p. 20). Both methodological and theoretical

11 An example could be the layout and design of the exhibition *The Brain: In Art & Science* at the Bundeskunsthalle in 2022, which took up the visual concept of neuronal structures within the human brain. This curatorial decision might rightly be critiqued as superficial and overly simplistic.

interdisciplinarity have the disruptive potential to, at least partly, change 'disciplinary […] concepts […] as a result of cooperation, fostering new conceptual categories and methodological unification' (p. 20, drawing on Boden 1999). Jungert calls this form 'unifying' interdisciplinarity (Jungert 2010, p. 6, based on Heckhausen 1972), an adjective that Klein uses to characterize a certain form of transdisciplinarity. This detail from the terminological debate in interdisciplinary studies shows how fluid these descriptions still are, in this case between *inter-* and transdisciplinarity. Klein states herself, despite advocating to keep the established three basic definitions of multi-, *inter-* and transdisciplinarity, that in times of 'changing configurations of knowledge and education' (and I would add culture) these taxonomies 'need to develop [in an] open' and 'dynamic' way (Klein 2010, p. 28).

In order to continue my attempt of a preliminary typology of three kinds of interdisciplinary exhibitions, I would like to describe the production of *interdisciplinary* exhibitions (in a narrower sense) as requiring a creative exchange of knowledge and differing practices within a continuously cooperating (and ideally jointly decision-making) curatorial team. During the production process the team engages in a joint effort and process of conceptualizing, exemplifying, visualizing, displaying and conveying knowledge on a given topic. These practical aspects of collaborative exhibition-making will be analysed in great detail in the case studies (chapters 4–6). Exhibitions resulting from such collaborations are not necessarily ordered by disciplines but rather by thematic questions, often problematizing them in a discursive and intellectually inspiring and productive way. By asking questions and suggesting solutions, they have the potential to produce new ideas, new knowledge, and new practices. This type of exhibition could serve as an experimental territory and academic product for exhibition curators and academic researchers alike. Here, exhibition curators and academic researchers could together improve the outcome of interdisciplinary projects by uniting their respective strengths and perspectives.

3.2.3 Transdisciplinarity

The term *transdisciplinarity* is perhaps the most complex, radical and politically charged (Klein 2010, pp. 24–26), but arguably also the vaguest of the three classifications of interdisciplinarity. The basic definition already given in the pre-

vious chapters is twofold.[12] Klein describes transdisciplinarity (1) as a 'transcending', 'transgressing' and 'transforming' kind of interaction, which enables 'systematic', 'conceptual', 'structural' and even 'unifying' 'full integration', and (2) as 'transsector interaction' (Klein 2010, p. 16). This second definition seems to have become more common in the European context than in the academic communities of interdisciplinary studies in the United States (p. 25).

3.2.3.1 Transdisciplinarity as 'full integration'

Transdisciplinarity, in the first definition, is aiming at a *holistic* approach transcending 'the narrow scope of disciplinary worldviews' (Klein 2010, p. 25, drawing on Raymond C. Miller)[13] and is often driven by a 'social purpose' (p. 24) or 'critical imperative' (p. 25). This approach has deep roots in philosophy and the history of sciences, in what Klein calls the 'historical quest for systematic integration of knowledge' (p. 24). This historical approach towards a universal understanding of knowledge has already been mentioned in the literature review (chapter 2). Today's observable return of universalism in the course of globalization is, of course, also linked to problems and questions that are now perceived and hopefully solved on a global scale.

Moran uses the term 'trans-disciplinarity', when addressing the critics of interdisciplinarity, as a synonym for 'post-' or 'anti-disciplinarity' describing an 'intellectual stage where disciplinary divisions can be more radically subverted or even erased' (Moran 2010, p. 14). If interdisciplinary interaction could indeed reach a state of detachedness from disciplinary contexts and rules, such an interaction may perhaps in certain aspects or moments become a space for unifying integration, but it might also run the risk to turn into something like a 'non-place', a phrase coined by the French ethnographer Marc Augé (for example, Augé 2019, p. 32) and defined as a space without a sense of belonging or relations of any sort, a place where all communication has ceased to take place. 'Post-disciplinarity' seems to have become a new (mainly politically driven) movement in cultural studies (see Klein 2010, p. 23; Klein calls this 'critical interdisciplinarity'), but if understood in the sense of dissolving disciplines, it might be in danger of turning into something empty and weak instead of being a creative and productive research and work strategy. I therefore believe,

12 Klein actually discerns four 'trendlines' in transdisciplinarity (Klein 2010, pp. 24–26), but these have been summed up for the purpose at hand.

13 Miller, R. (1982). 'Varieties of interdisciplinary approaches in the social sciences', in: *Issues in Integrative Studies* 1, pp. 1–37.

especially in times of populism, that we need both, disciplinary experts as well as creative and productive interdisciplinary collaborations amongst them.

3.2.3.2 Transdisciplinarity as 'transsector interaction'

Apart from the holistic definition described above, the second and more common understanding of transdisciplinarity is described by Klein as 'transsector interaction' (Klein 2010, p. 25). She identifies the 'core premise' of this definition in the notion 'that problems in the *Lebenswelt* – the life world – need to frame research questions and practices, not disciplines' (p. 25). The collaborations between 'academic experts and social actors' are also motivated by the aim to reach 'democratic solutions' (p. 25, see also, for example, Frodeman, R. 'The End of Disciplinarity', in: Weingart et al. 2014, p. 191, as discussed in the literature review). This specific type of transdisciplinarity representing academic *outreach* to other realms of society in terms of knowledge integration as well as the claim of social *participation* will prove to be especially important with regard to my general advocacy of interdisciplinarity in museum studies. In the practical part (chapters 4–6) of this book, this will be especially relevant for the first of the three case studies, 'A transdisciplinary and participatory exhibition: Setting the bar for good practice. *TOUCHDOWN. An exhibition with and about people with Down's syndrome*', an exhibition that was developed in a collaboration between diverse academic experts and people with Down's syndrome as experts in their own right.

Thomas Potthast understands transdisciplinarity strictly as collaborations between academic disciplines and the realms beyond 'academic communities', involving 'non-academic inquiries and persons' in the research process (Potthast 2020, p. 181, transl. HP here and in the following quotes from this source). He offers an interesting 'working definition' of successful interdisciplinary research in general, which he describes as

> a form of (1) academic (2) collaboration in which (3) experts (qualified within disciplines) (4) on the basis of mutual respect and trust, (5) within the framework of academic-organizational conditions and according to given resources, (6) in a coordinated way and (7) principally equally ranked in teams are (8) working on a problem, which (8a) cannot be dealt with by one discipline alone, about which (8b) a joint understanding has to

> be reached, and for which (8c) a 'synthetic' solution (product) has to be developed (Potthast 2010, p. 181).[14]

By adding the word 'stakeholders' to 'experts' in point (3), this definition could also be applied to transdisciplinary projects involving 'non-academic aspects and groups' such as 'politics, administration, economy [or industry, p. 180] and civic society' (p. 181). Sadly, and tellingly, the realm of culture is missing in this list as a potential transdisciplinary partner, not to mention the fact that the realm of 'stakeholders' is apparently void of 'experts' in Potthast's understanding. The fact that culture is indeed underrepresented in the literature about interdisciplinarity might be sufficient in itself to justify my attempt to test out (and perhaps even implement) the theories of interdisciplinarity as a methodology or strategy of enquiry in museum studies and museum practice.

In my reading, transdisciplinary exhibitions are bridging the gaps between the academic, cultural, and social worlds, overcoming hierarchies of knowledge, for example by fostering collaborations of art and science (see, for example, Arnold 2015 and Bencard et al. 2019) or by including objects of everyday life. They are experimental (and sometimes radically unconventional) in a wider sense, creating larger narratives that reach their audiences in a multifaceted way – intellectually, emotionally, and aesthetically. These exhibitions often involve a more heterogeneous group of participants on the producing end, and a more intense level of participation of both exhibition-makers and visitors. Participatory transdisciplinary exhibitions are especially important to engage with (often marginalized) communities outside the academic or cultural realms. In a broader political sense, exhibitions like these are essentially 'making things [objects, issues, matters] public', including the 'different patterns of emotion and disruption, of disagreements and agreements' they are generating (Latour 2005, pp. 14–15). 'Discussion and [...] experimentation' are 'important for making sense of a globalized world and one's place in it', and 'museums have an obvious part to play in this regard' (Dahlgren and Hermes 2015, p. 127). The role of museums and exhibitions in society can thus additionally be seen as 'the moderation of open discussion' (p. 127). The political dimension of interdisciplinary exhibition-making will become further apparent in the case studies of this book.

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14 Based on Dürnberger, M. and Sedmak, C. (2004). 'Erfahrungen mit Interdisziplinarität' (Experiences in interdisciplinarity), in: *Working papers 'Theories and commitments'*, Salzburg: Universität Salzburg, p. 8.

3.3 What is bad interdisciplinarity and what could be best practices?

With all these definitions at hand, what could possibly go wrong in conducting interdisciplinary research (and exhibition-making)? It has probably become clear by now that the author of this book is counting herself as one of the 'believers' in interdisciplinarity. To further justify and explain this personal instinct, I want to explore what critics of interdisciplinarity have to say in the context of academia, as this promises not only to reveal some more facets of interdisciplinarity as such, but also, in contrast, to bring out some ideas for best practices of interdisciplinarity. Rick Szostak, one of the most prolific and influential authors in interdisciplinarity studies today, suggests that it is important to not ignore and instead respond to critical arguments, but 'if we do not trumpet the existence of interdisciplinary best practices we cannot be surprised when interdisciplinarity is identified by its worst practices' (Szostak 2017). Despite many obstacles in my own practice, I am ready to join the trumpeters for good practices in interdisciplinarity, specifically with the critical analysis of three exhibition cases in chapters 4–6 of this book. And this research process of reflecting on my practice of interdisciplinary exhibition-making has definitely improved my understanding of interdisciplinarity both in its theoretical and practical implications.

In his article 'From Bad to Good: Is There Bad Interdisciplinarity?' Winfried Löffler makes an important distinction regarding a 'functioning and reasonable interdisciplinarity' (Löffler 2010, p. 157, transl. HP here and in the following quotes from this source). He discerns the 'material object' (German: Materialobjekt) of an academic discipline from its 'formal object' (German: Formalobjekt). Interdisciplinary collaborations might share a 'material object'[15]

15 What even missing a joint 'material object' (a theme, question, or problem) means, might be demonstrated by using an example from our own faculty at the University of Manchester. During the years 2017–2018, the School of Arts, Languages and Cultures (SALC) indulged its staff and students with a room called IDEA (Interdisciplinary Exchange Area) at Ellen Wilkinson Building (Fig. 3.1). The room was furnished with four black sofas around an empty glass table, flanked by a blank flip chart. Whenever I peered through the glass window in the door into this room, its empty and inhospitable atmosphere had not changed. It is no surprise that this room was put to another purpose in 2019 as – on my inquiry – the only 'material objects' that had been shared in there had been lunch break sandwiches. There is hardly a more telling example for

which is the object (topic, question or problem) of their research, but they always differ in their 'formal objects' which are their differing perspectives, ways of inquiry and methodologies of approaching the possibly joint 'material object' of their research. From a strictly (and also quite opinionated) academic point of view, Löffler argues that only those disciplines that not only share the same 'material object', but also share comparatively similar 'formal objects', have the chance to conduct productive interdisciplinary collaborations (p. 162). Although rightly stressing the process-oriented qualities of interdisciplinarity, he turns this advantage into confining interdisciplinarity to the realms of 'experimentation and activity', and doubts that there are such things as 'interdisciplinary theories' and 'interdisciplinary explanations' (p. 162). In Löffler's understanding, interdisciplinarity might perhaps be a productive research strategy *on the way* to new knowledge, but it is very rarely part of the final result (p. 161). He thus doubts the meaningful existence of interdisciplinary academic products – something this research wants to challenge.

Fig. 3.1: University of Manchester, Ellen Wilkinson Building, School of Arts, Languages and Cultures (SALC), IDEA (Interdisciplinary Exchange Area) room, 2017–2018. Photo: © Henriette Pleiger, 2018.

the fact that interdisciplinarity is not existing in itself but requires good questions and dedicated players.

To underline his view, Löffler names three 'forms of bad interdisciplinarity' in academia, which he calls 'nice-to-know-interdisciplinarity' (p. 164, in this case himself using the English phrase 'nice-to-know'), 'as-if-interdisciplinarity' (p. 166), and 'interdisciplinarity as unfriendly takeover' (p. 169).

The first type, the 'nice-to-know-interdisciplinarity', is described as a superficial academic activity – in Löffler's view hardly deserving the name 'interdisciplinarity' – as the involved disciplines are only relying on connections and similarities regarding their 'material objects' on a 'metaphorical level' and are 'lacking sufficiently similar formal objects', meaning ways of looking at their 'material objects' (p. 164). This is, of course, reminiscent of the characteristics of multidisciplinarity. Löffler gives the example of an academic event, a lecture series, about 'The Foreign' (German: Das Fremde) involving

> legal experts ([on the topic of] aliens legislation), literary scholars (exile literature), linguists (foreign words and language migration), biologists (immigration of foreign plants and animals, so-called neophytes), sociologists (delimitation and integration of foreigners in different cultures), aestheticians (techniques of artistic alienation), historians specialized in nutrition and economy (history of colonial goods and similar imports), military historians (history of the Foreign Legion and other non-nationally recruited army units) and so forth (Löffler 2010, pp. 164, 165).

Löffler judges such events in an academic setting as occasions of a mere social and entertaining quality that are meaningless regarding the production of new knowledge. They might offer some new 'nice-to-know'-facts for the inclined listeners, perhaps even widening their horizons regarding the 'relativity of their own discipline' (p. 165) but such events remain a 'merely additive, bad interdisciplinarity' (p. 165). Löffler rightly states that in such events (in Klein's terminology they would be characterized as multidisciplinary) the effort of integrating the presented pieces of knowledge and perspectives on the event's topic is mostly left to the recipients, but his worries about the danger of confusing and disorienting a lay audience (p. 165) seem exaggerated. Instead, I would argue that Löffler underestimates the power of *curiosity*. An event like the one he describes could have marked a promising beginning of an *interdisciplinary* project about its main topic. The problem with a lecture series such as this is not the event itself or the wide scope of the involved disciplines, but that it stopped short of being developed into an *interdisciplinary* project, per-

haps leading to the collaborative production of a publication or an exhibition with the conceptual depth to be taken seriously as an academic product.

The wide range of disciplines that were, for example, involved in the exhibition *Assembling Bodies – Art, Science & Imagination* (see Herle et al. 2009 and Herle 2013), certainly differed in their 'formal objects' (ways of enquiry), but nevertheless collaborated in a most meaningful way resulting in an equally meaningful academic (and not just cultural) product. When I saw this exhibition at the Museum of Archaeology and Anthropology of the University of Cambridge in 2009, I was instantly amazed and impressed by the courage of the exhibition curators to take on such a huge topic for a temporary exhibition. Although the museum's location and identity is obviously well settled within the inspiring environment of an academic campus and therefore perhaps provided a more natural setting for an *interdisciplinary* exhibition than other museums located off-campus, it still seemed like a Herculean task to curate a multifaceted exhibition about 'the different ways that bodies are imagined, understood and transformed in the arts, social and bio-medical sciences' (Herle et al. 2009, back cover). It is of little surprise that Nicholas Thomas, the museum director, called it 'the most ambitious exhibition' the museum had 'produced to date' (p. 5). The exhibition emerged from the 'cross-disciplinary' project 'Changing Beliefs of the Human Body' and was 'not just an outcome of research, it has been a research process in itself' (p. 5). The three exhibition curators, Anita Herle, Mark Elliott and Rebecca Empson, state in their introduction that 'the exhibition demonstrates the productivity of interdisciplinary research' (p. 9). From the beginning of the five-year research project, the exhibition had been planned as an integral part and academic output, also with the aim to present recent innovative research from the University of Cambridge. The project originally only involved the disciplines of archaeology, social anthropology, history, and classics, but during the process of making the exhibition the curatorial team extended the disciplinary scope to include art history, the history of science, biomedicine, and contemporary art (p. 9). Many more disciplines were touched in the exhibition, for example criminal law (p. 35), the study of musical instruments as analogies for the human body (p. 42), brain science (p. 44), as well as research on genetics (p. 66) and artificial intelligence (p. 84), to name but a few.

At first glance, the wide scope of the involved disciplines for this exhibition might be reminiscent of Winfried Löffler's example of a seemingly random array of academic facts and results encircling a topic or joint 'material object', like in the aforementioned lecture series about 'The Foreign'. But the difference is

that the latter produced a low 'level of integration' (Klein 1990, p. 15) compared to the intense curatorial work achieved by the three exhibition curators named above – three interdisciplinarians and curatorial bridge-builders – who managed to create a new whole out of 'a wealth of divergent materials, disciplines and practitioners' (Herle et al. 2009, p. 9). According to their own account, the process of making the exhibition 'prompted many fruitful collaborations', 'increased dialogue between academic colleagues in various departments, museums and libraries' and enabled 'links with local and international communities' (p. 9). Although the curators created and controlled the overall narrative, including 'numerous specialist contributions' (p. 9) they encouraged 'lateral connections' (p. 9) between objects and ideas both in the exhibition and the catalogue. It is these 'lateral connections' – these *lateral ways of thinking* – which constitute a greater intensity of integration in an interdisciplinary research process. The ways of enquiry (the 'formal objects') may have differed considerably in this exhibition project, but instead of being an example for 'bad interdisciplinarity' it became a truly inspiring exhibition and an example of best *interdisciplinary* practice, in its outreach even possessing rewarding transdisciplinary aspects, for example by including works of contemporary artists (see also Bjerregaard 2020, p. 5). Or, as Thomas Osborne wrote on the 'phenomenon of art-science', 'Interdisciplinarity is most exciting where most improbable; in other words, where the creative energies of its practitioners are most at stake in entering into the unknown' (Osborne 2013, p. 95).

The second and third types of 'bad interdisciplinarity', according to Löffler, are 'as-if-interdisciplinarity' (Löffler 2010, p. 166) and 'interdisciplinarity as unfriendly takeover' (p. 169). These two forms can be understood as building a linear relationship, as the former type might be leading to the latter. The 'as-if-interdisciplinarity' describes the academic practice of transferring the methodology and terminology of one discipline to another, or of translating the academic results of one discipline into the terminology of another discipline, in order to make these results available. These communication strategies amongst varying disciplines are to be viewed as 'basically reasonable activities at the forefront of real interdisciplinarity' (p. 166). These become questionable, though, 'where the awareness for the problems of methodological and terminological transfers is lost' (p. 166). Löffler has some telling examples of recent 'as-if-interdisciplinary' fields such as the 'economics of education' or 'neuromarketing.' Such seemingly interdisciplinary new fields of research are often put into existence by one discipline, in order to participate from the prestige of another discipline (in these two cases the allegedly more prestigious disciplines

of economics and the neurosciences) (p. 166). There are certainly examples of exhibitions to be found which tried to upgrade their appeal and significance by borrowing conceptual ideas or terminology from more popular disciplines, which is, of course, not a bad practice per se.[16]

'Interdisciplinarity as unfriendly takeover' is a possible consequence of the aforementioned 'as-if-interdisciplinarity'. While the latter still allows for different methodologies and terminologies to co-exist, the former means the takeover by a leading discipline, dissolving this methodological and terminological diversity. In a hierarchical instead of a collaborative process, only one voice prevails in an originally polyphonic setting. A more constructive form of *interdisciplinarity* would instead involve a democratic process of negotiation, in order to dissolve or save a methodological and terminological diversity by reaching a meaningful consensus.

Löffler's observations regarding the two latter forms of a problematic kind of interdisciplinarity are to be taken seriously when it comes to analysing the interdisciplinary exhibition cases in the practice-based part (chapters 4–6) of this study. Learning from my own experience, rather meaningless forms of interdisciplinarity are the ones in which dialogue and collaboration are suppressed either by the disciplinary participants themselves or by a third regulating or managing party mostly representing the institutional head (and/or financier) of an interdisciplinary project. *Interdisciplinarity* fails where it stops short of being developed or of being allowed to blossom. But how can practitioners mitigate this risk? In its best practice, interdisciplinarity is about creative processes and the courage to think across boundaries, in order to create

16 As a possible example, I am reminded of the trend for immersive digital art exhibitions, now often realized in a blockbuster format. As tempting as the technical possibilities are, I would not be surprised if the progress in digitalisation gradually decreased some museums' confidence in the strength of the original artwork and its traditional presentation. Especially economic interests could force on them a form of interdisciplinarity that might be unwanted in the long run. See, for example, this article from 2021: https://www.museumnext.com/article/blockbuster-immersive-digital-exhibitions-bloom/ (last accessed 26 August 2023). But there are also signs that the 'immersive art' trend, which gained momentum during the COVID-19 pandemic, may not be as economically successful as expected. See this article from 2023: https://www.theguardian.com/artanddesign/2023/aug/03/immersive-art-firm-behind-van-gogh-and-monet-shows-files-for-bankruptcy (last accessed 29 August 2023).

new knowledge and new practices. Anne Balsamo and Carl Mitcham have formulated five useful 'virtues' for 'the ethics of interdisciplinarity' (Balsamo and Mitcham 2010, p. 270). These are 'intellectual generosity, confidence, humility, flexibility and integrity' (p. 270), but these virtues (certainly also applying to curatorial work) must be facilitated within an interdisciplinary project setting to thrive. A moderated research process which provides enough time as well as financial and spatial resources is needed to turn these joint virtues and ambitions for an integrative collaboration into a meaningful cultural practice.

The discussion above has presented a more detailed classification of interdisciplinarity, revealing a number of insights regarding different qualities of collaborative research processes. Based on the assumption that exhibition-making can be a research method in itself (see Thomas 2010, Bjerregaard 2020), this terminological analysis can be applied and used to further understand the processes behind the making of interdisciplinary exhibitions. I plan to use this terminological toolkit for the analysis of three exhibition cases in chapters 4–6. Having described the theoretical framework of my research in the previous sections of this chapter, my methodological approaches will be discussed in the following section. For applying the theoretical framework to my practice as an interdisciplinary exhibition curator, I will look at useful methods of inquiry and analysis such as critical autoethnography in an institutional setting, case studies and qualitative interviews. Possible ethical issues of this research will also be discussed especially in terms of institutional transparency.

3.4 Methods of investigating my practice as an interdisciplinary exhibition curator

3.4.1 Institutional transparency and critical autoethnography

My research on interdisciplinary exhibition-making – and potential best practices thereof – is practice-led, as it tries to advance knowledge about and within this cultural practice. The evaluation and analysis of my own professional practice is therefore an integral part of my research.

The *transparency* of cultural practices – meaning the disclosure and investigation of internal processes and insider knowledge about cultural practices – has emerged as an important aspect of my research. Having worked and still working as an exhibition curator at the Bundeskunsthalle in Bonn, Germany, since 2002, I am especially interested in the production processes and inter-

actions of collaborative, interdisciplinary exhibition-making, focusing on the complex processes behind the scenes. The institution, an exhibition hall without a collection of its own, has already been generally introduced in the introduction (chapter 1) and more specifically regarding its programme scope of temporary exhibitions in the literature review (chapter 2). Despite the ethical questions arising from analysing internal institutional processes as a participant or member of an organization, I agree with Beatrice von Bismarck, who writes in her article 'Matters of Negotiation: Roles and Practices in Project Work' that collaborative exhibition projects can yield more meaningful results if their production processes and conditions are made transparent (Bismarck 2002, p. 235).

I have come to think about transparency also in spatial terms and analogies, and in terms of power relations, in order to map out open spaces and barriers enabling or hindering collaborations in exhibition-making. Having viewed interdisciplinary exhibitions as possible 'experimental territories' from the start of this research, I am asking myself now: Whom do we, as an institution, actually invite to experiment on such a territory (if we provide it at all), when our institution literally and figuratively is more reminiscent of a fortress than an open space? Inside its main building, opened in 1992, the Bundeskunsthalle has about 5,000 square metres of exhibition space designed for highly flexible use. But from the outside it looks so hermetically sealed that visitors often have difficulties finding its entrance, which lies hidden in a small courtyard at one corner of the building. From a bird's-eye view, its roof garden suggests openness but is only open for regulated access during the summer months. Judging from its architectural features the Bundeskunsthalle was clearly conceptualized as a 'temple' for the arts and other cultural activities rather than as a 'welcoming inclusionary' place, as Elaine Gurian put it when arguing for more inviting and open museum architectures as public spaces (Gurian 2005, p. 204). Some time ago, an elderly woman who had participated in one of our special guided tours for people with dementia, reportedly told one of her relatives a few days after the event that she had been on an outing. She couldn't remember where she went and what it was all about, but what she did know was that she had participated in a 'very elite activity' and that she definitely wanted to try staying in this distinguished 'circle'. This emotional reaction somehow revealingly stands against the inclusionary aim of the described activity. As proud as we are of our inclusionary programmes, our building (and perhaps other aspects of her visit that informed this woman's feelings) still breathes an elitist atmosphere.

Fig. 3.2: Architectural model by Gustav Peichl of the Bundeskunsthalle in Bonn, Germany, 1987. Photo: Peter Oszvald, © Kunst- und Ausstellungshalle der Bundesrepublik Deutschland GmbH, Bonn.

Our visitors' experiences with the institution and its barriers and boundaries are very important, but as for my research question about interdisciplinary exhibition-making, I am more interested in looking at the experiences of the external experts, curators and other collaborative partners who are invited to join us in making exhibitions, and in how the institution (including myself) deals with them. The aim and necessity to collaborate with others, at least in my institutional practice, surprisingly often stands against the fear of being invaded or overpowered. From an institutional point of view – and when theorizing about exhibition-making, I sometimes have to remind myself that I am not an independent exhibition curator but instead part of an institutional setting with all its rules and regulations – developing an interdisciplinary exhibition obviously means inviting people in but at the same time requires me to keep them at a certain distance, for example with security passes granting limited access, or with limited contracts and limited payments. Bismarck speaks of the deconstructive potential of changing defined boundaries during collaborative exhibition-making processes, describing them as 'processes of convergencies and divergencies' (Bismarck 2002, p. 231, transl. HP) and, quoting Stefan Germer, argues for the deliberate 'disturbance of certainties'

(p. 233, transl. HP). Anne Lorimer even speaks of 'ruptures', for example, caused by 'processual instabilities' (Lorimer 2007, p. 198) in her case study on an experimental exhibition about the human brain at the Chicago Museum of Science and Industry. She argues that experimental exhibitions should allow for going 'beyond what could have been thought out beforehand' in order to 'offer instead new forms of knowledge and practice' (p. 200) in a 'rich interplay of materiality, semiosis, and sociality that takes place within the space they have created' (pp. 215, 216). But to what extent are institutions ready for (or can realistically cope with) such productive disturbances to their institutional routines and workloads?

Reflecting on my own professional practice, I have become increasingly interested in exploring the questions of *what it takes* and *what institutions get* if they invest in collaborative and interdisciplinary exhibition-making, perhaps eventually leading to the development of more precise standards for this kind of exhibition. To answer these questions, the nearest at hand for the collection of relevant data is a transparent analysis of my own professional practice. But this requires the disclosure of insider knowledge about institutional processes that are usually considered internal (potentially leading to ethical issues), and such a disclosure must be carefully justified theoretically and methodologically.

The need for transparency in my research requires a qualitative method that is simply able to *describe and write about a culture* and is thus a form of *ethnography*. In my case this culture is a 'working culture' or 'institutional culture'. Ethnography becomes autoethnographical depending on how much it openly allows for the researcher's own perspective. Thus, allowing for subjectivity, *autoethnography* strikes me as a useful method with regard to my research questions in several aspects: (1) Autoethnography may help to connect insider experience and knowledge to a larger academic discourse (Adams et al. 2015, p. 25). (2) It may help to 'account for intuitive leaps, false starts, mistakes, loose ends, and happy accidents' (p. 22), and thus reveal the productive real-life messiness (p. 9), but also the institutional obstacles of the collaborative process of interdisciplinary exhibition-making. (3) It enables a transparency of the researcher's voice and professional identity. (4) It advocates proximity instead of objectivity (p. 23). (5) It values storytelling (p. 10) as a process-related method. A method allowing for 'stories and storytelling as ways of knowing' (p. 10) seems related to a crucial ingredient of exhibition-making itself. This aspect of autoethnography is also fittingly connected to the method of qualitative interviewing, allowing for individual narratives such as anecdotes and recounts of professional experiences.

Some autoethnographical approaches feel too personal and too emotional for my research, although they are, of course, completely justified within the context of biographies of, for example, marginalized groups or individuals in society (see Adams et al. 2013). Still, what justifies the use of autoethnography is my insider position and insider knowledge that could be relevant for my research questions. But this concerns my *professional self* rather than my personal self – if these two can always be separated. Leon Anderson distinguishes an *analytical* (Anderson 2006) style of autoethnography from a more evocative, sometimes intentionally emotional kind of autoethnography (Adams et al. 2015). My research in museum practice is certainly also a personal investigation of my own practice so that I can develop a clearer set of professional values and gain more knowledge and control over my own actions. In a positive way, this research also runs against my noticeably growing routine in the processes of exhibition-making and helps me gain more courage to travel new and untested paths. But in order to contribute to the academic discourse or even theory building in museum practice, I have clearly opted for a critical, analytical method and writing style by choosing a form of 'critical autoethnography' which acknowledges the researcher's standpoint but is 'accessible to judgement and evaluation' by others (Adams et al. 2015, p. 89).

3.4.2 Case studies, interviews, grey literature, and ethical limitations of this research

I will take three exhibition cases, already outlined in the introduction to this book, as examples from my own practice as a curator and manager of temporary exhibitions at the Bundeskunsthalle, reflecting on how they worked as interdisciplinary projects by documenting and analysing critical moments and developments during their production process. These *cases studies* from my own curatorial practice are about the following three exhibitions, constituting chapters 4–6 of this study:

1. A transdisciplinary and participatory exhibition: Setting the bar for good practice – *TOUCHDOWN. An exhibition with and about people with Down's syndrome* (2016–2018)
2. The 'inter-disciplined' exhibition: Art meets science – *Weather Report. About Weather Culture and Climate Science* (2017/2018)
3. A multidisciplinary exhibition and the political dimension of *interdisciplinarity – We Capitalists. From Zero to Turbo* (2020)

These three exhibitions are not necessarily key cases or representative examples, but they are complex cases rich in information and experience and can therefore be analysed in great detail. They offer variation (Flyvbjerg 2006, p. 230) in their different settings and circumstances, creating a diverse picture while being subject to scrutiny through a lens of theoretical propositions. Applying and testing theories of interdisciplinarity especially through the comparison of these three exhibition cases promises to deliver useful and revealing insights for exhibition theory and practice in museum studies. Bent Flyvbjerg writes that 'the most advanced form of understanding is achieved when researchers place themselves within the context being studied' (Flyvbjerg 2006, p. 236) and I am indeed very grateful for this privileged research setting allowing me to theorize my daily curatorial work at the Bundeskunsthalle, where changing directors and colleagues have generously supported my research over the past few years.

The three case studies are perhaps not only valuable from a museum studies point of view, but also for the academic discourse in interdisciplinary studies. Bianca Vienni-Baptista reiterates the need for case studies in this field of science theory, specifically for understanding more comprehensively differing conceptions of *inter-* and transdisciplinary research (Vienni-Baptista 2023, p. 72). At the same time, initiatives such as the EU project SHAPE-ID (Shaping interdisciplinary research practices in Europe)[17] are reaching out beyond the realms of science and technology research communities to the arts and humanities as well as other societal stakeholders.

For understanding what interdisciplinary exhibitions are and how they are conceptualized and produced, the method of individual and partly autoethnographic case studies seems to be rewarding, as they can unveil the possibilities and limitations of exhibition-making practice from an insider's perspective. Writing a case study from the inner perspective of a case participant promises to be a difficult task though. Reflecting on your own practice can feel like 'a kind of crisis' (Macdonald and Basu 2007, p. 6). Firstly, because there is a certain secrecy going along with inner-institutional production processes, as disclosing the 'disjunctions, disagreements and "surprise outcomes" involved in cultural production' does not necessarily meet the objectives of an institution's 'impression management' (Macdonald 2002, p. 8) even in hindsight. Secondly, these everyday procedures do not seem worth being theorized, as at least for the practitioner they often are routine activities, or as Sharon Macdonald put

17 Accessible at https://www.shapeid.eu (last accessed 26 August 2023).

it in *Behind the Scenes at the Science Museum*, 'one of the problems that an ethnographer working in a relatively "unexotic" setting may face is how to *defamiliarise the familiar*' (Macdonald 2002, p. 7, emphasis added). Although I have tried to include both perspectives – that of a participant and that of a (retrospective) observer – a 'participant-observer' (Macdonald 2002, p. 12) or 'participant academic' (Nicolescu 2016, p. 466) –, this theoretical attempt certainly lacks a more distanced view on my own role in the process of making exhibitions, and I have tried to make up for this deficit by including the views of colleagues who were able to also critically reflect on my own actions during these processes.

An important tool for the reflective analysis of my own practice and perspective are the *qualitative interviews* that I have conducted with co-curators and collaborative partners within the scope of the three case studies. These semi-structured interviews add to a deeper understanding of the processes involved to develop the exhibitions but also touch on more general questions within my research. For the interviews I have developed a set of ethically approved questions for external exhibition and museum curators as well as other academics and professionals (during the process becoming curators), who collaborated in interdisciplinary exhibitions co-curated and managed by myself at the Bundeskunsthalle.[18] These questions (see Appendix) aimed at a retrospective analysis of the process of making an interdisciplinary exhibition, starting from forming an interdisciplinary team, jointly developing an exhibition concept, on to negotiating and choosing objects and to finding a joint curatorial language for interpretation and exhibition design. The interview questions focused especially on key issues and moments of decision-making as well as knowledge production and allowed for a deep feedback conversation in hindsight. These occasions have proven to be of immense value to all participants including the researcher, especially because they were not automatically part of the institutional procedures of finalising an exhibition project. Apart from this welcome side effect of my research creating opportunities to jointly reflect on the project amongst the respective exhibition teams, I have most importantly tried to enable the interviewees' 'voices and experiences to challenge and support' my research claims (Vanover et al. 2021, p. 324).

The six interviews (and two additional feedback conversations) were conducted in German language between 2018 and 2021. All interviewees were sent

18 For this research, a low-risk ethical approval was granted by the University of Manchester, School for Arts, Languages and Cultures (SALC) on 12 February 2018.

a detailed information sheet and have given their written consent to participate in this research including to be published under their real names. The six interviews have been transcribed to enable a thematic analysis (see, for example, Brett and Wheeler 2022, p. 180). The interview transcriptions in German language amount to a total of c. 75,200 words. All quotes from these transcriptions were translated into English by me. Given the amount of data, one might legitimately ask why only a comparatively small part of it was used in the case studies of this book. Although the interviews followed the prepared set of questions, they turned into deep reflective discussions about the shared experiences in exhibition-making, as described above. These conversations revealed the 'social drama' (Macdonald 2002, p. 6, after Victor Turner)[19] of the exhibition-making processes and were in itself 'social processes' (Silverman 2017, p. 153) as they not only involved a joint reflection in hindsight but also had a clarifying and even in some instances healing effect regarding past conflicts. David Silverman gives the advice that as a qualitative interviewer you should 'ignore what you know already about your interviewees' (Silverman 2017, p. 154) to achieve a credible result. I tried to take up the role of the distanced researcher, but at the same time I was still a participant myself. The fact that we know each other well amongst the three exhibition teams introduced in this book led to a trustful and in large parts confidential atmosphere during the interviews. And I tried to remain ethically aware of what Dawn Mannay describes as 'landscapes of representation, interpretation, voice, trust, confidentiality, [and] silence' (Mannay 2016, p. 123) building up during the interviewing process. However, the interviews did yield immensely valuable observations and statements by the interviewees regarding my research question.

The main thematic grid, through which I analysed the interviews, was the classification of interdisciplinarity in order to identify multi-, *inter-* and transdisciplinary processes within our curatorial practice, revealing the complexity and fluidity of these categories. On a more general note, the interviews yielded important parallel stories and alternative perspectives on a shared series of events. Furthermore, the interview questions allowed me to reflect on my own curatorial and managing role within a team system. Some of the interviews also laid bare institutional shortcomings and suggestions for change. The arguably selective quotes from the interviews have been approved for publication

19 Turner, V. (1974). *Dramas, Fields and Metaphors: Symbolic Action in Human Society.* Ithaca, NY: Cornell University Press.

by the interviewees after reading the finished case studies before the final completion of this study.

This research had comparatively low *ethical risks* but, as stated above, the need for transparency afforded the disclosure of internal processes and insider knowledge from within the institution I am working at. In order to reveal some aspects of the 'complexity of what goes on behind the scenes – some of the mess that is tidied away in the finished product' (Macdonald 2002, p. 246), *grey literature* (unpublished documents) has also been an important source. Many of my own notes and memories during the work on the three exhibition cases have been included into this study as far as they are not violating any personal or institutional rights.

3.5 Conclusion: Applying a rich theoretical vocabulary to the analysis of interdisciplinary exhibition-making

Perhaps the most important result of the terminological observations above is the fact that *interdisciplinarity* in the discussed narrower sense must be recognized and acknowledged as a complex endeavour. If the established definitions are taken seriously not only in universities but also in the cultural sector, institutions and individual researchers/curators might be more careful in claiming the term 'interdisciplinary' for their academic and cultural projects. It must be understood that the research-based strategic decision to conduct projects in an interdisciplinary way has considerable consequences for their complexity, resources, and expenditures. These theoretical reflections therefore have significant practical implications if they are translated into a methodology and consistently implemented in museum practice. It is this methodological translation and implementation that I want to test out in the following chapters. As interdisciplinarity in all its forms applies first and foremost to *processes* of research and knowledge creation, this aim of testing the theory in practice requires a rigorous analysis of the production processes of interdisciplinary exhibition-making. An important precondition of this is my understanding of curating/exhibition-making as a research activity, as elaborated on above.

The works of Klein and other more recent authors not only provide a theoretical vocabulary and analysis of the field of interdisciplinarity studies but also an immensely useful and in-depth analysis of integrative processes as such (especially Klein 1990, for example, pp. 182–196, and later publications). I will

draw on these more practical aspects of interdisciplinarity in greater detail in the three case studies of this book.

In the course of the theoretical discussion above, I have gathered a rich portfolio of categories and terms, such as useful descriptive adjectives, that will enable a more precise analysis of interdisciplinary exhibition-making. The established categories of interdisciplinarity will be tested and exemplified in the three exhibition cases that in some way or other claimed to have taken on a multifaceted perspective on their respective themes. Their differing shades and grades of interdisciplinarity will show the fluidity of these categories, but more importantly the need for a more precise language to analyse their differences. This will also involve institutional critique and autoethnographical narratives as well as the views of co-curators, colleagues, and other collaborative partners in these exhibition cases. As Bent Flyvbjerg writes, 'the proximity to reality, which the case study entails, and the learning process that it generates for the researcher will often constitute a prerequisite for advanced understanding' (Flyvbjerg 2006, p. 236). This is something I plan to offer with the following three case studies.