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**THE MICROPOLITICS  
OF COLLABORATIVE GOVERNANCE**  
**A power-sensitive and process-oriented  
perspective**

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**ARTICLE-BASED (CUMULATIVE)  
DISSERTATION**

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*Submitted by*  
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## Summary

Why do exercises in collaborative governance often witness more impasse than advantage? This cumulative dissertation undertakes a micro-level analysis of collaborative governance to tackle this research puzzle. It situates micropolitics at the very center of analysis: a wide range of activities, interventions, and tactics used by actors – be they conveners, facilitators, or participants – to shape the collaborative exercise. It is by focusing on these daily minutiae, and on the consequences that they bring along, the study argues, that we can better understand why and how collaboration can become stuck or unproductive. To do so, the foundational part of this dissertation (Article 1) uses power as a sensitizing concept to investigate the micro-dynamics that shape collaboration. It develops an analytical approach to advance the study of collaborative governance at the empirical level under a power-sensitive and process-oriented perspective. The subsequent articles follow the dissertation's red thread of investigating the micropolitics of collaborative governance by showing facilitation artefacts' interrelatedness and contribution to the potential success or failure of collaborative arrangements (Article 2); and by examining the specialized knowledge, skills and practices mobilized when designing a collaborative process (Article 3). The work is based on an abductive research approach, tacking back and forth between empirical data and theory, and offers a repertoire of concepts – from analytical terms (designed and emerging interaction orders, flows of power, arenas for power), to facilitation practices (scripting, situating, and supervising) and types of knowledge (process expertise) – to illustrate and study the detailed and constant work (and rework) that surrounds collaborative arrangements. These concepts sharpen the way researchers can look at, observe, and understand collaborative processes at a micro level. The thesis thereby elucidates the subtleties of power, which may be overlooked if we focus only on outcomes rather than the processes that engender them, and supports efforts to identify potential sources of impasse.



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*Power must be understood as a multiplicity of force relations [...].  
The micropractices of power and the day-to-day activities  
– hour to hour and minute to minute sometimes –  
are what is significant.*

*(Flyvbjerg, 2001, p. 120)*

## Introduction

### Motivation

In recent decades, collaborative governance has shifted from being a novelty in policy making towards the ‘new normal’ (Soerenen and Torfing, 2021, p. 2): a widespread approach to face complex socio-ecological challenges by ‘improving problem definitions, stimulating mutual learning [...], and generating joint ownership of solutions’ (ibid). Ideally, the benefits of collaborative governance exercises lie in the production of something that none of the involved actors may have been able to achieve alone. Huxham has called this added value of collaboration the ‘collaborative advantage’ (1996, p. 241). However, both practice and research often reveal experiences of moments in which collaboration becomes stuck and the results achieved appear negligible; moments of *collaborative impasse*, as I call them in this dissertation. When collaborative impasse occurs, collaboration may result in ‘unforeseen negative externalities’ (Torfing, 2018, p. 1), for instance by exacerbating divisions among societal actors, and becomes ‘at best an impractical mechanism for determining the public will, and at worst misleading or dangerous’ (Delli Carpini et al., 2004, p. 321).

The idea for this dissertation project developed during my ten-year experience as practitioner, designing and facilitating collaborative exercises, and as action researcher, studying, (co-)convening, and advising on these arrangements. In both roles, I repeatedly witnessed the inherent fragility of collaborative processes, and often felt overwhelmed by the tangled dynamics taking place throughout a collaboration, which disconnected the arrangement from its original plans: No matter how much engagement, care, financial

resources, and time conveners and facilitators invested in a collaborative process, moments of collaborative impasse were recurring features that seriously endangered the very existence of the arrangement itself. Why was that so? As a facilitator, I noticed that much of my ‘capacity and intuition about how to proceed’ (Innes and Booher, 2018, p. 83) was reliant on ‘embodied knowledge’ (Freeman and Sturdy, 2014, p. 8). As a result, I felt an urge to somehow put things in order and render explicit what I knew in practice (Schön, 1983). I transformed my increasing disillusion with collaboration into a research puzzle (Gustaffson and Hagström, 2017; Schwartz-Shea and Yanow, 2012) and asked myself what it takes to initiate and run successful collaborative processes.

Collaboration is ‘neither easy nor always effective’ (Page et al., 2015, p. 715), and impasse does not spare even well-designed arrangements (Bianchi et al., 2021, p. 1583). The academic literature on collaborative governance and deliberative democracy has so far attempted to address this challenge by looking at specific dimensions influencing the performance of collaboration, such as representation and recruitment strategies (Landemore, 2013; Longstaff and Burgess, 2010), the communicative methods fostering collective action (Nanz and Fritsche, 2012), exclusionary dynamics that collaborative arrangements may reproduce (Sanders, 1997; Young, 2001), or the practices of facilitators in actively tackling these (Cooper and Smith, 2012; Dillard, 2013; Escobar, 2019; Mansbridge et al., 2006; Moore, 2012). While such studies provide an in-depth understanding of specific aspects of the collaboration, what is still missing is an analytical approach that would allow empirical exploration of how these dimensions influence one another along the course of the collaboration, and how they impact the performance of a given arrangement. In the words of Walker and colleagues, we need ‘better analyses and an improved conceptual apparatus to understand the complexities of participation today’ (Walker et al., 2015, p. 9).

The present dissertation project undertakes a micro-level analysis of the phenomenon of collaboration, covering both its design and implementation phases. Its overarching research questions are: “*How does collaboration work in its daily practice?*” and “*How does collaborative impasse emerge?*” The study inquires, on the one hand, into the practices of designing collaboration, by investigating the expertise of the ‘makers’ of collaboration (Lee, 2015) who shape the rationale, framing, and rules operating in the collaborative space. On the other, it analyses how the plans of conveners and facilitators get appropriated, resisted, and transformed (Felt and Fochler, 2010, p. 219) by other



actors once the collaboration stage opens to its participants. For this, it develops an analytical approach to empirically track the impacts of micro-dynamics on a collaborative process over time. Overall, the present work is situated in literature around collaborative governance (Ansell and Gash, 2008; Emerson and Nabatchi, 2015; Gash, 2016; Soerensen and Torfing, 2021). To address its research questions, the three articles that compose this cumulative dissertation build on studies of democratic innovation (Escobar, 2015; Escobar and Elstub, 2019; Smith, 2009); literature devoted to facilitation (Bherer et al., 2017; Cooper and Smith, 2012; Escobar, 2019; Lee, 2015; Moore, 2012; Spada and Vreeland, 2013); organization studies focused on process (Langley, 1999; Weick, 1995); studies proposing an interpretative approach in public policy (Bartels, 2014; Cook and Wagenaar, 2012); and investigations of the ‘ongoing, dynamic and evolving nature’ of collaborative arrangements (Vandenbussche et al., 2020, p. 1). Furthermore, the articles draw upon debates deriving from the literature on socio-materiality (Akrich and Latour, 1992; Carlile et al., 2013; Jarzabkowski and Pinch, 2013; Nicolini et al., 2011; Jarzabkowski et al., 2013; Star, 2010) to investigate the impact of facilitation artefacts within collaborative settings; and upon studies of expertise and experience (Collins et al., 2016; Eyal and Pok, 2015; Grundmann, 2017; Kennedy, 2019; Kotzee and Smit, 2018; Nunn, 2008) when seeking to identify the constitutive elements of the expertise required to design collaboration.

In the following, I first introduce the research gap to be addressed, the methodological research approach which I decided to follow, and the main theoretical concepts that underpin the present work. Secondly, I provide an overview of the three articles which constitute this cumulative dissertation, their research questions, and main results. Contributions to the broader context and future research will be illustrated in the Conclusion section at the end of this dissertation.

### **The research gap**

Several approaches have been proposed over the past decades to explain collaborative governance and its mechanisms. The widely cited definition by Ansell and Gash (2008) describes it as:

*‘...a governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal,*

*consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets' (Ansell and Gash, 2008, p. 544)*

Interestingly, a decade later, one of the definition's authors stated that, despite the 'booming business' (Douglas et al., 2020, p. 495) of collaborative governance, 'we [still] know little about *what* collaborative governance is, *how* it works and *whether* it lives up to its promise' (Gash, 2016, p. 454 – emphasis added). This uncertainty generates conceptual and methodological challenges when undertaking an empirical analysis of the performance of collaborative governance (Emerson and Nabatchi, 2015, p. 718): What exactly is at the center of investigation? And how do we proceed in the investigation? The literature offers different approaches to tackle this issue. While one strand focuses on answering the question of what collaboration is by illustrating its goals and qualities (Gash, 2016, p. 454), a second one develops theoretical models (Ansell and Gash, 2008; Bryson et al., 2006; Emerson et al., 2012) seeking to provide an overview of the components of what Emerson and colleagues call the 'collaborative governance regime' (2012, p. 5). What these frameworks set in the foreground are incentivizing or constraining contextual conditions at the outset of collaboration (e.g. resource imbalances among different actors); the institutional design, with its terms and forms of participation; collaborative dynamics (e.g. building trust, fostering capacity for joint action, generating a shared ownership); (facilitative) leadership; and collaboration's outcomes. While offering an integrated perspective on the key components that influence the course of a collaborative process, such theoretical models seem to leave open the questions of how to apply them at the empirical level (Dewulf and Elbers, 2018, p. 2) and, in particular, how to investigate the dynamic nature of collaborative governance (Gray, 1989; Huxham and Vangen, 2005; Page et al., 2015) and the ways in which complex interactions among the identified components affect the collaborative performance over time (Klijn and Koppenjan, 2000).

To advance the application of these frameworks at the empirical level, this research project suggests moving away from attempts to provide general statements on possible conditions for success in collaborative governance *ex ante* (Choi and Robertson, 2014, p. 496). Instead, it holds that only empirical investigation of the dynamics influencing the collaboration throughout its course may show whether a collaborative process actually leads to empowerment or instead exacerbates inequalities (Farr, 2017, p. 4). To achieve this, I follow Flyvbjerg's (2002, 2006a, 2006b) invitation to extend the analysis

to the question of “*How?*” collaboration works, and to focus on ‘minutiae’ which, ‘when closely examined, would reveal itself to be pregnant with paradigms, metaphors, and general significance’ (Flyvbjerg, 2006b, p. 237). I hold that a micro-level analysis (Bartels, 2014; Collins, 2005; Escobar, 2019; Goffman, 1959) investigating the diversity of interventions used by actors to actively influence and shape collaborations offers promising insights to understand how collaborative governance works in its daily practice. By understanding collaborative processes as social practices, namely ‘organized, open-ended spatial-temporal manifold[s] of actions’ (Schatzki, 2005, p. 471), this analysis focuses not on individuals or the surrounding structures, but on their interactions (Nicolini, 2013, p. 163).

### **An abductive line of inquiry**

Focusing on the micro level of collaborative governance can quickly become overwhelming. The investigation of the tight bundle of interventions made by actors throughout the collaboration can generate an enormous quantity of empirical data and poses the risk of ‘getting lost’ (Lather, 2007) without finding a way back. An abductive research approach, tacking back and forth between empirical data and theoretical concepts (Schwartz-Shea and Yanow, 2012), represented a viable way to circumvent this challenge and address my initial research puzzle. This line of inquiry consists of progressively identifying informed categories for observing and making sense of the dynamics shaping collaborative governance arrangements (Haug et al., 2013, p. 25), and developing a ‘conceptual apparatus’ (Walker et al., 2015, p. 9) to support the empirical analysis. This granted me the mental freedom to note down even the smallest and apparently insignificant intervention in the collaborative space that, I assumed, could potentially change the trajectory of the arrangement. At the same time, it encouraged me to constantly look for other scholars' contributions – within and beyond the collaborative governance literature – that could offer theoretical anchors to what I had just observed in the field. Going back and forth between fieldwork and constantly evolving reading lists progressively sharpened the way I was looking at and making sense of the world of collaboration.

An abductive logic of inquiry implies constructing a theory that is iteratively developed with the goal of generating ‘understanding rather than an explanation’ (Blaikie and Priest,

2019, p. 99) of the issue at hand. Scharz-Sea and Yanow portray abductive research as the attempt to track the ripples left by a stone: even after sinking beneath the water's surface, 'we can surmise that a stone had been there when we see the ripples, and we can "look" to clarify aspects of the impacts it had as it passed' (2012, p. 31). Looking is here meant as a combination of talking, observing, reading, but also doing (*ibid*). Such a way of 'looking' has been the main approach for this thesis and invited me to include in the analysis all experiences I gathered around collaboration, be they as action-researcher and co-convenor in collaborative settings, as expert offering policymakers advice on collaborative arrangements, or as facilitator in these settings. The abductive reasoning perspective (Blaikie, 2007; Scharz-Sea and Yanow, 2012) was applied along with a grounded theory approach (Bryant and Charmaz, 2007; Glaser and Strauss, 1967; Strauss and Corbin, 1990). Diverging from original grounded theory accounts, I did not stick to a theoretical tabula rasa. Instead, I relied on 'sensitizing concepts' (Bacharach and Lawler, 1980, p. 5) drawn from the literature and set them in a dialogue with the empirical data.

To clarify, the next section introduces some key analytical concepts that emerged from this abductive line of inquiry. Together, they contributed to my definition of collaborative governance at the micro level as '*an ongoing interplay between designed and emerging interaction orders*'. This definition and its implications are detailed in Article 1 and constitute the groundwork for the theoretical, methodological, and empirical work of this thesis.

### **Collaborative governance at the micro level**

Collaborative governance differs from other types of collaboration in its top-down approach, with one or more institutional authorities opening previously closed policy arenas to a larger group of (institutional and non-institutional) actors. These spaces, brought into being and framed by resource-bearing agents, are called *invited spaces* (Cornwall, 2002, p. 17). Their invited character differentiates them from *closed spaces*, where decision-making processes take place behind closed doors, and from *claimed/created spaces*, which are usually created autonomously by less powerful actors without institutional mandate (Gaventa, 2006, pp. 26–27). Every invited space for collaboration entails a *frontstage* and a *backstage* (Escobar, 2015, p. 3, building on Goffman, 1971). Frontstage refers to the moment in which the involved actors come

together and start a dialogue. In this setting, those in charge of facilitating aim to ‘distribute opportunities for intervention, keep the flow of communication going, observe communication patterns, and enable participants to change them when unproductive dynamics block the flow’ (Escobar et al., 2014, p. 97). To reach and benefit from that moment, however, substantive backstage work is necessary, both before and afterwards. It is in the backstage that conveners and professional facilitators identify procedures and activities to design new ‘interaction orders’ (Goffman, 1983, p. 5). These suggest new ways for different actors to interact with each other (Escobar, 2015). The backstage activity of assembling new interaction orders (henceforth, *designed interaction orders*) within an invited space for collaboration materializes in the *process design*, which defines ‘the where, when, and how of collaborative governance’ (Purdy, 2012, p. 411) through detailed choices around the ‘theme, participants, frequency of meetings and mandate of the group’ (Kristjansen, 2020, p. 5).

Most often, however, designed interaction orders do not play out in the ways they were designed. As the collaborative exercise moves to the frontstage, the original process design experiences a constant ‘situated negotiation and renegotiation of meaning’ (Lave and Wenger, 1991, p. 51). Participants, facilitators, and conveners together generate what I call an *emerging interaction order*. Figure 1 visualizes collaborative governance at a micro level as an ongoing interplay between *designed* and *emerging interaction orders*.



Figure 1: Collaborative governance at the micro level: an ongoing interplay between designed and emerging interaction orders.

## Outline of articles

This section sketches the content of each article composing this dissertation and places the specific contribution of each within the broader research program. Table 1 offers an overview of the three articles.

	RESEARCH QUESTION	PUBLICATION
<b>ARTICLE 1</b>	<i>How can we empirically study and analyze power dynamics that lead to collaborative impasse?</i>	Molinengo G (2022) Flows of power: An analytical framework for the study of collaboration. Crit Policy Stud. <a href="https://doi.org/10.1080/19460171.2022.2037005">https://doi.org/10.1080/19460171.2022.2037005</a>
<b>ARTICLE 2</b>	<i>How do artefacts contribute to collaborative processes, in particular to their success or failure?</i>	Molinengo G, Stasiak, D (2020) Scripting, situating, and supervising: The role of artefacts in collaborative practices. Sustainability 12(16):6407. <a href="https://doi.org/10.3390/su12166407">https://doi.org/10.3390/su12166407</a>
<b>ARTICLE 3</b>	<i>What do researchers do (and how) when they advise policymakers on collaboration processes, and what kind of expertise do they rely on?</i>	Molinengo G, Stasiak D, Freeth R (2021) Process expertise in policy advice: Designing collaboration in collaboration. Humanit Soc Sci 8:310. <a href="https://doi.org/10.1057/s41599-021-00990-9">https://doi.org/10.1057/s41599-021-00990-9</a>

Table 1: Overview of the articles

The first article of this dissertation – *Flows of power: An analytical framework for the study of collaboration* – puts power at center stage, understood as a ‘sensitizing concept’ (Bacharach and Lawler, 1980, p. 5) to investigate those dynamics that have led to a moment of collaborative impasse, and represents the theoretical and analytical foundation of the dissertation. It asks: “*How can we empirically study and analyze power dynamics that lead to collaborative impasse?*” and proposes that it is by looking at the ‘minutiae’ (Flyvbjerg, 2006b, p. 237) of collaboration as well as the dynamics (here termed *flows of power*) that they set off, that we can gain insights into failures of collaborative arrangements. To do so, the article proceeds along three main steps:

1. It conceptualizes collaborative governance at the micro level as an ongoing interplay between designed and emerging interaction orders;
2. Based on this definition, it develops a theoretical framework to enable a power-sensitive and process-oriented analysis for assessing the performance of collaboration at the micro level. The framework supports researchers in disentangling the micro-decisions taken by facilitators and conveners in the design phase of a collaborative arrangement. It does so by identifying ten arenas for power (Purdy, 2012) that shape the *designed interaction order*; and by tracking how the original designed interaction order – and its arenas – interplays over time with emerging interaction orders, through the analysis of selected *flows of power* that may potentially lead to moments of collaborative impasse.
3. Finally, it applies the framework to an exemplar (Flyvbjerg, 2006b) of a collaborative arrangement that was implemented in planning the route of a high-voltage electricity line in Germany.

The article introduces a ‘process sensitivity’ to investigate the dynamic nature of collaborative arrangements (Vandenbussche et al., 2020, p. 1) and illustrates the manifold ways in which power manifests, operates, and unfolds in collaboration at the micro level. A retrospective analysis (Langley, 1999) of selected flows of power in the case study proposes a genealogical analysis (Foucault, 1979) of power in the context of collaboration: it highlights chains of actions (Schatzki, 2002) between events that occurred at different moments during the collaboration. While seemingly having little in common, they nevertheless contribute to explaining why the collaborative arrangement looks as it does at a given stage of the process.

The second article – *Scripting, situating, and supervising: The role of artefacts in collaborative practices* – investigates one specific arena of the framework proposed in the first article, namely *facilitation material*. Guided by the research question “*How do artefacts contribute to collaborative processes, in particular to their success or failure?*”, the study focuses on objects designed for and used in collaborative practices. The analysis tracks over time how the same facilitation artefacts (Post-it notes, marker pens, maps, and visual templates) available to participants are used differently in three different communicative modes of deliberation, and how this affects the quality of deliberation. Data were collected during an explorative study conducted in Magdeburg,

Germany, in 2019, under purposefully designed conditions in the context of mobility transition. On each of three days, a different group consisting of 5–7 local citizens (17 in total) deliberated on the same policy-relevant question: “*How can Magdeburg's inner city become more attractive to pedestrians?*” Their communicative interaction was supported by different designed interaction orders: self-organized collaborative work (day 1), dynamic facilitation method with a facilitator (day 2), and tailor-made multi-method process design with a facilitator (day 3). The study was accompanied by the German TV channel MDR (Mitteldeutscher Rundfunk), which filmed the whole event and granted researchers access to the audio-visual recordings. The analysis of this material was accompanied by semi-structured interviews, photo documentation, and participatory observation to thoroughly investigate the role played by facilitation artefacts.

Again relying on the concept of collaborative governance at the micro level as an interplay between designed and emerging interaction orders, the study investigates the impact of facilitation artefacts in their socio-material, spatial, and temporal dimensions. The design, mobilization, and use of facilitation artefacts (Akrich and Latour, 1992; Gherardi, 2008; Jarzabkowski et al., 2013; Star, 2010) (socio-material dimension) are analyzed both in the backstage and frontstage (spatial dimension) in four phases of the making of collaboration: *scripting*, *setting the stage*, *performing*, and *inscribing* (building on Hajer, 2015; Escobar, 2015, 2019) (temporal dimension). This heuristic enables tracking the ongoing interplay between: (a) the original function of facilitation artefacts as scripted by process designers, (b) their actual use by participants and other actors during the collaboration, and (c) the reactions, strategies, and practices of facilitators in seeking to re-instate, adjust, or correct the use of artefacts according to the evolving situation. The results show that artefacts substantially influence the ways in which participants act in a collaborative setting. Unscripted and unsituated artefacts can contribute to reinforcing the very communicative patterns that collaboration aims to overcome, at worst leading to collaborative impasse. Furthermore, the article identifies three crucial practices mobilized by facilitators in attempting to avoid impasse and instead foster collaborative advantage: *scripting*, *situating*, and *supervising*.

The third article – *Process expertise in policy advice. Designing collaboration in collaboration* – investigates the specialized knowledge, skills, and practices mobilized by those responsible for the design of new interaction orders. It terms these as *process*



*expertise*. The study conceptualizes process expertise in the context of science–policy interfaces, by undertaking a self-reflective case narrative (Becker and Renger, 2017) and scrutinizing the advisory work of the authors' research team at the Institute for Advanced Sustainability Studies (IASS) in Potsdam, Germany. It particularly investigates: “*What do researchers do (and how) when they advise policymakers on collaboration processes, and what kind of expertise do they rely on?*”

The study introduces an exploratory definition of process expertise as ‘*knowledge on process design for planning collaborative arrangements with policymakers in advisory settings by facilitating knowledge co-production among involved actors*’ and discusses five constitutive elements. The findings show that researchers do not provide their policymaking counterparts with potential solutions to tackling the issue at hand. Rather, they offer policymakers advice on the *process* of designing collaboration *in* collaboration. The study identifies two levels at which these micropractices of process expertise operate: relational and processual. By working at the relational level, process experts help to create conditions for a collaborative modus operandi at the very outset of the advisory process. At the processual level, they interact with other types of knowledge to co-design a collaborative strategy within the advisory setting. Concerning the broader context of this thesis, the results of this study show that the generation of new interaction orders does not take place solely in the frontstage of a collaborative arrangement. Instead, the facilitation of new ways for actors to interact with each other commences at the very outset of the collaboration, in the backstage. This assists conveners in ‘expand[ing] their understanding of the complex problem space’ (Bruhn et al., 2019, p. 336) and formulating an adequate and comprehensive strategy for tackling it collectively.

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## Article One

# Flows of power: An analytical framework for the study of collaboration<sup>1</sup>

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### *Abstract*

Why do exercises in collaborative governance often witness more impasse than advantage? This paper suggests putting power at center stage and focusing the analysis on the micro level. It is by looking at the daily ‘minutiae’ of collaboration, and at the dynamics (here called *flows of power*) that they set off, that we can gain insights into failures of collaborative arrangements. To enable a power-sensitive and process-oriented analysis of collaborative governance, the paper develops an analytical framework for the empirical exploration of collaborative governance at the micro level. The framework examines how design choices at the outset of collaboration are re-interpreted, challenged, and transformed by micro-dynamics taking place over the course of the arrangement. The article argues that a process-oriented investigation of how collaboration evolves and unfolds over time elucidates the subtleties of power, which may be overlooked if we only consider outcomes rather than the processes that engender these outcomes. The work is based on an abductive research approach and illustrates the analytical possibilities of the framework by zooming in on an exemplar of a collaborative arrangement for planning the route of a high-voltage electricity line in Germany.

*Keywords: power dynamics; collaborative governance; process design; collaborative impasse; facilitation.*

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### **Introduction**

Collaborative governance has become a focal point for tackling a wide array of issues in policymaking: by generating new spaces of interaction for actors from different sectors, it supports the co-development of policies and strategies to tackle complex issues in a

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deliberative and consensus-seeking mode (Ansell and Gash, 2008; Ansell and Torfing, 2018). The benefits of collaborative governance have been extensively discussed in the literature (Ansell, 2012; Dryzek, 2001). Huxham (1996, p. 241) speaks in this regard of *collaborative advantage*, namely the synergetic production of outcomes that no actor would have been able to achieve alone. However, both practice and research often reveal experiences of what I term collaborative *impasse*. This refers to moments in which collaboration becomes stuck, when energies invested in designing, convening, and running a collaborative process seem squandered and the results achieved appear negligible. Thus, a gap seems to emerge between the rhetoric on the benefits of collaboration versus its actual results (Hoppe, 2011; van der Arend and Behagel, 2011).

More research is therefore needed to understand the dynamics influencing the performance of collaborative governance. This article suggests that a power-sensitive and process-oriented investigation of collaboration can contribute to address this gap. By focusing the analysis on the micro level and putting power at center stage, understood in terms of ‘seemingly trivial incidents and transactions’ (Morley, 2006, p. 543, cited in Escobar, 2019), I argue that it is by looking at the daily ‘minutiae’ (Flyvbjerg, 2006b, p. 237) of collaboration that we can gain insights into failures of collaborative arrangements. The research question guiding the analysis is hence: “*How can we empirically study and analyze power dynamics that lead to collaborative impasse?*”

By building on previous works (e.g. Avelino, 2011; Flyvbjerg, 2002; Huxham and Beech, 2008; Purdy, 2012), the article develops an analytical framework for the empirical exploration of collaborative governance at the micro level. The framework examines how the design choices made by conveners and facilitators at the outset of collaboration (e.g. framing of the agenda, participants, participatory methods) are – subtly or overtly – re-interpreted, challenged, and transformed by micro-dynamics taking place over the course of the arrangement. I argue that a process-oriented investigation of how collaboration evolves and unfolds over time can track apparently insignificant, yet relevant chains of action (Schatzki, 2002), here called *flows of power*, which might lead to collaborative impasse and impact the performance of collaborative arrangements.

After presenting the theoretical foundation and the abductive methodological approach that inform the building of the framework, the article illustrates its two components and subsequently discusses its analytical possibilities through an exemplar (Flyvbjerg,



2006b) of a collaborative arrangement for planning the route of a high-voltage electricity line in Germany.

### **The micro level of collaborative governance**

A micro-level perspective can reveal how everyday interactions fundamentally shape the course of collaboration (Bartels, 2014; Collins, 2005; Escobar, 2019; Goffman, 1959). It is at this level of analysis that we can observe how collaboration gets done and undone (de Sousa Briggs, 1998, p. 1), through a tangled bundle of design choices constantly intersecting with participants' viewpoints on how the arrangement should be run. For example, a strategically placed microphone may intend to give certain actors greater opportunity to speak while denying others; the decision of a facilitator not to discuss an issue beyond a certain timeframe may strongly influence the quality of the process outcomes. Such choices define the conditions under which collaboration takes place. However, they do not stand alone: A participant seated at the back may seize the microphone and raise their voice; heated debate among the group may distract the facilitator from imposing a time limit. It is in such interactions that we see how a collaborative process can suddenly change direction. Understanding how collaboration works in its daily practice is hence the first step to identify potential traps and hindrances that may affect its performance. The present section repurposes existing debates on collaboration and power and makes them suitable for empirical analysis. It introduces key analytical concepts that contribute to a processual understanding of collaboration as an ongoing interplay between *designed* and *emerging interaction orders*, on which the framework relies.

### **Collaborative governance as interplay between designed and emerging interaction orders**

Collaborative governance at the micro level can be described in Goffmanian terms as assembling new interaction orders (Escobar, 2019, p. 189). Like a traffic code, an *interaction order* establishes 'the ground rules for a game' (Goffman, 1983, p. 5). By assembling new interaction orders, collaborative governance thus creates ways for actors to interact with each other, where existing interaction rituals (Collins, 2005) are altered, and new power regimes can emerge (Escobar, 2019). In the context of collaboration, the assemblage of new interaction orders (henceforth, *designed interaction orders*)

materializes in the *process design*, which determines the roles and plot of the play performed on the collaborative stage (Goffman, 1959; Escobar, 2015). Conveners and facilitators play a crucial role in this (Escobar, 2019): Conveners have or receive a mandate to initiate the process, and can enlist facilitators, namely professionals with ‘process expertise’ (Escobar, 2015; Molinengo et al., 2021), to design and moderate its communicative interactions. Designing collaboration means, in Bobbio's (2019, p. 44) words, ‘making decisions’ on how the stage will look. By way of their formal authority (Hardy and Phillips, 1998), facilitators and conveners define, through multiple and fine-grained design choices (e.g. list of invitees, agenda, setting of the room), the rationale, framing, and rules operating in the collaborative setting.

When the collaborative process opens to participants, these new actors engage with the script proposed by conveners and facilitators. However, unlike in a theater performance, actors on the collaborative stage usually depart from this original script: they ‘appropriate, resist and transform [...] roles and identities’ (Felt and Fochler, 2010, p. 219) and set the script in motion (Weick, 2001, p. 225). Those responsible for the collaboration, on the other side, react to these interventions by reinstating their original plans or adapting some of its components. In doing so, participants, facilitators, and conveners together generate what I call an *emerging interaction order*. Figure 2 attempts to visually capture collaborative governance at a micro level as an ongoing interplay between *designed* and *emerging interaction orders*.

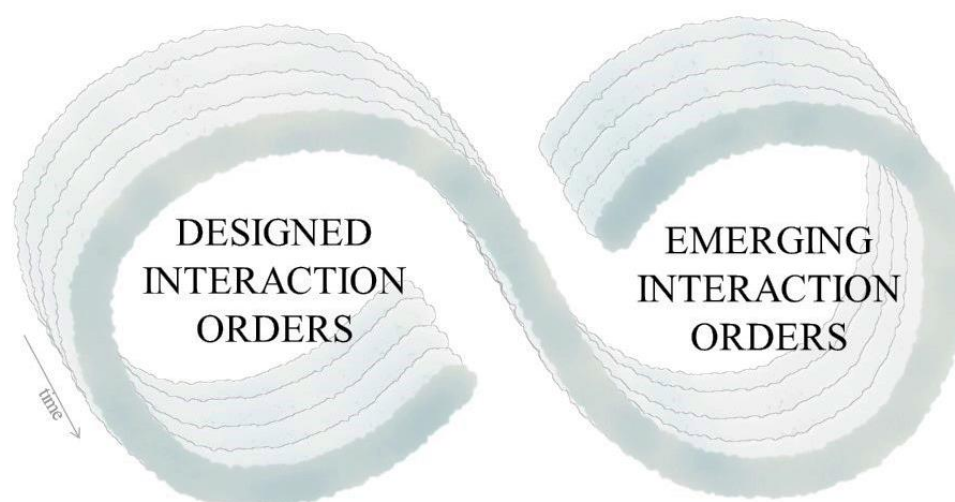


Figure 2: Collaborative governance at the micro level: an ongoing interplay between designed and emerging interaction orders.

In this interplay, structure (designed interaction orders) and agency (emerging interaction orders) exist in a duality, with each continually contributing to transforming or reproducing the other (Giddens, 1984). Collaboration thus becomes a mobile and fluid phenomenon, constantly shaped by a collective process of assembling, disassembling, and reassembling (Escobar, 2019) the designed interaction order according to the interests and viewpoints of those in the room at a specific time of the process. This process-oriented approach, methodically supported by scholars rooted in process research (Langley, 1999; Langley et al., 2013), allows considering changes and unpredicted circumstances (Bartels, 2012, p. 437).

### **Collaborative impasse**

Following Weick (1995, p. 86), who focuses on ‘interruptions’ as an opportunity to retrospectively make sense of the experience, this work analyses moments of collaborative impasse as a starting point to investigate collaborative performances. Junctures leading to collaborative impasse may include a lack of clarity on what goals to achieve, new events questioning the entire purpose of the collaboration, or unmanaged disputes and mistrust. When collaborative impasse manifests at the micro level, an external observer may sense a changing atmosphere in the group: growing frustration among participants regarding the lack of achievements promised by the collaborative setting; participants' interactions falling back into exclusionary dynamics; unmanageable divisions in the group; participants' lack of trust towards the conveners and their agenda.

Originally, Huxham (1996) contrasts ‘collaborative advantage’ and ‘collaborative inertia’; for analytical purposes, I choose to speak instead of ‘collaborative impasse.’ What is observable as a result of inertia or impasse is similar: little or nothing happens. However, the two metaphors emphasize different dynamics. Inertia implies a tendency to remain unchanged and suggests a static image of ritualized inaction among participants in collaborative settings. In contrast, collaborative impasse has a temporal connotation: it assumes a previous interaction among actors that led to deadlock, which is one of the core interests of this paper.

Collaborative impasse emerges in the ongoing interplay between designed and emerging interaction orders. When moments of collaborative impasse arise, the outcomes of the collaborative process move away from the initial goals set by the designed interaction order. This is not to say that arrangements succeed only by sticking to the original process design. Indeed, instances of collaborative impasse can also emerge when the designed interaction order does not consider participants' viewpoints, priorities, and interests (Bartels, 2012). Instead, collaborative impasse signals that the interactions between the participants assume an unproductive character. It is on these scenarios that the present inquiry focuses.

### **Power as analytical lens**

Power is here treated as a ‘sensitizing concept’ (Bacharach and Lawler, 1980, p. 5) to investigate those dynamics that have led to a moment of collaborative impasse. Such analysis includes a wide range of activities, interventions, and tactics used by actors to influence the collaborative exercise, according to their own perspective on how the process should be run. An example of such interventions is framing, namely the action of defining, restricting, and narrowing the range of questions, options, or possibilities (Blue and Dale, 2016). While conceiving the process design, conveners might draft an agenda that invites participants to discuss possible solutions to an infrastructural project, without discussing *whether* such a project is necessary. A participant might react to this by calling attention to marginalized issues. In response, a facilitator might frame this heated and critical intervention as merely an individual experience or ‘anecdotal’ (Innes and Booher, 2015, p. 200) and consequently dismiss the person's viewpoint.

Such interventions suggest a shift of analysis from distinguishable actions of single actors towards an analysis of the interactions among them (Arendt, 1970). In this way, the study

embraces the call by Flyvbjerg (2006a, p. 367) to take a step back from focusing only on *who* has power, based on actors' most visible sources of power, and instead extends its focus to the question of *how* power is exercised and unfolds. A practice-based view on power supports this analytical choice: Cook and Brown (1999) hold that the idea of power as something to be possessed and exercised over others – an aspect underlined by many of the classical definitions of power (Bachrach and Baratz, 1962; Dahl, 1957; Lukes, 2005) – is to be complemented with an understanding of power as ‘situated, provisional, revisable, open-ended and always in the making’ (Marshall and Rollinson, 2004, p. 75 on the work of Cook and Brown, 1999). Following Foucault's invitation to decipher power in ‘a network of relations, constantly in tension, in activity’ (Foucault, 1977, p. 26 cited in Marshall and Rollinson, 2004), the study traces micro-dynamics that substantially influence the collaboration, which a static view on power as possession would most likely overlook (Tello-Rozas et al., 2015, p. 1066). To illustrate the difference among these two perspectives, I suggest an analytical distinction between *acts* and *flows* of power in the context of collaborative governance:

*An act of power is the capacity of an actor to intervene at a specific moment during a collaborative process, by accessing temporarily available sources of power, according to their own interests and hence opinion on how the arrangement should be run.*

This definition entails an understanding of power as possession. Returning to the previous example: During the design phase, conveners shape the framing of the collaboration according to their perspective, by means of their formal authority (Hardy and Phillips, 1998) at this stage of the process. Analyzing such acts of power answers the crucial question of *who has power* and provides information on the timing, circumstances, and actor constellation in which this act takes place. However, such an analysis, while necessary, is insufficient. To investigate the effects of this act on the

collaborative arrangement's performance, I build on Schatzki's definition of chains of actions (2002, pp. 148–149)<sup>2</sup> and introduce the concept of *flow of power*<sup>3</sup>:

*A flow of power is a chain of actions, originating from one initial act of power and including the responses of other actors – be they participants, conveners, or facilitators – that contribute to the ongoing interplay between designed and emerging interaction orders.*

The concept of *flow of power* – as its use in the framework will show – can elucidate the subtleties of power, which may be overlooked if we only consider outcomes rather than the processes that engender these outcomes.

## Materials and methods

Finally, at the end of fifteen months of endless attempts to include everyone in the planning process, and after the final results of the collaboration had been sent to the local authority for evaluation, there it was: a new citizen initiative claiming that their opinion had not been included in the process;  
And that everything needed to be discussed again.  
(Author's field notes, July 2015)

The above event offers a tangible instance of collaborative impasse. It is taken from the case study that informs the present article, namely an arrangement to collaboratively plan the route of a high-voltage electricity line in southern Germany. The intention of this article is not to fully analyze the case study, but to offer concrete examples of how the framework could be applied to understand collaborative impasse, by zooming-in (Nicolini, 2009) on details, stories, processes – ‘exemplars’, in Flyvbjerg's (2006b) words – that shaped the collaborative arrangement. The field note excerpt describes a citizen initiative that questions the legitimacy of the arrangement after its conclusion. As an action researcher working in this setting, fulfilling both convening and academic tasks, I constantly observed and struggled with how collaboration's original plans radically changed during the process, often in unexpected ways. No matter how much engagement,

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<sup>2</sup> Schatzki defines a chain of action as ‘a series of actions, each member of which is a response either to the immediately preceding member or to an event or change that the immediately preceding member brought about in the world’ (2002, pp. 148–149).

<sup>3</sup> In this paper the concepts of ‘flow of power’ and ‘power dynamic’ are used interchangeably. In certain instances, the term ‘flow of power’ is used to distinguish this from ‘acts of power.’

care, financial resources, and time the conveners invested in this process, moments of collaborative impasse were recurring features. This article grapples with this research puzzle through an abductive logic of inquiry (Schwartz-Shea and Yanow, 2012, p. 28).

### **The case study**

The design and implementation of the collaborative arrangement took place in 2014–2015 (15 months) within a three-year action research project. Run in two localities, the arrangement was co-initiated and implemented by the research team I was part of, in partnership with one of the German TSOs (Transmission System Operators) and supported by professional facilitators. Here, citizens and local actors (mayors of the potentially affected areas, local authority officers, and NGOs representatives) were invited to suggest and plan, together with experts, alternative routes for a new electricity line running through the two localities.<sup>4</sup> The collaborative process included a series of open events for all citizens to suggest new potential corridors for the electricity line. The complex and detailed work in further developing these ideas was done in planning workshops with a group of approximately 20 members, composed of eight randomly selected citizens,<sup>5</sup> TSO employees, and local actors. The choice of this case is not accidental: As Flyvbjerg states, ‘extreme cases often reveal more information because they activate more actors and more basic mechanisms in the situation studied’ (2006b, p. 229). The case study offered fertile ground for a power-sensitive and process-oriented analysis of collaborative governance at the micro level, especially for its contested nature: The electricity company had clear interests in building the high-voltage power line as quickly and cost-efficiently as possible, while also being jointly responsible for co-designing and convening the collaborative planning process. Further, the framing of the question to be discussed was quite narrow: It only allowed discussion of *where* the electricity line should run, but not *whether* this infrastructural project was required. These initial conditions, in particular the presence of a non-impartial co-convenor, provided the

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4 German law ‘encourages’ electricity companies active in the field of energy transition strategies to include citizens in the planning process, but does not foresee any formal delegation of decision-making competence to the local population.

5 In the first locality 700 citizens, randomly selected from the local registry, were invited by letter to apply to join the planning group. In the second locality the TSO issued an open invitation to the entire population. Applicants could contact a call center run by professional facilitators. Participants were selected from the applicants by lottery, aiming to ensure representation according to residence (localities were divided into sectors), gender, and age.

opportunity to investigate the multiple ways through which participants contested, resisted, or re-negotiated the rules of the game set by the designed interaction order. This last one, despite the structural power asymmetries among actors involved and the highly complex task of identifying new, alternative routes for a high-voltage electricity line, nonetheless attempted to alter existing power regimes: It redistributed roles and included new kinds of expertise (e.g. citizens' local knowledge) in the planning process. The action research approach conducted in this case study, with researchers actively participating in the design of this arrangement, gave access to its backstage activities (Escobar, 2015; Molinengo et al., 2021) and allowed a close analysis of the design choices that shaped the designed interaction order.

### **Data collection and analysis**

Close involvement in the process allowed a thick description (Geertz, 1973) of the dynamics shaping the collaboration. Triangulation of data (Schwartz-Shea and Yanow, 2012, p. 61) was ensured with:

- Fieldnotes from the author's participation in almost daily conference calls with the TSOs and the professional facilitators to discuss the design and implementation of the arrangement over 15 months; seven open events; and five two-day planning workshops;
- 24 in-depth interviews, conducted together with two other researchers, before, during, and after the collaborative arrangement with conveners, facilitators, and representatives of the involved participants, focusing on their own experience of the collaborative arrangement (i.e., perceived successes and failures, motivation, expected results, aspects to improve);
- Facilitators' scripts of the overall process design, open events, and planning workshops;
- Minutes of the conference calls and of each collaborative event (usually taken by one of the professional facilitators).

A focus on power was not part of the original research design, but emerged retrospectively, in a sense-making phase (ibid) following immersion in the research field. Since various forms of power cannot be directly observed, a main task consisted of developing informed categories for observing power – in this case retrospectively (Haug



et al., 2013, p. 25). Their identification took place within what Schwartz-Shea and Yanow (2012, p. 27) term a ‘simultaneous and iterative puzzling over empirical materials and theoretical literatures.’ Three main concepts from the literature – interaction order (Goffman, 1983), collaborative inertia (Huxham, 1996), and arenas for power (Purdy, 2012) – offered a theoretical anchor to decipher the ‘overwhelming nature of boundaryless, dynamic, and multi-level process data’ (Langley, 1999, p. 694). The empirical material was analyzed in two stages. The first stage aimed to reconstruct the designed interaction order of the collaborative arrangement. By relying on Purdy’s concept of ‘arenas for power,’ defined as the components of collaborative governance processes that provide actors ‘opportunities for the exercise of power’ (2012, p. 411), the main (micro) design choices through which facilitators and conveners shaped the rationale of the collaboration were mapped, and later clustered into ten arenas, illustrated in the next section. Interviews with facilitators and conveners, combined with their scripts, gave access respectively to their ‘embodied’ and ‘inscribed knowledge’ (Freeman and Sturdy, 2014, p. 8, 11).

This step set the foundation for retrospectively tracking, in the second stage, the dynamics leading to moments of collaborative impasse. Based on the earlier description of the phenomenon, instances of collaborative impasse were identified by looking for events in the history of the collaboration that hinted at the emergence of disputes or mistrust among actors. This was done by combining data sources from participatory observation (researcher and convener’s perspective), interviews (actors’ interpretations), and archival data. Subsequently, the interplay between designed and emerging interaction orders connected to these events was reconstructed. This was done by tracing back actors’ interventions, the flows of power they set in motion, and the arenas involved. Particular attention was dedicated to those flows engaging with a high number of arenas over their course. Similarly to building a plane while flying it, the main result of this analysis consisted of the framework illustrated in the next section.

For validation purposes, several versions of the framework – in particular, its ten arenas – were tested, further developed, and integrated in the empirical analysis of other collaborative settings (Molinengo and Stasiak, 2020). Their investigation allowed the researchers to double-check the consistency, interrelatedness, and labelling of the framework’s arenas for power. Furthermore, following the practice of ‘member-

checking' (Shea-Schwartz and Yanow, 2012, p. 106), an adapted version of the framework for practitioners was discussed during a two-day workshop with public administration representatives of the German government involved in the design and/or implementation of collaborative governance strategies. Finally, this framework was also substantiated by an ongoing exchange with relevant communities of practice, such as facilitators of collaborative processes.

### **The framework of analysis**

This section presents, by means of examples from the case study, the two main components of the framework for assessing the performance of collaboration at the micro level, namely: 1. mapping the designed interaction order's arenas of power; and 2. tracking how this designed interaction order interplays over time with emerging interaction orders, through the analysis of selected flows of power. The first analytical step supports researchers in detailing the architecture of the collaborative arrangement, as initially planned by conveners and facilitators at its outset. The second step focuses on the wide range of activities, interventions, and tactics used by actors to influence the collaborative exercise, and on the chains of actions (Schatzki, 2002) that they set off (*emerging interaction orders*), to illustrate how the initial collaborative architecture is being appropriated, resisted, and transformed (Felt and Fochler, 2010, p. 219) over time by its participating actors.

### **Mapping the designed interaction order and its arenas**

A designed interaction order is not neutral, but a power-loaded structure being generated and negotiated by a group of actors according to their specific agendas at the initial stages of the collaboration (Herberg, 2020). The framework supports researchers in disentangling the bundle of micro-decisions (acts of power) – sometimes intuitive, sometimes deliberately strategic – undertaken by facilitators and conveners in the design phase, by identifying ten arenas for power (see Figure 3) (Purdy, 2012) that shape the designed interaction order.

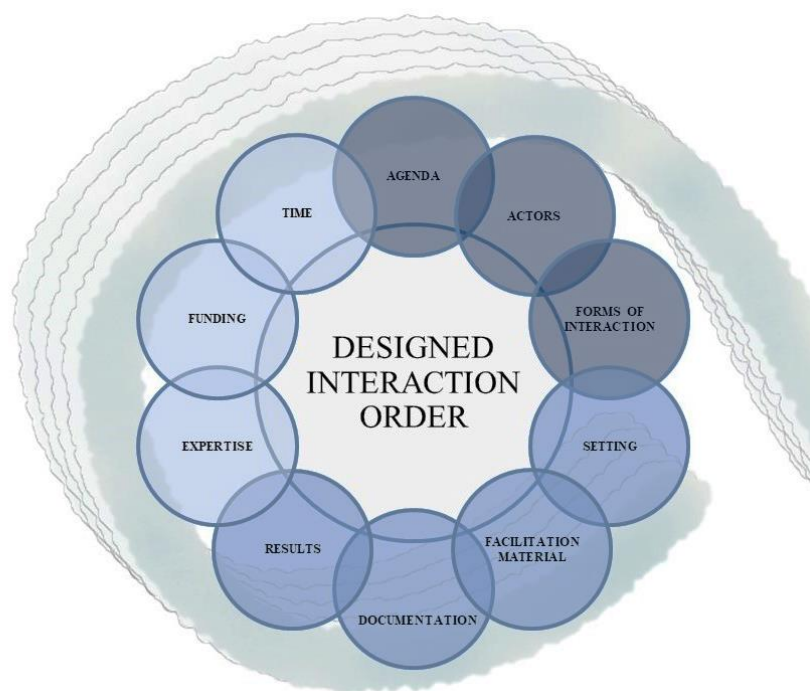


Figure 3: The designed interaction order and its ten arenas for power.

While some of the arenas (in particular: agenda, actors, and forms of interaction) find extensive correspondence with the literature on process design (Ansell and Gash, 2008; Fung, 2003, 2005; Kadlec and Friedman, 2007; Bryson et al., 2013; Purdy, 2012), other arenas – especially those related to the material dimension of collaborative arrangements (setting, facilitation material, documentation, and results) – are less systematically discussed, yet emerged in the abductive research process that informs this paper.

The first three arenas represent the core of the designed interaction order and answer the ‘what’ (*agenda*), ‘who’ (*actors*) and ‘how’ (*forms of interaction*) questions of collaboration (Fung, 2003). The *agenda* arena defines the issue at stake and the framing within which participants are invited to contribute. In the present case study, the agenda did not tackle the question of *whether* the infrastructural project was actually required, but instead opened up a space of influence to a broader audience on *where* the electricity line should run. The *actors* arena refers to the question of who has (and who exercises) a voice in the process, and in which role. In our case, the conveners' team charged a group of 20 experts, policymakers, and lay citizens with planning new alternative routes for the electricity line, instead of first asking experts to draft proposals that would pre-frame the results. The *forms of interaction* arena addresses the question of how communicative

interaction occurs among actors, and relies on subtle yet powerful decisions from facilitators (Bartels, 2014, p. 657). For instance, in our case, site visits were organized to identify the advantages of and hindrances to each potential route, rather than simply basing discussions on the presented plans. This design choice was intended to transform the classic dichotomy between experts and lay actors.

The next four arenas relate to the material dimension of collaboration, in particular in terms of physical conditions and artifacts that should support the communicative interaction of its participants (Schatzki, 2002, p. 41) (*setting; facilitation material*) and the material products that the arrangement is expected to deliver (*documentation; results*). The *setting* arena sheds light on how the physical setting ‘constructs’ the roles participants can take on a certain stage (Hajer, 2005, p. 626). During site visits, local citizens had greater understanding of the landscape features than non-local environmental planners and could point to important factors for the planning process. The *facilitation material* arena encompasses the artifacts used by facilitators to enable communicative interactions, such as markers, ‘Post-it’ notes, and pin boards (Molinengo and Stasiak, 2020). The presence of a detailed map, on which to draw alternative corridors, enabled citizens to contribute to the planning process with greater precision than having a loose discussion without any visual support. The sixth arena refers to the issue of *documentation*. Crucial questions here are: Who is documenting the interaction? How is the documentation shared with the broader public? In this case, documentation was a highly debated issue within the conveners' team: The written minutes of a public event, if disseminated within a context of highly complex planning and escalated conflict, could potentially be reframed and manipulated via social media. This led the conveners' team to publish online only partly the documentation of Q&A sessions between experts and citizens. The seventh arena concerns the design of what *results* are to be delivered at the end of the collaboration, and their foreseen impact (Fung, 2005). The conveners' team held intensive discussions on whether the collaborative arrangement should aim to reach consensus on one preferred route for the electricity line. Ultimately, several alternatives were submitted to the local planning authority in order to increase the prospect of influencing the planning process.

A last group of arenas refers to different kinds of *resources* identified by conveners and facilitators as necessary for running the collaborative arrangement. In particular, the issues of *expertise, funding, and time* are identified. The *expertise* arena defines who is

considered an expert in the collaborative arrangement, and hence given access to finite resources (e.g. more time to speak). The choice to invite certain experts to participate in a process also outlines what information will be made available to ‘non-experts.’ In our case, environmental planners employed a color-coded legend to represent the geographical space within which alternative corridors would be developed, thereby allowing participants to quickly visualize locations from which electricity lines were excluded for technical, environmental, or cultural reasons. In this way, participants were enabled to formulate more precise and potentially viable proposals. The issue of *funding* had a substantive impact in our case: Initially, the hiring of professional facilitators was thought to be fully covered by the research project's budget; however, after some months, it became clear that the complexity of the issue required more collaborative events than were originally planned. This raised the question within the conveners' team of whether a co-financing model, supported by the TSO, might delegitimize the collaborative arrangement, cast doubt on the researchers' neutrality as conveners, and limit their scope for making independent design choices. Ultimately, the team approved the co-financing model, in order to guarantee professional moderation for all necessary planning steps. Finally, the arena of *time* illustrates how collaboration is influenced at the micro level by overarching time constraints (Hoppe, 2011, p. 175) and must therefore be designed around them. The identification of potential impediments to alternative routes for the electricity line, such as breeding or hatching sites, was only possible during specific months, and thus profoundly influenced the schedule of the collaborative arrangement.

The arenas are analytically separated but tightly interconnected: In the case of an on-site visit, for example, the choice of a specific *setting* (i.e. site visits) also influenced the *forms of interaction* that facilitators wanted to generate and the (local) *expertise* they intended to mobilize. Also, each of these design choices is subordinated to the underpinning purpose of the arrangement, set by the *agenda* arena, and contributes to support it: for instance, the collaborative planning of a new route for a high-voltage electricity line (*agenda*) was realized through workshops designed to enable productive communicative *interactions* among selected *actors* – holding different kinds of *expertise* – to deliver specific *results*.

## Tracking flows of power

Mapping the choices of a designed interaction order, however, does not reveal the ways in which participants potentially challenge and transform arenas for power over the course of the collaboration, thus changing conveners' and facilitators' original plans. The framework proposes the analytical concept of *flows of power* to capture the subtle dynamics through which a designed interaction order is constantly being assembled, disassembled, and reassembled.

In particular, the framework distinguishes between *reinforcing*, *modifying*, and *departing* flows of power. In this, it builds on Castells' (2011) and Schatzki's (2002) illustrations of the underlying dynamics in a practice's development<sup>6</sup>. *Reinforcement* refers to a power flow that reasserts the original design choices of a certain arena. *Modification* alludes to a power flow that integrates new meanings without fundamentally changing the nature of the arena. Finally, *departing* flows of power imply fundamental change within the arena. To illustrate: In the present case, an oft-discussed scenario (which ultimately did not materialize but can quickly highlight the three types of flow) was the emergence of a separate forum set up by a local citizen initiative to more fundamentally discuss what kind of energy transition citizens might wish for (e.g. a decentralized and local approach to energy generation, which would eliminate the need for cross-country high-voltage lines). Through such an act of power, namely choosing to discuss the *if* and not the *how* of a new electricity line, a citizen initiative would emancipate itself from the dominant rationale of the *agenda* arena and generate its own forum of discussion. The interaction between this initial act of power and the responses of conveners and other actors might have resulted in three different power flows:

(1) *Reinforcement*: the conveners' team, responding to this act, may give an interview via a prominent media channel, presenting legal decisions and data to emphasize the futility of discussing the *if* question, and accusing the citizen initiative of disseminating

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<sup>6</sup> While Castells (2011, p. 15) identifies two opposite dynamics that follow an act of power, namely a 'change' or a 'reinstatement' of prior structures, Schatzki introduces – next to 'maintenance' (Castells' reinstatement) – a nuance between 'recomposition' and 'reorganization'. In recomposition, only some aspects of a practice are changed, while reorganization implies a more fundamental change in the nature of the practice itself (2002, pp. 240–242).

misinformation in this regard. This would seek to discredit the actions of the citizen initiative and reinstate the current *agenda*.

(2) *Modification*: conveners may decide to integrate the hotly debated ‘*if* question’ into the next event and invite representatives of the citizen initiative to present their views on the topic. This negotiation within the *agenda* arena would lead conveners to at least explain in detail why a new high-voltage line is indeed considered necessary.

(3) *Departing*: despite the conveners' attempts to co-opt the initiative, the parallel forum may gain attention from the media and other participating actors, mobilize a critical mass that radically questions the nature of the *agenda* of the collaborative arrangement, and hence boycott it.

While the first two cases are likely to reproduce choices consistent with the designed interaction order, the *departing* flow of power challenges the very nature of the *agenda* arena and causes a moment of collaborative impasse in the official collaborative exercise, by discrediting its rationale. An analysis of this last flow with a process-oriented approach focuses on the chains of actions that an initial act of power – the citizen initiative starting its own forum of discussion – sets off. It establishes connections among concrete instances at the micro level which might have substantial effects on the course of collaboration – as the next section shows.

### **Applying the framework to understand collaborative impasse**

The author's field notes, which begin the *Materials and methods* section, illustrate a moment of collaborative impasse in which a citizen initiative questioned the very basis of the collaboration after its conclusions had been delivered. In this section, I illustrate how the analytical concepts proposed by the framework – *arenas for power* and *flows of power* – can support the analysis of this episode, by zooming in (Nicolini, 2009) on this exemplar (Flyvbjerg, 2006b). The investigation shows that this moment of collaborative impasse had its origin in the very beginning of the collaboration.

During the first public event of the collaborative planning process, conveners displayed a large map depicting the geographical space within which participants were invited to develop alternative corridors for the electricity line. This map also showed possible solutions previously identified by experts. Initially, the map, like the public event itself,

had a purely informative aim. However, during the event, citizens standing in front of this map suddenly began drawing potential corridors outside of the originally delineated area. Researchers and employees of the electricity company were initially surprised by this emerging interaction order but permitted, and subsequently even encouraged, participants to draw their ideas on the map. During the follow-up conference call among the conveners' team, the project leader of the electricity company decided after some discussion to take these proposals into account. An initial expert assessment found that some of the citizens' suggestions were indeed valid.

If we take a step back and employ the framework, we observe a *modifying* flow of power that starts in the *facilitation material* arena of the process design: Citizens turned the initially informative function of a map into an active tool to integrate their perspectives into the planning process and shifted the informative character of the public event to a deliberative one. This intervention established a precedent for how local knowledge (*expertise*) could meaningfully contribute to the highly complex planning process and modified the *forms of interaction* foreseen by the process design between experts and citizens on that occasion. Furthermore, it substantially enlarged the geographical space (*setting arena*) of the collaborative arrangement. By augmenting the dimensions of the involved arenas, as visualized in Figure 4, the framework tracks the arenas in which the interplay between designed and emerging interaction orders takes place at a certain time during the process.



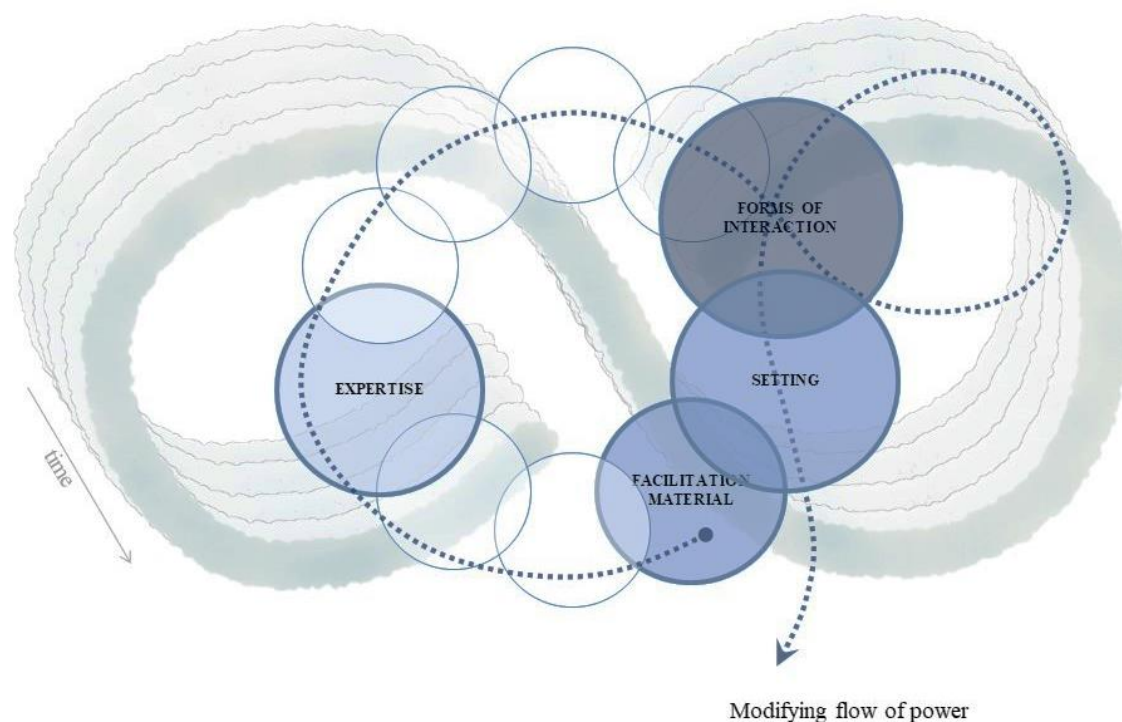


Figure 4: Visualization of the arenas (*facilitation material, expertise, forms of interaction, and setting*) involved in a *modifying* flow of power during and immediately after the first public event of the collaborative process.

However, the story became even more complex. The decision by conveners to consider the new alternative courses as viable also implied the need to include more potentially affected citizens, local organizations, and political actors (*actors*). *Time* pressure, scarce knowledge of local networks, and lack of *funding* to properly inform new potentially affected actors led to a poor recruitment strategy. Feeling overwhelmed by the expanding geographical space to be considered in the collaborative planning process, both in terms of the substantial financial costs of evaluating additional candidate routes across a larger geographical area, and of the logistical efforts involved in recruiting newly affected actors, the conveners decided to set definitive limits to the geographical space (*setting*) in which alternative corridors could be developed, and hence ceased actively recruiting additional participants. This led to the moment described at the beginning of this section: Some months later, after the results of the collaborative exercise had been submitted to local authorities, a new citizen initiative was founded. It lamented the fact that, although one of the submitted alternative courses would run through its territory, locals had not been invited to join the planning process. Therefore, they questioned the legitimacy of

the collaborative arrangement and the approach undertaken to achieve its *results*. This instance of collaborative impasse, visualized in Figure 5, can be traced back to a design choice in the *facilitation material* arena at the very beginning of the collaborative process.

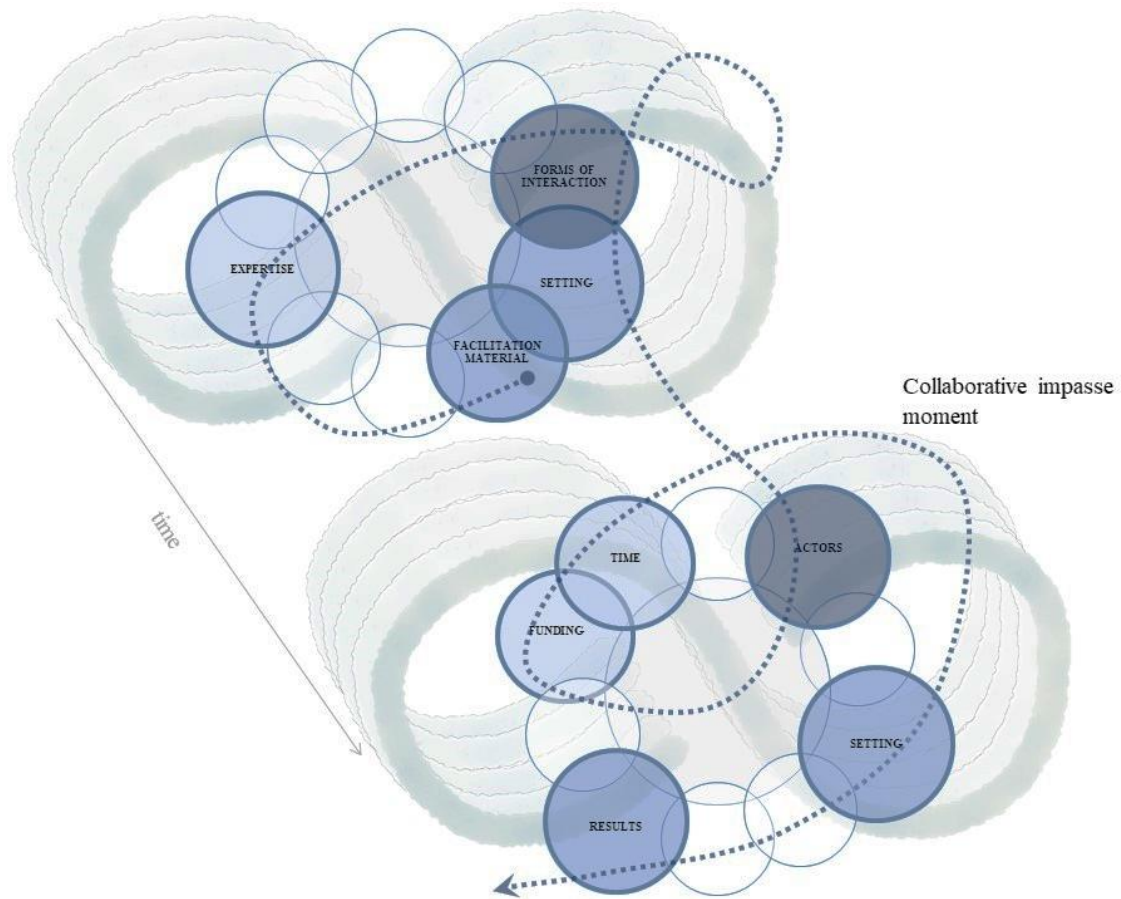


Figure 5: Tracking the long-term effects of a flow of power, originating in the *facilitation material* arena and culminating in a collaborative impasse moment in the *results* arena.

This example illustrates a retrospective analysis (Langley, 1999) of a selected flow of power that led to an episode of collaborative impasse, by:

- Identifying the act of power at the origin of the flow and the arena in which it was located;
- Tracing how conveners, facilitators, and participants responded to this act of power over time (*emerging interaction orders*), while identifying which arenas were modified over time (*designed interaction order*), and assessing the type of flow of power (*reinforcing, modifying, departing*) that affected them;

- Identifying the arena in which collaborative impasse took place.

The analysis of this episode shows three main contributions of the concept of flows of power to understand the performances of collaborative governance. First, the investigation of a flow of power explains why the collaborative arrangement looks as it does at a given stage of the process. A basic yet crucial observation in this episode is that flows of power originating in one arena (*facilitation material*) unfold and reverberate in other arenas (*expertise, forms of interaction, setting*), and can have substantial effects in yet others (*results*): The origin of the foundation of a citizen initiative fundamentally criticizing and discrediting the whole collaborative arrangement at its very end can be traced back to the conveners' decision to let participants draw new lines on a map. Even though these two events have apparently little in common, the analysis of the flow of power illustrates the chain of actions connecting them: The enlargement of the geographical space; new affected actors; lack of resources for proper inclusion in the newly expanded planning process. Changes in one arena (in this case, the *setting*) drive reactions in others; similarly to an engine – once one component is set in motion, so are all others to varying degrees.

Second, the analysis of a flow of power uncovers the choices that conveners and facilitators had to take at every crossroads appearing along the collaborative path, and the resulting consequences. Collaborative impasse can be traced back to the moment in which the original designed interaction order, based on calibrated and interrelated design choices (e.g. a maximum number of 20 *participants* in the planning workshops, in order to enable productive communicative *interactions* to deliver detailed *results*) is modified through the conveners' decision to enlarge the geographical space. At that time, conveners could not probably imagine all the changes that this would have implied: new participants joining the planning workshop, thus undermining the possibility of undertaking complex and detailed work in small groups; new financial resources and more time required to evaluate additional candidate routes, thus challenging the established budget and timeline for the collaboration; new citizens to engage, while lacking knowledge of local networks that could support the recruiting strategy. In contrast to the predictable mechanical movements of an engine, a change of course in a collaborative arrangement depends on a multitude of factors over which conveners and facilitators lack control.

This leads to a third consideration: Flows of power make visible the fine-grained work performed by the conveners and facilitators throughout the collaboration, and the thin line that separates collaborative advantage from impasse. On the one side, their ‘capacity to adapt the nature, tone, and conditions of the conversation to the needs of the situation at hand’ (Bartels, 2012, p. 657) plays a crucial role in adjusting their initial choices and nurturing the generative side of collaboration, while encouraging emerging interaction orders (e.g. citizens drawing on the maps) to shape the path with new perspectives. On the other side, conveners and facilitators – confronted by *modifying* and *departing* flows which substantially alter the nature of the arrangement – are called to question whether the changes brought to the table are aligned with the original purpose of the collaboration and whether they, being responsible for the collaboration, can secure the necessary resources to continue supporting the process. The illustrated example showed that the decision to enlarge the geographical space went beyond the conveners' capacities and risked delegitimizing the results achieved.

## **Discussion**

What kind of analysis can be relevant to understanding collaborative governance's performance? The present article argues that a dynamic investigation of the manifold ways in which power manifests, operates, and unfolds in collaboration at the micro level can hold important insights into ‘how [collaboration] works and whether it lives up to its promise’ (Gash, 2016, p. 454). To substantiate this argument, the article developed a framework for this scope and showed that a process-oriented analysis can support an in-depth understanding of instances of collaborative impasse. Such work builds on studies on democratic innovations (Escobar, 2015, 2019), organization studies (Weick, 1995; Langley, 1999), and studies proposing an interpretative approach in public policy (Bartels, 2014; Cook and Wagenaar, 2012), which suggest a ‘process sensitivity’ to investigations of the ‘ongoing, dynamic and evolving nature’ of collaborative arrangements (Vandenbussche et al., 2020, p. 1). It is indeed in its process-sensitivity that the strength of this framework lays. While major efforts in the literature have succeeded in identifying at the theoretical level those factors and conditions that influence the design of collaborative arrangement (Ansell and Gash, 2008; Bobbio, 2019; Bryson et al., 2013; Purdy, 2012), the present study advances their application at the empirical level. It does so by providing researchers with conceptual entry points to refer

to while observing and making sense of the tight bundle of interventions used by actors throughout the collaboration. The concept of *flows of power* invites researchers to focus on collaboration's porous character (Escobar, 2019) and the manifold opportunities for its participants to shape it.

Focusing on the micro level of collaborative governance can be overwhelming, both for its practice and analysis. From a practice viewpoint, the illustrated example shows the myriad pitfalls and challenges that those responsible for the collaboration might encounter during the process. At the same time, it also strengthens the argument that collaboration is not 'self-generating' (Levine et al., 2005, p. 3) and that the craft of engaging the public requires an 'extremely sophisticated' (Lee, 2015, p. 224) expertise (see also Escobar, 2019; Molinengo et al., 2021). From an analytical perspective, questions may arise concerning the transferability of this framework to studying collaboration in other contexts. The robustness of the framework stems from combining an in-depth analysis of a case study with iterative rounds in other collaborative contexts (cf. Molinengo and Stasiak, 2020), member-checking strategies (Shea-Schwartz and Yanow, 2012), and the author's experiences as practitioner in the field. The present article has illustrated a retrospective application (Langley, 1999) of the framework to a case study, which relied on the researchers' immersion in the context, combined with interviews and a rich variety of longitudinal data from multiple sources. There are, however, various other ways to apply the framework in other contexts. The most conservative application would expect researchers to use the framework as a conceptual map, structuring their fieldwork along the collaborative process. The idea would not be to identify every act of power (and its consequent flow) along the collaborative process, but to sensitize researchers to detect and analyze changes taking place in specific arenas at a specific time in the process. Another approach could be to focus the data-gathering strategy on moments of collaborative impasse as 'occasions for sensemaking' (Weick, 1995, p. 86) and to pay attention to the design choices conveners and facilitators make in dealing with these instances. Researchers might also undertake a narrative approach (Langley, 1999) and use the framework as an interview guide with conveners, facilitators, and participants to reconstruct the flows of power that led to collaborative impasse according to their viewpoint. Finally, an adapted version of the framework for the work of practitioners might serve as a guide for conveners and facilitators to reflect on their own design choices, identify moments of collaborative impasse, and the dynamics that

may have led to them. These examples show that the analytical concepts provided by the framework can be used flexibly, depending on the focus of those employing it. Nevertheless, all share a common approach: tracking flows of power across arenas over time, to investigate moments of collaborative impasse.

## **Conclusion**

In contrast to the critique of Dewulf and Elbers (2018, p. 2) that analytical models for investigating power ‘remain at a high level of abstraction making them less useful for empirical research,’ the present work undertook the challenge of generating a theoretical framework grounded in and emerging from practice, connecting it with different strands of the literature, in order to produce empirical work tied to the daily practice of conveners, facilitators, and participants in collaborative settings.

While the focus is on the tangled bundle of acts and flows of power taking place throughout the collaboration, the approach proposed by the framework is of wider scope. Collaborative exercises are subject to coercive trends if hidden agendas are ignored (Mouffe, 1999; Rubinstein et al., 2018; Sanders, 1997; Young, 2001), and can quickly turn into a new strategy for strengthening particularistic interests (Walker et al., 2015, p. 8). The proposed framework challenges this tendency and encourages a fine-grained perspective on power that remains close to its micropolitics. Only by closely examining power may we be able to critically scrutinize forms of collaboration that, either more or less overtly, exclude relevant voices (Dalton, 2017) and exacerbate power inequalities, which in turn foster or reinforce other inequalities in society (Lee et al., 2015).

The framework also underlines the importance of facilitators' and conveners' work in constantly rebalancing and reconsidering design choices when confronted with the realities of collaborative practices. Once the designed interaction order is out in the world, it is their task to observe emerging interaction orders and, when faced with a change to the original plan, to balance out the different design choices connected to this change. Without such adjustments, there is the risk that conflicting goals of different arenas within the process design may clash with each other and lead to impasse. The present paper aims to make a first theoretical step towards informing the design of more power-sensitive collaborative processes and is open to scrutiny and development.

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## Article Two

# Scripting, situating, and supervising: The role of artefacts in collaborative practices<sup>7</sup>

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### *Abstract*

While calls for cross-sectoral collaboration have become a recurrent motif in sustainability-oriented policymaking and research, the practical realization of such processes presents significant challenges. The hope for ‘collaborative advantage’ often gets traded for the experience of ‘collaborative impasse,’ namely those moments in which collaboration gets stuck. To better understand the reasons underlying such impasses, the study focuses on the impact of facilitation artefacts—objects designed and used in collaborative practices. The study proposes an analytical heuristic of collaborative practices to investigate the data collected in an explorative study, tracing artefacts across three different communicative modes of deliberation. Detailed analysis of the case, grounded in audio–visual material, semi-structured interviews, photo documentation, and participatory observation, shows that such artefacts substantially influence the structure of the emerging interaction order in a given setting, and that unscripted and unsituated artefacts might contribute to reinforcing those communicative patterns that collaboration aims to contrast. The study identifies three relevant practices in facilitation work, in order to steer emerging interaction orders away from exclusionary dynamics: scripting, situating, and supervising. Although emerging from the micro-analysis of artefacts, these practices might apply to other spheres of collaboration and serve as orientation for successful collaborative processes.

*Keywords: artefacts; collaborative practice; facilitation work; collaborative advantage; collaborative impasse; frontstage and backstage.*

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### **Introduction**

Calls for cross-sectoral collaboration have become a recurrent motif of sustainability-oriented policymaking and research, as reflected in the discourses around co-design

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(Herberg, 2020; Moser, 2016), co-creation (Herberg et al., 2020; Mauser et al., 2013), co-production (Kershaw, 2018), and collaborative governance (Ansell and Gash, 2008; Bodin, 2017; Huxham et al., 2000). Governments and scientific institutions initiate collaborative arrangements, hoping for these joint efforts to result in innovative and legitimate suggestions of how to face complex socio-ecological challenges (Ansell and Torfing, 2014; Awan et al., 2013). However, collaborative processes do not always meet such expectations (Fadeeva, 2005) of generating what Huxham defined as a ‘collaborative advantage’, namely the achievement of results that none of the involved actors alone could otherwise have reached (Huxham, 1996; Huxham and Vangen, 2005). Instead, both research and practice reveal experiences of ‘collaborative impasse’, namely those moments in which collaboration gets stuck (Molinengo, 2022). These moments can derive from a multitude of reasons, often intertwined with each other and entangled in a bundle of diverse dynamics. Understanding these dynamics behind collaborative advantage and collaborative impasse is of both theoretical and practical importance, and can help to address the challenge of ‘learning to collaborate while collaborating’ (Freeth and Caniglia, 2019; Klein, 1996; Van Breda and Swilling, 2019).

An old idiom claims that the devil is in the details. In this paper, we turn this phrase into a research approach. In particular, we concentrate on the interaction between the social and the material in collaborative practices, by looking at the design and use of facilitation artefacts (Jarzabkowski and Pinch, 2013; Schatzki, 2002, 2005). In the words of Carlile et al., we ask ‘in which ways objects, artifacts and materiality actually matter’ in collaborative practices, as – based on our practice in transdisciplinary research, design, and facilitation of collaborative processes – we believe that they do (2013, p. 2).

A gap seems to exist between what practitioners and scholars in the field of collaboration consider relevant in the dynamics that influence the development and results of respective collaborative processes. Disciplines such as management and organization studies, or science and technology studies have opened up a substantial discussion about socio-materiality over the past decades. However, the academic literature on collaboration has instead dedicated extensive attention to different communicative methods, and has not extensively analyzed the role of artefacts in this context (Di Giulio and Defila, 2018; Healey and Hillier, 1996; Rosenberg, 2007; Rowe and Frewer, 2000; Smith, 2009). Some important exceptions, which will be discussed below, do not fully compensate for the tendency to either take material objects for granted or else deem them insufficiently

relevant to consider in the analysis (Cooren et al., 2006; Escobar, 2015; Hajer, 2005; Nicolini et al., 2011).

In practice, on the other hand, facilitation artefacts receive much attention. For example, organizational consultant Harrison Owen realized that some of the most fruitful and living conversations were taking place during the coffee breaks of the conferences he convened (Owen, 2008). Fascinated by this discovery, he designed a collaborative format called Open Space, with an ongoing buffet at its core. Facilitators trained in this method are acutely aware of how a well-formed circle of chairs with some flowers in the middle, and well-written flip charts, are crucial for the success of the event. The strategic organization of material objects is considered a key aspect to enable self-organization of participants. The Design Thinking method, well known in the social entrepreneurship scene, foresees a very specific setup to support its participants in coming up with innovative ideas: standing-height tables in order to integrate body and mind in the thinking process, pinwalls with easy-roll lockable casters to ensure flexibility in the contents produced, and a rigorous presence of different sized and colored adhesive Post-it notes to generate as many ideas as possible (Brown, 2009). Practitioners, therefore, seem highly aware of the importance of this material component of collaboration in their daily work (Doorley and Witthoft, 2012).

Not everyone might share this passion for detail while designing a collaborative process. However, processes do not remain unaffected by the very materiality of artefacts and setting, especially when deciding to take responsibility for bringing various actors together, e.g. in the context of a transdisciplinary project or science-policy interface. While observing and being involved in numerous collaborative processes, we have been struck by the following puzzle (Schwartz-Shea and Yanow, 2012, p. 27): facilitators of such processes pay great attention to the material side of collaboration; much more than researchers in this field do. Following this initial interest, we ask the overarching question: *“How do artefacts contribute to collaborative processes, in particular to their success or failure?”*

In order to address this research question, we first present an analytical heuristic of collaborative practice in its spatial, temporal, and socio-material dimensions that supports our data analysis. This heuristic builds on the existing research on facilitation work and socio-materiality. Secondly, we introduce the methods we used to collect data,

and subsequently analyze our case study: a three-day explorative study of how different communicative methods may enable active contribution by citizens engaged in collaborative policy making. Following our heuristic, we present and discuss the results and formulate four arguments on the role of artefacts in collaboration.

The theoretical contribution of the article to the current literature on collaboration unfolds along different strands: (1) it brings the materiality of collaboration to the forefront of analysis and shows its interrelatedness and contribution to the potential success or failure of collaborative arrangements; (2) it offers a critical and in-depth analysis of how the micropolitics of collaboration substantially impact the overall results and indicate a path for future improvements; (3) it bridges scientific and practical knowledge in the field, by drawing on practitioners' 'embodied knowledge' (Freeman and Sturdy, 2014) on the one hand, and on the other making evident the mechanisms and practices related to facilitation artefacts that might be overlooked in practitioners' everyday work; (4) the paper's proposal of a heuristic of collaborative practices offers researchers an orientation to investigate the multitude of dynamics – spatial, temporal, and material – that shape the development of a collaborative exercise.

### **A Heuristic of Collaborative Practices**

*'Facilitation is political work: you are creating an artificial situation, orchestrating materials and artefacts, and seeking to enable dynamics that would not happen otherwise.'* (Escobar et al., 2014, p. 96)

In order to investigate collaboration at a micro level, the following section develops a heuristic of collaborative practices, building on the work of Hajer (2005) and Escobar (2014, 2015, 2019). We first identify relevant concepts from the literature on collaboration to describe the work of collaboration-oriented practitioners at a micro level in their spatial and temporal dimension along four phases: *scripting*, *setting the stage*, *performing*, and *inscribing*. Secondly, we discuss relevant literature from management and organization studies, as well as science and technology, in order to investigate the role of artefacts within these collaborative settings in their *scripted*, *situated*, and *relational* nature. In this way, the intention is to combine a selected state-of-the-art review with the development of the analytical heuristic that guides our investigation.

### *Spatial and temporal dimensions*

At a micro level, collaborative practices can be interpreted as the attempts of process designers and facilitators to assemble and shape new ‘interaction orders’ in the communicative and material dynamics that unfold in a collaborative setting (Escobar, 2014, based on the work of Goffman, 1983). By challenging communicative patterns that lead to exclusionary dynamics, these interaction orders attempt to foster inclusive, meaningful, and productive conversations (Escobar, 2011).

Facilitators and process designers, namely the main makers behind institutionally-led collaborative processes, are investigated separately in this study, although these roles may often be played by the same actors. Moore describes facilitators as ‘those who lead discussions and continuously interact with the other participants in the conduct of the discourse’ (Moore, 2012, p. 147). This definition focuses on the work of these practitioners in what, in Goffmanian terms, would be called the ‘frontstage’ (Goffman, 1966). However, as Escobar underlines, collaborative practices and facilitators' work are not limited to the frontstage, but also require extensive ‘backstage work’ (Escobar, 2014). In their backstage work, process designers ‘define, through multiple and fine-grained design choices [...], the rationale, framing, and rules operating in the collaborative setting’ (Molinengo, 2022). Process designers might also involve a broader group of actors beyond the facilitators, such as the conveners of the arrangement, other policy makers involved in the issue, experts, representatives of the participant groups, and other stakeholders. They all, to differing degrees, contribute to shaping decisions on what the frontstage of collaboration will look like. The concept of frontstage and backstage (Goffman, 1966) is useful at an analytical level, since it applies a spatial dimension to identifying ‘what happens where’ in a collaborative practice, and can precisely locate the social interactions occurring within it.

Interaction orders designed by facilitators and process designers, whose intention is to support inclusive, collaborative, and productive dynamics among participants, should not be understood as something static. Instead, they interweave with – as we term them – ‘emerging interaction orders’ generated when new actors, such as participants or other stakeholders, enter the collaborative arena (Bartels, 2013, based on the work of Follett, 1919). In order to track and investigate this interweaving process (Follett, 1919) through time and space, we propose a heuristic of collaborative practices. We draw our heuristic

from the work of Hajer, who identifies four key concepts that contribute to illustrating the performative dimension, mostly frontstage, of collaborative policy making ('scripting', 'staging', 'setting', and 'performance') (Hajer, 2005, p. 631), and Escobar, who extends Hajer's concept of scripting to the backstage work (Escobar, 2015, p. 274) and identifies other crucial dimensions of facilitation work (Escobar, 2019). Building on their concepts, we identify and illustrate four phases of collaborative practices: *scripting*, *setting the stage*<sup>8</sup>, *performing*, and *inscribing*. In reality, these should not be strictly intended as sequential phases, but as dimensions interweaved with each other and progressing iteratively, back and forth.

*Scripting* – The scripting phase, happening backstage and in closed-door settings, represents the core of assembling new interaction orders. The script of the collaboration begins taking form with the identification of a potential collaborative advantage in addressing a specific problem (Bacchi, 2009, p. xxi). Once the leading question of the issue to be tackled is shaped, process designers begin to form an agenda and identify communicative methods, thematic inputs, and facilitation material in order to enable the group of participants to engage in productive discussion. Such work is similar to generating choreographies. However, the focus is not on performers executing exactly what is written in the script, but in prefiguring the paths that participants could potentially walk, without establishing their results (Escobar, 2015, p. 273, based on the work of Schatzki, 2002).

*Setting the stage* – Immediately before the collaborative event starts, still in the backstage, facilitators and process designers 'populate the room with artefacts that seek to compel participants to act and speak within certain parameters' (Escobar, 2015, p. 276): They choose a specific seating arrangement; carefully write flipcharts, with questions to address, but also instructions on how to reach the restrooms, in order to silently share with participants all relevant information they may need to work productively and at ease; check the microphones, decide who is going to sit where, agree

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8 This phase draws from the 'setting' concept illustrated by Hajer, defined as 'the physical situation in which the interaction takes place and can include the artifacts that are brought to the situation' (Hajer, 2005, p. 631). However, the *setting the stage* phase in our heuristic explicitly includes in its analysis the previous dynamics occurring backstage among facilitators, process designers, and other actors, which will result in Hajer's frontstage 'setting'. It is worth mentioning that Hajer uses the expression 'setting the stage' in the title of the same article, though without defining its meaning.



on time breaks with the catering service, and review the agreed script before the performance begins.

*Performing* – The encounter between process designers, facilitators, participants, and artefacts in the frontstage is a relational and situated performance (Bartels, 2013, p. 476). In this setting, facilitators rely on their scripts but are often required to perform ‘impromptu scripting,’ the practice of reacting to participants’ deviations from or resistances to the original scripts (what we call emerging interaction orders) with new propositions (Escobar, 2015, p. 279). Moore defined the work of facilitators in this context as ‘following from the front’ (2012). Participants in collaborative settings are not passive consumers of the initially designed interaction order, but rather ‘appropriate, resist and transform’ it (Felt, 2010, p. 219).

*Inscribing* – In-between frontstage and backstage, the dimension of inscribing consists of the attempt to condense ‘multiple knowledges, utterances, documents... into workable translations’ (Escobar, 2019). Still in the performing phase, ongoing documentation of the results takes place via multiple devices (flipcharts, Post-it notes, templates) and hands (facilitators, graphic recorders, volunteering participants), with the intention of offering visual anchors and orientation in the multitude of words spoken in the room to the public. Inscribing plays a crucial role for the backstage work that usually follows the collaborative event. In the latter, a refined translation of the discussed contents is necessary, in order to share them with actors responding politically to the deliberation (Freeman, 2009).

### ***Socio-material dimension***

*‘Social life transpires through human activity and is caught up in orders of people, artifacts, organisms, and things [...] and it exists only as so entangled.’*  
(Schatzki, 2002, p. 123)

Next to the spatial and temporal dimension, collaborative practices are shaped by a socio-material one. Within our heuristic, we analyze the role of facilitation artefacts as *scripted*, *situated*, and *relational*. While many scholars still tend to treat material and human agency as separated in their analysis, as Jarzabkowski and Pinch note (2013, p. 581), the present paper investigates how material artefacts play a role in social interaction by focusing on the entanglement of the social and the material in collaboration. In the

context of our study, we understand the material world in collaboration as being designed and mobilized by process designers to support the performance of the arrangement (Schatzki, 2005, p. 1865). Further, the arrangement's outcomes are defined by the constant interaction between materials and performers (participants, facilitators, other actors). In this way, facilitation artefacts are not meaningful as such, but are so only in the embedded context of social activities (Nicolini et al., 2011, p. 612; Jarzabkowski and Pinch, 2013, p. 586).

Artefacts are scripted, situated, and relational (Akrich and Latour, 1992; Gherardi, 2008; Jarzabkowski et al., 2013; Star, 2010). They are *scripted*, because they are assigned specific purposes by process designers and facilitators. This potentially defines their function in a certain setting. More generally, studies on artefacts in collaboration identify functions such as motivating collaboration, creating common understanding, and objectifying people's thinking (Cooren et al., 2006, p. 535; Nicolini et al., 2011, p. 612). Scripted facilitation artefacts are used as means of shaping and negotiating the social space that will host the participants (Brown and Duguid, 1996). In this way, artefacts contribute to form new 'social worlds,' namely 'groups with shared commitments to certain activities, sharing resources of many kinds to achieve their goals and building shared ideologies about how to go about their business' (Clarke and Star, 2008, based on the work of Strauss, 1978, 1982, 1993; Becker, 1982).

Artefacts are further *situated*, or physically and communicatively embedded, within the collaborative practice (Latour, 1987, quoted in Gherardi, 2008). Each facilitation artefact is embedded in the larger framework of a designed interaction order, assigned a certain function at a specific time in a specific setting, and connected to other objects and activities. In our understanding, 'situating' is a crucial activity of facilitators and process designers along all temporal phases of the arrangement. If situated 'wrongly,' an artefact's scripted function can fail. Introducing a flipchart of the agenda two hours after the beginning of the collaborative process, for instance, can hardly serve its initially scripted purpose.

The third fundamental dimension of artefacts is their *relational* nature. This has been aptly summarized by Star: 'An object is something people [...] act toward and with' (2010, p. 603). It is not sufficient to place an object in the room to achieve the scripted purpose. The object 'lives' in terms of enabling, shaping, but also constraining, once social interaction starts. It is in this relational dimension that we can observe the chains

of action that result from the unfolding encounter between social and material worlds (Schatzki, 2002). Artefacts are starting points of a process of meaning-negotiation between participants and facilitators, and among participants themselves, and can be assigned functions beyond those originally designed. ‘Documents quickly pass beyond the reach and protection of their maker and have to fend for themselves,’ state Brown and Duguid (1996). This fluidity characteristic of artefacts can lead to creativity (e.g., participants cutting the instruction sheet into a quick prototype to plastically show others their new idea), but also deviation from an event's purpose (e.g., participants using a documentation template to stabilize a wobbly table). The art of forging facilitation artefacts, therefore, implies a combination of clear instructions and enough open space for participants' interpretation and creativity.

Scripting, however, as every human practice, does not generate ‘indestructible’ processes: it can contain gaps and omissions. Unscripted artefacts, namely inappropriately designed objects or facilitation materials, may be used by facilitators due to their routines and without specific purpose. Such unscripted artefacts can resemble an instrument whose melody does not match the general score, and can easily ‘talk back’, namely resist what participants are being assigned to do with them (Schön, 1987, p. 31). Artefacts thereby reveal their affordances and constrains in relation to a specific situation (Faraj and Azad, 2012; Gibson, 1979; Jarzabkowski and Pinch, 2013). For instance, seating arrangements considerably influence group participation and decision-making: following a plenary session with participants sitting in rows, if the facilitator invites their public to briefly discuss their main insights in small groups, then the use of interlinked conference chairs – which until then afforded the properties requested for the plenary session – will ‘talk back’ and reveal their constrains to participants, who will realize an impediment to easily reorganizing into sub-groups (Cummings et al., 1974; Michelini et al., 1976).

## **Methods**

In order to address the research question mentioned above, we applied an abductive reasoning perspective (Blaikie, 2007; Schwartz-Shea and Yanow, 2012; Timmermans and Tavory, 2012), along with the grounded theory approach (Bryant and Charmaz, 2007; Glaser and Strauss, 1967; Strauss and Corbin, 1990). This choice made it possible

to move ‘back and forth between our own data, our experience, and broader concepts’ (Mason, 2002). Different from original grounded theory accounts, we did not stick to a theoretical tabula rasa but could come up with a literature-induced heuristic of collaboration. This allowed for purposeful organization of the rich data without compromising the explorative character of the study. The types of phenomena we were interested in required some openness with regard to research design. Although qualitative researchers usually ‘study things in their natural settings,’ we decided to combine exploratory and observational approaches (Astalin, 2013; Denzin and Lincoln, 2005; Mills et al., 2010; Reiter, 2017). In particular, we applied the analytical methods of grounded theory to data sets collected via the exploratory case study.

### **The case**

The exploratory study was designed to investigate collaborative practices in the field of mobility transition in cities. The case took place on 20–22 June 2019 in Magdeburg, Germany, and was set up by a research team from the Institute of Advanced Sustainability Studies (IASS, Potsdam) in cooperation with the German TV channel MDR (Mitteldeutscher Rundfunk) and the City of Magdeburg.

Each day, a different group consisting of 5–7 local citizens (17 in total) was asked to generate ideas related to the same policy-relevant question: *“How can Magdeburg’s inner city become more attractive to pedestrians?”* With this question, the City of Magdeburg intended to gain insights from its citizenry on the inner city status quo and on potential ideas for more pedestrian-friendly strategies. The timeframe for each slot was three hours. The researchers selected three different interaction orders for comparison: self-organized collaborative work on day 1, dynamic facilitation method with a facilitator on day 2, and tailor-made multi-method process design with a facilitator on day 3. A total of 702 potential participants were randomly selected from the official register of Magdeburg residents, and a postal invitation to participate in the study was sent to each person’s registered address. This initial invited group comprised an equal number of women and men, distributed equally among three age groups (16–34, 35–54, and 55–74 years). However, the positive response rate was initially only around 1%

(n=7). Following post-recruitment phone calls to 84 of the 702 citizens<sup>9</sup>, complemented by ‘street intercept’ recruiting (Chisnell, 2016) in inner city Magdeburg<sup>10</sup>, the response rate was increased to 2.42% (n=17: 10 women, 7 men). However, due to this low response rate, the selection strategy's original goal of recruiting a sufficiently diverse sample was only partially met. Also, despite the initial intention of running two groups for each format, the number of participants only enabled one format to be held per day. The exploratory design envisaged that each of the groups would work in the same room in Magdeburg City Hall, could use the same facilitation artefacts for the collection of results, and would have the same amount of time available.

Each of the collaboration partners had different interests in and expectations of the event. MDR, which first contacted the researchers, was looking for interesting cases for a TV documentary on the role of citizens in democratic innovations. Such innovations depart from the ‘traditional institutional architecture’ of democracies (Smith, 2009, pp. 1–2), and are designed to increase citizens' ‘opportunities for participation, deliberation and influence’ (Elstub and Escobar, 2019, p. 11). However, these very opportunities are reported to depend on the actual type of innovation and the way it is designed (Michels, 2011). The IASS research team was thus interested in exploring the influence of different interaction orders (reflecting possible types of democratic innovation designs) on the quality and outcomes of collaborative work. The cooperation with MDR, and their financial engagement, enabled the organization of the study and guaranteed access to a very dense audio-visual documentation of the three formats. For this exploration, it was imperative for researchers to observe a real-world collaborative process, not a simulation. In order to achieve this, the City of Magdeburg was invited to join the partnership and asked to identify a policy-related issue on which the input and engagement of its citizens

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<sup>9</sup> Researchers did not have direct access to residents' phone numbers. Therefore, they identified publicly available phone numbers for 84 of the original 702 invitees. Of those 84: 27 were aged 35–54 [12 f, 15 m] and 57 were aged 54–75 [21 f, 36 m]. Six of these 84 individuals participated in the event. The youngest age group (aged 16–34) could not be contacted at all via this chosen post-recruitment method, as this age group mostly uses mobile phone numbers that are not publicly registered.

<sup>10</sup> In the ‘street intercept’ recruitment method, researchers addressed pedestrians (always the 7th one after the previous one) on a previously determined route in inner city Magdeburg and invited them to join the event. The recruitment process lasted seven hours and a researcher spoke to 65 citizens, of whom five accepted immediately and a further eleven shared their phone contacts to enable follow-up by the researchers. Of these sixteen individuals, four subsequently participated in the event.

were considered necessary. Officials from the city development department co-developed with the researchers the leading question of all three formats, hosted the event in rooms at the City Hall, and showed interest in including the citizens' ideas in their work toward a new concept for the inner city.

Two members of the research team actively designed the exploratory study and selected three different kinds of interaction orders, developed and implemented the recruitment process, and managed the communication with all partners, while the two authors of this paper undertook exploratory accompanying research (Freeth and Vilsmaier, 2020).

### ***Data collection and analysis***

Empirical data collected and processed to inform our analysis included:

- Field notes from participatory observation of both the backstage and the frontstage work of the collaborative process throughout the phases of scripting, staging, performing, and inscribing.
- 13 recorded and transcribed semi-structured interviews with actors engaged in the process. Facilitators and researchers were interviewed before and after the event. Due to time constraints, officials of the city development department were interviewed before the event, and participants and the MDR director afterwards.
- Seven hours of audio-visual recordings of all three events; transcripts thereof, including coded segments of each participant's speech time.
- Pictures of the resulting documentation (maps, Post-its, and templates) filled in by the participants during each event.

Having a chance to investigate in detail the three different approaches to facilitation artefacts, we decided to follow a 'method for moving back and forth between data analysis, interpretation and the process of explanation or theory construction' (Mason, 2002, p. 180).

In the first stage of the analysis we reviewed and explored our field notes and semi-structured interviews, in order to identify references made to the object of the initial research puzzle, that is artefacts. After the first iteration of open coding, codes were organized along the spatial-temporal dimension of the collaborative heuristic and assigned to the phases of scripting, setting the stage, performing, and inscribing. This

allowed for identifying in particular those artefacts that had been used in all phases. In a further iteration, axial coding allowed for supplementing the analysis with the socio-material dimension (scripted, situated, and relational artefacts) and establishing linkages between its categories. Focusing on the artefacts established as most relevant in the previous step, we traced how they were perceived by different participants and how they unfolded along the phases and varied in their (scripted) function, use, and interpretation across the three formats that we analyzed.

In the second stage of analysis, we turned to the audio-visual material in order to further substantiate the emerging patterns with respect to the socio-materiality of artefacts. As the video material was generated by four fixed and two moving cameras in the room, the analysis allowed for gaining multiple perspectives on each scene. Here, verbal accounts of artefacts could be supplemented by observation of participants' actual behavior, the use of artefacts, and interactions they induced/were present in. In a further step, we decided once again to zoom in (Nicolini, 2009) on specific video sequences that captured the relational dimension of artefacts, as well as their entanglement with the social world, and coded them accordingly. While organizing data into categories and identifying patterns, we paid special attention to the 'interaction between variables' (Astalin, 2013, p. 118) and undertook constant comparison among the three analyzed formats.

## **Results**

The core of the presented case study consisted of investigating how three different interaction orders could foster collaborative work around and offer potential solutions to the same overarching question: *"How can Magdeburg's inner city become more attractive to pedestrians?"* Originally, the research design did not explicitly intend to investigate the role of facilitation artefacts, and focused instead on communicative interactions. More precisely, the researchers planned to use the same kind of facilitation artefacts for the collection of results (which they called 'results' containers') for all groups, in order to generate a constant variable among them. These 'results' containers' had been designed together with the facilitator of day 3 during the scripting phase. The use of the same artefacts in all groups aimed to compare, at a later stage, the results produced by participants and, on a policy-advice level, to offer a 'homogenized' overview to the city development department of the City of Magdeburg.

*'We will work with different results' containers, identically for all three groups. In particular, we thought about a map to which specific ideas could be pinned. Another template will allow participants to separately record concrete and further developed ideas. I think this format is applicable to the work of the city administration.'* (Researcher)

The results of our analysis show that the choice of implementing a specific (communicative) interaction order has a significant impact on the ways in which social and material worlds interweave with each other. In particular, via abductive grounded theorizing, we formulate the following arguments:

- (1) The presence or absence of artefacts in the room has a substantial influence on the structure of the emerging interaction order;*
- (2) The very same artefacts are interpreted and used differently within different emerging interaction orders;*
- (3) Unscripted and unsituated artefacts might contribute to reinforcing those communicative patterns that collaborative interaction orders aim to overcome;*
- (4) Purposefully scripted and situated artefacts also require constant supervision by the facilitator, in order to embed them in their emerging interaction order.*

In order to elaborate on these arguments and their empirical foundation, we first reconstruct the interaction between the social and material world in each of the three days; secondly, we introduce the backstage work in the scripting and setting the stage phases that brought the respective facilitation artefacts ('results' containers') to the hands of participants; thirdly, we zoom (Nicolini, 2009) in on some vignettes of the frontstage work in the performing phase relating to our four arguments; and finally, we discuss the results of these collaborative practices in the inscribing phase.

### **Interactions between the social and material world: three constellations**

*Day 1: Interaction between facilitation artefacts (not chosen by participants) and participants* – On the first day, five participants discussed ideas in a self-organized way (see Figure 6). Without external moderation or preassigned roles in the group, participants were invited by researchers to discuss the main question with the support of the 'results' containers': a map, Post-its with 5 predefined categories, a template to document their ideas, and marker-pens. With this kind of setting, researchers originally



intended to emulate a quite common scenario of self-organized citizens gathering to discuss a certain issue, in order to investigate the unfolding communicative dynamics.



Figure 6: Participants of the self-organized group discuss their ideas with the support of a map.

*Day 2: Interaction between facilitation artefacts (not scripted by the facilitator), facilitator, and participants* – On the second day, a professional facilitator was invited to support the dialogue among five participants via the method of dynamic facilitation (Rough, 2002; Zubizarreta, 2014) (see Figure 7). The facilitator did not take part in the scripting phase. Instead, she was asked to plan an agenda according to this facilitation method and to use, next to the facilitation artefacts specific to this method (four flipcharts documenting the discussion, headed: Ideas/solutions; Concerns; Facts; Questions/challenges), the same facilitation artefacts as foreseen for all groups. This setting intended to emulate a ‘one-method-fits-all’ logic: finding a facilitation method that can be implemented in any context and that does not require an extensive scripting phase.

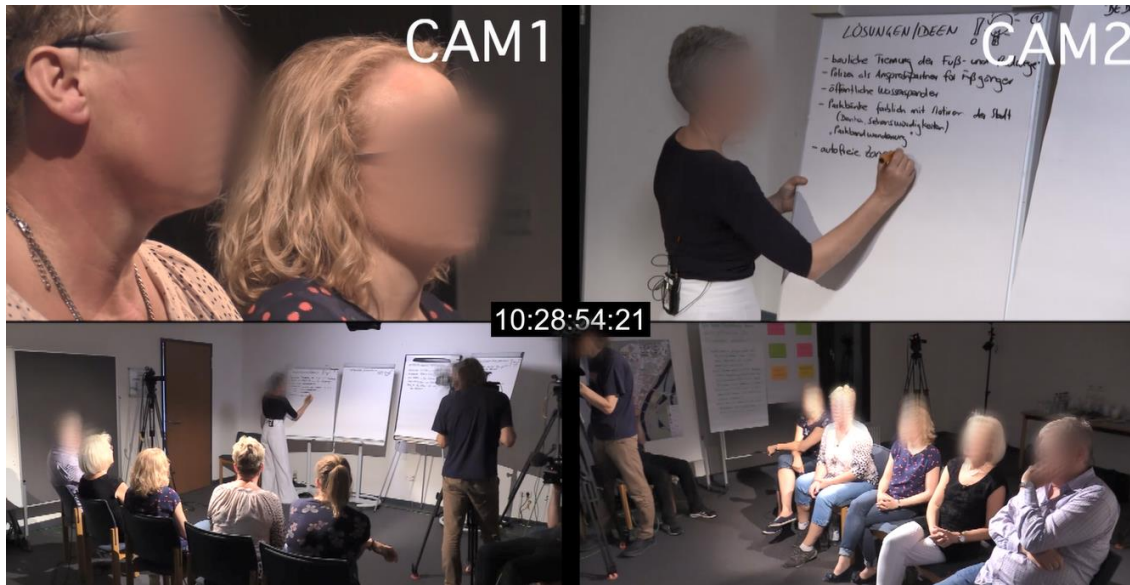


Figure 7: One participant explains her ideas to the facilitator during the dynamic facilitation session.

*Day 3: Interaction between facilitation artefacts (scripted by the facilitator), facilitator, and participants* – On the third day, a professional facilitator guided a group of seven participants along a process design that she scripted (including the ‘results’ containers’) for this specific context, together with the researchers (see Figure 8). This kind of setting was expected to verify the working hypothesis of the researchers: that a collaborative arrangement, in order to produce sustainable and inclusive results, needs to be collaboratively and extensively planned in all its dimensions (e.g., communicative methods, facilitation artefacts).



Figure 8: Participants of the tailor-made collaborative process document their ideas on a map.

## Backstage work

### *Scripting*

In order to script the third format, researchers and the facilitator of day 3 meet<sup>11</sup> several times to define the purpose, the leading question, and to generate an interaction order ‘*fostering co-creation,*’ as a researcher frames the goal of this collaborative exercise in an interview. During one of these meetings, the discussion is centered on what kind of facilitation artefacts could be used to support participants in generating and documenting results. Ideas thrown around include pictures from the city's past and images of good practices from other cities. In general, the material to be used is associated with knowledge that process designers want to provide to participants as an “entry point”. After a collective brainstorming session, the researchers and facilitator identify five categories to guide participants in developing their ideas: Redesign of streets; Nature; Art/culture; Leisure areas; and Stores/businesses. One extra category is left open, in order to integrate new ideas that process designers might not have considered.

*‘I believe that, within such a short time, it is useful [...] to define what is the scope of action for participants to develop their own ideas. We are suggesting these categories rather as a projection surface. These may match, or not, and*

11 The following Sections intentionally use the present tense, in order to illustrate an ‘in-the-moment’ analysis (Escobar, 2015) of the events.

*[participants] might also realize that there are completely different categories. This [suggesting categories] accelerates the process.’ (Facilitator)*

The intention of the facilitator immediately translates into the development of concrete artefacts, as illustrated in Figure 9. A map of inner city Magdeburg is created, onto which participants can pin their ideas written on colorful stickers (six colors, one per category). Moreover, an A3 (paper size) template is designed for participants to note down the details of their ideas, with some guiding questions to allow precision. The scripted function of these artefacts is to offer participants some orientation points, a potential focus for the limited time available, and guided support for documenting their ideas. The sixth sticker, lacking a category, is intended to encourage disagreement and creative thinking among the group. In this way the process designers purposefully prefigure the path (Escobar, 2015, p. 273, based on the work of Schatzki, 2002) leading participants to document their ideas and, at the same time, leave some options open for participants to diverge from the main path and define their own way to reach the goal.

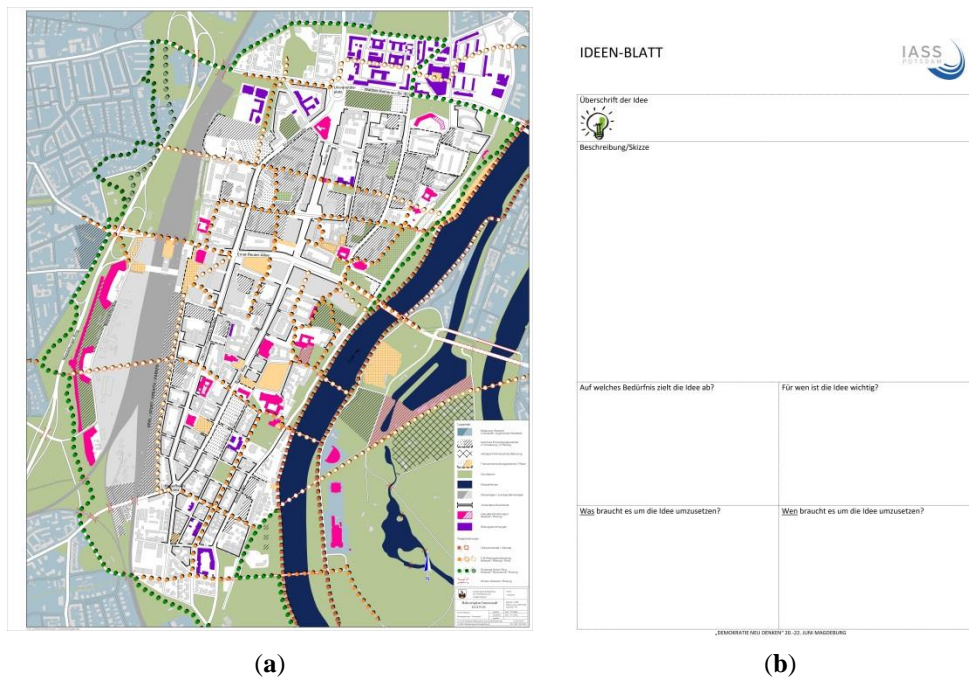


Figure 9: The ‘results’ containers’: a map (a) and a template (b), made available to all three groups in order to document the results of their discussion.



### *Setting the stage*

While the scripting phase is characterized by communicative negotiations, deliberation in this phase takes place in a physical room, which is at the same time also the object of discussion. Contentious points are mostly the inclusion, absence, or positioning of objects. The phase of setting the stage opens up the exercise to a larger constellation of actors. Each – equipped with different resources, competences, and stakes in the process – can influence the way the stage is being set: in our case, researchers, camera operators, and facilitators. They all shape or, as stated in several interviewees' words, negotiate on and make compromises regarding the setting. One facilitator reflects: *'in a way, I intentionally accepted working in a context and setting which was not optimal for the method.'* On day 1, the camera team arrives first on the location. They choose the smallest room available in the municipality building to host the event, *'because there was an overhead light hanging [from the ceiling], where they could attach their spotlights'*, assumed one researcher in an interview. The room is dark and warm on this summer day: large, black curtains are hung in front of each window *'to keep the daylight outside,'* states the documentary's director. The researchers realize that this may impact the performance, productivity, and creativity of participants. However, when they arrive, there is too little time left to re-discuss how and where to set the stage. They realize a further limitation caused by the camera crew: participants cannot move freely due to their microphone cables.

Two researchers (one a co-author of the present article) go to the room hosting the collaborative exercise. They quickly discuss where to place the facilitation material, which has changed slightly from that discussed in the scripting phase. The researchers charged with purchasing stickers to pin on the map, having a vague memory of what has been discussed previously on their exact use, have instead bought 20×15 cm Post-its in four different colors. Knowing the limitations caused by the discussants' microphones, which hinder participants in moving from their chairs, they decide to place Post-its on the table where the map is located, together with some copies of the template and some thick flipchart marker-pens, which is what they found available on the spot.

On day 3, as soon as the facilitator who participated in the scripting phase arrives on the spot and sees the facilitation material, she observes that the Post-its bought by the researchers are too big for the purposes of the exercise. By this time, the groups from

days 1 and 2 have already worked with these larger Post-it notes. She takes scissors and starts cutting each into five parts, reducing their size. She also turns around the pinwalls so that the maps are not visible, since participants will work on these only during the second phase of the process and are not expected to see them at the beginning of the process. The facilitator thereby purposefully situates, physically and temporarily, the facilitation artefacts in the room and reconnects them (e.g., by cutting the Post-its) to the original intention of the script.

## **Frontstage work**

### ***Performing***

The performing phase witnesses a constant interplay between the designed interaction order, which the process designers previously scripted in order to generate a productive exchange, and participants, who constantly interact with, negotiate, and sometimes resist the offers of facilitators (Felt and Fochler, 2010). Facilitation artefacts represent the tangible materiality of this offer. While researchers and facilitators may have scripted these artefacts' use and situated them in the room with a specific intention, the results show that their effect on the three performances varies significantly. We show this along the previously mentioned four arguments and by zooming in on several vignettes of the performance (Nicolini, 2009):

*(1) The presence or absence of artefacts in the room has a substantial influence on the structure of the emerging interaction order.* Facilitation artefacts, their presence or absence, turn out to have an indirect influence on the way participants interact with each other and structure their conversations. At the beginning of day 1, a male participant looks at the pinwall that illustrates the five predefined categories (Redesign of streets; Nature; Art/culture; Leisure areas; and Stores/businesses) and suggests starting with the “streets” category. He distributes Post-its, which he finds on the table, to each participant, so that they write up their ideas. The Post-its and the predefined categories are used by participants to start, structure, and manage a conversation among strangers situated in a room for the next three hours with cameras filming them. This procedure soon becomes an emerging interaction order. However, participants soon abandon the Post-its: *‘I believe, the lady next to me and I were the only ones who actually wrote things down, the others [all men] did not want to write at all. And then we gave up pretty quickly and*

*directly wrote everything onto these big sheets of paper [the template]. We haven't really paid attention to the small cards [Post-its] anymore. But it was just because the small cards were lying there [on the table], that we originally took them.'* (Participant, day 1). In this statement, the interviewee reflects on how the participants' initial decision to write on Post-it notes was simply due to their presence on the table. However, it also shows that the interaction order "imposed" by the Post-its is quickly resisted by some members of the group. The video recording shows, for instance, how a participant immediately starts commenting on one of the categories without writing anything on the Post-it, and how others follow him by sharing their opinions. He thus ignores the artefact. At a certain point, participants decide that, alternatively, one person should protocol the ideas, using the template. They even discuss this decision openly and humorously (*'I do not want to write'* and *'it's too hot in here...'*). A collective decision by individuals against a certain artefact (*'let us write collectively!'*) becomes a moment of unity in the group.

Similarly, the absence of artefacts also has an effect on the way participants are enabled to generate ideas. On day 2, no tables are included in the setting: the room is small and priority is given to the initial row of chairs and the four flipcharts required by the dynamic facilitation method. In the last part of the session, participants are divided between two groups and invited to further elaborate and document the ideas emerged in their discussion. One group struggles to write on the Post-its, as one participant reports in an interview: *'these strange sticking Post-its, I found them quite awkward in that moment, because you had these floppy sheets of paper in your hands and didn't really know how to write on them.'* Due to the difficulty of simultaneously holding the Post-its and writing, the two women decide to share tasks: *'one held them [Post-its] and the other one wrote on them ... [...] there should have been some other working material, something else, maybe some kind of support or so, you know? Not just a piece of paper in your hand; that was silly.'* The lack of a physical support for writing has consequences for the productivity of the discussion: participants first have to come up with an alternative solution to note down their results. This undermines the function of the Post-its, which are consequently described as inappropriate for participants' purposes.

On day 3, one of the participants, a non-native speaker of German, seems to have difficulties in sharing his ideas (he only speaks 1.5% of the time during group work). However, the map is a helpful device for him. At a certain point of the discussion, he

stands up and looks at it. His pointing at the map, even without saying much, allows him to momentarily become an active part of the emerging interaction order of the group. He makes eye contact with other participants, and points at elements on the map where he may have a question or would like to make an observation. Another woman stands up next to him to hear him better. The map thus has an enabling effect. Star called these artefacts ‘boundary objects,’ namely an object that ‘sits in the middle’ (Star, 1989, p. 47), ‘a sort of arrangement that allows different groups to work together without consensus. [...] a shared space’ (Star, 2010, pp. 602–603). The presence of the map supports communicative interaction between participants. A participant simply needs to point to the map, and the attention of the other members of the group is immediately drawn to it. It fosters concreteness, precision, and mutual understanding, since it allows participants to show the others what they are talking about.

*(2) The very same artefacts are interpreted and used differently within different emerging interaction orders.* When researchers decided to use the same ‘results’ containers’ in all three groups, they intended to make the same material resources available to everyone and provide equal support in generating ideas. However, the empirical material shows that the same facilitation artefacts are in fact open to different interpretations and uses.

On day 1, the five categories and the Post-its seem to structure the flow of the conversation. However, they do so in a different way than was originally scripted by the process designers. In this case, the diligent way of following the proposed categories may foster productivity at the cost of creativity. Statements such as ‘*we ticked off a lot of squares!*’, or ‘*we were productive!*’ from an interview with a participant show that the group measures success mainly by the quantity of written Post-its and templates produced. Indeed, an analysis of the three groups’ documentation shows that the self-organized one produced a much higher quantity of suggestions than the other two. Enthusiastic announcements in the group such as ‘*another note has been produced!*’ or ‘*we need to fill up this sheet*’ confirm this attitude towards the task to fulfill during the three hours. After one hour, when the conversation falters and the group does not know exactly what to write, one participant states ironically: ‘*I think they have cancelled the show already*’ and laughs. The presence of cameras, in terms of artefacts, nurtures this dynamic. Although in conversation with each other, participants seem to be very aware of the fact that they are being filmed and should “perform well” – as measured by writing ideas on the given artefacts.



Next to the different interpretations of the ‘results’ containers,’ we also observe different uses of these artefacts on the three days. On day 1, one of the reasons for abandoning the use of Post-its is that only thick marker-pens are available for writing on them: *‘these notes [Post-its] that you [researchers] distributed had kind of a workshop touch, where you write a word on it and stick it to a wall somewhere, right? And we were supposed to develop many ideas, but then the marker-pens were too thick to write all ideas onto these small Post-its. [...] with these marker-pens, we were a bit limited.’* In this context, Post-its are, in Schön's words, ‘talking back’ to participants and revealing the constraints that they impose (Schön, 1987). In their physicality – their size (too small), combined with the size of the marker-pens (too thick) – both artefacts hinder the participants' intentions, namely to write whole sentences on the notes. This differs from the other two days, when both groups use the same materials without complaining or asking the facilitator for thinner pens. A working hypothesis attributes this to the timing with which the artefacts are situated in the agenda. On days 2 and 3, the artefacts are not used for an initial brainstorming session as the group in the first format did. Instead, they are used in a way that is closer to their scripted function, namely at the end of the session to sum up and present the ideas that have been extensively discussed during the first two hours. At this stage, single keywords written on the Post-its are enough for other participants to understand the meaning behind them. Timing therefore plays a crucial role in using artefacts in a way that stays close to their scripted intention.

*(3) Unscripted and unsituated artefacts might contribute to reinforcing those communicative patterns that collaborative interaction orders aim to overcome. Asked about her assumptions regarding potential dynamics emerging in the self-organized group, one of the facilitators answered: ‘I could assume that the patterns which everybody has in her everyday life will emerge [in this setting], so that the [...] eldest children, in psychotherapeutic terms, will take the lead, that everyone [...] falls back into their own pattern, [...] And then, I think, based on how many men and how many women are present, one could also recognize specific patterns.’*

This hypothesis is confirmed, and not only in the self-organized group. Two examples show how the relational nature of artefacts (Star, 2010) can reinforce communicative patterns such as exclusionary dynamics or tendencies to reproduce social structures that collaborative practices aim to challenge (Mouffe, 1999; Sanders, 1997; Young, 2000,

2001). On day 1, the group decides at a certain point to abandon Post-its and start writing collectively on the template. The man who moderated the discussion at the beginning of the session assigns the role of documenting the discussion to a woman. He does it while offering her a template to fill in and affirming that *'women tend to have the best handwriting.'* His statement is supported by the other two male participants. Time to speak is considered as a resource in this setting, so whoever is not documenting has more chances to speak freely. A coding of the spoken segments of each participant shows that this man spoke 31.4% of the time during the three hours. The woman tries to pass the template to the other woman sitting next to her (another woman, following the same line of thinking as the man), who instead refuses non-verbally and pushes the template back. The template thus becomes a medium to assign specific roles to participants, and is used in a way that forces the interlocutor to either accept or make an effort to refuse. *'She was actually forced to do it. Nobody wanted to, and then she had to, more or less,'* as another participant comments in an interview. Having accepted the first option, the woman looks for another pen, since the marker-pens available are too thick to write on the document. After realizing that there is no other pen available on the table, she takes one out of her bag, commenting *'Oh, women and handbags...'* Having found the pen, she asks for some input on what to write, and the man who gave her the template starts dictating her some ideas. While this may be done with the best intentions, the act of dictating has a relevant impact on the way the ideas are being framed and will be subsequently translated into results. This segment shows how unscripted and unsituated artefacts can reinforce asymmetries (in this case regarding gender) and hierarchies (who is in charge of dictating) within the group. In this case, even the woman contributes to this, maybe ironically, by engaging with other artefacts (firstly finding a pen, and secondly highlighting how carrying bags has its advantages for women). In this case, the artefacts (Post-its, marker-pens, templates) are unscripted, since they have not been purposefully designed for, and temporally and physically situated in, this specific interaction order (self-organized work). Because of this, the scripted relational dimension of these artefacts (e.g., writing and discussing together) also becomes lost, thereby leaving room for an emerging interaction order in which asymmetrical dynamics may dominate.

Unscripted and unsituated artefacts can also contribute, albeit indirectly, to the exclusion of participants. On day 2, in the final part of the session, a group of three participants, two women and one man (the same who, as mentioned above, had struggled with writing

on Post-its without physical support) discuss which Post-its should be pinned on the map. The two women converse quite intensely on what to write. The man stands passively aside, but, at a certain point, manages to grab a Post-it. Access to and use of the Post-its represent ways of becoming an active part of the conversation – in other words, he gets access to the interaction order that emerged in the group over the preceding ten minutes (discussing, writing down on a Post-it, pinning it on the map). However, this interaction order can also have exclusionary effects if the use of artefacts is monopolized. The two women are very close to each other while discussing, because one holds the Post-it on which the other is writing. The discussion becomes a one-to-one conversation. No role is left for the man in this interaction order. While the two women continue their animated converse, he first checks his phone, and at a certain point moves away from them and returns to sit on his chair. While Post-its are certainly not the only factor that contributes to this dynamic, they amplify his exclusion from the group, by depriving him of the “toy” that others are “playing with.” The facilitator does not intervene. While this may be a personal choice by the facilitator, it is also possible to assume that this may have to do with the ownership of the interaction order's script. Not having taken part in the scripting phase of these ‘results’ containers’ may have left the facilitator without the necessary knowledge to intervene. As she later comments in an interview, *‘If we don't accompany the process [from the beginning] but only run it, that's just something else.’*

*(4) Purposefully scripted and situated artefacts also require constant supervision by the facilitator, in order to embed them in their emerging interaction order.* Artefacts are inevitably relational. This means that their use contributes to the constant emergence of new interaction orders among the participants, and that even purposefully scripted and situated facilitation artefacts may lead the group dynamic in another direction than was originally planned. The role of the facilitator thus consists of orchestrating – sometimes in the background, sometimes in a more explicit way – the directions taken by these emerging interaction orders.

On day 3, the facilitator who contributed to designing the ‘results’ containers’ during the scripting phase introduces them in the second part of the session. She divides the participants into two groups. Each corner has four chairs placed in a semi-circle in front of a pinwall displaying the map. On the floor, participants find the stickers (originally, the Post-its that the facilitator cut into five parts). The facilitator invites them to write

down their ideas and pin them on the map. She explains the five categories and the possibility of identifying new ones. She encourages participants not to rush the process: *'There is enough time for this task; maybe you want to take some time to share your thoughts first...'* The facilitator, in this case, guides the participants in their use of the map and stickers. She foresees the potential rush and productivity dynamic that the task (writing down the ideas) may cause, and tries to avert the time pressure by suggesting a potential interaction order (first talking to each other, then writing) that the group may follow. In one of the two groups, after a short while, one woman stands up and starts writing some ideas on the stickers. However, even when she is not writing, she continues standing in front of the pinwall, speaking (30.4% of the group-work time, according to our coding analysis) and looking at the map, while everyone else remains seated. After some minutes, the facilitator intervenes and shares an observation with the group: if the woman stands, the communication takes place only between her and another participant. By standing, she inevitably shows her back to two participants of the group and indirectly cuts them out of the conversation. In this way, the facilitator indirectly asks participants to modify their way of interacting. The woman and the group seem to positively accept the facilitator's comment, and the woman sits down. She actively asks the other two participants whether they want to suggest some ideas. This interaction segment shows how the use of artefacts is constantly interconnected with and dependent on the facilitator and her work. Even when scripted artefacts are actively introduced and strategically situated in the flow of the process, those using them can interpret and use them in multiple ways, leading the interaction into unforeseen and potentially unproductive paths. With her intervention, the facilitator sees herself in charge of supervising, and eventually steering, the interaction between artefacts and participants on a relational level. Questions thereby become 'a possible means to exercise power' (Wang, 2006) in two different ways: firstly, the facilitator changes the conditions of the exchange among participants, by prompting reflection on the current group dynamic (McCardle-Keurentjes and Rouwette, 2018); secondly, the previously standing participant, as a consequence of the facilitator's intervention, opens up the floor of discussion to the formerly excluded participants, by asking their opinions. One interviewed participant of the group finds a similar metaphor to describe her work as follows: *'Someone has to hold the rudder in this context. [...] if the facilitator does not pay attention, the topic can quickly glide into a different direction.'*

### *Inscribing: Between frontstage and backstage*

‘Whatever goes unrecorded during a participatory process will likely be lost for policy-making,’ as Escobar states, referring to the process of inscribing in facilitation work (Escobar, 2019, p. 190). The ‘results’ containers’ analyzed so far play a crucial role in this inscribing phase. In order to have an impact, they need to be scripted (which results do we want to document?), situated (how can we integrate them into the agenda in order for participants to productively use them?), and relational (who should be there while they are being produced?). We analyze this phase of inscribing by bearing in mind the fact that the three formats took place in a partly artificial context, in which each group could deliberate within a restricted amount of time and under special conditions (e.g., being filmed, partly working with unscripted and unsituated artefacts). The scripting phase shows that the ‘results’ containers’ were used, to differing degrees, in the ways they were scripted for. The photo documentation of all templates and maps produced by the three groups presents different kinds of depth (e.g., templates with sub-questions being left empty) and precision (e.g., large Post-its pinned around or on the map, hindering the precise localization of the individual ideas – see Figure 10).

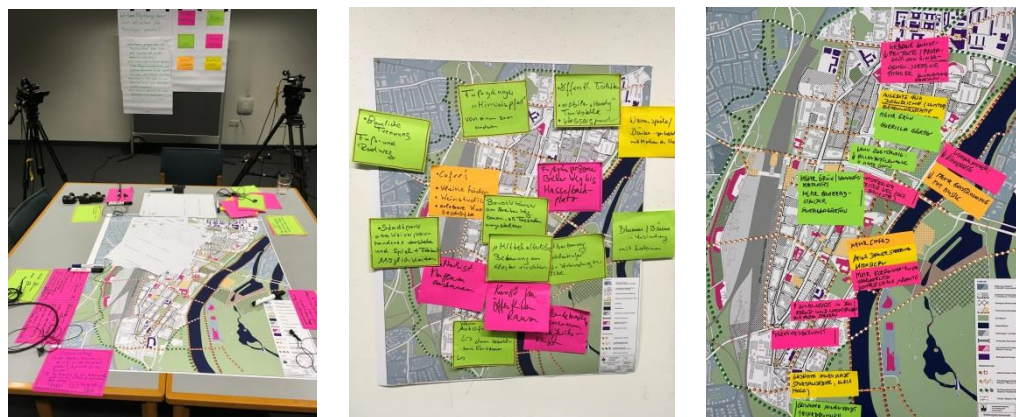


Figure 10: The results of the discussion visualized on the map on day 1, day 2, and day 3.

Officials from the city development department seem not to see a challenge in the legibility of handwritten Post-its: *‘We can actually deal with that [...]. We know this type of work and can therefore quickly move on to the next steps, and of course we will write it down neatly. [...] that is actually not a problem.’* Both facilitators retrospectively highlight the fact that the artefacts’ relational quality would have benefited from the presence of representatives of the city development department during the deliberation. *‘One of the persons I have missed was somebody who will work with the results [we*

*produced] and who could have asked questions that we didn't think of, in order to really make sure that we collect proposals at the right level. Which level and which precision is needed now? Does it need the level 'We need more cafes' or does it need the precision of 'We need three benches on this crossing, and we need them with light.'* Within this interview segment, the facilitator suggests that the presence of city officials in the room could have made it easier to increase the precision of the collaborative exercise's results and make them more likely to be implemented. Furthermore, the documentation also presents a relational dilemma: Who is in charge of interpreting what has been written on the templates and pinned on the maps? That question was posed by one of the facilitators to us, in the role of researchers and conveners, during an interview we conducted: *'I have this question: Is what has been produced during the three workshops so clear to you that you can present it [to the city administration]? Or how do you interpret the results? The city will also interpret them again, right?'* Since the beginning, the researchers saw themselves as being in charge of this inscribing process. However, now, with the raw data at their disposal, they find themselves at a crossroad, as one of them notices: *'How do we intervene in the content; do we paraphrase? Or do we really stick to the raw text?'* They finally choose the latter option, and generate a document that clusters the different ideas of the three groups while staying as close as possible to the words of the participants. All participants receive this document and have the opportunity to rate the different ideas. Based on the participants' responses to this survey, a report is sent to the City of Magdeburg. By employing this approach, the researchers intended to remain neutral and refrain from translation. However, as Freeman underlines, 'to translate is not merely to "carry over", but to take over' (Freeman, 2009, p. 441). The role of translator has not been explicitly scripted or carried out by any involved party in the process under study. As there was no prior agreement on the process for this part of the procedure, the researchers assume a role similar to a gatekeeper of information without, however, offering an active translation.

## **Discussion**

The pages above took readers on a micro-journey to the world of artefacts in collaborative settings and showed how the successes or failures of collaboration intertwine with seemingly insignificant minutiae. The detailed analysis of three interaction orders in our study illustrates and offers evidence of how, even in apparently controlled environments,

emerging interaction orders can be volatile, quickly change direction, and are tightly entangled with material elements. The results of our study show that: (1) The presence or absence of artefacts in the room has a substantial influence on the structure of the emerging interaction order; (2) The very same artefacts are interpreted and used differently within different emerging interaction orders; (3) Unscripted and unsituated artefacts might contribute to reinforcing those communicative patterns that collaborative interaction orders aim to contrast; and (4) Purposefully scripted and situated artefacts also require constant supervision by the facilitator, in order to embed them in their emerging interaction order.

These arguments show that the micropolitics of socio-material arrangements do substantially matter in the overall collaborative practice, because they are consequential for the ways in which participants interact with each other. For this reason, the mobilization of each facilitation artefact needs to be systematically thought through in collaboration, and goes far beyond “making the room look nice and inspiring.” In particular, we found that ownership of the interaction order's script, from scripting to inscribing, is crucial for its purposeful implementation. This refers especially to facilitators, who prove to have an irreplaceable role in orchestrating these micro-dynamics. But it also implies co-ownership of the script by other co-conveners, which can emerge when the scripting phase becomes a platform for confrontation and mutual understanding among those with a stake in the upcoming steps of the collaborative process. In our case, the material constraints introduced by one of the conveners in order to fulfill their task in the process, namely the camera team, show the consequences of a lack of information exchange in the scripting phase. The episode illustrates how the presence of an unresolved difference in goals and priorities among conveners (the MDR camera team aiming to set up the space to obtain good-quality pictures *versus* the facilitators and researchers aiming to offer participants a productive environment for developing their ideas) unintentionally undermined the purposes of the entire collaborative arrangement.

Our analysis identifies three practices in facilitation work that deserve attention, in order to steer the emerging interaction order away from exclusionary dynamics: *scripting*, *situating*, and *supervising*. These practices, connected to the investigation of artefacts within the context of our case study, might extend to other (not necessarily material)

spheres of collaboration. While scripting has been extensively tackled by Escobar as a key dimension of facilitation work (Escobar, 2014, 2015, 2019), the other two practices emerged in our empirical investigation and are connected to two core properties of artefacts discussed above: being situated and relational (Akrich and Latour, 1992; Gherardi, 2008; Jarzabkowski et al., 2013; Star, 2010). *Situating* refers to the practice of consciously placing facilitation artefacts in the room, both physically and communicatively, at the right time. In our case, facilitators “layered” their physical presence during the three-hour sessions, rendering visible only those artefacts that were necessary to orchestrate a specific activity. Other artefacts remained hidden, waiting for their time to come. This allowed for focus and avoided distraction. On a communicative level, facilitators often took several minutes to explain the use and role of artefacts and to suggest how participants could interact with them and with each other during the activity. When purposeful or extensive *situating* did not take place, for instance in the self-organized group in which the ‘results’ containers’ were only briefly presented by a researcher before the group started its work, we observed how the simple presence of Post-it notes in the room generated a different emerging interaction order, based on productivity instead of creativity. The practice of *supervising* focuses on the constant, dynamic interplay between the original interaction order and the emerging interaction order(s) among participants. The task of facilitators consists of steering, or adjusting, the emerging interaction order on a relational level in a way that it fosters inclusive and productive dynamics.

The empirical material generated in the study is based on the unique opportunity to analyze participants' deliberations on a real-life question under purposefully designed conditions. At the same time, high-quality video documentation enabled detailed analysis of each instant of the collaboration – a fundamental precondition when investigating micropolitics of facilitation artefacts. However, the same enabling conditions for this study also carry limitations. Deliberating for three hours in front of cameras, and knowing that some of these shots will be broadcast on national TV may have influenced the propensity of participants to behave in a certain way. These same conditions certainly contributed to self-selection among participants, thereby excluding those who were unwilling to be filmed. Furthermore, the setting's physical conditions – working in a small, warm room with subdued lighting, without being able to move freely – negatively affected the well-being of participants and facilitators. Finally, the low participant



response rate – potentially also connected to the tight time schedule of the scripting phase – did not allow for organizing more than one group for each format. Additional groups would have provided a more robust basis for our analysis.

The four arguments formulated in this paper require further refinement and confrontation with other empirical cases and methods of analysis. The results of the investigation might also be framed as analyzing the unexpected side-effects of an “experiment.” Researchers introduced a “fixed” variable (the ‘results’ containers’) in a highly dynamic and constantly changing environment that is a collaborative setting, by assuming that this variable could remain unchanged. As a side-effect, instead, the ‘results’ containers’ showed to be extremely volatile in their interpretation, use and impact on the overall emerging interaction order(s). If the exploratory study was to be repeated, a potential research design could include: (a) a self-organized group accessing a greater variety of facilitation artefacts, without the imposition of predefined categories; (b) a method-driven format, with the opportunity for the facilitator to participate in the scripting phase and co-design the facilitation artefacts; (c) the presence of the question-giver (in this case, the City of Magdeburg) in the collaborative setting, in order to answer questions regarding the kinds of results to be produced. This way, the research design would attempt to remain even closer to the reality of daily collaboration and of the potential roles of artefacts within it.

The study of artefacts in collaborative settings could further benefit from analyzing our data from different angles and following questions that were beyond the scope of the present study. Our results hinted, for instance, to the crucial role of facilitators in actively working with facilitation artefacts, and to the potential influence of artefacts on fostering mutual understanding in diverse groups (e.g., the map of the city). Here, it would be of help to focus specifically on facilitators' perspectives and their active choices in working and interacting with the material world. This could be analyzed by comparing in-depth the conversation dynamics of the two facilitated formats and within the self-organized group.

## **Conclusions**

A puzzling observation sparked the investigation: research in the field of collaboration has not dedicated substantive attention to the role of artefacts, whereas practitioners in

the field consider them a key aspect of their facilitation work. Our work addresses this knowledge gap by showing the deep interrelatedness and embeddedness of artefacts in the social activities that are constitutive of collaborative arrangements.

The paper examines collaborative practices at a micro level as an ongoing unfolding of activities, taking place in multiple contexts, which mutually and constantly influence each other (Nicolini et al., 2011). In order to investigate them as such, we applied a heuristic that combines a temporal dimension (scripting, setting the stage, performing, and inscribing phases), a spatial one (frontstage and backstage work), and a socio-material one (scripted, situated, and relational artefacts). This framework enabled us to track the ongoing interplay between: (a) the interaction order designed by the process designers, and (b) the emerging interaction order(s) of participants and other actors. While offering an approachable way to investigate the fine-grained interactions between social and material worlds, the significance of this study also relies on the explorative approach chosen to address the research question. It generated a mutual learning process across communities (researchers, facilitators, co-conveners, and participants) and produced relevant results for both scholars and practitioners in the field of collaboration.

Since sustainable policymaking at the national and global levels is ever more reliant on collaborative approaches, gaining an understanding of the micro-dynamics that shape these processes is fundamental to the future of environmental governance. Indeed, as we showed, what happens at the micro level of collaboration can have a substantial influence on the impact that these arrangements might have (or not) on following policymaking processes. The investigation of fine-grained interactions between the social and material world can offer significant insights on a more abstract level and inform the processes of investigating, organizing, and conducting sustainability collaborations. Facilitation artefacts, indeed, should receive greater attention, as they represent the very core of the dynamics between the process design as scripted by its conveners and the emerging interaction order as co-shaped by participants. Our study shows that artefacts, as with every other dimension of collaborative processes, cannot be investigated (or, in the practice, organized) as separate entities, but need to be seen as parts of a whole orchestra playing.

Studying artefacts can reveal the origins and developments of dynamics that potentially lead to moments of collaborative advantage (Huxham, 1996; Huxham and Vangen, 2005) or impasse (Molinengo, 2022). As we have shown, collaborative impasse can emerge,

for instance, when involved actors do not exhaustively formulate and discuss their respective priorities and interests in the scripting phase. In our case, this led to arranging the event setting in a way that spoke to the technical needs of the MDR team but negatively impacted the work of facilitators and participants. When asked about their first memory of the process they participated in, almost all interviewees spoke of the *'warm and stuffy room,'* which visibly affected the wellbeing of participants while deliberating. Similarly, the fact of buying the wrong material (large-sized Post-its rather than smaller stickers, as originally planned), caused by not knowing their precise scripted and situated purpose in the overall process, affected the quality of the documentation in the inscribing phase.

Collaborating to achieve sustainability goals implies the involvement of actors with much higher stakes than simply how to set up a room for recording a documentary. Nevertheless, the underlying dynamics may be similar. These episodes from the micro level can be easily translated to inform other spheres of sustainability collaboration. Our heuristic and arguments, developed as a result of abductive grounded-theorizing, may offer some guidance and orientation for scripting, staging, performing, and inscribing collaborative processes, and the vignettes we illustrated may serve as a plastic example of dynamics that could take place in any collaborative setting. As demonstrated, collaborative advantage might be meticulously planned in the scripting phase. A good plan, however, must always include some mechanisms of responsiveness to account for unanticipated elements that – as experience shows – emerge before and during the performing phase. Above all, it needs to integrate the perspectives of its participants, with their backgrounds, experiences, and interests. Situating and supervising our collaborative practices along the path might represent two important missing pieces towards purposeful, legitimate, and productive collaborations, alongside others still waiting to be discovered.

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### **Author Contributions**

Conceptualization, G.M.; methodology, G.M. and D.S.; formal analysis (interviews' analysis, G.M. and D.S.; video analysis, G.M.); investigation, G.M.; writing—original

draft preparation, G.M.; writing—review and editing, G.M. and D.S.; project administration, D.S.. All authors have read and agreed to the published version of the manuscript.

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## Article Three

### Process expertise in policy advice: Designing collaboration in collaboration<sup>12</sup>

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#### *Abstract*

Complex societal and environmental challenges motivate scholars to assume new roles that transcend the boundaries of traditional academic expertise. The present article focuses on the specialized knowledge, skills, and practices mobilized in the context of science–policy interfaces by researchers who advise policymakers on collaborative governance processes intended to address these pressing issues. By working on the backstage of collaborative arrangements, researchers support policymakers in the co-design of tailor-made strategies for involving groups of institutional and non-institutional actors in collaboration on a specific issue. The present article examines the expertise underpinning this practice, which we term process expertise. While already quite widely practiced, process expertise has not yet been comprehensively theorized. The study employs a self-reflective case narrative to illuminate its constitutive elements and investigates the advisory work of the authors' research team, called “Co-Creation and Contemporary Policy Advice”, located at the intersection of science, policymaking, and civil society. The findings show that process expertise, when exercised by researchers and supported by an assemblage of enabling conditions inherent to the research context, goes beyond the possession of a set of skills at the individual level. Instead, process expertise in the context of science–policy interfaces unfolds in interaction with other types of knowledge and fulfils its task by generating a weakly institutionalized ‘in-between space’, in which researchers and policymakers interact to find more inclusive ways of tackling complex challenges. In this realm, relational work contributes to establishing a collaborative modus operandi at the very outset of the advisory process, while working at the processual level supports knowledge co-production among multiple actors. The article argues that it is the ongoing work of process experts at the intersection of relational and processual levels that helps maintain momentum in these collaborative partnerships. By formulating and discussing five constitutive elements of process expertise, this paper untangles the complex work that is required in collaborative research settings and gives a language to the invisible work per-

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formed by researchers who offer policymakers—and other invited actors—advice on the process of designing collaboration in collaboration.

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## **Introduction**

Over recent decades, the rise of complex societal and environmental challenges, ranging from climate change to the current COVID-19 pandemic, has increasingly fostered a debate on the potential roles that researchers can or should play in addressing these pressing issues (Pohl et al., 2010). The present article focuses on the specialized knowledge, skills, and practices of researchers who advise policymakers on collaborative governance. In this context, one or more institutional authorities opens up previously closed policy arenas to a larger group of (institutional and non-institutional) actors. The expectation is to generate a broader and multi-perspective understanding of the issue at hand, foster creativity in the generation of solutions, and enlarge societal support for their implementation (Torfing and Ansell, 2017, p. 37). Accordingly, the advisory paradigm of ‘speaking truth to power’, that is of offering evidence to support decision makers, has opened up for ‘making sense together’ (Hoppe, 1999, cf. also Hoppe, 2005, 2009; Pielke, 2007; Renn, 1995; Strassheim and Canzler, 2019), thus broadening expectations towards researchers' expertise in policy advice and calling for the rearticulation of the interactions between experts, policymakers, and citizens (Carrozza, 2015; cf. Fischer, 2000). With an underlying understanding of the policymaking process as ‘collective puzzlement’ (Hecl, 1974, p. 305, cited in Hoppe, 2011), knowledge production, intended as ‘a group activity’ (Bandola-Gill and Lyall, 2017, p. 254), has shifted from the linear ‘knowledge transfer’ towards the interactive ‘knowledge exchange’ (Mitton et al., 2007).

Many attempts have been made to typologize the use of advice in the policy process (Aubin and Brans, 2021), including advisers' roles (Connaughton, 2010; Mayer et al., 2004; Pielke, 2007), as well as the style and the substance of advice offered (Howlett and Lindquist, 2004; Prasser, 2006). Providing advice on collaboration involves offering substantive input on how to design respective processes (SAPEA, 2019, p. 58; see also Brand and Karvonen, 2007; Fischer, 2009; Maasen and Weingart, 2005; Martinsen, 2006). But it also requires the ability to foster a ‘creative attitude’ (Follett, 1930, p. 211) in the advisory arena that is necessary to collectively address complex issues. As no domain-specific excellence translates automatically into this competence (Bammer et al., 2020; Bennett and Brunner, 2020; Escobar et al., 2014; Fischer, 2012), further research

is needed with respect to the constitutive elements of such an expertise, which we term *process expertise*. The present article takes up this challenge.

This exploratory work builds upon advisory activities at the Institute for Advanced Sustainability Studies (IASS) in Potsdam, Germany, where our research group (“Co-Creation and Contemporary Policy Advice”) has experimented with and conducted research on collaborative approaches at the intersection of science, policymaking, and civil society. These include, for instance, supporting local municipalities in co-developing (along with societal actors) mobility strategies in public space during the COVID-19 pandemic; planning together with city mayors and public servants the implementation of citizen councils to set priorities for the future development of a district in Berlin; and advising regional and national governments on how to co-develop pathways towards a sustainable future together with affected actors, as part of the coal phase-out in the Lusatia region.

To conceptualize the kinds of expertise underpinning this practice, and thus contribute to the related debates, we scrutinize our experiences and undertake a self-reflective case narrative (Becker and Renger, 2017), inquiring: “*What do researchers do (and how) when they advise policymakers on collaboration processes, and what kind of expertise do they rely on?*” To approach this question, we offer an overview of the main debates on how to define expertise, provide an exploratory definition of *process expertise* in the context of science–policy interfaces, and substantiate this with literature dealing with facilitation; secondly, we introduce the context of our advisory work at the IASS and illustrate the research methods underpinning our investigation; thirdly, based on the results of our analysis, we formulate and discuss five constitutive elements of process expertise. Finally, we reflect on the pathways for improving the application of process expertise that is necessary in such advisory contexts within and beyond academia.

### **Defining expertise**

Anyone trying to offer an answer to ‘*what* expertise really is and *how* it actually works’ (De Donà, 2021, p. 82) enters surprisingly slippery semantic ground. On the one hand, everyone seems to understand the term ‘expertise’ in its everyday use. The more or less common ground is rooted in the etymology of the word *expert*, from the Latin verb *experiri*, namely ‘to try’. A related *expertus* is ‘someone who is experienced, has risked

and endured something, is proven and tested' (Grundmann, 2017, p. 27). On the other hand, the tendency observable in scholarly disputes is rather to underline the challenge of offering a straightforward or uncontested definition of this concept (cf. Ward et al., 2019) without ending in the tautological trap of defining expertise as 'what experts have that non-experts do not' (Nunn, 2008, p. 415).

Different disciplines and approaches to the study of expertise offer alternative perspectives on this subject (Ward et al., 2019). One of the biggest debates unfolds between those scholars who hold that expertise is relational (Grundmann, 2017), namely 'constructed' in dialogue with certain audiences (Pfister and Horvath, 2014), and therefore attributed by someone else (Kotzee and Smit, 2018, p. 99; see also, e.g., Fischer, 2009; Jasanoff, 2003; Wynne, 2003), and those who see expertise as 'real, namely relying on the experience and competencies of the person' (Kotzee and Smit, 2018, p. 100, referring to Longino, 2016). Another strand of debate differentiates between expertise as an 'internal property' of a person, resulting from constant individual practice, or as an 'external construct of a community', thus also including its consumers and regulators, and the context in which expertise operates (Nunn, 2008, p. 414). A practice perspective suggests moving away from understanding expertise as 'owned' towards being 'applied', which combines 'understanding and doing' (Pellizzoni, 2011, p. 766, 767, also referring to Turner, 2003; Goldman, 2006; Schatzki, 2001). Eyal and Pok move even further away from the actor-centred perspective and perceive expertise as 'in-between space' connecting different arenas (2015, p. 41–42). In these terms, expertise includes devices, tools, the contributions of other experts, institutional and spatial arrangements, and the concepts that organize experts' intervention (ibid., p. 47). Eyal (2019) also adds another major line of debate, namely whether expertise is a matter of embodied and tacit knowledge, or rather of abstract and explicit rules.

Collins et al. (2016, p. 109), who advocate for realistic accounts and for retaining 'a separate sphere for technical debates so as to preserve a notion of expertise', notably differentiate between 'interactional' expertise, which allows for conversing with experts within a field, and can be gained by immersion within a specific discourse of a given domain, and 'contributory' expertise, which allows not only for conversing, but for making contributions to a field in question. One becomes a contributory expert by collaborating with other contributory experts and acquiring their skills, being immersed not only via language, but also via practice (Collins, 2014, p. 65, cited in Grundmann,

2017, p. 33). The concept of interactional expertise has initiated much interest in the forms, skills, and motivations behind collaboration among experts from different disciplines. Contributing to this strand of research, Kennedy (2019) distinguishes four different categories of motivation for developing interactional expertise. The respective profiles include ‘learners’ (who want to gain knowledge about a target field), ‘challengers’ (who want to influence or change a given domain), ‘collaborators’ (who are interested in learning and working across sectors), and ‘mediators/facilitators’ (who are driven by an interest in ‘resolving a disagreement or enabling dialogue, the experience of learning about each group, or the process of assisting in the bridging of these divides’) (p. 225, 226). Acquiring the vocabulary of another scientific community might also play a key role in a trading zone, in which some kind of ‘pidgin’ or ‘creole’ (Galison, 2010, p. 25) is created for the purpose of communication across disciplines. This trading zone, facilitated by interactional expertise, has the potential to become a new field of expertise (Gorman, 2010). Barley et al. argue that the management of information and communication within and between domains ‘involves its own, unique forms of knowledge’, which they call process expertise (2020, p. 5, 6).

Throughout the literature on expertise, several authors claim to offer a pragmatic conceptualization of expertise that could allow productive exchange among research communities and offer some guidance despite ongoing disputes and divides (cf. SAPEA, 2019). One possibility is to acknowledge the context-related usefulness of different traditions of expertise studies, as ‘[n]o single notion related to expertise is necessary or sufficient for or definitive of expertise’ (Nunn, 2008, p. 415). Another possibility is to look for a common denominator, as in the case of Kotzee and Smit (2018, p. 113), who aim to overcome the divide between constructivist and realist approaches through ‘a single, coherent conception of expertise’, which they explain as ‘a three-part relationship among a subject, an object and a comparison class’. Garret et al. (2009) criticize the discipline-bounded nature of studies on expertise and argue against the use of categories such as ‘explicit’ and ‘tacit’ that—in their view—offer ‘little underlying information as to the make-up of the expertise’ (p. 93) and are mutually exclusive (p. 94). They instead propose viewing expertise from a multi-disciplinary perspective and provide a comprehensive account that focuses on three interrelated factors: ‘the *content* of knowledge required to complete a task at the individual or group level, the *operational*

*context* for which that knowledge is useful, the *process* by which that knowledge is utilised' (2009, p. 100, 103, emphasis added). In the next section, we propose an exploratory definition of process expertise based on these three coordinates.

## **Process expertise**

The term 'process expertise'—with various linguistic nuances—has already been proposed by several authors to illustrate expertise focused on the process of engagement (Escobar, 2015), on communication within and across domains (Barley et al., 2020; Treem and Barley, 2016), on the art of creating 'forums that give voice to publics' (Felt and Fochler, 2010, p. 220), and on interacting with local knowledge (Yanow, 2003). Chilvers speaks of 'participatory process experts' by referring to those 'who design, facilitate, and evaluate participatory processes and articulate public understandings' (2008, p. 162). Moore contrasts 'substantive expertise' on the matter of deliberation with 'processual expertise', defined as 'the expertise of facilitators in conducting deliberations' (2012, p. 153). While many of these definitions hint in the same direction as our understanding of process expertise, as yet there is no systematic elaboration on the constitutive elements of the concept. Lee, in her long-term study of public engagement professionals, states that 'there is no name for what dialogue and deliberation experts do' (Lee, 2015, p. 55). In this article, we take on the challenge of rendering process expertise more identifiable, systematized, and accessible (Bammer et al., 2020, p. 8), and focus on expertise mobilized by researchers while advising policymakers on collaborative arrangements.

As a first step, we present our exploratory definition of process expertise in the context of science–policy interfaces, by following the three elements suggested by Garrett and colleagues' (2009) framework (content; operational context; process):

*Process expertise consists of knowledge on process design (content) for planning collaborative arrangements with policymakers in advisory settings (operational context) by facilitating knowledge co-production among involved actors (process). Process expertise, in other words, offers advice on the process for designing collaboration in collaboration.*

In the next two subsections, we substantiate this definition by building upon literature devoted to facilitation. An exhaustive review of all debates on the topic would exceed

the scope of this article; consequently, the goal is to identify key elements to provide a foundation for our empirical analysis.

### **The makers of collaboration**

The ‘makers’ (Lee, 2015) of collaborative settings are variously referred to in the literature as experts of community (Rose, 1999), public engagement professionals (Lee, 2015), facilitative leaders (Gash, 2016), professional participation practitioners (Cooper and Smith, 2012), or deliberative consultants (Hendriks and Carson, 2008). We call them facilitators (Dillard, 2013; Escobar, 2019; Mansbridge et al., 2006; Moore, 2012). Literature dealing with facilitation offers key insights into both the *content* of knowledge and the *process* by which process expertise is utilized to establish and nourish collaborative environments, conceived as an ‘extremely sophisticated’ (Lee, 2015, p. 224), ‘invisible’, but ‘persistent and skilled labor’ that operates at a relational, pragmatic and political level (Bennett and Brunner 2020, p. 10, 15).

A wide variety of practices lies at the foundation of facilitation work (Bryson et al., 2013; Jacobs et al., 2009; Mansbridge et al., 2006). One strand of the literature focuses on the skills that support collaborative work. Quick and Sandfort, who investigated the learning practices of facilitators, summarize them as ‘skills for managing discursive exchange and group dynamics’ (2019, p. 235). Another strand aims at uncovering the rationale which guides facilitators' action. Escobar frames the work of facilitators in Goffmanian terms of ‘seeking to assemble new interaction orders by carrying out transformative processes’ (Escobar, 2014, p. 256). Goffman (1983, p. 5) defines interaction orders as ‘domain[s] of activity’ that lay ‘the ground rules for a game’ such as a country's traffic code or a language's grammar. By focusing on the *quality* of interaction with counterparts, facilitators foster new modes of relating to each other (Escobar et al., 2014, p. 92), build and maintain relationships (ibid., p. 460; Bennett and Brunner, 2020; Westling et al., 2014), and support the group in developing readiness to ‘visualize reality from the perspective of others’ (Williams, 2002, p. 115). A third strand focuses on facilitators’ activities and approaches to shape the communicative process with norms and rules towards ‘rigorous deliberative exchanges’ (Dillard, 2013, p. 218). Deliberative practitioners ‘listen critically to appreciate multiple forms of knowledge’ (Forester, 2013, p. 19) and activate the tacit knowledge of the group (Quick and Sandfort, 2019). Facilitators do not perceive themselves as substantially contributing to the discussion

(Escobar et al., 2014, p. 96), so that their interventions are considered successful if participants perceive their role as ‘invisible’ (Lee, 2015, p. 114). In this regard, Fischer speaks of ‘participatory expertise’ as a new kind of expertise, where ‘the participatory professional operates from the local contexts in its own terms, rather than prescribing premises from above’ (Fischer, 2003, p. 190).

### **The backstage of collaboration**

The *operational context* on which much attention in the literature is focused refers to the so-called ‘frontstage’ of collaborative arrangements, namely the performative phase in which the involved actors come together to deliberate (Escobar, 2015). While these studies offer important insights into the mechanisms of collaborative governance (e.g. communicative methods, participants' recruitment strategies, choice of themes, role of facilitators), they only investigate one side of the coin. Such a perspective, indeed, ‘lack[s] accounts of the *backstage* policy work carried out [...] to set up the *frontstages* of participatory governance’ (Escobar, 2015, p. 3, italics in original, building on Goffman, 1971). It is on the backstage that the making of collaborative governance actually takes place and where fine-grained choices shape the rationale, framing, and rules structuring the collaborative space (Molinengo, 2022). Here, those responsible for a collaborative arrangement ‘[turn] myriad agendas, actors, interactions, spaces, materials... into manageable plans and stories’ (Escobar, 2019, p. 188) and develop a process design, which functions as a roadmap for collaboration (Ansell and Gash, 2008; Bryson et al., 2013; Kadlec and Friedman, 2007). Process design ‘describes the where, when, and how of collaborative governance’ (Purdy, 2012, p. 411) and includes decisions on—among others—the participants to be invited, modes of interaction and communication to be implemented, information to be shared, and results to be produced (Bobbio, 2019, p. 43). For a collaborative process to be productive, therefore, involves much more than ‘the pragmatic work of facilitating a discussion’ (Forester, 2013, p. 18).

### **Research methods**

The investigation is based on a self-reflective case narrative that ‘prioritize[s] the narrator's own meaning making’ (Becker and Renger, 2017, p. 141), focused on the work of our IASS research team in ongoing advisory processes. The institutional context of IASS, within which the project operates, is unique: The institute was founded in 2009 as a joint initiative of the German Federal Government, the Federal State of Brandenburg,



and the research organisations of the German Science Alliance, with a mandate to understand, advance, and accompany transformations towards sustainable development. To pursue this, IASS has developed a specific research approach (Nanz et al., 2017), based on the interplay between transformation and transformative research. While transformation research ‘studies the conditions, mechanisms and causes of processes of social change [and] generates descriptive or analytical knowledge’, transformative research ‘aims to advance and facilitate processes of societal change by developing possible solutions and supporting their implementation through inter- and transdisciplinary research practice’ (Meisch, 2020, p. 8). Providing policy advice, therefore, is closely connected to the IASS's founding mandate and to part of its research approach. Five-year periods of basic funding, access to communicative channels with the policymaking field at national, regional, and local levels, and to relevant networks provide fertile ground for researchers to experiment with forms of policy advice that aspire to be, as our German project title says, “*zeitgemäß*”, namely aligned with the complexity that shapes current sustainability issues. Within this context, we zoomed in (Nicolini, 2009) on different exemplars (Flyvbjerg, 2006) of our practice in the years 2017–2020.

### **The case study**

The case study examines our team members' practices when co-designing with policymakers—and other invited actors—tailor-made strategies to include a broader circle of actors in addressing complex societal and environmental challenges. Their advice does not offer the policymaking counterpart potential solutions for the issue to tackle; instead, it designs the communicative path to address the problem at hand collectively. To exemplify, we briefly introduce two ongoing activities led by IASS team members:

The first activity involves advising a local Berlin municipality on collaborative mobility transition strategies in the city. Since 2019, at the heart of this advisory activity is the establishment of regular meetings among public servants, politicians, researchers, and civil society organisations, co-initiated and facilitated by a member of our research team, wherein different logics can confront and learn from each other. At the outbreak of the COVID-19 pandemic, when public administrations faced strong pressure to act and many people started shifting their work activities online (many for the first time), this pre-

established communicative routine enabled collaborative, focused and productive online meetings. In this setting, researchers facilitated a knowledge co-production process of prototyping a series of unprecedented mobility measures to guarantee citizens safe bicycle trips across the city and social distancing in public spaces (e.g. bike lanes and temporary play streets<sup>13</sup>) and advised the group on how to include the citizenry in their planning, implementation, and evaluation.

Another activity consists of planning—together with a mayor and public servants of another Berlin district—a sequence of so-called citizen councils (Asenbaum, 2020; Rough, 2002), a participatory format made up of 12 to 15 randomly selected citizens, to formulate recommendations to the local administration concerning the future development of the district. The process began when a citizen initiative contacted a team member due to his expertise around this participatory method. He then supported the citizen group in drafting and presenting to the municipality a proposal to host citizen councils. Within just a few weeks, the citizen representatives and district mayor met to discuss the idea. The researcher has since worked with this multi-stakeholder group to design the collaborative activities, embed the citizen councils' results within the political agenda, and is currently supporting the mayor and public servants in developing competencies to undertake a more responsive role in these participatory processes.

### **Data collection**

This study has a basic, yet potentially problematic assumption: we assume that the concept of process expertise can be investigated by analyzing the practices of our team. In doing so, we place ourselves in the role of process experts, at the risk of seeming arrogant to the reader and, most importantly, of lacking the necessary critical distance to the object of study. In order to address this issue, we undertook the following measures in our data-collection strategy: 1. We employed a reflection-in-action approach (Schön, 1987), in order to decrease the 'chronological–physical separation from action, such that reflection can usefully be said to take place *in the midst* of action' (Yanow and Tsoukas, 2009, p. 1340); 2. To better identify potential gaps and shadows in our conceptualization of process expertise, we invited an external researcher [R.F.] to contribute to this study as a third author; 3. To navigate our positionality in each step of the process of data

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collection and analysis, we followed the ‘formative accompanying research approach’ (FAR) conceived by Freeth and Vilsmaier, which centres on the ‘dynamic positionality’ of the investigators between learning about, with and for a collaborative research team (2002, p. 2). Drawing on selected elements of FAR, we divided the data-gathering strategy into two main phases:

The *learning about* phase included:

1. Self-reflection by the first author [G.M.] on the motivation and scope of the present study (Becker and Renger, 2017), based on the author's own assumptions about the practice of process expertise and participatory observation in advisory processes.
2. Three reflection rounds on (point 1) together with the second author [D.S.] (project lead) and the third author [R.F.] (senior fellow and later associated scholar at the IASS).
3. One-to-one semi-structured interviews with each of the six members of the team (including G.M. and D.S.), focused on specific exemplars of their advisory activities. To collect information, we undertook a practice-centred approach and investigated how interviewees construct the problems they intend to tackle and how solutions are achieved through processes of structured interaction (Colebatch, 2006, p. 314).

The subsequent *learning with* phase, which took place two weeks after the last interview had been conducted, consisted of a two-hour collective reflection with the team members on their practice, in order to expand reflexivity at a group level (Berger, 2015, p. 222). This balanced input elements (e.g., sharing results from the interviews) with other activities in order to inquire, even provocatively, about team members' positionalities (e.g., “Are you a researcher, an advisor, or a process designer?”). The core element comprised two rounds of collective sense-making, wherein team members reflected on the key skills behind their practice and the challenges of fulfilling an advisory role. Within this setting, G.M. acted as first moderator for the discussion, with D.S. participating in the discussion and acting as second moderator in case G.M. wished to intervene as a participant. R.F. offered observations toward the end of the conversation and invited the group to elaborate on specific issues. In this way, we worked transparently in different roles and, at the same time, gained some critical distance thanks to the third

author's presence. Following the data analysis and an initial draft of the present article, team members were invited to critically comment on the draft text.

The final *learning for* phase is beyond the scope of the current article; rather, we expect the present article to become the foundation for future analysis. Subsequently, a future discussion round, involving the same constellation of participants, will critically approach the effects of these lessons on the team members' practice, and identify actions to integrate this kind of expertise more strongly into the team's work.

### **Data analysis**

The data analysis combines an abductive approach (Blaikie and Priest, 2019; Schwartz-Shea and Yanow, 2012) and grounded theory (Bryant and Charmaz, 2007; Glaser and Strauss, 1967; Strauss and Corbin, 1990). We thereby integrated our experience in advisory settings with new data emerging from empirical work explicitly focused on our specific research question, and respective debates in the literature. In the first stage of analysis, we reviewed the data generated in the *learning about* phase through an iteration of open coding of the one-to-one interview transcripts. Building on this, we identified thematic categories that supported a second round of coding and integrated the analysis of the two-hour collective reflection transcripts. Also in this analysis phase, roles were split in order to foster critical reflection: G.M. analyzed data, while D.S. and R.F. pointed 'to possible projections and ignoring of content by the researcher' (Berger, 2015, p. 230) in the ways that the data had been interpreted.

### **Results**

In this section, we present findings related to process expertise based on the analysis of the advisory practice of designing collaboration *in* collaboration with policymakers. We do so by illustrating: 1. the researchers' guiding rationale in these settings; 2. the relational and processual levels at which process expertise operates; 3. the skills underlying process expertise; 4. a conceptualization of process expertise as operating in an 'in-between space'; 5. the conditions that enable researchers to operate as process experts in advisory settings.

#### **The researchers' guiding rationale**

Depending on context, researchers might follow different motivations to engage in the processes of collaboration and to develop the skills required to collaborate effectively.

Kennedy (2019) offers insights into developing interactional expertise in interdisciplinary cooperation, whereas we offer a more transdisciplinary perspective and concentrate on collaboration between experts and policymakers in the context of science–policy interfaces.

The rationale guiding team members' activities in their advisory practice entails achieving both societal and research impacts. In terms of societal outcomes, researchers aim to establish new interaction orders within the democratic system, at both macro and micro levels. The generation of new *'interactions'*<sup>14</sup>, specifically in contexts where *'societal change is currently being shaped, negotiated, or even contested'*, emerged as a recurring theme in the analysis. Referring to the macro level, one researcher involved in implementing citizen councils at municipality level framed their rationale in terms of *'upgrading'* the current political system and the ways in which different groups of actors interact with each other. Following this, another researcher mentioned their work with Berlin policymakers on drafting and implementing a new mobility law. In their understanding, the co-design of a collaborative process to involve civil society in developing new measures for the city's mobility transition attempted to generate *'collective meaning'* beyond the production of a simple *'piece of paper'*. It fostered citizens' understanding and, consequently, their active participation in the implementation stage. Researchers observe that the problems plaguing communication in policymaking processes also manifest at the micro level. One researcher mentioned experiences from the annual Conference of the Parties to the UN Framework Convention on Climate Change (COP) in 2018, where: *'you often have three or four people speaking on a podium, and then people sitting in rows of chairs, who are supposed to listen, but who are actually writing emails and playing on their mobile phones'*. Researchers' counterproposal to what they called a *'format for downloading information'* (or, as framed in a blog article by one of the team members, *'a culture of untapped potential'*, cf. Bruhn, 2017) was to substantiate the scope of the conference—namely networking, lobbying and decision making—with the establishment of a “Co-Creative Reflection and Dialogue Space” at the following COP in Madrid in 2019. Here, they initiated dialogue

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14 In the Results section, text quoted from the empirical material is indicated by *'italics and quotation marks'*.

sessions at which participants were invited to generate new ideas on how to improve the culture of interaction at the COP (Wamsler et al., 2020).

From a research perspective, the guiding rationale consists of establishing new interaction orders between researchers and policymakers with the intention of generating knowledge from and for the practice. In these advisory settings, team members attempt to foster a mutual learning cycle with the actors they are working with: *'we try to bring them together, by learning with them and, at the same time, to share with them what we have learned'*. By participating actively in the backstage of policy processes, researchers have *'access'* to information, actors, and networks they would not normally have and the chance to closely investigate those (micro) dynamics that influence the design and implementation of such collaborative spaces: *'At the same time, as a social scientist, while hearing the counterpart's expectations, you are also listening-in to your research subject. [...] you are thereby learning a lot—not only at a strategic level, but you also gain a better idea of what could actually be investigated.'*

### **The interplay of relational and processual levels**

Our analysis shows that process expertise operates at two levels: relational and processual. These two levels complement each other. The relational level helps create conditions conducive to collaboration, while the processual level takes advantage of those conditions to co-design a collaborative strategy within the advisory setting.

#### ***Relational level***

Working at the relational level aims to facilitate the creation of collaborative relations in the setting where process expertise operates. Thus, our first argument is:

*(1) Process expertise generates conditions at the relational level for the advisory process to take place.*

At the macro scale, the task consists of creating new communication channels within or beyond a given organization, and of generating institutional support, and thus legitimacy, for the emerging collaborative process to take place. This work entails creating the conditions for different actors to meet in a common setting, experience the mutual benefit of working together (Townsend, 2014, p. 117) and the resulting *'collaborative advantage'* (Huxham, 1996) of these spaces. One example here is citizen councils where, during the design phase, a team member suggested building a *'project group'* responsible for

steering the process. This group featured the mayor, civil servants from the city district, representatives of political parties, and representatives of the citizen initiative. The researcher supported the group in drafting agendas in advance of their meetings and facilitated the sessions in the background by posing questions and ensuring all voices were being heard. Bringing together a constellation of such diverse actors and facilitating their interactions had two goals, according to the researcher. First, it established new relationships between policymakers and civil society to synergistically combine resources (e.g., knowledge, funding). Second, it fostered alliances among individuals, which also contributed to sustainable communication ties during the implementation phase. After one year, as the researcher reports, *'we have built up a basis of trust, and the communication flow works fine. [...] People have found each other'*. Yet, relational work also takes place by spontaneous interventions 'in situ'. For instance, a researcher involved in advisory activities on the coal phase-out process in the Lusatia region intentionally made use of a frontstage event featuring both political representatives and local actors in order to establish new relations between these two groups that otherwise had limited opportunities to communicate: *'I went to [name of politician] in a break [...] and [...] figured that he needed two things. Then I said, okay, one of these issues can be discussed right now [during the workshop]'*. In the following workshop session, the researcher raised the issue and invited local actors to contribute their experience. This intervention also had effects at the processual level: it resulted in the co-design of a local participation strategy presented to the regional government. In this way, the researcher made use of a frontstage event to inform policymakers, working backstage on upcoming collaborative arrangements, and fostered co-production between the two settings.

At the micro level, relational work focuses on face-to-face interactions (Escobar et al., 2014) and encourages reciprocal listening, reflection, and an atmosphere of trust. Building a rapport between counterparts, respectful of divergent positions, can open up resources and knowledge normally not shared in such processes. A researcher describes how the initially defensive attitude of the interlocutor (*'their body language was something like: 'we are ready for confrontation''*) changed when he suggested starting the meeting by discussing each person's personal motivation for participating in the process: *'At that point you could notice how their body language relaxed, and they said: Okay, now we have to re-think this whole event. Good to know that you are interested in*

*our opinion, and that you want to listen to our concerns*'. This example shows how process expertise explicitly contributes to generating new interaction orders by fostering communicative framings *'beyond fixed interests and positions*'. Researchers can also introduce new interaction orders by embodying them. For example, a team member related how he and colleagues initiated the "Co-Creative Reflection and Dialogue Space" at the COP in Madrid. Since this was an uncommon format for the audience of negotiators, climate policy advisors, and scientists, the researchers encountered some difficulties in recruiting participants. The three researchers therefore decided to sit in the middle of the room and started a dialogue with each other: *'and just because of this [...] people came in. And afterwards the room was packed*'. Embodying a new way to interact with each other can support a group in overcoming established conventions.

### ***Processual level***

Working at the processual level has the objective of facilitating knowledge co-production in the advisory setting, once the conditions of a more trusting and collaborative atmosphere have been created. Our second argument is that:

- (2) *Process expertise encompasses the capacity to co-design a collaborative process, by structuring and supervising the co-production of knowledge of multiple actors.*

A researcher describes such an intervention as *'advising on the process*': *'we [...] help shape a path that can lead to a solution, although we can't see the solution ourselves*'. Similarly, Lee, in her analysis of public engagement professionals practice, underlines their focus on the *'quality and integrity*' of the process (2015, pp. 90–92). Researchers' advice offers a *'structure*' to the dialogic interaction, leading towards co-production of knowledge and the co-design of a collaborative process. The way they describe their knowledge on process design (Ansell and Gash, 2008; Bryson et al., 2013; Kadlec and Friedman, 2007; Purdy, 2012) suggests a mental map that guides their understanding of collaborative processes. This map includes, for instance, an established and tested *'question-set*', as one of the researchers called it: *'Who do you need to engage, on which issue, and how? And why is this collaborative arrangement actually necessary?'* These questions lay the focus on the essential ingredients for collaboration to take place. Constantly connecting the co-production of ideas of the group with the identified purpose of the assignment is a further element of this mental map (*'you always need these learning loops to check: wait, does this still serve the original purpose [of the*



*collaborative arrangement]?’). Researchers speak of the co-design of new interaction orders as an ongoing process of ‘divergence’ and ‘convergence’, borrowing an expression often used in the facilitation community of ‘The Art of Hosting’<sup>15</sup>. In the former, participants are invited to develop new ideas and perspectives on the issue, while in convergence phases researchers attempt to operationalize discussions into workable action plans: ‘At some point I just tried to ask the classic questions [...] and to bring some structure to the conversation so that people can work a little more consciously with: What is possible in this context? What are the next steps? And also: Who is actually taking care of the implementation of these steps?’ The co-production of knowledge is thus condensed into concrete prototypes, plans, strategies, and responsibilities. The researchers' intervention does not end at the design of the collaborative arrangement in the backstage; instead, they supervise its implementation and unfolding over time at the frontstage. Molinengo and Stasiak describe the practice of ‘supervising’ as the attempt by process experts to guide or adjust the original design of the collaborative arrangement according to the dynamics that emerge during its implementation (2020, p. 6407). This is exemplified by a team member who reports that, while implementing a series of citizen councils, their work consisted of providing backstage support for the conveners from the public administration: ‘Here I often had the role of [...] working with other people [public servants] to ensure that the agreed path is being followed and the set goals are being pursued’. In the implementation phase, the mental map and its defined goals and activities provide orientation for researchers to supervise and potentially adjust future paths.*

### **Skills involved in process expertise**

In order to analyze the sources of process expertise, we first investigated the individual skills of team members. In the course of analysis, however, we realized that teamwork also actively contributed to the development of process expertise. Hence, we propose our third argument:

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15 <https://www.artofhosting.org/> (Accessed on 5 November 2021)

(3) *Process expertise is cultivated, fostered, and implemented not only at the individual level but also within the team—as a collective practice to advance researchers' advisory work.*

### ***Individual practice***

The research team has six members: five with an academic background in social sciences (political sciences, sociology, public administration studies, and applied linguistics) and one physicist. Such diverse academic training is very useful while offering advice. One example is training in *'systematic listening'*: *'where you really try to understand the perspective of the other person. [...] what kind of problem do they actually have to solve, these politicians? My impression is that they usually can't even formulate that themselves. But you can try to support it by listening'*. Similarly, analytical skills can contribute to identifying crucial, but as yet unaddressed, dimensions of the problem in dialogue with the counterpart (*'[you] can spot where it's going to get difficult, where social conflicts might occur or just the process doesn't make sense anymore'*). Skills acquired via academic training and research are complemented in the team by experience in advocacy and facilitation work. Past collaborations with politicians and public servants, for instance, allow researchers to better understand the modus operandi of the policymaking world. Competence in the fields of collaborative leadership, agile project management, and facilitation (including approaches such as Art of Hosting, Design Thinking, Dynamic Facilitation, Process Work and Deep Democracy) is also of much practical value in this realm. For instance, *'thinking in prototypes'* is mentioned by several researchers as a key ability, helping to translate abstract ideas into tangible suggestions that come across in the exchange with policymakers. Individual dispositional attributes, as also highlighted in the facilitation literature (Lee, 2015), contribute to fine-grained relationship-building skills: *'When you start explaining things [...] (said a researcher to a colleague in the collective reflection session) it is very [...] inviting because of your gestures, because of the way your eyes light up. [...] [In this way you can] connect to people very quickly'*. Another researcher highlighted how a colleague's way of positioning himself towards the counterpart with *'a deep respect, although you might not share their position'* allowed interlocutors to share their perspective without feeling judged or criticized. One can thereby make others *'feel valued [...] [in the] knowledge they possess'*. Furthermore, researchers seemed to have specific attitudes while performing their advisory function. One researcher reflected on his reaction to

statements such as: *'no, this is not possible'* which he often heard from policymakers. *'I deliberately hold on to the belief that governance processes are human-made. And this means that it is possible for us to design them differently, [and that] we define the rules of the game.'*

### ***Team practice***

Although researchers' individual skills underpin process expertise, the analysis reveals that it is also cultivated, fostered, and—above all—implemented as a collective practice within the team. The interviews referred to *'teamwork'*, namely the ability of engaging in and fostering collective practice, as *'a precondition'* for many of the research group's activities. The team was described as the place where researchers support each other in the strategic planning of advisory processes, *'to make a reflected proposal to the outside world'*. *'[A] clarifying process arises in the team [...] where the other team members [...] point out potential challenges [connected to the specific context] or come up with new ideas'*. These ritualized spaces for exchange differ from conventional peer-to-peer mechanisms in research practices. Here, those individual skills identified in the previous section are practiced within the team with the goal of contributing to the architecture of advisory processes. Such open communication among researchers relies on a shared set of basic distinctions acquired in the team's practice over the years (Schön, 1983, quoted in Yanow and Tsoukas, 2009) since its foundation in 2017. Starting the week with a 30-minute meeting in which each member updates the others on their upcoming tasks, plus a moderated 2-hour meeting mid-week, allow the six members to maintain an overview of the team activities, to efficiently make decisions, share with their colleagues the current challenges of their advisory work and co-develop strategies to tackle them. The practice of process expertise—seen by the team as crucial to running its activities—is explicitly trained and reflected upon during these meetings. Furthermore, including the elements of agile (Morrison et al., 2019) and strengths-focused (Clifton and Harter, 2003) approaches in leading the team, as well as balancing the orientation towards effectiveness and relationships (Kahane, 2010) encourages the proactivity of its members, stimulates collaboration instead of concurrence, and fosters co-ownership of the research agenda. As one of the researchers framed it: *'I wonder if you can even be a single 'process expert'. I feel it's definitely a collective process to enact process expertise. [...] [It is] a collective*

*capacity, instead of owning a set of skills as an individual and then bringing it to others. [...] it is a situated collective experience.'*

Practicing process expertise in a collective manner is particularly relevant given that their work takes place in volatile contexts such as policymaking: *'on a terrain that is often fragile [...] so that my intervention today may no longer be appropriate tomorrow'*. This implies a higher *'risk'* for researchers and may have consequences for their academic activity, given the fact that research timelines and lists of publications do not make an exception for collaborative research approaches (Bennett and Brunner, 2020, p. 13): *'you have to take into account that you may not deliver results very quickly, for example. Or that the original plan may blow up. [...] Anything can happen.'* These observations relate to the argument of Balmer and colleagues, that *'taking risks'* is a core element of collaborative work in research (2015, p. 20). During the team discussion, the issues of *'courage'* and *'risk-taking'*, necessary to work as researchers in such settings, came up several times. Courage was connected to fears of practicing something unusual, within both the policymaking and academic worlds, while teamwork, again, was seen as crucial for coping with risk: *'I don't think that anyone is born a coward, you know [laughs]; I think it has a lot to do with trust and a feeling of confidence—not in yourself but in the situation and also in others in the situation. [...] imagine we would just have this sort of group where we feel so at ease that we can take risks [...] then I think courage can grow even more, you know [...] courage can be a product of collaboration. [...] it's something that you can create'*. The team practice, both in terms of co-producing new ideas and generating a solid basis of trust among members, appeared very supportive for the researchers' work in advisory settings.

### **Process expertise in 'in-between spaces'**

Limiting the analysis of process expertise to the individual skills and its team practice would be insufficient to cover its unfolding *in relation with* policymakers. Building on Eyal and Pok's definition of expertise as an *'in-between space'* connecting different arenas (2015, pp. 41–42), we develop our fourth argument:

- (4) *Process expertise unfolds in the interaction among actors and contributes to generating a space between research and policymaking, where new interaction orders emerge.*

The analysis of the research team's advisory activities shows that accessing the policymaking backstage of collaboration can take place in different ways and is often linked to windows of opportunity. In the advisory activity around tackling mobility challenges raised by the pandemic, pre-existing trusted relationships with policymakers—established by the long-term immersion in the field of a team member through their research and advocacy activities—generated the basis for quickly joining forces. In the activity on implementing citizen councils at municipal level, engaged citizens who had heard about this participatory methodology approached an IASS researcher with a reputation and theoretical expertise in this domain, seeking support in presenting a proposal to the district mayor. In a third possibility—as in the case of the coal phase-out in the Lusatia region—IASS researchers actively integrated policy advice activities into their research strategy at project outset and sought interested partners at the policymaking level during the research design phase. What connects all these activities is what researchers refer to in the interviews as the *'exploratory phase'*, or *'phase zero'*, as conceptually formulated by one of them (Herberg, 2020). It is in this phase, at the outset of the advisory process, that researchers actively facilitate an inquiry process for both parties—researchers and policymakers—to discuss the object of collaboration, (re-)frame the problem to be tackled, get to know the counterparts' resources, identify interdependencies, define roles and tasks, and verify their own motivation and interests. This lays the foundation for each actor to identify their own collaborative advantage (Huxham, 1996) and decide upon their participation in this advisory space. In phase zero, researchers facilitate and structure the exchange by *'influencing from the very beginning the dialogic setting'*, both at the relational and processual level. By asking specific questions of the interlocutor, researchers move beyond their own knowledge and experience, to sharpen and identify the very challenge to be tackled. With researchers' support, policymakers *'explore, map and expand their understanding of the complex problem space before the political institution or decision-making body sets transformative change in train'* (Bruhn et al., 2019, p. 336). It is through this experience that policymakers may acknowledge the value of process expertise and grant access to backstage settings: *'Initially, we [researchers] were only asked to give an idea of how it [collaborative process] might look. But then we had so many questions that they [policymakers] said: 'Well, we could actually appoint this institute for this [assignment]'*'. In the setting where process expertise operates, both researchers and

policymakers constantly check whether the issue, and the approach chosen to tackle it, cover their own agenda. Indeed, the willingness of both researchers and policymakers to participate is an essential precondition for this space to exist. A researcher describes this mutual exploration of expectations as *'trying to find out: they [policymakers] are approaching us with an initial assignment: is this really the core aspect of the issue we could contribute to, or is there more behind it? And [...] it is also about finding out: does this request match what we can and want to offer?'* The statement highlights the difference between the roles of researchers and corporate actors in these advisory processes. Private consultants' assignments and goals are set by the client, whereas researchers are usually not bound by contracts with policymakers: *'We are not financially dependent on someone else. [...] It's more like [...] getting to know each other and starting to think together about what could actually emerge [out of this collaboration].'* In this way, the encounter between advisors and policymakers goes beyond the rules and etiquettes of the policymaking backstage. The actors meet in neither the academic nor policymaking field, but instead 'in-between'. Along with the development of cooperation, a permeable and weakly institutionalized (Eyal and Pok, 2015, p. 44) space starts taking shape between researchers and policymakers, with new interaction orders fostering knowledge co-production and mutual learning. Distinct perspectives can co-exist, while the actors' differing forms of expertise intertwine with each other: *'And that is perhaps also [...] the co-creative aspect about it [this operating modus]. You can work together on something, even if you have different goals. You might be 'paid out' in different kinds of 'currencies', contribute with different resources and have different criteria of success. But somehow you can still identify a common intention that keeps you together and leads you to unite forces'.* In such an in-between space, expertise does not simply flow from advisors to policymakers. Rather, different kinds of expertise interact with each other and generate diverse outputs, both at a policymaking and research level.

### **Process experts as an assemblage**

Eyal and Pok (2015, p. 49), quoting Callon (2005), propose seeing experts as an 'assemblage' shaped by 'all those actors—humans as well as non-human devices—who participate in putting together statements and performances without being authorized to speak or act'. In other words, researchers can exercise their process expertise in advisory settings via a set of specific conditions. Our fifth argument in this regard is that:

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(5) *Process expertise is exercised by researchers through an assemblage of enabling conditions supported by their status as academics.*

Understanding experts as an ‘assemblage’ allows us to critically reflect on what enables researchers to take on the position of process experts. The first and main enabling condition refers to their academic status, and its related cognitive authority (Escobar et al., 2014, p. 98), which grants them a privileged role while accessing the policymaking backstage: *‘the fact that I am an academic and I can perform as such gives me, from time to time, a sort of more neutral and credible role of...an expert’*. Team members showed high awareness of not being neutral in these processes (*‘I’m an actor when I’m [...] advising [...] because I’m shaping those settings in a certain way.’*). Paradoxically, it is particularly this alleged ‘neutrality’ as academics that grants them the position of experts and allows them to have a substantial role in these processes (Balmer et al., 2015, p. 9). It allocates *‘a sort of catalytic power. You can give space to particular voices and invite others to listen. [...] You can bring those people that are not present in the room into the conversation’*. While this engenders advantages, it also increases the responsibility of researchers to be aware of the power dynamics in the room, including the power vested in their own role. Financial independence from policymakers is another condition that enables researchers to act more freely than other consultants: *‘If I were a freelancer [...] I would probably act differently [...] I would have to advise while knowing: Okay, I can sell this in the end.’* This aspect calls for transparent and open relations: *‘This is an invitation. Anyone can profit from it. I am open to working together with anyone [that is interested]’*. A third enabling condition in such settings is the relatively unconstrained time frame, and access to diverse kinds of knowledge. Long-term immersion in their field allows researchers to engage with a multitude of perspectives and legitimizes them to ask questions that other actors might not be willing to pose: *‘in conflict situations [...] [you are] in a very privileged position because you listened very broadly, and this is definitely a societal resource that you can bring in’*. However, wielding such societal resources leads researchers toward a greater awareness of their own role in the political sphere. As one researcher puts it: *‘This really is a luxury, I have to say. But it [the status of researcher] also comes with a particular duty [towards society]’*.

## Discussion

Our results show that process expertise, when exercised by researchers and supported by an assemblage of enabling conditions inherent to the research context (finding 5.), goes beyond the possession of a set of skills at the individual level (finding 3.). Instead, process expertise fulfils its task, namely the co-design of a tailor-made strategy for different actors to collaborate with each other on a specific issue, by generating an ‘in-between space’ where process expertise unfolds in interaction with other types of knowledge and new interaction orders among actors can emerge (finding 4.). In this realm, relational work contributes to establishing a collaborative *modus operandi* at the very outset of the advisory process (finding 1.), while working at the processual level structures and supervises the co-production of knowledge of multiple actors (finding 2.). This perspective on process expertise resonates with the distinction proposed by Cook and Brown (1999) between an epistemology of possession, which treats ‘knowledge as a distinct, self-sufficient entity that individuals and groups can possess, share, pass on, acquire, lose and recover’ (Marshall and Rollinson, 2004, p. 73 on the work of Cook and Brown, 1999) and an epistemology of practice, which proposes ‘a view of knowledge as a dynamic, negotiated, situated, social accomplishment’ (*ibid*). Process expertise, in our context, can best be understood if analyzed under both perspectives. On the one hand, our results show that with respect to the *content* of expertise (Garrett et al., 2009) researchers in advisory settings possess sophisticated knowledge on process design necessary to plan any collaborative arrangement. The exercise of this core competence alone, however, does not suffice to complete such a task and is complemented by other competencies that support the *process* by which this content knowledge is applied to a specific case: researchers' analytic skills acquired via academic training support policymakers in exploring and expanding their understanding of the complex problem space (Bruhn et al., 2019, p. 336) to be addressed; facilitation skills contribute to structuring of the process of co-production of knowledge among involved actors. These skills do not directly relate to the problem at hand (Bammer et al., 2020, p. 2) but rather focus on generating the conditions for different actors to work together in tackling the problem. From this perspective, process expertise is best illustrated from a practice view: researchers engage with other kinds of knowledge in the room and use their own expertise to create an arena of productive interaction. Ultimately, similarly to the invisible role of



facilitators described by Lee (2015, p. 114), participants engaged in the co-production process might find it difficult to clearly identify researchers' contributions.

Since the very beginning of 'phase zero', process expertise contributes to generating a new *operational context*, which is to be found neither in the academic nor policymaking field, but instead 'in-between'. In this permeable and weakly institutionalized (Eyal and Pok, 2015, p. 44) space, all actors involved are invited to step out of their conventional roles into an unknown zone ('Zonen der Uneindeutigkeit': Felt, 2010, p. 77). Such fluidity of actors' roles constitutes the greatest strength of these spaces, as it enables the emergence of new communicative dynamics that pave the way for knowledge co-production. At the same time, these spaces are temporary, fragile, and volatile: In the worst case, a single personnel change or withdrawal among the policymaking counterparts may jeopardize all collaborative and research efforts. Also, working in such spaces can require substantial time investments from researchers, possibly leading to an imbalance between their tasks as advisors and scientists. Ongoing effort is needed to cultivate these spaces for policymakers and researchers, to keep engaging within these settings. Bennett and Brunner, who introduce the concept of a 'buffer zone', that is '[...] a space, a border zone between multiple worlds of work within which new political and relational work occurs' (2020, p. 14) in collaborative research practices, argue that work at the relational level (ibid, p. 15) is essential for creating and sustaining such practices with non-academic partners (see also Westling et al., 2014, p. 443). Next to the relational level, we identify a further contribution of process expertise: its work at the processual level. It is at this level that collaboration shows its productive side and generates tangible results. For instance, in the advisory activity to co-develop safe mobility strategies at the early stages of the COVID 19-pandemic, researchers' relational work intertwined with an ongoing generation and testing, together with the other actors, of prototypes (e.g. temporary play streets) to address the set challenge. The interplay between collaborating and experiencing the results of this collaboration fostered the active engagement of actors within this arena and their motivation to be part of it. In the case of the Lusatia region, the researcher's facilitation of new connections among backstage and frontstage actors led to the co-development of a collaborative strategy, thus strengthening the mandate of this advisory space. We therefore argue that it is the ongoing work of process expertise

at the intersection of relational *and* processual levels that helps maintain momentum in collaborative partnerships.

Furthermore, we identified two factors that instill ‘*courage*’ in researchers to exercise process expertise as an integral part of their research mandate in these contexts and that support maintaining these settings. First, the collective practice of process expertise in the research team's weekly meetings, where members experiencing challenges with an advisory activity can turn to their colleagues, plays a crucial role in offering peer-to-peer consultation. Also, through reflection, these meetings generate some critical distance to the pressuring demands of the policymaking field (Boezeman et al., 2014), while encouraging a balance between societal and research outcomes. A second factor is to be found at the research institutional level. The IASS research approach (Meisch, 2020; Nanz et al., 2017) grants a mandate for the research team to experiment with such emerging research practices and holds an awareness of the soft skills (e.g. experience in collaborative leadership, facilitation, and agile management) necessary for collaborative research work when recruiting from academic personnel for these activities. Also, funding that goes beyond short-term third-party projects provides significant capacity, in terms of both monetary and human resources, for supporting these emergent advisory practices (Kennedy, 2018); it guarantees researchers' autonomy from (while at the same time enabling to establish a productive relation with) their counterparts in these spaces; it offers research teams great freedom in identifying fruitful partnerships, while avoiding projects with co-optation risks; and, most importantly, it allows relatively stable team composition, which is crucial for cultivating a team practice.

Process expertise deserves further scrutiny and reflection. The reflection-in-action approach of the present study has highlighted some of the challenges arising in this advisory practice. Although an in-depth discussion of the advantages and pitfalls of engaged scholarship in advisory practice goes beyond the scope of the present paper, substantiating the practical challenges with insights from other, more critical, academic discourses would be a logical further step. Potential paths to strengthen the robustness of our findings could include extending the analysis to other research teams with a similar mandate; investigating policymakers' perceptions of researchers' work in this setting; and analyzing the impacts of collaborative arrangements co-designed by researchers and policymakers.

## Conclusion

In this paper, we attempt to give a language to the ‘invisible work’ (Bennett and Brunner, 2020, p. 13) performed by researchers who offer policymakers—and other invited actors—advice on the *process* of designing collaboration *in* collaboration. Process expertise has the potential to enrich the repertoire of ‘appropriate concepts’ that illustrate the complex work that is required in research collaborations (Bennett and Brunner, 2020, p. 13) when tackling complex socio-environmental challenges. This expertise, as we show, goes beyond mastering a specific method: it consists of a combination of dispositional elements (such as the character and biographical experiences of individual researchers) and—to a larger extent—learnable skills. These skills are not restricted to a single domain (e.g., facilitation work), but extend to a broader set of practices that rely on the experiences of researchers in different contexts (academia; private sector; NGOs; policymaking). Furthermore, this learning process is accelerated and fostered when embedded in the collective practice of a research team and should be seen as ongoing and lifelong.

How to learn from and further improve practices of process expertise of academic communities involved in research integration and implementation across various contexts? One approach is to share advisory experiences. A first step in this direction is Bammer et al.'s (2020) proposal of building a shared knowledge bank of expertise. While we endorse documenting and connecting expertise, we also see much value in cooperation and exchange at the level of practice, and hence learning (from each other) by doing. Building a network of research teams—working in advisory contexts with process expertise—could offer guest researchers an opportunity to participate in local policy advice activities and exchange practices ‘in situ’. Also, while the main focus of this study was the role of process expertise in establishing invited spaces (Cornwall, 2002) for collaboration, the potential of this kind of expertise clearly extends beyond such formalized settings. Researchers' skills in establishing legitimate collaborative processes and relations among different actors could be of even greater value in conflictual and contested contexts. Being able to offer advice not only to policymakers, but also, e.g., to citizen groups who not only *invent* but also *claim* new spaces for meaningful participation, turns out to be increasingly relevant (Gaventa and Cornwall, 2008, p. 186). Further structured reflection *on* and deliberate development *of* process

expertise is necessary for science to realize its transformative mandate in a responsible and transparent manner.

Process expertise is already practiced across various contexts. While we hinted at some of the key elements of process expertise, these are to be understood not as a prescription but as an invitation to a further conversation with interested communities of transformative scholarship. Fostering such an exchange appears important not only for the theoretical refinement of process expertise as a concept, but primarily in terms of support and orientation for researchers facing the challenges of collaboration on a daily basis. In this context, the practice evolves much faster than the theory; our reflection-in-action approach has offered a way to bring them into dialogue.

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### **Author Contributions**

Design of the work, G.M., D.S., R.F.; methodology, G.M., D.S., R.F.; data acquisition, G.M.; data analysis and interpretation, G.M.; writing—original draft preparation, G.M.; writing—review and editing, G.M., D.S., R.F.; project administration, D.S. All authors have read and agreed to the published version of the manuscript and are accountable for all aspects of the work.

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## Conclusion

The present dissertation shows the importance of analysing collaborative governance as a process, a ‘contested, fragile, and evolving assemblage’ (Escobar, 2021, p. 12), in order to assess its performance. I argue that a power-sensitive and process-oriented analysis of collaborative governance, understood as a ‘dynamic, negotiated, situated social accomplishment’ (Marshall and Rollinson, 2004) that is constantly co-created and recreated in a circularity of actions (Follett, 1919), can offer particular insights into collaborative failures. The study asks: “*How does collaboration work in its daily practice?*” and “*How does collaborative impasse emerge?*”

Starting from the assumption that ‘what is general is often empty and banal, whereas it is often in the deep, concrete detail that genuinely important interrelationships are expressed’ (Flyvbjerg, 2001, p. 114), the study situates micropolitics at the very center of analysis: a wide range of activities, interventions, and tactics used by actors – be they conveners, facilitators, or participants – to shape the collaborative exercise. I argue that it is by focusing on these daily minutiae – and on the consequences that they induce – that we can better understand why and how collaboration can become stuck or unproductive. To do so, the foundational part of this dissertation (Article 1) uses power, understood as being ‘produced from one moment to the next in all points and all relations’ (Flyvbjerg, 2001, p. 120, building on Foucault, 1979), as a sensitizing concept (Bacharach and Lawler, 1980) to investigate the micro-dynamics that shape collaboration. This approach takes a step back from focusing only on *who* has power (Flyvbjerg, 2006a, p. 367), based on actors' most visible sources of power, and instead extends its focus to the question of *how* power is exercised and unfolds. It calls for the necessity of connecting actors' interventions to their resulting dynamics, to investigate those forces that influence the course of an arrangement. The subsequent articles follow the dissertation's red thread of investigating the micropolitics of collaborative governance by showing facilitation artefacts' interrelatedness and contribution to the potential success or failure of collaborative arrangements (Article 2); and by examining the sophisticated skills and practices underpinning process expertise when designing a collaborative process (Article 3).

The overarching research questions of the dissertation presented a challenge akin to ‘building a plane while flying it’: To be able to empirically investigate collaborative impasse, the study required the development of a conceptual apparatus to make sense of and situate the daily activities shaping the collaboration in the broader architecture of the arrangement. To address this concern, I progressively developed – following an abductive line of inquiry (Blaikie and Priest, 2019; Schwartz-Shea and Yanow, 2012) – a heuristic of collaborative governance at the micro level, grounded in and emerging from practice, that allowed me to conduct a process-oriented analysis of the phenomenon. This heuristic represents a key contribution of my work to the study of collaborative governance. In the following, I first illustrate the main pillars of this heuristic; secondly, I describe the main findings of the three articles that employ it; and finally, I discuss the main contributions of the dissertation to its broader context.

### **A heuristic for the study of collaborative governance**

The heuristic developed in this dissertation conceives collaborative governance at the micro level as an ongoing interplay between *designed* and *emerging interaction orders*. These two analytical concepts repurpose the well-known debate on structure and agency and make it suitable for empirical analysis: structure (designed interaction orders) and agency (emerging interaction orders) exist in a duality, with each continually contributing to transforming or reproducing the other (Giddens, 1984). In its simplicity, this duality sets the ground for a process-oriented analysis of a collaborative arrangement: it allows investigation of how the original architecture of a collaborative process is appropriated, resisted, and transformed (Felt and Fochler, 2010, p. 219) over time by its participating actors. It further allows charting how conveners and facilitators react to these interventions by reinstating their original plans or adapting some of its components. Here, the concept of *flows of power* plays a central role: Through their analysis, researchers can trace how changes in an arena for power drive reactions in others, potentially leading to collaborative impasse.

While Article 1 develops the core of this heuristic, the next two articles build on it and add a further analytical dimension, namely the spatial differentiation between ‘backstage’ and ‘frontstage’ of collaborative governance (Escobar, 2015, p. 3, building on Goffman, 1971). This spatial differentiation extends the study of collaboration beyond the performative dimension of the frontstage and sheds light on the substantive work that is

necessary to design a new interaction order in the backstage. Additionally, Article 2 proposes four phases – *scripting*, *setting the stage*, *performing*, and *inscribing* (building on Escobar, 2015, 2019 and Hajer, 2015) – to situate when, how, and in which actors' constellations a designed interaction order is modified, challenged, or reinforced along the stages of a collaborative process.

## **Main findings**

The three articles that compose the dissertation project rely on the above-illustrated heuristic as a starting point to investigate how collaboration works and how instances of collaborative impasse might emerge in this context. Five main findings can be highlighted:

***1. Collaborative governance consists of the establishment of new interaction orders among the actors involved, both in its frontstage and backstage settings.*** Top-down collaborative arrangements emerge with the intent to design new ways for participants to interact with each other. The study on the role of process expertise in designing invited spaces for collaboration (Article 3) shows that the underlying rationale of assembling new interaction orders (Escobar, 2015; Goffman, 1983) does not apply solely to the frontstage of collaborative arrangements. Instead, the establishment of a collaborative modus operandi already takes place in the backstage when researchers, in the context of this article, conceive together with the process conveners a tailor-made strategy for involving other actors to collectively tackle a specific issue. Even prior to that point, as the article shows, new interaction orders are fostered within the researchers' team, where collaborative practices foster peer-consulting and mutual support among researchers acting as advisors to collaborative governance exercises. The whole ecology of collaboration, then, consists of the ongoing establishment of new ways for actors to interact with each other – that pave the way for knowledge co-production. Understanding this rationale, and the ways in which designed interaction orders are constantly negotiated and modified, is central for the analysis of collaborative exercises.

***2. A sophisticated expertise is foundational to designing collaboration: process expertise.*** Article 3 sheds light on the micropractices that take place in the backstage of a collaborative process at its outset and illustrates the fine-grained work of its 'makers' (Lee, 2015). The study shows that designing a new interaction order – by 'making

decisions' (Bobbio, 2019) concerning the content of its ten arenas (Article 1) – goes beyond individual process design knowledge (Ansell and Gash, 2008; Bryson et al., 2013; Kadlec and Friedman, 2007; Purdy, 2012) but requires instead a collective group effort. Process expertise contributes to the generation of a weakly institutionalized 'in-between space,' in which researchers and policymakers interact to find more inclusive ways of tackling complex challenges. The article identifies two levels at which process experts operate: *relational* work contributes to establishing a collaborative modus operandi at the very outset of the advisory process, while working at the *processual* level supports knowledge co-production among multiple actors. With the identification of these two levels, the article gives a language to the 'invisible work' (Bennett and Brunner, 2020, p. 13) that is required in collaborative practices and disentangles the complexity of the task.

**3. Collaborative impasse can be detected in the interplay between designed and emerging interaction orders.** By engaging in collaborative arrangements, participants continuously renegotiate the originally designed interaction order. This can lead, on the one hand, to collaborative advantage: The successful incorporation of alternative viewpoints into the conveners' initial strategy for collectively tackling a specific issue can, for instance, contribute to a more integrative and inclusive framing of the challenges to be addressed (Bruhn et al., 2019, p. 336). On the other hand, emerging interaction orders can also lead collaboration to stall. Article 1 shows that attempts by conveners to adjust their initial design choices to encourage an emerging interaction order (i.e. citizens drawing potential electricity pylon corridors outside of the originally delineated area) generated a snowball effect: their decision to enlarge the geographical space exceeded the conveners' financial and human resources available to the collaborative exercise and risked delegitimizing its findings and achievements. Article 2, which focused on the role of materiality for the success or failure of collaborative processes, offers evidence from a case study in which the simple (unscripted and unsituated) presence of Post-it notes in the room generated an unexpected emerging interaction order, based on productivity instead of creativity (as originally planned by conveners), and negatively affected the quality of the deliberation's results. These findings reinforce a main argument of this dissertation, namely that collaborative environments can be highly volatile and that the successes or failures of collaboration intertwine with seemingly insignificant minutiae (Flyvbjerg, 2006b, p. 237).

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**4. Collaboration is not ‘self-generating’ (Levine et al., 2005, p. 3), but instead requires constant supervision and adjustment of original plans.** Facilitators prove to have an irreplaceable role in steering collaborative arrangements away from collaborative impasse. Article 1 highlights the calibrated and interrelated nature of design choices (termed *arenas for power*) that shape the original designed interaction order. It further illustrates the work performed by the conveners and facilitators throughout the collaboration, in adjusting their initial choices to the current emerging interaction orders. Building on this, Article 2 identifies three practices in facilitation work that contribute to steering emerging interaction orders away from exclusionary dynamics: *scripting*, *situating*, and *supervising*. Of particular importance here is the practice of *supervising*, in which facilitators intentionally observe the emerging interactions among participants and, if needed, actively intervene to steer them towards fostering inclusive and productive dynamics. All three articles highlight, from different perspectives, the importance of constantly rebalancing and reconsidering design choices when confronted with the evolving realities of collaborative practices, while at the same time keeping in mind the potential consequences of such changes on the overall arrangement. Otherwise, there is a risk that conflicting goals among different arenas of the process design may clash with each other and lead to collaborative impasse.

**5. Focusing on minutiae in the collaborative setting, and on the processes that they endanger, holds promising insights for understanding instances of collaborative impasse.** The analysis of Article 1 connects two events that appear to have little in common: it shows that the foundation of an external citizen initiative – that fundamentally criticized and discredited the whole collaborative arrangement at the very end of its course – can be traced back to a seemingly insignificant decision by the conveners to allow invited participants to draw new lines (potential electricity pylon corridors) on a map, in an attempt to react to an emerging interaction order. While the detailed tracing of myriad pitfalls and challenges that might arise during the process might sound discouraging from a practitioners' perspective, the analysis of their resulting flows of power shows that micropolitics matter substantially in the overall collaboration and are crucial for understanding collaboration's mechanisms and its potential failures.

## Closing remarks

My intention has been to develop an approach to advance the study of collaborative governance at the empirical level, both in its backstage and frontstage settings, from design to implementation. The work offers a repertoire of ‘appropriate concepts’ (Bennett and Brunner, 2020, p. 13) – from analytical terms (designed and emerging interaction orders, flows of power, arenas for power), to facilitation practices (scripting, situating, and supervising) and types of knowledge (process expertise) – to illustrate the detailed and constant work that surrounds collaborative arrangements. These analytical concepts sharpen the way in which researchers can look at, observe, and understand collaborative processes at a micro level. They direct the researcher's attention to the detailed minutiae and encourage the investigation of aspects – such as the materiality of collaboration – which so far have not found large resonance in the study of collaborative governance yet do indeed have an impact on the collaborative performance. The offered definition of collaborative governance entails, next to a descriptive level of the phenomenon as an interplay of designed and emerging interaction orders, a procedural approach to empirical investigation of how collaboration unfolds over time: Tracking how actors' interventions reinforce, modify, or depart from original design choices along the course of the arrangement displays the details, mechanisms, and dynamics that drive and influence collaborative governance, and supports efforts to identify potential sources of impasse.

The increasing integration of participatory formats such as citizens' assemblies into the policymaking agendas of many countries contributes to spread the potentials of collaborative governance as a viable approach to address the complex challenges of today. Nonetheless, the results of this dissertation project show that the choice of what participatory method(s) to employ when bringing diverse actors together is only one amongst many others when designing a new interaction order. Furthermore, the present work sheds light on the multiple settings and numerous steps that a collaborative arrangement must go through before seeing the light of the frontstage. It sensitizes researchers to expand their investigation to the design phase (Bacchi, 2009, p. xii; Herberg, 2020, p. 1; Phillips et al., 2002, p. 32) and encourages a thorough assessment of it, by providing them with a detailed and differentiated overview of the design choices that shape this phase (*arenas for power*) and by rendering the expertise of those responsible for the design, here called *process expertise*, more identifiable, systematized, and accessible (Bammer et al., 2020, p. 8). Furthermore, the power-sensitive and process-



oriented perspective applied to collaboration at the micro level shows that even well-designed processes cannot be exempted from potential failures, and highlights the multiple pitfalls that a collaborative arrangement can stumble upon: backstage efforts to design a collaborative strategy might be jeopardized by a single personnel change or withdrawal among the policymaking counterparts (Article 3); the presence in the room of simple props such as Post-it notes can encourage productivity instead of creativity among participants, thus undermining the quality of the results (Article 2); a single decision by conveners to enlarge the geographical space in which alternative corridors might be considered within a participatory planning process can challenge their established budget and timeline, lead to a poor recruiting strategy, and compromise the entire collaborative effort (Article 1).

Although these results seem quite discouraging at a first sight, they also show something more fundamental: In order to understand ‘what collaborative governance is, how it works and whether it lives up to its promise’ (Gash, 2016, p. 454), we have to re-think the way we talk about and approach the phenomenon of collaboration. The risk of a format-logic is to present collaborative governance as an unchanging and ready-to-use product. The present study proposes instead an understanding of collaboration as being constantly in the making: Understanding collaboration as a practice, as an ‘open-ended spatial-temporal manifold of actions’ (Schatzki, 2005, p. 471), highlights its contingent and porous character (Escobar, 2019), the manifold possibilities for its participating actors to influence its course, and the key role of facilitators in adjusting the course of collaboration towards collaborative advantage.

Although this dissertation is primarily a scholarly intervention, it also aims toward future adaptations across communities of practitioners engaged in collaborative processes. Its results provide ‘handles for reflective practice’ (Huxham and Vangen, 2005, p. 234) that can support conveners and facilitators, but hopefully also other societal actors *claiming* new spaces for meaningful participation, in approaching their own work with more awareness: By making their embodied practices more explicit (e.g. through scripting, situating, supervising), by pointing out the multiple and diverse spheres in which power can be exercised in a collaborative arrangement (e.g. arenas for power), and by conceptualizing their work (e.g. working at the relational and processual level). Concretely speaking: An adapted version of Article 1’s analytical framework was used

in a two-day workshop featuring local, regional, and national German public administration representatives to reflect on past collaborative arrangements and to identify factors and dynamics that hindered their success. Further, a documentary on participatory democracy, produced and broadcast by the same German TV channel MDR (Mitteldeutscher Rundfunk)<sup>16</sup> that had also covered the explorative study illustrated in Article 2, reached and sensitized a broad audience about the importance (and consequences) of design choices in collaborative arrangements. Finally, the results of Article 3 – which responded to a call for papers (Bammer et al., 2020) on expertise for tackling complex challenges – offer a detailing of practices necessary for collaborative work of relevance to researchers engaged in transformative research (Nanz et al., 2017; Meisch, 2020), to policymakers acting as conveners of collaborative arrangements, and to facilitators active in this context.

The abductive inquiry I followed in this dissertation fostered creativity and experimentation, supported the inclusion of different perspectives on the subject (as researcher, advisor, and practitioner), and encouraged me to walk new paths when studying collaborative governance. Instead of following a well-known and established definition of collaborative governance, for instance, I chose to coin my own, connecting it with different strands of the literature, to best serve the goals of my research agenda. The definition also helped to develop a theoretical framework, grounded in and emerging from practice, that uses power as a central concept for the analysis of collaboration. The framework's robustness has been ensured by iterative rounds in several collaborative contexts (e.g. Article 2), member-checking strategies (Shea-Schwartz and Yanow, 2012), and an ongoing exchange with other scholars and practitioners.

Nonetheless, the analytical concepts developed in this work, together with the power-sensitive and process-oriented perspective that I suggest following, warrant further refinement and application to prove their effectiveness and be developed further. Future research paths suggested by the present thesis include: Studying process expertise beyond the design phase; systematically testing the framework of analysis with other researchers in collaborative exercises to identify potential lacunae in its empirical application;

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16 Mehr Bürger an die Macht? – Wie sich Demokratie verändern muss (More citizens in power? – How democracy needs to change), [https://www.mdr.de/tv/programm/video-330396\\_zc-12fce4ab\\_zs-6102e94c.html](https://www.mdr.de/tv/programm/video-330396_zc-12fce4ab_zs-6102e94c.html) (Accessed 14 January 2022)

generating routinized spaces of exchange and reflection among researchers, policymakers, and facilitators to close the gap between the lodestars of academics and practitioners, respectively.

In terms of personal learning, this PhD journey provided me with new tools when making sense of and hosting collaborative exercises. I began the dissertation somewhat disillusioned about its benefits, since I had repeatedly observed first-hand the myriad ways in which a collaborative arrangement can be sabotaged, lead to impasse, or have its efforts nullified. Today, while still acknowledging this collaborative fragility, my view has sharpened, both from an analytic and practical perspective. I have new theoretical anchors and a wider net of practical approaches at my disposal when investigating these processes. Also, by making some of my ‘embodied knowledge’ (Freeman and Sturdy, 2014, p. 8) more explicit, I am more aware of my own practice when designing a process or facilitating a group discussion. When thinking now of my initial question: “*What does it take to initiate and run successful collaborative processes?*” I would instinctively summarize my research findings from a designer's perspective as: dedicate attention to the process. Be attentive to the interrelated nature of the design choices that shape a process design; to the ways other actors might interpret and negotiate them; and to the consequences for the overall arrangement when undertaking changes to some of them. While such an approach does not prevent the risk of collaborative governance being nullified or misused, these design practices can contribute to ensuring an iterative approach that is in line with the proposed understanding of collaboration as being constantly in the making.

On a different level, this dissertation encouraged me to embrace, rather than hide, my role of pracademic in this context, being active both in academia and practice (Posner, 2009), and to value and integrate all types of knowledge I hold around collaboration to substantiate my research. It is in my hope that this contribution can serve as support to the growing community of transformative scholars that include collaborative work in their research agenda and perceive it as a core pillar of their mandate and responsibilities, when contributing to addressing pressing social and environmental challenges.

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